2008/09 Annual Performance Report
Gas Distributors

March 2010

Economic Regulation Authority
WESTERN AUSTRALIA

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Purpose of the Report

The purpose of this report is to bring transparency and accountability to the performance of gas distribution businesses that supply small use customers.[1]

This report focuses on the performance data provided by gas distributors in accordance with the performance reporting obligations set out in the Gas Compliance Reporting Manual[2] (**Reporting Manual**). The report focuses on performance in the following areas:

- Customer Connections: information about the total number of connections on the distribution network and the proportion of new connections that have been established by the distributor outside the prescribed timeframes.
- Gas Consumption: information about the amount of gas consumed by customers and the level of unaccounted for gas.
- Leaks: information about the number and type of leaks on the distribution network.
- Network Reliability: information about the frequency and duration of supply interruptions on the distribution network.
- Customer Service: information about customer satisfaction with the service provided by the distributor as measured by level of complaints and customer contact centre responsiveness.
- Guaranteed Service Level Payments: information about the number of payments made by WA Gas Networks (**WAGN**) for failing to meet the service standards prescribed in their Access Arrangement.

Gas Distribution Market Structure

Gas licensing is regulated by the *Energy Coordination Act 1994* (**Act**). Part 2A of the Act deals with the licensing of gas supply. The functions of the Authority[3] in respect of licensing are to:

- administer the licensing scheme;
- monitor and report to the Minister for Energy on the operation of the licensing scheme and the compliance of licensees with their licences; and
- inform the Minister of any failure by a licensee to meet the requirements of its licence.

The Act prescribes two classes of gas supply licence:

a) Distribution - which authorises the licensee to construct a distribution system and transport gas through it, or to transport gas through an existing distribution system (**network**).[4]

[1] A small use gas customer consumes less than 1Terajoule (1TJ) of gas per annum.

[2] The Gas Compliance Reporting Manual can be found on the Authority's web site: http://www.era.wa.gov.au/2/319/51/regulatory_guid.pm

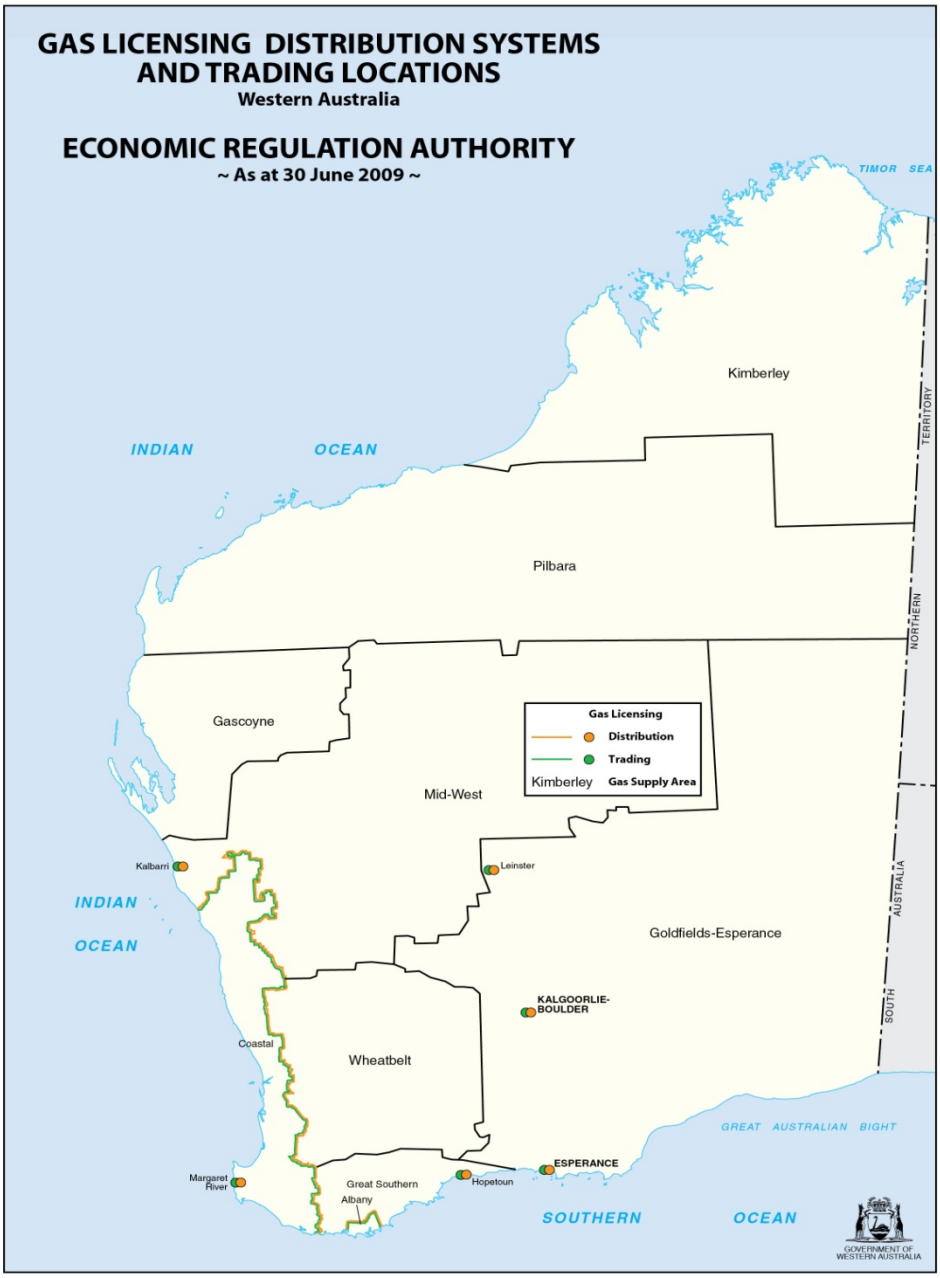
[3] Section 11AA of the Act

[4] This report uses the term distribution network to describe a distribution system, which is consistent with the approach used to describe electricity distribution systems.

b) Trading - which authorises the licensee to sell gas to small use customers that is transported through a distribution system.

Gas distribution licences permit the distributor to supply gas via a reticulation network in one or more supply areas, or one or more parts of one or more supply areas. Figure 1 shows the eight gas supply areas in the State and the locations of gas distribution networks that are currently licensed by the Authority.

Figure 1: Gas Supply Areas in Western Australia



During 2008/09, there were four gas distributors licensed by the Authority:

- WAGN, formerly AlintaGas Networks, (licence GDL8);
- Esperance Power Station (licence GDL10);
- Origin Energy Retail (licence GDL7); and
- Wesfarmers Kleenheat Gas (**Wesfarmers Kleenheat**) (licence GDL9).

Performance data is not presented for Origin Energy Retail in this report as the licensee has not supplied gas to any customers during 2008/09.

In 2008/09, the Western Australian gas distribution market comprised just over 611,000 residential and non-residential customer connections.

Gas distribution in Western Australia is dominated by WAGN, which holds a licence to operate distribution networks in the Coastal, Goldfields-Esperance and Great Southern supply areas. WAGN supplies gas to 99.8% of all small use customer connections (610,294 connections) in the State. The Coastal and Goldfields-Esperance networks supply natural gas and the Great Southern network supplies LPG.[5]

Esperance Power Station operates a small natural gas reticulation network in Esperance, supplying 242 (or 0.04%) of the total small use customer connections. WorleyParsons Asset Management, an associated company, is the exclusive gas retailer in the area supplied by the Esperance Power Station distribution network.

Wesfarmers Kleenheat operates four small LPG reticulation networks in Leinster,[6] Margaret River, Hopetoun and Albany, supplying 831 (or 0.14%) of total small use customer connections. Wesfarmers Kleenheat is also the exclusive gas retailer in the areas supplied by these distribution networks.

Origin Energy has constructed 8.4 km of gas main to distribute LPG in Kalbarri, but no gas was supplied to customers during 2008/09.

Gas Compliance Reporting Manual

Gas distribution and trading licences contain a condition requiring the licensee to provide information to the Authority in connection with the Authority's functions under the Act. In the Reporting Manual the Authority has defined the compliance and performance information that it requires licensees to provide. The Authority published a revised Reporting Manual in March 2009.[7]

The Reporting Manual details the content of the annual performance report that gas licensees must provide to the Authority and the timing of the report. There is no equivalent national performance reporting framework for gas distribution of the kind that exists for electricity distribution or electricity and gas retailing (that are defined in the 2002 SCONRRR Report[8] or the 2007 SCONRRR Framework,[9] respectively). Instead, the

[5] Liquified Petroleum Gas.

[6] Wesfarmers Kleenheat supplies gas in Leinster under contract to a resources company.

[7] The Reporting Manual was also revised in September 2009 to incorporate amendments to the compliance reporting frameworks for gas traders and gas distributors resulting from the introduction of the Gas Customer Code. The Manual is available on the Authority's web site: http://www.era.wa.gov.au/2/317/51/notices.pm

[8] Utility Regulator's Forum: Steering Committee on National Regulatory Reporting Requirements - National Regulatory Reporting for Electricity Distribution and Retailing Businesses, March 2002.

[9] Utility Regulator's Forum: Steering Committee on National Regulatory Reporting Requirements (Retail Working Group) - National Energy Retail Performance Indicators, May 2007.

practice in other jurisdictions has been to develop jurisdiction-specific performance reporting frameworks. The approach adopted by the Authority has been to develop a performance reporting framework based on:

- information reporting requirements that were in the old form distribution licences,[10] with modification where necessary;
- relevant indicators from the 2002 SCONRRR Report; and
- relevant indicators from the 2007 SCONRRR Report.

The transitional provisions in the Reporting Manual required gas distribution licensees to provide whatever information was available in the performance report for the 2007/08 reporting year and provide a fully compliant report commencing in the 2008/09 reporting year. This approach gave licensees time to implement data collection systems that comply with the performance reporting framework set out in the Reporting Manual.

The Authority has published MS Excel Gas Distributor Data Sheets and a Gas Distribution Licence Performance Reporting Handbook[11] to assist gas distributors with the reporting process.

[10] The "old form" distribution licences were those that were in force prior to 2007. These licences included a schedule setting out the annual performance data that was to be provided to the Authority.

[11] Gas Distribution Licence Performance Reporting Handbook which can be found on the Authority's web site: http://www.era.wa.gov.au/2/319/51/regulatory_guid.pm

Highlights

This is the third annual report published by the Authority examining the performance of gas distributor licensees who supply small use customers in Western Australia. The 2008/09 report is the second report that presents the performance of gas distributors based on performance reports provided in accordance with the Reporting Manual.[12]

Customers

During 2008/09, the total number of customer connections on distribution networks grew by 2.8%, to 611,367 connections. The number of residential connections grew by 2.7%, to 602,618 connections, and the number of non-residential connections grew by 8.1%, to 8,749 connections.

WAGN is the dominant gas distributor in Western Australia, supplying gas to just over 610,000 customer connections, comprising 99.83% of residential connections and 99.43% of non-residential connections. The remaining distributors, Esperance Power Station and Wesfarmers Kleenheat have 211 (0.04%) and 812 (0.13%) residential customer connections and 31 (0.35%) and 19 (0.22%) non-residential customer connections, respectively.

Gas Consumption

In 2008/09, overall gas consumption fell by 4.4%, to just over 28,000TJ, compared to the previous year. Residential gas consumption increased by 3.8%, to 10,700TJ, and non-residential gas consumption fell by 8.8%, to 17,300TJ.

The reduction in non-residential gas consumption may be explained in part by the restricted gas supply that was available during the Varanus Island incident (in the third quarter of 2008), and the impact of the economic slowdown in Western Australia.

Leaks

In 2008/09, there was a 6.5% decrease in the overall number of mains leak repairs (to low, medium and high pressure gas mains), compared to 2007/08, with almost all mains leak repairs occurring on the WAGN distribution networks. There was a 6.4% decrease in the overall number of leak repairs to (low, medium and high pressure) property service connections in 2008/09, with almost all leak repairs being made to WAGN customer connections.

WAGN was the only distributor to report carrying out meter leak repairs during 2008/09, reporting a 27.8% increase (to 1,006 repairs) in the number of leak repairs, compared to 2007/08.

Network Reliability

This is the second year that gas distributors have been required to report network reliability performance. The Reporting Manual requires distributors to provide data for a

[12] The 2006/07 report was based on the non-financial performance information provided by licensees in accordance with the gas licences that were in force prior to June 2007.

suite of reliability performance reporting indicators that are based on the definitions in standard IEEE 1366-2003.[13]

Esperance Power Station and Wesfarmers Kleenheat reported zero interruptions to supply on their networks during 2008/09.

In 2008/09, the overall SAIDI on the WAGN networks decreased by 95.7%, compared to 2007/08. The overall network SAIDI was 1.148 minutes with a corresponding SAIFI of 0.006, which equates to a CAIDI of 196 minutes. WAGN have stated that the majority of the supply interruptions on their networks were the result of third party damage to their infrastructure, which resulted in a normalised SAIDI of 0.034 minutes (or 3.0% of overall SAIDI). The average percentage of time that gas was supplied on the WAGN networks was 99.993% over the 2008/09 reporting year.

Complaints

This is the second year that gas distributors have been required to report on the level of customer complaints. Esperance Power Station and Wesfarmers Kleenheat stated that they received no complaints from customers during 2008/09.

WAGN reported 30 customer complaints for this period, which represents 0.1 complaints per 1,000 customers, a decrease of 9.1% compared with 2007/08. The majority of compaints related to 'Other' issues (73.4%) (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other customer service categories), followed by 'Administrative Processes or Customer Service' (10%) and 'Connection and Augmentation' (6.7%).

Contact Centre Performance

Only WAGN and Wesfarmers Kleenheat[14] operate contact centres.

Compared to 2007/08, the state-wide total number of calls to call centres increased by 12.9%, to 238,921 calls. In 2008/09, WAGN achieved improvements against all three performance measures, compared to 2007/08, in particular an increase of 6.6% (to 91.1%) in the number of operator calls responded to within 30 seconds, and a decrease (from 5.0% to 2.9%) in the level of unanswered calls. By comparison, the Wesfarmers Kleenheat call centre performance in 2008/09 remained relatively unchanged.

[13] Standard IEEE 1366-2003 - Guide for Electric Power Distribution Reliability Indices, Institute for Electrical and Electronic Engineers. The Standard defines a number of measures of network reliability: SAIDI (System Average Interruption Duration Index), SAIFI (System Average Interruption Frequency Index) and CAIDI (Customer Average Interruption Duration Index).

[14] The Wesfarmers Kleenheat call centre handles calls for gas distribution, gas retailing and other Kleenheat businesses.

DISTRIBUTOR PERFORMANCE

Customers

In 2008/09 there were three gas distributors active in the small use[15] gas market: WAGN, Esperance Power Station and Wesfarmers Kleenheat.

The Reporting Manual requires gas distributors to record the number of residential and non-residential customer connections on their distribution networks. The number of customer connections on gas distribution networks is defined in terms of the number of installed meters with a specified capacity. Generally meters with a capacity in excess of $6m^3$ supply non-residential users.

Table 1 disaggregates the number of residential and non-residential connections by each distributor network, as at 30 June 2009.

Table 1: Residential and non-residential customer connections at 30 June 2009

Licensee	Residential Customer Connections		Non-Residential Customer Connections		Total Customer Connections	
	Total Connections	New Connections	Total Connections	New Connections	Total Connections	New Connections
WAGN	601,595	16,008	8,699	652	610,294	16,660
Esperance Power Station	211	30	31	3	242	33
Wesfarmers Kleenheat	812	40	19	0	831	40
State Total	**602,618**	**16,078**	**8,749**	**655**	**611,367**	**16,733**

Residential connections comprise 98.6% of the total connections on distribution networks. WAGN is the dominant gas distributor, supplying gas to 99.83% of residential customer connections and 99.43% of non-residential connections. The remaining distributors, Esperance Power Station and Wesfarmers Kleenheat supplied 211 (0.04%) and 812 (0.13%) residential customer connections, and 31 (0.35%) and 19 (0.22%) non-residential customer connections, respectively.

WAGN accounted for 99.6% of the growth in residential customer connections and 99.5% of the growth in non-residential customer connections during 2008/09.

Table 2 details the number of residential and non-residential customer connections over the five year period to 30 June 2009. In 2008/09, the total number of customer connections on distribution networks increased by 2.8%, compared to 2007/08. This comprised a 2.7% growth in the number of residential connections and 8.1% growth in non-residential connections.

[15] Small use customers consume less than 1 TeraJoule (TJ) of gas per annum.

Table 2: Residential and non-residential customer connections

Licensee	Residential Customer Connections					Non-Residential Customer Connections[16]				
	2004/05	2005/06	2006/07	2007/08	2008/09	2004/05	2005/06	2006/07	2007/08	2008/09
WAGN	522,329	526,269	553,129	585,587	601,595	8,374	10,123	8,308	8,047	8,699
Wesfarmers Kleenheat	610	620	623	772	812	13	13	13	19[17]	19
Esperance Power Station[18]	N/A	N/A	169	181	211	N/A	N/A	28	28	31
State Total	**522,939**	**526,889**	**553,921**	**586,540**	**602,618**	**8,387**	**10,136**	**8,349**	**8,094**	**8,749**

Timeliness of New Connections

Table 3 details the total number of customer connections that were not provided by the date agreed with the customer, for both 2008/09 and the previous year.

Table 3: Total customer connections not provided by the agreed date

Licensee	Total connections	
	2007/08	2008/09
WAGN	34	35
Esperance Power Station	0	0
Wesfarmers Kleenheat	0	0
State Total	**34**	**35**

In 2008/09, only WAGN reported that they had provided connections after the date agreed with the customer. Table 3 shows that, in 2008/09, there were 35 connections not provided to customers by the agreed date. Comparing Table 1 and Table 3, it can be seen that the 35 connections represent 0.2% of WAGN's new customer connections in 2008/09.

[16] The number of non-residential connections is assumed to equal the number of gas meters with a capacity >6 cubic meters for the reporting years 2004/05 to 2006/07.

[17] Previously reported as 20 in 2007/08, but Wesfarmers Kleenheat has revised this figure to 19 because one connection which was previously defined as a small use customer was supplied with an amount of gas greater than 1 TJ.

[18] Esperance Power Station was granted a gas distribution licence in August 2007.

Gas Consumption

Gas Consumption by Customers

The Reporting Manual requires gas distributors to keep records of the amount of gas consumed by residential and non-residential customers and the peak gas demand on their distribution network in the hour(s) of heaviest customer demand.

Table 4 details gas consumption during 2008/09 and the previous year.

Table 4: Residential and Non-residential Gas Consumption

Licensee	Residential Customer Gas Consumption (GJ)		Non-residential Customer Gas Consumption (GJ)	
	2007/08[19]	2008/09	2007/08[20]	2008/09
WAGN	10,279,166	10,666,514	18,978,436	17,310,456
Esperance Power Station	2,474	2,644	17,783	19,038
Wesfarmers Kleenheat	19,935	22,875	2,036	1,847
State Total	**10,301,575**	**10,692,033**	**18,998,255**	**17,331,341**

Compared to 2007/08, overall gas consumption decreased by 4.4%, to 28,023TJ. Residential gas consumption increased by 3.8% and non-residential gas consumption fell by 8.8%.

While residential gas consumption on the WAGN distribution networks increased during 2008/09 consistent with the overall growth in customer connections, the increase in residential gas consumption on the Esperance Power Station network (6.9%) was significantly less than its increase in residential gas connections (16.6%). Esperance Power Station has commented:

> a significant number of residential connections were made in the latter half of 2008/09 and, together with a relatively high vacancy rate in connected homes due to the closure of the BHP Billiton Ravensthorpe mine site, this has resulted in a lower than expected residential gas demand.

The increase in residential gas consumption on the Wesfarmers Kleenheat distribution networks (14.7%) was greater than the increase in residential gas connections (5.2%).

Non-residential gas consumption in 2008/09 on the Esperance Power Station distribution network increased consistent with the overall growth in customer connections. With regards to this increase, Esperance Power Station commented:

> Whilst there was some reduction in gas demand during the Varanus incident, the increase in Esperance Power Station's non-residential gas demand in 2008/09 was attributed, in part to an increase in connections and also the higher than expected consumption from major customers using grain drying equipment.

Non-residential gas consumption on the Wesfarmers Kleenheat distribution networks fell by 9.3% although the number of its connections remained the same as the previous year.

[19] Both Esperance Power Station and Wesfarmers Kleenheat have re-stated their 2007/08 residential gas consumption figures.

[20] Both Esperance Power Station and Wesfarmers Kleenheat have re-stated their 2007/08 non-residential gas consumption figures.

Similarly, non-residential gas consumption on the WAGN distribution networks fell by 8.8%, although the number of non-residential gas connections increased by 8.1%.

Varanus Island Incident

On 3 June 2008, a pipeline explosion at Apache Energy's Varanus Island operation cut Western Australia's gas supply by 30 per cent. Partial gas production, to 120 TJ per day, was restored on 6 August 2008 (compared with pre-incident production of 230 TJ per day).[21] Soon after the explosions on Varanus Island, the WA Government set up the Gas Supply Coordination Committee (**GSCC**). The GSCC determined that the priority schedule for the allocation of available energy was designed to minimise broad community disruption and economic impact by allocating available energy to energy infrastructure in the first instance, followed by:

- critical health and safety services, including public transport and communications;
- residential customers;
- industries providing essential goods and services; and
- other industries.

During the Varanus Island incident the WA Government called upon all gas customers to reduce both gas and electricity usage where possible and established a Gas Bulletin Board to facilitate trading between gas market participants. Normal gas supplies were resumed in the December quarter of 2008.

WAGN, the dominant gas distributor in Western Australia, experienced an increase in residential gas consumption by 3.8% in 2008/09, compared to an increase of 6.9% in the previous year.[22] In general, the WA Government made the continuance of residential gas supply a higher priority than non-residential supply and the current year's consumption increase appears to be in line with residential connections growth.

Non-residential gas consumption on the WAGN distribution networks fell 8.8% in 2008/09. The widespread disruption to gas supplies in the first quarter of the financial year partially explains the reduction in overall non-residential gas consumption. An increase in the spot price of gas immediately after the Varanus Island incident,[23] the WA Government's request to reduce usage and the impact of the economic downturn on business activity could also have resulted in reduced non-residential gas demand.

Unaccounted for Gas

Unaccounted for gas (**UFG**) is a measure of network efficiency for gas distribution networks. UFG represents the difference between gas metered at the input to the distribution network and the gas usage billed to customers. The two most common contributors to UFG are leaks and metering differences. The amount of UFG can be reduced by maintaining the distribution network, thereby reducing the level of leaks and other gas loss events.

[21] Refer to the WA Department of Industry and Resources document: "Background on Varanus Island and the Incident" accessible at: http://www.dmp.wa.gov.au/documents/081786_Background2.pdf

[22] The Authority notes that the Perth region experienced a colder than normal winter in 2008, with mean temperatures from July to August 2008 slightly below average (source: http://www.bom.gov.au). WAGN has indicated this may also have had an impact on the supply of residential gas consumed in the 2008/09 year.

[23] Refer to the Commonwealth Government's Senate Standing Committee Inquiry Report: Matters relating to the gas explosion at Varanus Island, Western Australia (section 4.24); accessible at: http://www.aph.gov.au/Senate/committee/economics_ctte/wa_gas_08/report/

Table 5 compares the overall level of UFG in 2008/09 and the previous two years. In 2008/09, the total amount of UFG increased by 3.2%, compared to 2007/08, comprising of a 3.3% increase on the WAGN networks and a 17.1% fall on the Wesfarmers Kleenheat networks.

Table 5: Unaccounted for gas

Licensee	Unaccounted for Gas (GJ)		
	2006/07	2007/08	2008/09
WAGN	621,266	830,915	858,000
Esperance Power Station	50	0	0
Wesfarmers Kleenheat	804	415	344
State Totals	**622,120**	**831,330**	**858,344**

Table 6 shows that UFG as a proportion of the total gas consumed varies from 0% for Esperance Power Station to 3.1% for WAGN. It should be noted that distribution licences do not set targets for the level of UFG.

Table 6: Unaccounted for gas as a percentage of total gas consumed

Licensee	2007/08		2008/09	
	Total Gas Consumed (GJ)	Unaccounted for gas (%)	Total Gas Consumed (GJ)	Unaccounted for gas (%)
WAGN	29,257,607	2.8	27,976,970	3.1
Wesfarmers Kleenheat	21,971	1.8	24,722	1.4
Esperance Power Station	20,257	0.0	21,682	0.0

Leaks

The level of leaks in a gas distribution network over time is influenced by asset condition. Prudent distribution network operators use leak data as an input to their asset operation and maintenance strategies. The Reporting Manual categorises gas main leaks into mains, (customer) service connections and meters. Each of these categories are further sub-categorised into low (≤7kPa), medium (7-210kPa) and high (>210kPa) operating pressure segments of the reticulation network.

Table 7 details the annual number of leak repairs to low, medium and high pressure gas mains during the five years to 30 June 2009. In 2008/09, there was a 6.5% decrease in the overall number of leak repairs, compared to 2007/08.

Table 7: Number of gas main leak repairs

Licensee	Number of gas main leak repairs[24]				
	2004/05	2005/06	2006/07	2007/08	2008/09
WAGN	346	217	276	755[25]	706
Esperance Power Station	N/A	N/A	1	0	1
Wesfarmers Kleenheat	3	0	0	0	0
State Total	**349**	**217**	**277**	**755**	**707**

Table 8 details the annual number of leak repairs to low, medium and high pressure property service connections during the five years to 30 June 2009.

Table 8: Number of property service connection leak repairs

Licensee	Number of property service connection leak repairs[26]				
	2004/05	2005/06	2006/07	2007/08	2008/09
WAGN	1,153	1,409	1,598	5,713[27]	5,348
Esperance Power Station	N/A	N/A	0	0	0
Wesfarmers Kleenheat	0	0	0	2	1
State Total	**1,153**	**1,409**	**1,598**	**5,715**	**5,349**

There was a 6.4% decrease in the overall number of leak repairs to these property service connections in 2008/09.

[24] The data for 2004/05 to 2006/07 is based on the gas main breaks performance indicator in the old form distribution licence.

[25] WAGN has re-stated the original 2007/08 figure published in the 2007/08 Annual Performance Report (from 218 leaks), after converting from a manual to an automated system which subsequently recorded several new categories of leaks.

[26] The data for 2004/05 to 2006/07 is based on the service pipe breaks performance indicator in the old form distribution licence.

[27] WAGN has re-stated the original 2007/08 figure published in the 2007/08 Annual Performance Report (from 4,056 leaks), after converting from a manual to an automated system which subsequently recorded several new categories of leaks.

Prior to the introduction of the Reporting Manual in 2007, distributors were not required to report the number of leak repairs to gas meters. Table 9 details the number of leak repairs to gas meters for 2008/09 and the previous year.

Table 9: Number of leak repairs to gas meters

Licensee	Number of leak repairs to gas meters	
	2007/08	2008/09
WAGN	787[28]	1,006
Esperance Power Station	0	0
Wesfarmers Kleenheat	0	0
State Total	**787**	**1,006**

The only distributor to report carrying out gas meter repairs was WAGN, who reported a total of 1,006 leak repairs to gas meters in 2008/09, an increase of 27.8% on the previous year.

[28] WAGN has re-stated the original 2007/08 figure published in the 2007/08 Annual Performance Report (from 629 leaks), after converting from a manual to an automated system which subsequently recorded several new categories of leaks.

Guaranteed Service Level Payments

WAGN is subject to a guaranteed service level (**GSL**) payment scheme under the Access Arrangement for the Mid-West and South-West Gas Distribution Systems. GSL schemes are intended to provide incentives to service providers to ensure that the level of service delivered to individual end use consumers meets minimum standards. Where the service provider fails to deliver prescribed services within predetermined service levels, payments are made by the service provider to consumers by way of compensation.

This scheme provides for payments by WAGN to small gas users in circumstances of:

- late arrival for a gas fault or emergency appointment;
- late establishment of a gas service;
- more than four unplanned interruptions in a calendar year; and
- unplanned interruptions greater than 12 hours continuously.

WAGN reported a total of 35 payments for the late establishment of a gas service, an increase of 2.9% on the previous year. No other GSL payments were made in 2008/09.

Network Reliability

Significant Interruptions to Small Use Customer Premises

The Reporting Manual requires distributors to report on the interruptions to supply of small use customer premises. The performance measures for these interruptions are:

- the number of customer connections that have experienced interruptions that exceed 12 hours continuously; and
- the number of customer connections that have experienced five or more interruptions during the reporting period.

These measures are similar to the performance measures applying to electricity distributors.

Table 10 details the number of customers that have experienced an interruption of supply exceeding 12 hours continuously. There were no interruptions of this type reported by gas distributors in 2008/09.

Table 10: Number of customers experiencing interruptions exceeding 12 hours continuously

Licensee	Customers with interruptions to supply >12 hours continuously	
	2007/08	2008/09
WAGN	0	0
Esperance Power Station	0	0
Wesfarmers Kleenheat	1	0
State Total	**1**	**0**

Table 11 details the number of customers who have experienced five or more interruptions to supply in 2008/09 and the previous year. For the second consecutive year, the distributors reported that no customers had experienced 5 or more supply interruptions.

Table 11: Number of customers experiencing 5 or more interruptions to supply

Licensee	Customers with 5 or more supply interruptions	
	2007/08	2008/09
WAGN	0	0
Esperance Power Station	0	0
Wesfarmers Kleenheat	0	0
State Total	**0**	**0**

Network Reliability Performance

This is the second year that gas distributors have been required to report network reliability performance. The Reporting Manual requires distributors to report against a suite of reliability performance reporting indicators that are based on the definitions in standard IEEE 1366-2003.[29] Measures of supply reliability include:

- System Average Interruption Duration Index (**SAIDI**) – measures the total duration of supply interruption for the average customer on the network;
- System Average Interruption Frequency Index (**SAIFI**) – measures how often the average customer experiences a supply interruption;
- Customer Average Interruption Duration Index (**CAIDI**) – measures the total duration of supply interruption for those customers who have experienced an interruption during the year to 30 June; and
- Average percentage of time that gas has been supplied to customer premises.

The definition and calculation of SAIDI, SAIFI and CAIDI apply to sustained interruptions of supply.[30]

The equivalent reliability standards for electricity networks define four measures of SAIDI, SAIFI and CAIDI: Overall, Distribution Network Planned, Distribution Network Unplanned and Normalised Distribution Network Unplanned.[31] Two measures of SAIDI, SAIFI and CAIDI are presented in this section; overall and normalised. The definitions[32] of these two measures are:

- Overall Interruptions - includes all sustained interruptions including transmission outages, planned interruptions and unplanned interruptions.
- Normalised Interruptions - excludes transmission outages, outages that exceed a SAIDI threshold of three minutes, outages caused by exceptional natural or third party events and outages where the distributor cannot reasonably be expected to mitigate the effect of the event on interruptions by prudent asset management.

System Average Interruption Duration Index (SAIDI)

Table 12 details the 2008/09 overall and normalised SAIDI performance for the three gas distribution networks in 2008/09.

WAGN was the only distributor to report sustained interruptions on their networks during the 2008/09 financial year. The average customer experienced 1.1 minutes of supply interruption in 2008/09, compared to 26.8 minutes in 2007/08. During 2008/09, WAGN's Normalised SAIDI was 3.0% of the Overall SAIDI, indicating that 97.0% of the overall interruption duration for the average customer was caused by excluded interruptions[33] such as transmission outages and/or exceptional natural or third party events. WAGN has advised that numerous interruptions were the result of third party damage to their infrastructure.

[29] Standard IEEE 1366-2003 - Guide for Electric Power Distribution Reliability Indices, Institute for Electrical and Electronic Engineers.

[30] A sustained interruption of supply is an interruption with a duration greater than 5 minutes.

[31] This measure excludes outages that are caused by exceptional natural or third party events and events that distributors cannot reasonably be expected to mitigate against in their asset management processes.

[32] Table 2 (page 7) National Regulatory Reporting for Electricity Distribution and Retailing Businesses, Utility Regulators Forum, Steering Committee on National Regulatory Reporting Requirements, March 2002.

[33] For a description of excluded interruptions see Appendix 1.

Table 12: Gas distribution network SAIDI

Licensee	Average Interruption Duration (minutes per annum)			
	2007/08		2008/09	
	Overall	Normalised	Overall	Normalised
WAGN	26.8	Not Provided	1.148	0.034
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	3,060[34]	120	0	0

System Average Interruption Frequency Index (SAIFI)

Table 13 details the overall and normalised SAIFI performance of the three gas distribution networks in 2008/09 and the previous year.

Table 13: Gas distribution network SAIFI

Licensee	Average Interruption Frequency (interruptions per annum)			
	2007/08		2008/09	
	Overall	Normalised	Overall	Normalised
WAGN	0.5	Not Provided	0.006[35]	0.001[36]
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	4[37]	2	0	0

Consistent with Table 12, WAGN was the only distributor to report non-zero values for SAIFI in 2008/09. WAGN's Normalised SAIFI was 11%[38] of Overall SAIFI.

Customer Average Interruption Duration Index (CAIDI)

Table 14 details the overall and normalised CAIDI performance of the three gas distribution networks in 2008/09. SAIDI and SAIFI measure the effect of interruptions averaged over all customers connected to the distribution network. CAIDI measures the effect of interruptions for only those customers who have experienced an interruption during the reporting period. In 2008/09, Overall CAIDI was 196 minutes, compared to 54 minutes in 2007/08. The normalised CAIDI (excluding third party events, etc) in 2008/09 was 54 minutes.

[34] In 2007/08, 94% of Wesfarmers Kleenheat's Overall SAIDI was due to a single outage of 2880 minutes caused by factors beyond their control.

[35] Rounded from the actual figure of 0.005868.

[36] Rounded from the actual figure of 0.000630.

[37] In 2007/08, 50% of Wesfarmers Kleenheat's Overall SAIFI was due to the outages referred to in note 34.

[38] Based on the actual figures to six decimal places.

Table 14: Gas distribution network CAIDI

Licensee	Average Interruption Duration (minutes per annum)			
	2007/08		2008/09	
	Overall	Normalised	Overall	Normalised
WAGN	53.6	Not Provided	195.637	53.968
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	765	60	0	0

Average Percentage of Time that Gas was Supplied by Distributors

Table 15 details the average percentage of time[39] that gas was supplied to customer premises.

Table 15: Average percentage of time that gas was supplied

Licensee	Average percentage of time gas was supplied	
	2007/08	2008/09
WAGN	99.995	99.993
Esperance Power Station	100.0	100.0
Wesfarmers Kleenheat	99.419	100.0

In 2008/09, WAGN was the only distributor to report a value of less than 100%, which is consistent with the reported SAIDI and SAIFI values.

[39] This is calculated as 100 x (minutes in the year – overall SAIDI)/(minutes in the year).

Complaints

This is the second year that gas distributors have been required to report on the level of customer complaints. The Reporting Manual has a customer complaint framework that is based on the SCONRRR 2002 report and regulatory reporting frameworks in other jurisdictions.

Table 16 provides a summary of the number of complaints received from residential and non-residential customers in 2008/09 and the previous year. WAGN reported a decrease of 9.1% in the number of customer complaints, with 30 complaints received in 2008/09.

Table 16: Total customer complaints received by gas distributors

Licensee	Customer complaints			
	2007/08		2008/09	
	Number of complaints	Complaints per 1000 customers	Number of complaints	Complaints per 1000 customers
WAGN	33	0.1	30	0.1
Esperance Power Station	0	0.0	0	0.0
Wesfarmers Kleenheat	0	0.0	0	0.0
State Total	**33**	**0.1**	**30**	**0.1**

Table 17 disaggregates the customer complaints received during 2008/09 into six complaint categories.

Table 17: Customer complaints by category during 2008/09

Compliant Category	WAGN	Esperance Power Station	Wesfarmers Kleenheat
Total Number of Complaints	30	0	0
Connection and Augmentation (% of total)	6.7	N/A	N/A
Reliability of Supply (% of total)	3.3	N/A	N/A
Quality of Supply (% of total)	3.3	N/A	N/A
Network Charges and Costs (% of total)	3.3	N/A	N/A
Administrative Processes or Customer Service (% of total)	10.0	N/A	N/A
Other (% of total)	73.4	N/A	N/A

The majority of customer complaints relate to 'Other' issues (73.4%) (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other customer service categories), followed by 'Administrative Processes or Customer Service' (10%) (timeliness of correspondence and other customer communications, the complaints handling process, timeliness of response to complaints and any other process of a general administrative nature) and 'Connection and Augmentation' (6.7%) (which includes quality and timeliness of providing new service connections or network augmentation works).

Call Centre Performance

A customer call centre comprises a dedicated telephone infrastructure and customer service officers to handle customer enquiries. The telephone infrastructure is capable of recording a range of information about the incoming calls, including performance statistics.

Only WAGN and Wesfarmers Kleenheat operate call centres. Esperance Power Station provides telephone support to its customers using simpler telephone systems that do not record performance statistics.

Table 18 provides an overview of call centre performance in 2008/09. Table 19 details the total number of calls to an operator that were handled by each call centre during 2008/09 and the previous year. Compared to 2007/08, the total number of calls to an operator increased by 12.9%. The number of calls handled by the WAGN call centre fell by 7.3%, while the number of calls handled by Wesfarmers Kleenheat increased by 21.7%

Table 18: Summary of distributor call centre performance – 2008/09

Licensee	Total number of calls to an operator	Operator calls responded to within 30 seconds (%)	Unanswered calls (%)	Average duration before call is answered by an operator (seconds)
WAGN	59,802	91.1	2.9	12
Wesfarmers Kleenheat	179,119[40]	80.0	1.1	13
State Total	**238,921**	**82.8**[41]	**1.5**	**-**

Table 19: Total number of calls to an operator

Licensee	2007/08	2008/09
WAGN	64,491	59,802
Wesfarmers Kleenheat	147,202	179,119
State Total	**211,693**	**238,921**

Table 20, Table 21 and Table 22 detail call centre performance against the three key performance measures in 2008/09 and the previous year.

In 2008/09, WAGN reported improvements in performance against all three call centre performance measures. Wesfarmers Kleenheat reported a decrease in the level of unanswered calls and an improvement in the average time for a call to be answered. The levels of both WAGN and Wesfarmers Kleenheat compare favourably to those reported by industry peers.

[40] This includes all calls to the Wesfarmers Kleenheat call centre, which includes gas distribution, gas retailing and other Kleenheat businesses.

[41] This is the weighted average of the individual distributor performance.

Table 20: Operator calls responded to within 30 seconds (%)

Licensee	2007/08	2008/09
WAGN	84.5	91.1
Wesfarmers Kleenheat	80.1	80.0
State Total	**81.5**	**82.8**

Table 21: Level of unanswered calls (%)

Licensee	2007/08	2008/09
WAGN	5.0	2.9
Wesfarmers Kleenheat	1.2[42]	1.1
State Total	**2.4**	**1.5**

Table 22: Average duration before a call is answered by an operator (seconds)

Licensee	2007/08	2008/09
WAGN	16.9	12.0
Wesfarmers Kleenheat	15.0	13.0

[42] Wesfarmers Kleenheat has re-stated the figure (0.2%) that was reported in the 2007/08 Annual Performance Report – Gas Distributors

Appendix 1 – Additional Network Reliability Information for 2008/09

Network Reliability (SCONRRR 2002)

The following definitions[43] apply to the measures reported in this section:

- Overall – includes all sustained interruptions including transmission, planned and unplanned.
- Distribution Network (Planned) – excludes transmission outages and unplanned outages.
- Distribution Network (Unplanned) – excludes transmission outages and planned outages.
- Normalised Distribution Network (Unplanned) – excludes outages which:
  - are transmission outages and planned outages;
  - exceed a SAIDI impact of 3 minutes;
  - are caused by exceptional natural or third party events;
  - the distributor cannot reasonably be expected to mitigate the effect of the event on interruptions by prudent asset management.

SAIDI

Table 23 details the four SAIDI measures for gas distribution networks. For WAGN, 55% of the total SAIDI was attributable to planned outages and 45% was attributable to unplanned outages.

Table 23: Additional gas distribution network SAIDI data - 2008/09

Licensee	Average Interruption Duration (minutes per annum)			
	Overall	Planned	Unplanned	Normalised
WAGN	1.148	0.636	0.512	0.034
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	0	0	0	0

SAIFI

Table 24 details the four SAIFI measures for gas distribution networks. For WAGN, 30% of the total SAIFI was attributable to planned outages and 70% was attributable to unplanned outages.

[43] The definition is taken from National Regulatory Reporting for Electricity Distribution and Retailing Businesses, Utility Regulators Forum, Steering Committee on National Regulatory Reporting Requirements, March 2002., Table 2 page 7

Table 24: Additional gas distribution network SAIFI data - 2008/09

Licensee	Average Number of Interruptions (per annum)			
	Overall	Planned	Unplanned	Normalised
WAGN	0.006[44]	0.002[45]	0.004[46]	0.001[47]
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	0	0	0	0

CAIDI

Table 25 details the four CAIDI measures for gas distribution networks. CAIDI is the ratio of SAIDI divided by SAIFI. Comparing Table 23 with Table 24 shows that SAIDI due to planned outages is higher than that for unplanned outages. However, planned outages occurred less frequently (lower SAIFI), which resulted in planned CAIDI being approximately 2.9 times higher than unplanned CAIDI.

Table 25: Additional gas distribution network CAIDI data - 2008/09

Licensee	Average Interruption Duration (minutes per annum)			
	Overall	Planned	Unplanned	Normalised
WAGN	195.637	359.729	124.878	53.968
Esperance Power Station	0	0	0	0
Wesfarmers Kleenheat	0	0	0	0

[44] Rounded from 0.005868.
[45] Rounded from 0.001768.
[46] Rounded from 0.0041.
[47] Rounded from 0.00063.

Appendix 2 - Network Construction Information

Table 26 provides an overview of the network assets deployed in the distribution networks operated by WAGN, Esperance Power Station and Wesfarmers Kleenheat[48]. It can be seen that the distribution networks installed and in service for Esperance Power Station and Wesfarmers Kleenheat are significantly smaller and less diverse in both asset and pressure type compared to the distribution networks operated by WAGN.

Table 26: Distribution Network Construction Information by Distributor (as at 30 June 2009)

Asset Type	Asset Sub-Type	WAGN			Esperance Power Station			Wesfarmers Kleenheat		
		High Pressure	Medium Pressure	Low Pressure	High Pressure	Medium Pressure	Low Pressure	High Pressure	Medium Pressure	Low Pressure
Length of gas main (km) constructed from	Cast Iron	0	0	52.3	0	0	0	0	0	0
	Unprotected Steel	0	91.4	137	0	0	0	0	0	0
	Protected Steel	737.2	10.6	0	0	0	0	0	0	0
	PVC	0	5,970.0	3,679.3	0	0	0		8.7	0
	Polyethylene	525.0	1,445.0	41.2	0	35.2	0	0	15.6	0
	Other	0	44.3	40.8	0	0	0	0	0	0
Total length of distribution mains installed and in service (km)		1262.2	7,561.3	3,950.65[49]	0	35.2	0	0	24.3	0
Number of service connections per km of gas mains			47.2			6.9			34.2	

[48] While Origin Energy has constructed 8.4 km of main to distribute LPG in Kalbarri, at this time, this network has not been used to supply gas to customers.

[49] This total number is rounded and does not exactly match the sum of the amounts above it.