2007/08 Annual Performance Report
Gas Distributors

April 2009

Economic Regulation Authority
WESTERN AUSTRALIA

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Contents

List of Tables

Summary

This is the second annual report published by the Authority that examines the performance of gas distributor licensees who supply small use[1] customers in Western Australia.

The 2006/07 report[2] was based on the information reporting requirements set out in gas licences that were current until June 2007[3]. The Authority has now completed its review of gas distribution and trading licences and existing licences were substituted with new standard form licences which contain a condition requiring the licensee to provide information to the Authority in connection with the Authority's functions under the Act. The Authority has defined the compliance and performance information that it requires gas licensees to provide through its Gas Compliance Reporting Manual[4] (**Reporting Manual**). The performance reporting indicators for gas trading licences contained in the Reporting Manual incorporate the performance reporting indicators contained in the National Energy Retail Performance Indicators document published by the SCONRRR in 2007[5] (**2007 SCONRRR Framework**).

As a consequence of these changes, it is not possible in this year's report to provide comparative historic performance data for all performance indicators.

Customers

By 30 June 2008, the Western Australian gas distribution market comprised just under 596,000 residential and non-residential customer connections. This represents a 5.9% increase in residential connections, compared to 2006/07. However, caution should be exercised when comparing the 2007/08 connection data with the previous years because the AlintaGas Networks, now known as WA Gas Networks (WAGN), customer disaggregation was based on meter capacity for the years up to and including 2006/07 and by connection type for 2007/08.

WAGN is the dominant gas distributor, supplying gas to 593,634 (99.83%) of small use customer connections, 99.84% of residential customer connections and 99.41% of non-residential connections.

The remaining distributors, Esperance Power Station and Wesfarmers Kleenheat have 181 (0.03%) and 772 (0.13%) of residential customer connections, and 28 (0.35%) and 20 (0.24%) non-residential customer connections, respectively.

Gas Consumption

There was an overall increase in gas consumption in both the residential and non-residential sectors in 2007/08 from the previous year.

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[1] Small use customers consume less than 1TJ of gas per annum.

[2] 2006/07 Annual Performance Report – Gas Distribution and Trading Licences which can be found on the Authority's web site: http://www.era.wa.gov.au/2/468/51/reports__decisi.pm

[3] The 2006/07 report presented performance data for both gas distribution and gas trading licensees. For 2007/08 and future years, separate performance reports will be prepared with respect to gas distribution and gas trading.

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

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

While both WAGN and Wesfarmers Kleenheat saw an increase broadly consistent with the overall growth in customer connections, Esperance Power Station experienced a 3% decrease in consumption for its non-residential customers.

The total of Unaccounted for Gas (UFG) has increased by 33.6% from 2006/07, with this increase mostly attributable to the level of UFG reported by WAGN.

Leaks

In 2007/08, there was a 21.3% reduction in the overall number of leak repairs to low, medium and high pressure gas mains, compared to 2006/07.

There was however a 154% increase in the overall number of leak repairs to low, medium and high pressure property service connections in 2007/08. This increase can be attributed almost entirely to WAGN, who stated that the increase was due to a broadening of the types of leak repairs that are included in the definition of a property service connection leak.

Network Reliability

This is the first year that gas distributors have been required to report network reliability performance. The Reliability Manual requires distributors to report against a suite of reliability performance reporting indicators that are based on the definitions in standard IEEE 1366-2003[6].

WAGN only provided data for the overall level of SAIDI, SAIFI and CAIDI. They also stated that they do not collect data on planned network interruptions, consequently the reliability data provided only related to unplanned interruptions.

WAGN reported an overall network SAIDI of 26.8 minutes and a corresponding SAIFI of 0.5, which, when combined, gives a value of 53.6 minutes for CAIDI.

Wesfarmers Kleenheat reported an overall SAIDI of 3,060 minutes, of which 2,940 minutes was attributable to 2 interruptions that were beyond their reasonable control, resulting in a normalised SAIDI of 120 minutes.

The average percentage of time that gas was supplied was: WAGN (99.995%); Esperance Power Station (100%) and Wesfarmers Kleenheat (99.419%).

Complaints

This is the first year that gas distributors are required to report on the level of complaints that they have received.

WAGN reported 33 customer complaints for this period, which represents 0.1 complaints per 1000 customers. Of these, the majority related to 'Other' issues (67%) (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other customer service categories), followed by 'Connection and Augmentation' (27%) (which includes quality and timeliness of providing new service connections or network augmentation works).

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

There were also a small number of 'Quality of Supply' (3%) and 'Networks Charges and Costs' (3%) complaints received.

Esperance Power Station and Wesfarmer Kleenheat reported that they have received zero complaints.

Contact Centre Performance

Only WAGN and Wesfarmers Kleenheat[7] operate contact centres.

While the percentage of operator calls responded to within 30 seconds is similar for WAGN (84.5%) and Wesfarmers Kleenheat (80.1%), the percentage of unanswered calls for WAGN is significantly higher (5.0%) than Wesfarmers Kleenheat (0.2%).

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

Purpose of the Report

The purpose of this report is to bring transparency and accountability to the performance of gas distribution businesses and to benchmark, where possible, performance against similar businesses in other gas markets.

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[8] (**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 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[9] 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.

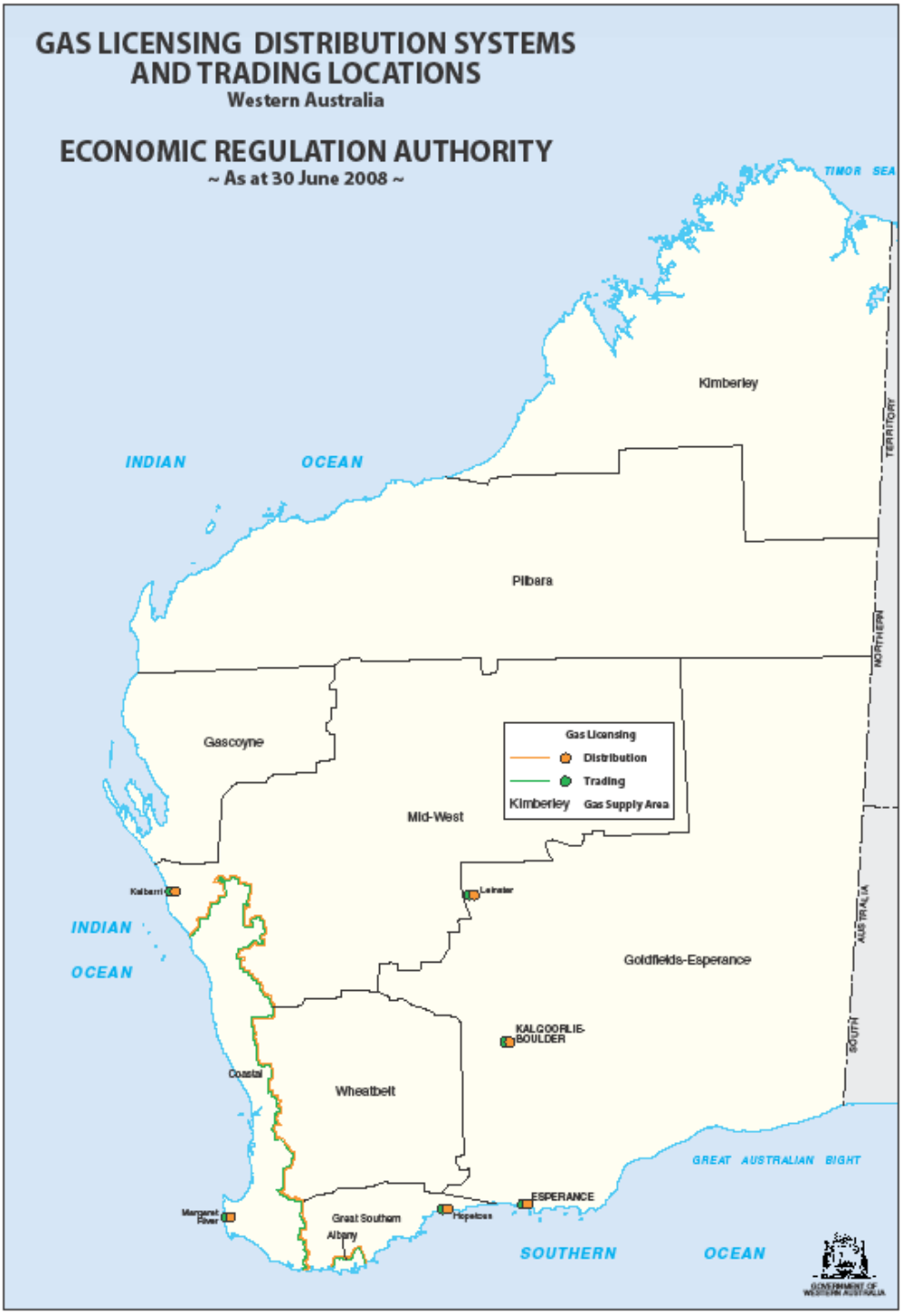
b) Trading - which authorises the licensee to sell to small use[10] customers, gas that is transported through a distribution system.

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

[9] Section 11AA of the Act

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



[10] A small use customer is defined as a customer who consumes less than 1TJ of gas per annum.

During 2007/08, 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 (licence GDL9).

The number of gas distributors has increased from three in 2006/07 with the entry of Origin Energy Retail (9 June 2008). Performance data is not presented for Origin Energy Retail in this report as its licence was not issued until close to the conclusion of the reporting year.

In 2007/08 the Western Australian gas distribution market comprised just over 594,500 residential and non-residential customer connections. This represents a 3.2% increase in residential and a 6.2% increase in non-residential connections.

The distribution sector is dominated by WAGN which holds a licence to operate distribution systems in the Coastal, Goldfields-Esperance and Great Southern supply areas. The Coastal and Goldfields-Esperance systems supply natural gas and the Great Southern system supplies LPG[11]. WAGN supplies gas to 99.8% of all small use customer[12] connections (593,634 connections).

Esperance Power Station operates a small natural gas reticulation network in Esperance, supplying 0.04% of small use customer connections (209 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 two small LPG reticulation networks in Leinster[13] and Margaret River, supplying 0.1% of small use customer connections (747 connections). Wesfarmers Kleenheat is also the exclusive gas retailer in the areas supplied by these distribution networks.

During 2008, Origin Energy was constructing a small LPG reticulation network in Kalbarri.

Gas Compliance Reporting Manual

The Authority has now completed its review of gas distribution and trading licences. Existing licences were substituted with new standard form licences between August 2007 and March 2008.

The new standard form licences contain a condition requiring the licensee to provide information to the Authority in connection with the Authority's functions under the Act. The Authority has defined in the Reporting Manual the compliance and performance information that it requires licensees to provide. The Authority published the Reporting Manual in September 2007, and subsequently published a revised Reporting Manual in March 2008[14].

[11] Liquified Petroleum Gas.

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

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

[14] The Reporting Manual was revised to incorporate amendments to the performance reporting frameworks for electricity retailers and electricity distributors resulting from the review of the Code of Conduct for the Supply of Electricity to Small

The Reporting Manual details the performance information that gas licensees must provide to the Authority and the timing of those reports. Unlike the situation for gas trading licences, there is no equivalent national performance reporting framework for gas distribution of the kind that exist for electricity distribution or electricity and gas retailing (i.e. trading) in the 2002 SCONRRR Report[15] or the 2007 SCONRRR Report[16]. Instead, the practice in other jurisdictions has been to develop jurisdiction-specific performance reporting frameworks tailored to the local regulatory environment. 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, 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 require gas distribution licensees to submit performance reports for the 2007/08 reporting year on a best endeavours basis, with fully compliant reporting commencing from 2008/09. This approach gives licensees time to implement data collection systems that are consistent with the performance reporting framework set out in the Reporting Manual.

The Authority has published MS Excel Retail Data Sheets and a Gas Distribution Licence Performance Reporting Handbook[17] to assist retailers with the reporting process.

Use Customers 2008, details of which are available on the Authority's web site: http://www.era.wa.gov.au/3/596/51/200607_review_o.pm

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

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

[17] 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

DISTRIBUTOR PERFORMANCE

Customers

In 2007/08 there were three gas distributors active in the small use[18] gas market: AlintaGas Networks, now known as WA Gas Networks (WAGN), Esperance Power Station and Wesfarmers Kleenheat. Although Origin Energy Retail was issued with a gas distribution licence on 9 June 2008, it was not active in the sector during the reporting period.

The Reporting Manual requires gas distributors to record the number of residential and non-residential customer connections served by 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, but this may not always the case. WAGN have used the "B3 connections" as the proxy to represent residential connections for the 2007/08 reporting period.

Table 1 provides a breakdown of the number of residential and non-residential connections served by each distributor as at 30 June 2008.

Table 1: Residential and non-residential customer connections at 30 June 2008

	Residential Customer Connections		Non-Residential Customer Connections		Total Customer Connections	
	Existing Connections	New Connections	Existing Connections	New Connections	Existing Connections	New Connections
WAGN	585,587	18,402	8,047	468	593,634	18,870
Esperance Power Station	181	14	28	2	209	16
Wesfarmers Kleenheat	772	73	20	0	792	73
State Total	**586,540**	**18,489**	**8,095**	**470**	**594,635**	**18,959**

Table 1 shows that the total number of customer connections on licensed distribution networks is 594,635, of which 98.6% are residential connections and 1.4% are non-residential connections.

WAGN is the dominant gas distributor, supplying gas to 593,634 (99.83%) of small use customer connections – 99.84% of residential customer connections and 99.41% of non-residential connections.

The remaining distributors, Esperance Power Station and Wesfarmers Kleenheat have 181 (0.03%) and 772 (0.13%) of residential customer connections and 28 (0.35%) and 20 (0.24%) of non-residential customer connections, respectively.

Table 2 provides details of the growth in residential and non-residential customer connections over the 4 year period to 30 June 2008. It is difficult to meaningfully compare the 2007/08 connection data with the previous years because the WAGN customer disaggregation was based on meter capacity for the years up to and including 2006/07 and by connection type for 2007/08. However, Table 2 does still provide a useful times series trend profile for customer connections. In future years the time series trend will be based on a standard customer connection type.

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

Table 2: Residential and non-residential customer connections 2004-08

	Residential Customer Connections				Non-Residential Customer Connections[19]			
	2004/05	2005/06	2006/07	2007/08	2004/05	2005/06	2006/07	2007/08
WAGN	522,329	526,269	553,129	585,587	8,374	10,123	8,308	8,047
Wesfarmers Kleenheat Gas	610	620	623	772	13	13	13	20
Esperance Power Station[20]	N/A	N/A	169	181	N/A	N/A	28	28
State Total	**522,939**	**526,889**	**553,921**	**586,540**	**8,387**	**10,136**	**8,349**	**8,095**

There was 5.9% growth in the number residential connections from 2006/07 to 2007/08. While all networks experienced growth, WAGN accounted for 99.6% of the total growth.

Timeliness of New Connections

Table 3 provides details of the total number of customer connections that were not provided by the date agreed with the customer, for 2007/08.

Table 3: Total customer connections not provided by the agreed date in 2007/08

	Total
WAGN	34
Esperance Power Station	0
Wesfarmers Kleenheat	0
State Total	**34**

Only WAGN reported non-zero data for this performance indicator. Comparing Table 1 and Table 3, it can be seen that the 34 connections not provided by the agreed date represent 0.2% of AlintaGas Network's new customer connections in this period.

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 provides details of gas consumption in 2007/08 and the change in consumption, compared to 2006/07.

[19] 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.

[20] Esperance Power Station was granted gas distribution licence GDL10 in August 2007

Table 4: Total gas consumption (GJ) during 2007/08

	Residential Customers		Non-residential Customers	
	Consumption (GJ)	Change from previous year (%)	Consumption (GJ)	Change from previous year (%)
WAGN	10,279,166	6.9	18,978,436	0.5
Esperance Power Station	3,890	7.1	13,454	-3.0
Wesfarmers Kleenheat	17,904	8.5	2,600	36.9
State Total	**10,300,794**	**-**	**18,994,054**	**-**

There was an overall increase in gas consumption in both the residential and non-residential sectors in 2007/08. While both WAGN and Wesfarmers Kleenheat saw an increase broadly consistent with the overall growth in customer connections, Esperance Power Station experienced a 3% decrease in consumption for its non-residential customers.

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 errors. The amount of UFG can be reduced by maintaining the distribution network so as to reduce the level of leaks and other gas loss events.

Kleenheat it decreased by 48.4%.

Table 5: Comparison of the level of unaccounted for gas during 2006/07 and 2007/08

compares the overall level of UFG in 2006/07 and 2007/08. The total UFG has increased by 33.6% from 2006/07 levels. The level of UFG for WAGN increased by 33.7%, for Esperance Power Station it decreased by 100% and for Wesfarmers Kleenheat it decreased by 48.4%.

Table 5: Comparison of the level of unaccounted for gas during 2006/07 and 2007/08

	Unaccounted for Gas (GJ)	
	2006/07	2007/08
WAGN	621,266	830,915
Esperance Power Station	50[21]	0
Wesfarmers Kleenheat	804	415
State Totals	**622,120**	**831,330**

Table 6 shows that UFG as a proportion of the total gas consumed varies from 0% for Esperance Power Station to just under 3% for WAGN. It should be noted that the licence does not set targets for the level of UFG.

[21] Esperance Power Station reported that they incorrectly reported this value as 0 in the 2006/07 report. This has now been corrected.

Table 6: Unaccounted for gas as a percentage of total gas consumed 2007/08

Licensee	Total Gas Consumed (GJ)	Unaccounted for gas (GJ) (%)
WAGN	29,257,607	2.8
Wesfarmers Kleenheat Gas	20,504	2.3
Esperance Power Station	17,344	0.0

WAGN commented that "Unaccounted for Gas is recorded on a 12 month basis and is seasonally impacted. The increase in UFG during the 2007/08 period is currently being investigated".

Leaks

The level of leaks in a gas distribution network over time is an indirect measure of asset condition. Prudent distribution network operators should use leaks 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 provides details of the total number of leak repairs to low, medium and high pressure gas mains during the 4 years to 30 June 2008.

Table 7: Number of leak repairs to gas mains 2004/05 to 2007/08

	Number of gas main leaks[22]			
	2004/05	2005/06	2006/07	2007/08
WAGN	346	217	276	218
Esperance Power Station	N/A	N/A	1	0
Wesfarmers Kleenheat Gas	3	0	0	0
State Total	**349**	**217**	**277**	**218**

There was a 21.3% reduction in the overall number of leak repairs to low, medium and high pressure gas mains in 2007/08. This also represents a 37.5% decrease on 2004/05 levels.

Table 8 provides details of the total number of leak repairs to low, medium and high pressure property service connections during the 4 years to 30 June 2008.

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

Table 8: Number of leak repairs to service connections 2004//05 to 2007/08

	Number of property service connection leaks[23]			
	2004/05	2005/06	2006/07	2007/08
WAGN	1,153	1,409	1,598	4,056
Esperance Power Station	N/A	N/A	0	0
Wesfarmers Kleenheat Gas	0	0	0	2
State Total	**1,153**	**1,409**	**1,598**	**4,058**

There was a 154% increase in the overall number of leak repairs to low, medium and high pressure property service connections in 2007/08. This increase can be attributed almost entirely to leak repairs occurring on the WAGN. WAGN commented that "the increase reported is due to a change of definitions used for reporting. Prior to 2007/08 only leak repairs for broken services were required to be reported on. Given the 2007/08 reporting period has expanded the definition of leak repairs to include "works undertaken to remedy a loss of containment on mains, service pipes, meters or related distribution equipment" this has resulted in reporting on a broader range 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 provides details of the number of leak repairs to gas meters in the year ending 30 June 2008.

Table 9: Number of leak repairs to gas meters in 2007/08

	Number of leak repairs to gas meters
WAGN	629
Esperance Power Station	0
Wesfarmers Kleenheat	0
State Total	**629**

Table 15 shows that the only distributor to report a non-zero value for gas meter repairs was WAGN, who reported a total of 629 leak repairs to gas meters in 2007/08.

Guaranteed Service Level Payments

WAGN is subject to a guaranteed service level (GSL) payment scheme pursuant to the terms of its Access Arrangement. GSL schemes are intended to provide incentives to service providers to ensure that the level of service delivered to individual end use consumers is not materially less than the high level of service reliably delivered by the network as a whole. Where the service provider fails to deliver prescribed services within predetermined service levels, payments are made by the service provider to consumers.

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

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

- late arrival for a gas fault or emergency appointment;
- late establishment of a gas service;
- more than 4 unplanned interruptions in a calendar year; and
- unplanned interruptions greater than 12 hours continuously.

WAGN reported a total of 34 payments for the late establishment of a gas service. Zero data was reported for all other categories of GSL payments.

Network Reliability

Significant Interruptions to Small Use Customer Premises

The Reporting Manual requires distributors to report on interruptions to supply of small use customer premises:

- the number of customer connections that have experienced interruptions that exceed 12 hours continuously; and
- The number of customer connections that have experienced 5 or more interruptions during the reporting period,

which is similar to the performance measures applying to electricity distributors.

Table 10 provides details of the number of customers that have experienced an interruption of supply exceeding 12 hours continuously during the year ending 30 June 2008. Only one interruption of supply exceeding 12 hours continuously was reported in 2007/08, by Wesfarmers Kleenheat.

Table 10: Number of customers experiencing interruptions exceeding 12 hours continuously during 2007/08

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

Table 11 provides details of the number of customers who have experienced five or more interruptions to supply during the year ending 30 June 2008. All distributors reported zero data for this performance indicator.

Table 11: Number of customers experiencing 5 or more interruptions to supply in 2007/08

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

Network Reliability Performance

This is the first year that gas distributors have been required to report network reliability performance. The Reliability Manual requires distributors to report against a suite of reliability performance reporting indicators that are based on the definitions in standard IEEE 1366-2003[24]. 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[25].

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[26]. Two measures of SAIDI, SAIFI and CAIDI are presented in this section; overall and normalised. The definitions of these two measures are[27]:

- 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.

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

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

[26] 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

[27] 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

System Average Interruption Duration Index (SAIDI)

Table 12 provides details of the overall and normalised SAIDI performance of the three gas distribution networks in 2007/08.

Table 12: Gas distribution network SAIDI - 2007/08

	Average Interruption Duration (minutes per annum)	
	Overall	Normalised
WAGN	26.8	Not provided
Esperance Power Station	0	0
Wesfarmers Kleenheat Gas	3,060	120

Table 12 shows that 94% of the total SAIDI on the Wesfarmers Kleenheat network was due to a single outage of 2,880 minutes caused by factors beyond their control.

WAGN has stated that they do not collect data on SAIDI caused by planned outages and unplanned outages that were due to factors beyond their control. Consequently, the overall SAIDI presented in Table 12 comprises only unplanned outages, and normalised SAIDI data is not available.

System Average Interruption Frequency Index (SAIFI)

Table 13 provides details of the overall and normalised SAIFI performance of the three gas distribution networks in 2007/08.

Table 13: Gas distribution network SAIFI - 2007/08

	Average Interruption Frequency (interruptions per annum)	
	Overall	Normalised
WAGN	0.5	Not provided
Esperance Power Station	0	0
Wesfarmers Kleenheat Gas	4	2

Table 13 shows that 50% of the total SAIFI on the Wesfarmers Kleenheat network was due to a single outage caused by factors beyond their control.

WAGN has stated that they do not collect data on SAIFI caused by planned outages and unplanned outages that were due to factors beyond their control. Consequently, the overall SAIFI presented in Table 13 comprises only unplanned outages and normalised SAIFI data is not available.

Customer Average Interruption Duration Index (CAIDI)

Table 14 provides details of the overall and normalised CAIDI performance of the three gas distribution networks in 2007/08. The pattern of CAIDI is different to that of SAIDI and SAIFI because SAIDI and SAIFI measure the effect of interruptions averaged over all

customers. CAIDI on the other hand measures the effect of interruptions for all customers who have experienced at least one interruption during the reporting period.

Comparing the overall CAIDI values with the normalised CAIDI values for Wesfarmers Kleenheat illustrates the effect of excluding the single long interruption from the normalised data.

Table 14: Gas distribution network CAIDI - 2007/08

	Average Interruption Duration (minutes per annum)	
	Overall	Normalised
WAGN	53.6	Not provided
Esperance Power Station	0	0
Wesfarmers Kleenheat Gas	765	60

WAGN has stated that they do not collect data on CAIDI caused by planned outages and unplanned outages that were due to factors beyond their control. Consequently, the overall CAIDI presented in Table 13 comprises only unplanned outages and normalised CAIDI data is not available

Average Percentage of Time that Gas was Supplied by Distributors

Table 15 provides details of the average percentage of time[28] that gas was supplied to customer premises during 2007/08.

Table 15: Average percentage of time that gas was supplied during 2007/08

	Average percentage of time gas was supplied
WAGN	99.995
Esperance Power Station	100.0
Wesfarmers Kleenheat Gas	99.419

Table 15 shows that the average percentage of time that gas was supplied to customer premises across the State ranged from 99.419% to 100%.

Complaints

This is the first year that gas distributors are required to report on the level of complaints that they have received. The Reporting Manual has adopted a customer compliant framework that is based on the SCONRRR 2002 report and regulatory reporting in other jurisdictions.

Table 16 provides a summary of the number of complaints received from residential and non-residential small use customers in 2007/08. WAGN reported 33 customer complaints for this period, which is equivalent to 0.1 complaints per 1000 customers.

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

Table 16: Total customer complaints received by gas distributors during 2007/08

Retailer	Customer complaints	
	Number of complaints	Complaints per 1000 customers
WAGN	33	0.1
Esperance Power Station	0	0.0
Wesfarmers Kleenheat Gas	0	0.0
State Total	**33**	**0.1**

Table 17 provides a breakdown of the customer complaints received during 2007/08 into a number of compliant categories.

Table 17: Customer complaints by category during 2007/08

Compliant Category	WAGN	Esperance Power Station	Wesfarmers Kleenheat Gas
Total Number of Complaints	33	0	0
Connection and Augmentation (% of total)	27	N/A	N/A
Reliability of Supply (% of total)	0	N/A	N/A
Quality of Supply (% of total)	3	N/A	N/A
Network Charges and Costs (% of total)	3	N/A	N/A
Administrative Processes or Customer Service (% of total)	0	N/A	N/A
Other (% of total)	67	N/A	N/A

It can been seen that the majority of customer complaints relate to 'Other' issues (67%) (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other customer service categories), followed by 'Connection and Augmentation' (27%) (which includes quality and timeliness of providing a new service connections or network augmentation works).

There were also a small number of 'Quality of Supply' (3%) and 'Networks Charges and Costs' (3%) complaints received.

Contact Centre Performance

A customer contact centre (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 calls that it is handling, including performance statistics.

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

Table 18 provides a summary of the call centre performance during 2007/08.

Table 18: Summary of retailer contact centre performance in 2007/08

Retailer	Total number of calls to an operator	Operator calls responded to within 30 seconds (%)	Unanswered calls (%)	Average wait before call is answered by an operator (seconds)
WAGN	64,491	84.5	5.0	16.9
Esperance Power Station	N/A	N/A	N/A	N/A
Wesfarmers Kleenheat Gas	147,202[29]	80.1	0.2	15
State Total	**211,693**	**81.5**	**2.8**	**-**

While the percentage of operator calls responded to within 30 seconds is similar for both WAGN and Wesfarmers Kleenheat, the percentage of unanswered calls for WAGN is significantly higher. WAGN commented that "the high number of unanswered calls for 2007/08 resulted from the introduction of a new IT system. The system, when introduced in June 2007, experienced regular and extended outages and had very slow response times during the first 6 months. This resulted in longer call handling times causing customers to abandon calls because of longer call waiting times. This has since been rectified and a reduction in unanswered calls is being recorded".

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

Appendix 1 – Additional Network Reliability Information for 2007/08

Network Reliability (SCONRRR 2002)

The following definitions[30] 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 19 provides details of the four SAIDI measures for gas distribution networks.

Table 19: Additional gas distribution network SAIDI data - 2007/08

	Average Interruption Duration (minutes per annum)			
	Overall	**Planned**	**Unplanned**	**Normalised**
WAGN	26.8	0	26.8	not provided
Esperance Power Station	not provided	not provided	not provided	not provided
Wesfarmers Kleenheat Gas	3,060	0	3,060	120

Table 19 shows that all reported SAIDI for 2007/08 was Distribution Network Unplanned.

SAIFI

Table 20 provides details of the four SAIFI measures for gas distribution networks.

[30] 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 20: Additional gas distribution network SAIFI data - 2007/08

	Average Number of Interruptions (per annum)			
	Overall	**Planned**	**Unplanned**	**Normalised**
WAGN	0.5	0	0.5	not provided
Esperance Power Station	not provided	not provided	not provided	not provided
Wesfarmers Kleenheat Gas	4	0	4	2

Table 20 shows that all reported SAIFI for 2007/08 was Distribution Network Unplanned.

CAIDI

Table 21 provides details of the four CAIDI measures for gas distribution networks. [insert comment]

Table 21: Additional gas distribution network CAIDI data - 2007/08

	Average Interruption Duration (minutes per annum)			
	Overall	**Planned**	**Unplanned**	**Normalised**
WAGN	95.9	0	95.9	not provided
Esperance Power Station	not provided	not provided	not provided	not provided
Wesfarmers Kleenheat Gas	765	0	765	60

Table 21 shows that all reported CAIDI for 2007/08 was Distribution Network Unplanned.

Appendix 2 - Network Construction Information

Table 22 provides an overview of the network assets deployed in the distribution networks operated by WAGN, Esperance Power Station and Wesfarmers Kleenheat. 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 than the distribution network operated by WAGN.

Table 22: Distribution Network Construction Information by Distributor (as at 30 June 2008)

Asset Type	Asset Sub-Type	WAGN			Esperance Power Station			Wesfarmers Kleenheat Gas		
		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	61.9	0	0	0	0	0	0
	Unprotected Steel	0	91.4	137	0	0	0	0	0	0
	Protected Steel	736	10.6	0	0	0	0	0	0	0
	PVC	0	5,973	3,679	0	0	0		8.7	0
	Polyethylene	36.8	1,816	17.7	0	35.2	0	0	13.3	0
	Other	0	15.3	42.1	0	0	0	0	0	0
Total length of distribution mains installed and in service (km)		773.2	7,905.8	3,937.7	0	35.2	0	0	22	0
Number of service connections per km of gas mains			47.1			5.9			34	