2013 Annual Performance Report – Energy Distributors

13 March 2014

Economic Regulation Authority
WESTERN AUSTRALIA

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Overview

This is the latest in a series of annual reports[1] published by the Economic Regulation Authority (**ERA**) that examines the performance of energy distributors who supply small use customers in Western Australia. More information about the definition of small use customers, and the operation of the licensing scheme for distributors who supply these customers, can be found in Appendix 8.

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

Customer Connections

Electricity Distributors

The state-wide total number of customer connections on electricity distribution systems increased by 3.4% during 2013, rising to just under 1.1 million connections. Connections on the Western Power distribution system increased by 3.4%, while the connections in the regional areas supplied by Horizon Power increased by 3.5%.

The South West Interconnected Network (**SWIN**)[2] operated by Western Power accounts for 95.8% of total connections.

The state-wide total number of new connections established on electricity distribution systems in 2013 was 13.8% higher than the previous year. New connections on the Western Power network rose by 12.0% (from 21,420 to 23,994), while new connections on the Horizon Power distribution systems rose by 34.9% (from 1,780 to 2,401). In 2013, Western Power further improved their on-time delivery of new connections to reach a six year high of 98.5%.

Gas Distributors

The state-wide total number of customer connections on gas distribution systems increased by 3.2% in 2013, up from 654,024 to 675,150 connections. During 2013, all three gas distributors reported an increase in connections on their systems: ATCO by 2.6%, Esperance Power Station by 6.1% and Wesfarmers by 4.1%.

Connections on the ATCO[3] distribution systems accounted for 99.81% of total connections.

The state-wide number of new connections established on gas distribution systems was 4.4% higher than the previous year, rising from 14,813 to 15,463 connections, of which approximately 99.99% were delivered on time.

[1] Each report covers the year ending 30 June 2013.

[2] The South West Interconnected System (**SWIS**) is the entire energy system, including all generators covering the coastal area from Kalbarri to Bremer Bay and the Goldfields. The transmission and distribution system that supplies this area is known as the South West Interconnected Network (**SWIN**), which mostly (but not completely) comprises the infrastructure that Western Power owns and operates.

[3] ATCO Gas Australia Pty Ltd

Distribution System Reliability

Electricity Distributors

There are two regulatory frameworks that are used to measure the reliability of electrical distribution systems in Western Australia: the *Electricity Industry (Network Quality & Reliability of Supply Code) 2005* (**NQ&R Code**), and the 2002 SCONRRR Framework.[4]

NQ&R Code

After reaching six year highs in 2012, the number of customer premises experiencing extended interruptions (>12 hours continuously) fell significantly in 2013. Horizon Power reported a 68.7% fall (from 1,875 to 587 premises) in affected premises, while Western Power reported a 78.4% fall (from 179,694 to 38,820 premises). Western Power attributed the fall in extended interruptions to a reduction in severe weather and bushfire activity during the year.

In 2013, the number of customer premises experiencing multiple interruptions in the Perth CBD and Urban area[5] systems, all supplied by Western Power, was 34.2% lower than the previous year, while the number of Rural area[6] premises that experienced more than 16 supply interruptions increased: by 183% for Horizon Power and by 108% for Western Power. The number of Rural area premises affected by multiple interruptions in 2013 reached a six year high for both distributors. Western Power attributed the rise in interruptions to a significant increase in lightning activity in the Mid-West region.

Compared to 2012, the average length of interruption to customer premises[7] in the Perth CBD fell and, at 28 minutes total, was below the 30 minutes per annum standard set in the NQ&R Code for the first time. In the Urban areas, the average length of interruption fell from 405 to 390 minutes, which exceeded the 160 minute standard set in the NQ&R Code by 230 minutes.

In the Rural areas supplied by Western Power, the average length of interruptions increased from 947 to 979 minutes, which exceeded the 290 minute standard in the NQ&R Code by 689 minutes. Western Power cited lightning strikes across geographically remote areas of the network as the primary contributor to the increases in the average length of time that customers were off supply in Rural areas during 2013.[8]

In the Rural areas supplied by Horizon Power, the average length of interruptions rose slightly, from 302 to 308 minutes, or 18 minutes over the NQ&R Code standard. Rottnest Island Authority was the only distributor to meet the 290 minute standard in 2013, where the average length of interruptions fell from 226 minutes to 76 minutes.

[4] National regulatory reporting for electricity distribution and retailing businesses, Steering Committee on National Regulatory Reporting Requirements, Utility Regulators Forum, March 2002

[5] Urban areas include the Perth metropolitan area (excluding the CBD), Albany, Bunbury, Geraldton, Kalgoorlie and Mandurah.

[6] Rural areas are all areas of the State other than the Perth CBD and Urban areas.

[7] The NQ&R Code measures the average length of interruption over a four year period.

[8] Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

2002 SCONRRR Framework

The measurement of interruptions under the 2002 SCONRRR Framework[9] (SAIDI, SAIFI and CAIDI)[10] is a more realistic measure of distributor system reliability because it allows the exclusion of interruption events caused by factors that are beyond the reasonable control of the distributor, such as transmission and generation outages. Under the 2002 SCONRRR Framework, the distributors report the total and normalised values of SAIDI, SAIFI and CAIDI. The normalisation process also removes days where the duration of interruptions significantly exceed the long-run average performance of the network.

Comparing the normalised SAIDI on the Western Power system in 2012 and 2013 shows that the average customer minutes off supply on most parts of their system were almost unchanged, with the exception of the Perth CBD, where there was a significant improvement (from 16 to 8 minutes of interruption). Horizon Power reported a 53% reduction (from 283 to 133 minutes) in Urban SAIDI, while the normalisation process removed all of the SAIDI on the Rottnest Island Authority distribution network because all of the outages had been caused by generation faults.

Gas Distributors

2013 is the sixth consecutive year that gas distributors have reported that they did not have any customer supply interruptions longer than 12 hours, nor did any of their customers experience five or more supply interruptions during the reporting year.

Complaints

Electricity Distributors

Electricity distributors are required to report on two distinct complaints categories: technical quality of service (**QoS**) complaints under the NQ&R Code and customer service complaints under the Electricity Customer Code.[11] Complaint reporting obligations for gas distributors are in the Gas Manual,[12] which covers supply quality and reliability, customer service and network charges and costs.

Horizon Power and Western Power were the only distributors who received QoS complaints in 2013. Comparing 2013 with 2012, the number of QoS complaints received by electricity distributors was almost unchanged: 1,330 complaints in 2012 and 1,341 complaints in 2013. The majority of the QoS complaints received in 2013 were related to issues that did not fall into any of the seven defined QoS categories, followed by TV or radio interference complaints and low voltage complaints.

The number of complaints received by Horizon Power related to Electricity Customer Code matters rose sharply during 2013, reaching a six year high of 469 complaints. Administrative and customer service complaints accounted for all of the increase.

[9] National regulatory reporting for electricity distribution and retailing businesses, Steering Committee on National Regulatory Reporting Requirements, Utility Regulators Forum, March 2002.

[10] System Average Interruption Duration Index, System Average Interruption Frequency Index and Customer Average Interruption Duration Index.

[11] *Code of Conduct for the Supply of Electricity to Small Use Customers*.

[12] The Authority's *Gas Compliance Reporting Manual*. The manual incorporates complaints reporting obligations in the *Compendium of Gas Customer Licence Obligations*, which is the equivalent document to the Electricity Customer Code.

Western Power reported a drop in complaints related to Electricity Customer Code matters during 2013, reaching a six year low of 664 complaints.

Prior to 2013, Horizon Power resolved 100% of the complaints they received within 15 business days. In 2013, their complaint resolution performance fell to resolving 55% of complaints within 15 days, which coincides with the significant increase in the number of complaints they received.

In 2013, Western Power's complaint resolution performance reached a six year high; 78% of complaints were resolved within 15 business days. The improved performance continues the trend that started after they reached a six year low of 26% in 2011.

Gas Distributors

In 2013, ATCO (36 complaints) and Wesfarmers (2 complaints) were the only distributors to receive complaints. The total number of complaints received by gas distributors in 2013 (38) is substantially lower than those received by electricity distributors (849).

Call Centre Performance

Electricity Distributors

Between 2012 and 2013, the total volume of calls to electricity distributor call centres was almost unchanged (up from 619,981 to 620,409 calls). Calls to the Horizon Power and Rottnest Island Authority call centres increased by 25% and 5.7% respectively, while calls to the Western Power call centre fell by 3.9%.

Compared to 2012, Horizon Power reported deteriorations in all three call centre performance measures; the percentage of calls answered within 30 seconds fell to a six year low of 75.9%.

Rottnest Island Authority reported a mixed result in 2013; the percentage of calls answered within 30 seconds fell to their lowest level on record, while the percentage of abandoned calls improved to the best on record.

In 2013, Western Power reported improvements in all three call centre performance measures: the percentage of calls answered within 30 seconds reached a six year high of 80.0%, the average wait time before a call is answered fell to a six year low of 12 seconds and the unanswered call percentage also improved.

Gas Distributors

ATCO informed the ERA that they had identified problems with their historical call centre performance data; prior to 2013, they had excluded scheduling calls. ATCO has provided corrected data for 2012.

Between 2012 and 2013, the volume of calls to gas distributor call centres increased by 3% (from 279,378 to 287,643 calls); calls to ATCO increased by 2.8% and calls to Wesfarmers increased by 3.0%.

Compared to 2012, ATCO reported an overall deterioration in all three call centre performance measures in 2013. Due to the data quality issues discussed earlier, it is not possible to assess their long term performance.

Wesfarmers reported an improved performance in 2013; the percentage of calls answered within 30 seconds increased, while the average wait time before a call is answered and the percentage of unanswered calls both fell.

Service Standard Payments

In 2013, Western Power made 47,523 payments (with a value of $3.8M) for supply interruptions exceeding 12 hours in duration, an increase of 65% compared to 2012. Western Power has explained that 38,659 payments were for outages caused by the storms in June 2012; the payments were not processed until the 2013 reporting year.

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Purpose of this Report

The Economic Regulation Authority (**ERA**) is the independent economic regulator for Western Australia.

In its regulatory role, the ERA assesses the terms and conditions, including prices, offered by owners of monopoly infrastructure to third parties in the gas, electricity and rail industries. It also licenses providers of gas, electricity and water services and monitors compliance with licensing conditions and other related regulatory obligations. The ERA also has a range of responsibilities in gas retailing and surveillance of the State's wholesale electricity market.

This is the sixth annual report that examines the performance of electricity distributors and the fifth annual report that examines the performance of gas distributors who supply small use customers in Western Australia that has been published by the ERA.

The purpose of this report is to bring transparency and accountability to the performance of energy distribution[13] businesses (electricity and gas) who supply small use customers (see below) and to benchmark, where possible, performance against similar businesses in other energy markets.

This report focuses on the performance data provided by energy distributors in relation to:

- All distributors:
  - 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 time frames.
  - Customer Service: information about customer satisfaction with the service provided by the distributor as measured by level of complaints and customer contact centre responsiveness.
  - Network Reliability: information about the frequency and duration of supply interruptions on the distribution network.
  - Compensation Payments / Guaranteed Service Level Payments: information about the number of payments made by electricity distributors for failing to meet the service standards prescribed in either the Code of Conduct for the Supply of Electricity to Small Use Customers (**Electricity Customer Code**) and the Electricity Industry (Network Quality and Reliability of Supply) Code 2005 (**NQ&R Code**), and payments made by the ATCO Gas Australia under their access arrangement.[14]
- Electricity distributors only:
  - Street Lighting: measures the proportion of faulty street lights that are repaired by a distributor within the prescribed standards.

[13] Electricity distribution licensees, electricity integrated regional licensees who distribute to small use customers and gas distribution licensees.

[14] ATCO Gas Networks is the only gas distributor that is covered by a service standard payment framework, which forms part of their gas access arrangement.

- Gas distributors only:
  - 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.

Appendix 8 provides further background information about energy distribution in Western Australia, while Appendix 9 provides an overview of the development of the Western Australian energy market.

Energy Distribution Market Information

This section of the report looks at the energy distribution market as measured by the number of distributors who have small use customers connected to their distribution systems and the number of customers that are connected to those systems. The remainder of this section provides information about:

- licensed electricity and gas distributors;
- distributors who are distributing electricity or gas to small use customers; and
- the number of small use electricity and gas customer connections.

Energy Distributors

The number of licensed electricity and gas distributors has remained almost unchanged since 2006. Table 1 details the number of licensed electricity and gas distributors during the five years ending 30 June 2013.

Electricity

When the Electricity Industry Act 2004 (Act) commenced in 2005, existing retailers were required to obtain a licence from the ERA by 30 June 2006. The majority of the licensed electricity distributors who are currently active in the market were granted a licence in 2005 or 2006. Between 1 July 2006 and 30 June 2013, the total number of licences has fallen from eight to six following EDL NGD (WA) and Central Norseman Gold Corporation surrendering their distribution licences in 2010.[15]

Table 1: Number of licensed distributors

	2008	2009	2010	2011	2012	2013
Electricity						
Licensed Distributors	8	6	6	6	6	6
Distributing to small use customers	3	3	3	3	3	3
Gas						
Licensed Distributors[16]	4	3	3	3	3	3

The number of electricity licences to distribute electricity to small use customers has remained unchanged since deregulation in 2005. The three distributors supplying small use customers are: Horizon Power, Rottnest Island Authority and Western Power.

Western Power operates the largest distribution system in the State, called the South West Interconnected Network (**SWIN**) that supplies the coastal area from Kalbarri to Bremer Bay and the Goldfields.

[15] The Electricity Industry Exemption Amendment Order 2009 granted exemptions from the requirement to hold a distribution licence to EDL NGD (WA) and Central Norseman Gold Corporation.

[16] The licensing scheme in Part 2A of the *Energy Coordination Act 1994* only covers distribution systems that supply small use customers.

Horizon Power operates the NWIS[17] and 35 islanded distribution systems in regional towns and remote communities across the State.

Rottnest Island Authority operates the distribution system on Rottnest Island, which is an "A class" nature reserve lying 15km off the coast to the west of Fremantle.

Gas

The ERA took over responsibility for licensing gas retailers from the Office of Energy[18] in 2005. At that time there were three licensed gas distributors: AlintaGas Networks, Wesfarmers Kleenheat Gas (**Wesfarmers**) and WorleyParsons Asset Management (**WorleyParsons**). Between 1 July 2006 and 30 June 2013, one new distribution licence was issued to Origin Energy (in June 2008). Origin Energy subsequently surrendered its licence in June 2010.

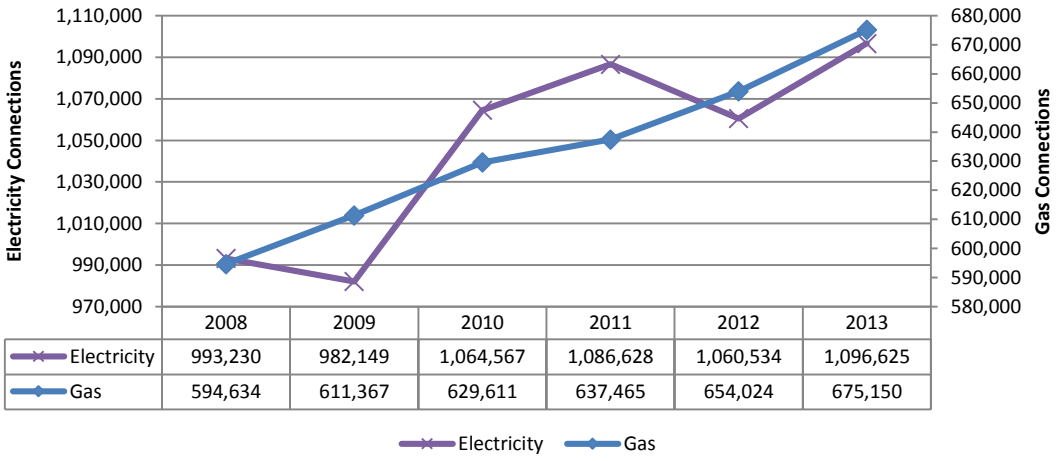
The natural gas distribution systems supplying the coastal area from Geraldton to Busselton and Kalgoorlie, and the distribution system that supplies LPG[19] in Albany are operated by ATCO Gas Australia Pty Ltd (**ATCO**).[20]

Wesfarmers operates three gas distribution systems that supply LPG in Leinster, Margaret River and Oyster Bay (near Albany).

Customer Connections

Figure 1 details the total number of small use customer connections on electricity and gas distribution systems in the State. During 2013, the state-wide number of electricity customer connections increased by 3.4% and the state-wide number of gas customer connections increased by 3.2%. Over the past six years, the average annual increase in customer connections was 2.0% for electricity and 2.6% for gas.

Figure 1: Small use customer connections on electricity and gas distribution systems



	2008	2009	2010	2011	2012	2013
Electricity	993,230	982,149	1,064,567	1,086,628	1,060,534	1,096,625
Gas	594,634	611,367	629,611	637,465	654,024	675,150

[17] The interconnected system located in the Pilbara region of the State that is supplied by generation plants in Dampier, Port Hedland and Cape Lambert.

[18] The responsibilities of the Office of Energy are now undertaken by the Department of Finance's Public Utilities Office in 2012.

[19] Liquefied Petroleum Gas.

[20] These distribution systems were previously owned and operated by AlintaGas Networks.

Connections on electricity distribution systems

Table 2 details the number of customer connections on each electricity distributor's system. Western Power, who operates the SWIN, accounts for 95.8% of the total state-wide customer connections.

During 2013, the number of customer connections on the Western Power system (SWIN) increased by 3.4%. The number of customer connections on the Horizon Power systems increased by 3.5%, while the number of connections on the Rottnest Island Authority distribution system has remained unchanged.

Table 2: Small use electricity connections by distributor

Distributor	2008	2009	2010	2011	2012	2013
Horizon Power	37,580	39,577	41,143	43,181	44,328	45,866
Rottnest Island Authority	99	191[21]	83	83	527[22]	527
Western Power	955,551	942,381	985,000	1,008,525	1,015,679	1,050,232
State Total	**993,230**	**982,149**	**1,026,226**	**1,051,789**	**1,060,534**	**1,096,625**

Table 3 details the number of new connections established by electricity distributors in 2012 and 2013. The total number of new connections established on electricity distribution systems during 2013 was 13.8% higher than in 2012, comprising a 34.9% increase in new connections established by Horizon Power and a 12% increase in new connections established by Western Power.

Table 3: New connections on electricity distribution systems

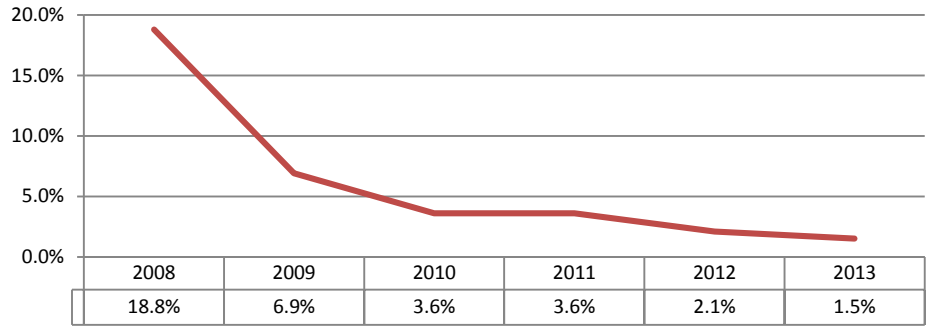
	2012			2013		
Distributor	Number of new connections	Connections not on time	% of connections not on time	Number of new connections	Connections not on time	% of connections not on time
Horizon Power	1,780	2	0.1	2,401	15	0.6
Rottnest Island Authority	0	0	n/a	0	-	-
Western Power	21,420	446	2.1	23,994	361	1.5
State Total	**23,200**	**448**	**-**	**26,395**	**376**	**-**

The *Electricity Industry (Obligation to Connect) Regulations 2005* prescribe the conditions for, and the time frames associated with, establishing a connection to an electricity distribution system for a small use customer. Table 3 shows that Western Power's on time delivery of new connections in 2013 was an improvement over that achieved in 2012. Figure 2 shows that 2013 is the fifth consecutive year that Western Power has improved their on-time connection performance.

[21] Rottnest Island Authority commented that the 2008/09 figure included all connections on the distribution system, not just small use connections.

[22] For 2011/12, Rottnest Island Authority has, for the first time, included multi-unit dwellings and holiday accommodation in its no. of electricity connections.

Figure 2: Percentage of late connections established by Western Power



Connections on gas distribution systems

Table 4 shows the number of small use customer connections on each gas distributor's system. ATCO is the largest gas distributor in the State, with 99.81% of total gas connections in 2013, which is unchanged from 2012.

During 2013, the number of customer connections on the ATCO systems increased by 3.2%, compared to 2012. The number of customer connections on the Wesfarmers and Esperance Power Station distribution systems increased by 6.1% and 4.1% respectively.

Table 4: Small use gas connections by distributor

Distributor	2008	2009	2010	2011	2012	2013
ATCO	593,634	610,294	628,537	636,323	652,808	673,878
Esperance Power Station	209	242	266	280	313	332
Wesfarmers	791	831	808	862	903	940
State Total	**594,634**	**611,367**	**629,589**	**637,427**	**654,024**	**675,150**

Table 5 shows the number of connections that were not provided in a time agreed with the customer. ATCO was the only distributor to report late connections, which represented a very small percentage of the total new connections.

Table 5: New connections on gas distribution networks

	2012			2013		
Distributor	Number of new connections	Connections not on time	% of connections not on time	Number of new connections	Connections not on time	% of connections not on time
ATCO	14,752	3	0.02	15,423	2	0.01
Wesfarmers	41	0	0.00	37	0	0.0
Esperance Power Station	20	0	0.00	3	0	0.0
State Total	**14,813**	**3**	**-**	**15,463**	**2**	**-**

Reconnections on electricity and gas distribution systems

Recent amendments to the Electricity Customer Code and the Gas Compendium require electricity and gas distributors to report performance for reconnecting customer premises to supply in accordance with the relevant prescribed time frame.

The 2013 reconnection data can be found in Appendix 7, Table 45.

Distribution System Reliability

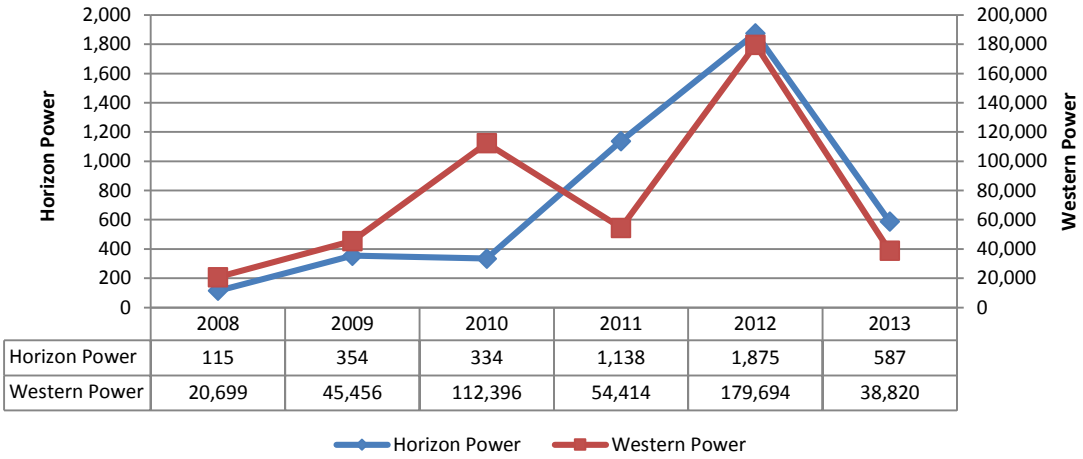
Electricity Supply Interruptions

Section 12 of the Electricity Industry (Network Quality and Reliability of Supply) Code 2005 (**NQ&R Code**) prescribes the following reporting standards in respect of interruptions to supply of small use customer premises:

- The number of customer premises that have experienced interruptions that exceed 12 hours continuously (**extended interruption**).
- The number of customer premises in the Perth CBD and Urban areas[23] that have experienced more than 9 interruptions during the reporting period.
- The number of customer premises in the other areas of the State (**Rural areas**) that have experienced more than 16 interruptions during the reporting period.

Figure 3 shows the number of customer premises on the Horizon Power and Western Power distribution systems that experienced an extended interruption over the past seven years.[24]

Figure 3: Extended interruptions of Horizon Power and Western Power customers



	2008	2009	2010	2011	2012	2013
Horizon Power	115	354	334	1,138	1,875	587
Western Power	20,699	45,456	112,396	54,414	179,694	38,820

Comparing 2013 with 2012, the number of customer premises on the Western Power system that experienced an extended interruption fell by 78.4%. Western Power commented that:

> This improvement in reliability was primarily driven by a decrease in interruptions caused by environmental factors, such as inclement weather and bushfires. However, significant weather events were still the main cause of customer supply interruptions during the 2012/13 period.[25]

The number of extended interruptions on the Horizon Power systems in 2013 (587) was 68.7% lower than in 2012. The Horizon Power interruption data shows a significant degree

[23] The NQ&R Code defines urban areas as being the Perth metropolitan area (excluding the CBD), Albany, Bunbury, Geraldton, Kalgoorlie and Mandurah.

[24] Rottnest Island Authority is excluded from Figure 3 because the number of extended interruptions on their system over the past seven years is small compared to Horizon Power and Western Power. The data for Rottnest Island Authority can be found in Appendix 7, Table 46.

[25] Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

of variability, which reflects the relationship between severe weather events (cyclone activity and extreme heat) and system interruptions during each reporting year.

Rottnest Island Authority reported that there were no extended interruptions to customer premises during 2013.

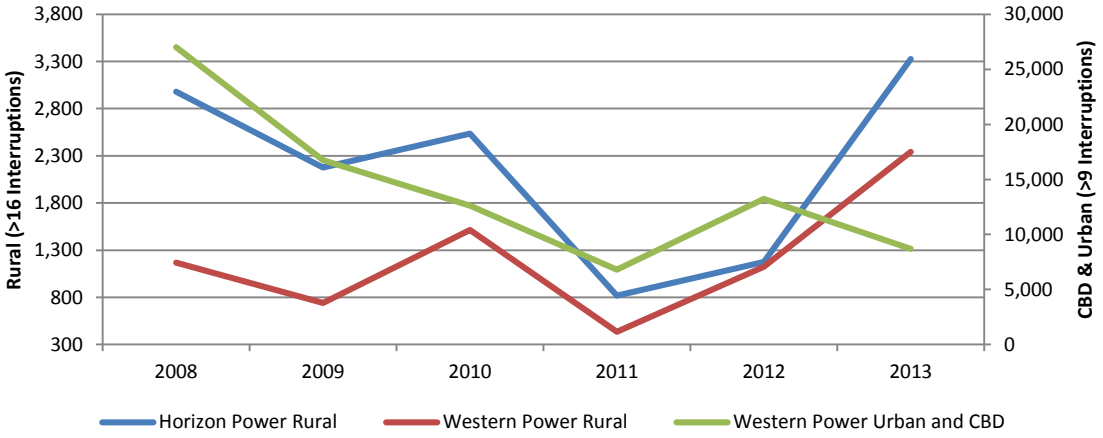
Figure 4 details the number of multiple interruptions to customer premises in the Perth CBD and Urban areas, and in Rural areas. The Perth CBD and Urban areas are exclusively supplied by Western Power, whereas Horizon Power, Rottnest Island Authority and Western Power supply premises in Rural areas.[26]

Comparing 2013 with 2012, the number of customer premises in Perth CBD and Urban areas that experienced more than 9 supply interruptions fell by 34.2%. The total number of Rural area premises that experienced more than 16 supply interruptions increased: by 183% for Horizon Power and by 108% for Western Power. The number of Rural area premises affected by multiple interruptions in 2013 reached a six year high for both distributors.

Western Power commented that:

> [multiple supply interruptions in Rural areas] were predominantly in the Mid-West region, where there has been a significant increase in the wide spread volume of lightning activity.[27]

Figure 4: Multiple supply interruptions on electricity distribution systems



Gas Supply Interruptions

The Gas Manual requires distributors to report on 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.

[26] Rottnest Island Authority has been excluded from Figure 4 because they have not reported any multiple interruptions to customer premises over the past six years.

[27] Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

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

2013 is the sixth consecutive year that gas distributors have reported that none of their customers experience five or more supply interruptions during the reporting year.

ATCO reported that 640 customers experienced a supply interruption that exceeded 12 hours continuously during 2013. ATCO commented that:

> ATCO Gas Australia made enhancements to the method of calculating and recording duration of gas supply interruption, and can now better identify the number of customers that experienced gas supply interruption for more than 12 hours.

The ERA welcomes the enhancements implemented by ATCO, which has led to improvements in the accuracy of reporting supply interruptions.

Electricity Distribution Network Reliability Performance (Network Quality and Reliability Code)

Schedule 1[28] of the NQ&R Code requires distributors to report on the following measures of system reliability for each discrete area of the State:

- average total length of all interruptions of supply to customer premises expressed in minutes (this measure divides the total length of network interruptions by the total number of customer premises connected to the network);
- average length of interruption of supply to customer premises expressed in minutes (this measure divides the total duration of interruptions by the total number of customer premises connected to the network that actually experienced a supply interruption);
- average number of interruptions of supply to customer premises (this measure divides the total number of network interruptions by the number of customer premises that actually experienced a supply interruption); and
- average percentage of time that electricity has been supplied to customer premises.

The values of the NQ&R Code reliability indices reported in this section do not exclude Major Event Days (**MED**),[29] in line with the requirements of the NQ&R Code. The approach taken in the NQ&R Code is unusual in that, by not excluding Major Event Days, the distributor reliability performance includes interruptions caused by factors that are generally outside the control of the distributor, such as third party action, severe storms and other natural disasters.

Clause 13(3) of the NQ&R Code defines the average value of interruptions as:

- the average of the interruptions for each year for the four years ending in the current reporting period; and
- the average of the four (annual) values.

[28] Clauses 11 and 13 of Schedule 1 deal with network reliability.

[29] Standard IEEE 1366-2003 defines a Major Event Day as a day in which the system SAIDI exceeds a threshold value T_{med} minutes. T_{med} is calculated from a statistical analysis of the SAIDI data over a specified period of time to identify events that deviate significantly from the average performance of the network.

This calculation gives an overall average over the most recent four year period and it is applied to the calculation of average length, and average frequency of interruptions.

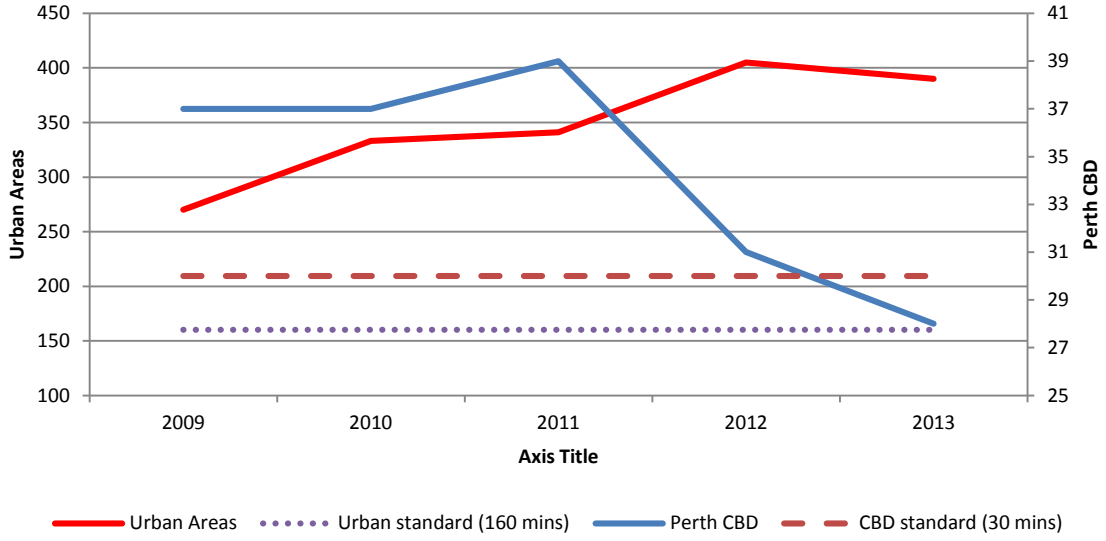
Table 6 details the standards for the average total length of interruptions to supply for each discrete area of the state prescribed in the NQ&R Code. The standards reflect the environmental, infrastructure and demographic factors that influence overall system reliability in each discrete area of the State.

Table 6: NQ&R Code standards for the average length of interruptions of supply (clause 13)

	The Perth CBD[30]	Urban areas (excluding Perth CBD)	Any other area of the State
Average total length of interruptions (minutes per annum)	**30**	**160**	**290**

System Reliability in the Perth CBD and Urban Areas

Figure 5: Average total duration of interruptions on Perth CBD and urban electricity distribution systems



Western Power is the only distributor that supplies customers in the Perth CBD. Figure 5 shows that the average total length of interruptions in the Perth CBD during 2013 (28 minutes) was lower than the 31 minutes reported in 2012, and was below the NQ&R Code standard by for the first time.

Western Power is also the only electricity distributor supplying Urban areas. Figure 5 shows that the average total length of interruptions in Urban areas fell from 405 minutes in 2012 to 390 minutes in 2013, which exceeded the NQ&R Code standard by 230 minutes. Western Power commented that:

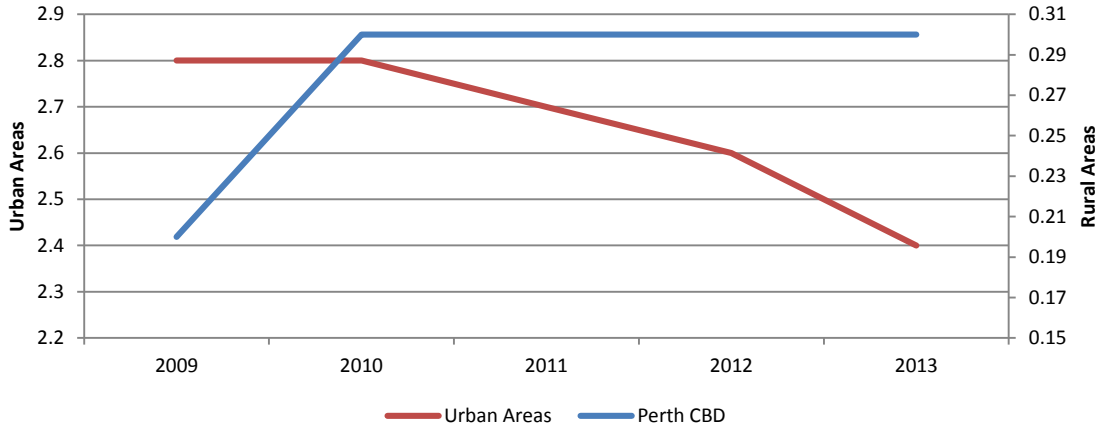
> This was predominantly due to a reduction in the following factors in comparison to the 2011/12 period:
>
> - the severity of storm events; and
> - car versus pole incidents.

[30] The Perth CBD area is defined as the areas supplied from the Milligan Street Zone Substation or the Hay Street Zone Substation.

> In addition, power line upgrades have contributed to a reduction in the impact of unplanned interruptions caused by equipment failure.[31]

Figure 6 shows that the average frequency of supply interruptions experienced by customers in the Perth CBD (0.30) during 2013 was unchanged from the preceding three years, while the frequency of supply interruptions in Urban areas fell from 2.8 to 2.4 over the same period.

Figure 6: Average frequency of interruptions on Perth CBD and urban electricity distribution systems



System Reliability in Other Areas of the State (including Isolated Systems)

All three distributors supply electricity to areas of the State outside of the CBD and Urban areas (**Rural areas**). Figure 7 details the average total duration of interruptions for each distributor in Rural areas.

Rottnest Island Authority is the only distributor that has met the 290 minute standard prescribed in the NQ&R Code, the sixth consecutive year this has been the case. The average duration of interruptions in 2013 (76 minutes) was the lowest reported over the past five years.

During 2013, Horizon Power exceeded the 290 minute standard by 18 minutes, which was marginally higher than the 12 minutes recorded in 2012. This is the third consecutive year that Horizon Power has achieved a performance that is close to the standard. The same consistency is also visible in relation to the average frequency of interruptions, suggesting the overall performance of Horizon Power's networks has been relatively stable for the past three years.

The average duration of interruptions on Western Power's Rural area distribution system increased to 979 minutes in 2013, exceeding the 290 minute standard by 689 minutes. Over the same period, the average frequency of interruptions was almost unchanged (Figure 8), indicating the average length of each interruption event in 2013 was longer than in 2012. Western Power commented that:

> [...] lightning strikes have been a significant contributor to the increase in customer interruptions in rural areas. Other contributors or causes, while much less prevalent than lightning activity, include overhead asset failures and planned outages.[32]

[31] Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

[32] Ibid.

Figure 7: Average total duration of interruptions on electricity distribution systems in other areas of the State

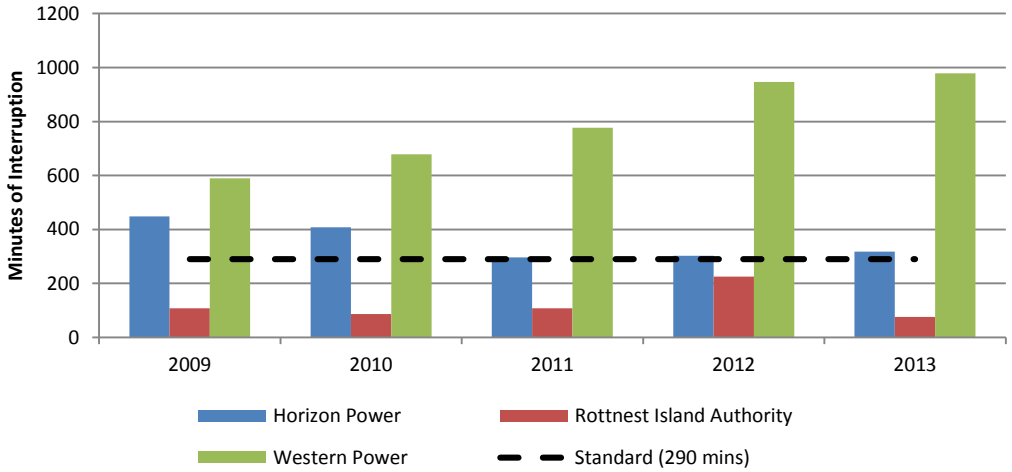
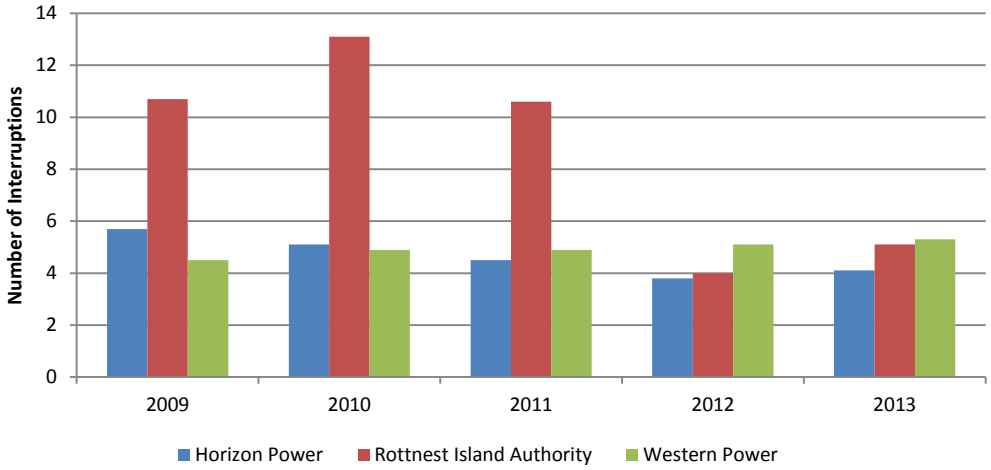


Figure 8: Average frequency of interruptions on electricity distribution systems in other areas of the State



Western Power has been reporting annual interruption data for isolated systems in Bremer Bay and Ravensthorpe to the ERA since 2010, so 2013 is the first year that four year average data is available for the duration and frequency of interruptions on these systems. In 2013, the average duration of interruptions on these systems was 537 minutes (which exceeds the NQ&R Code standard by 247 minutes) and the average frequency of interruptions was 11.6.

Electricity Distribution System Reliability Performance (2002 SCONRRR Framework)

The 2002 SCONRRR[33] reliability performance reporting indicators are based on the definitions in standard IEEE 1366-2003.[34] Measures of supply reliability include:

[33] National Regulatory Reporting for Electricity Distribution and Retailing Businesses, Utility Regulators Forum Steering Committee on National Regulatory Reporting Requirement, March 2002

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

- 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 reporting period.

The definition and calculation of SAIDI, SAIFI and CAIDI apply to sustained interruptions of supply. The 2002 SCONRRR Framework defines the sustained interruption threshold as being more than 1 minute.

The 2002 SCONRRR Framework also categorises the SAIDI, SAIFI and CAIDI measures into Overall, Distribution Network Planned, Distribution Network Unplanned and Normalised Distribution Network Unplanned.

Prior to 2010, the calculation of the Normalised Distribution Network Unplanned measures was based on the definition in the 2002 SCONRRR Framework, which excludes outages that were beyond the reasonable control of the distributor and any outage (irrespective of the cause) that contributes more than three minutes to the network SAIDI value.

In November 2009, the Australian Energy Regulator[35] adopted the method described in standard IEEE 1366 to calculate the daily threshold SAIDI value used to exclude interruptions. The IEEE method applies a statistical approach to calculate the SAIDI threshold for a Major Event Day (**MED**). The Normalised SAIDI then excludes all days during the reporting period where the daily SAIDI value exceeds the MED threshold.

The ERA considers it important that, where possible, there is consistency between the reliability performance measures applying to Western Australian distributors and the measures applying to distributors in other jurisdictions. Accordingly, the ERA has adopted the MED method to exclude unplanned interruptions from the Normalised Distribution Network Unplanned SAIDI, commencing from the 2010 reporting period.

The 2002 SCONRRR Framework applies the SAIDI, SAIFI and CAIDI reliability measures to the four classes of distribution network feeders that are described in Table 7.

Table 7: Distribution feeder classifications (SCONRRR)

Description			
CBD[36]	**Urban**	**Short Rural**	**Long Rural**
A feeder supplying predominantly commercial, high rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy compared to urban areas.	A feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.3MVA/km.	A feeder, which is not a CBD or urban feeder, with a total feeder route length less than 200km.	A feeder, which is not a CBD or urban feeder, with a total feeder route length greater than 200km.

It is normal practice to set reliability targets that are more stringent for CBD and Urban feeders compared to Rural feeders. The more stringent standards for CBD and Urban

[35] Electricity Distribution Network Service Providers, Service Target Performance Incentive Scheme, Australian Energy Regulator, November 2009 (see page 12 and Appendix D)

[36] The Perth CBD area is defined as the areas supplied from the Milligan Street Zone Substation or the Hay Street Zone Substation.

feeders reflect the higher levels of interconnection and available reserved capacity that apply to the design of these networks.

Distributors are also required to record SAIDI, SAIFI and CAIDI for the Total Network. The Total Network measure is the weighted average of the reliability of each class of feeder, and can be used to track trends in overall distributor network reliability over time.

Two measures of SAIDI, SAIFI and CAIDI are presented in this section: Overall and Normalised Distribution Network - Unplanned. The 2002 SCONRRR[37] definitions of these two measures are:

- Overall Interruptions - includes all sustained interruptions including transmission, directed load shedding, planned and unplanned.
- Normalised Distribution Network - Unplanned Interruptions – excludes transmission outages, directed load shedding and unplanned outages where the daily SAIDI exceeds the MED threshold.

System Average Interruption Duration Index (SAIDI)

Table 8 shows the overall and normalised SAIDI values by feeder category for each distributor. As would be expected from the normalisation process (which excludes certain outages from the calculation of SAIDI), the values of overall SAIDI are higher than the normalised SAIDI for all categories of feeder, except Rottnest Island Authority, where the values are the same because they only operate one class of feeder (Short Rural).

Of particular note is the much higher values of normalised SAIDI for the long rural feeders (>200km long) compared to the short rural feeders operated by both Horizon Power and Western Power. The higher values of long rural feeder SAIDI are attributable to the relatively remote locations of these feeders and longer average time to repair faulty lines. The higher values of normalised SAIDI on long rural feeders have relatively little impact on the Total Network SAIDI for both Horizon Power and Western Power because long rural feeders represent a small proportion of the overall feeder population in their distribution systems.

Table 8: Overall and normalised SAIDI for each electricity distributor in 2013

Distributor	Overall Average Interruption Duration (minutes per annum)				
	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	318	N/A	251	296	964
Rottnest Island Authority	76	N/A	N/A	76	N/A
Western Power	350	35	232	407	1,035
	Normalised Average Interruption Duration (minutes per annum)				
	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	202	N/A	133	184	781
Rottnest Island Authority	0	N/A	N/A	0	N/A
Western Power	175	8	103	181	685

N/A – No feeders of this type are operated by the distributor

Table 9 compares the normalised SAIDI values reported by distributors in 2012 and 2013. It can be seen that the Total Network SAIDI on the Horizon Power and Western Power

[37] 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.

networks was almost unchanged, while the normalisation process excluded all of the SAIDI on the Rottnest Island Authority network. Rottnest Island Authority reported that all of the unplanned outages on their network were caused by generator outages, which are excluded by the normalisation process.

In 2013, normalised SAIDI on the Horizon Power Urban feeders was significantly lower than it was in 2012. Horizon Power commented:

> The 2012 figure includes the impact of cyclone Heidi which was a major event that should have been removed from the normalised numbers. The revised 2012 urban feeder figure is 96 giving a total network figure of 167. [This would reduce the 2012 Urban SAIDI from 283 minutes to 96 minutes, and the Total Network SAIDI from 203 minutes to 167 minutes]

Table 9: Comparison of normalised SAIDI for each electricity distributor in 2012 and 2013

	2012					2013				
Distributor	Total Network	CBD	Urban	Short Rural	Long Rural	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	203	N/A	283	155	665	202	N/A	133	184	781
Rottnest Island Authority	226	N/A	N/A	226	N/A	0	N/A	N/A	0	N/A
Western Power	177	16	119	191	563	175	8	103	181	685

N/A – No feeders of this type are operated by the distributor

System Average Interruption Frequency Index (SAIFI)

Table 10 details the overall and normalised SAIFI values by feeder category for each distributor. Because the SAIFI associated with the interruptions that are excluded from the calculation of normalised SAIDI in Table 8 are also excluded from the calculation of normalised SAIFI, the normalised SAIFI values in Table 10 are also less than the overall values.

Table 10: Overall and normalised SAIFI for each distributor in 2013

	Overall Distribution network - Average Interruption Frequency (per annum)				
Distributor	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	4.1	N/A	2.9	4.2	6.8
Rottnest Island Authority	5.1	N/A	N/A	5.10	N/A
Western Power	2.6	0.3	1.8	3.1	6.5
	Normalised Distribution network - Average Interruption Frequency (per annum)				
	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	3.4	N/A	2.3	3.5	6.0
Rottnest Island Authority	0.0	N/A	N/A	0.0	N/A
Western Power	1.8	0.03	1.2	2.2	4.9

N/A – No feeders of this type are operated by the distributor

Table 11 compares the normalised SAIFI values reported by distributors in 2012 and 2013. Horizon Power reported an increase in Long Rural SAIFI, which correlates with a similar increase in Long Rural SAIDI (Table 9), and a slight increase in Urban SAIFI. Comparing Table 11 with Table 9 suggests that the decrease in Urban SAIDI is due to a reduction in the average length of each interruption that occurred in 2013: the number of interruptions has gone up while the total average length of interruptions has fallen.

Western Power reported a significant reduction in CBD SAIFI; most of the interruptions in 2013 were planned interruptions to perform maintenance work.[38] Rottnest Island Authority reported zero SAIFI, which is consistent with the SAIDI result in Table 9.

Table 11: Comparison of normalised SAIFI for each electricity distributor in 2012 and 2013

	2012					2013				
Distributor	Total Network	CBD	Urban	Short Rural	Long Rural	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	3.2	N/A	1.9	3.4	4.5	3.4	N/A	2.3	3.5	6.0
Rottnest Island Authority	3.5	N/A	N/A	3.5	N/A	0.0	N/A	N/A	0.0	N/A
Western Power	1.7	0.2	1.2	2.1	4.3	1.8	0.03	1.2	2.2	4.9

N/A – No feeders of this type are operated by the distributor

Customer Average Interruption Duration Index (CAIDI)

Table 12 details the overall and normalised CAIDI values by feeder category for each distributor. The differences between the overall and normalised CAIDI values for each type of feeder are different to that of SAIDI and SAIFI values because SAIDI and SAIFI measure the effect of interruptions averaged over all the customers that are supplied by a feeder, whereas CAIDI measures the effect of interruptions only for those customers on a feeder whose supply was actually interrupted. Therefore, CAIDI is more representative of the actual experience of the customers who were interrupted than SAIDI.

Table 12: Overall and normalised CAIDI for each electricity distributor in 2013

	Overall Distribution Network - Average Interruption Duration (minutes per annum)				
Distributor	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	78	N/A	87	70	141
Rottnest Island Authority	15	N/A	N/A	15	N/A
Western Power	136	118	128	130	160
	Normalised Distribution Network - Average Interruption Duration (minutes per annum)				
	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	59	N/A	58	52	129
Rottnest Island Authority	0.0	N/A	N/A	0.0	N/A
Western Power	100	270	89	84	139

N/A – No feeders of this type are operated by the distributor

Table 13 compares the normalised CAIDI values reported by distributors in 2012 and 2013. Horizon Power reported a significant decrease in Urban CAIDI, which is consistent with the reduction in Urban SAIDI (Table 9).

Compared to 2012, the CAIDI on the Western Power CBD feeders in 2013 was much higher, but the SAIDI and SAIFI fell significantly over the same period. This suggests that, on average, each interruption on the CBD networks affected only a small portion of the customers supplied by that network (SAIDI and SAIFI calculations include all customers

[38] See section 9.1, Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

served on a network, whereas CAIDI calculations only include the customers who actually experience the interruption).

In 2013, the CAIDI on the Rottnest Island Authority networks was zero, which corresponds to the zero SAIDI and SAIFI result discussed earlier.

Table 13: Comparison of normalised CAIDI for each electricity distributor in 2012 and 2013

	2012					2013				
Distributor	Total Network	CBD	Urban	Short Rural	Long Rural	Total Network	CBD	Urban	Short Rural	Long Rural
Horizon Power	64	N/A	152	46	147	59	N/A	58	52	129
Rottnest Island Authority	64	N/A	N/A	64	N/A	0.0	N/A	N/A	0.0	N/A
Western Power	103	96	99	91	130	100	270	89	84	139

N/A – No feeders of this type are operated by the distributor

Complaints

Electricity Distributors

Complaints Recorded under the SCONRRR 2002 Framework

Table 14 details of the technical quality of service (**QoS**) complaints that have been received by distributors during 2012.

Rottnest Island Authority did not receive any QoS complaints during 2013. A significant proportion of the complaints received by Horizon Power and Western Power were categorised as 'other' (technical matters not falling into the other complaint categories), which is consistent with previous years.

Table 14: Technical Quality of Service (QoS) complaints received in 2013

	Horizon Power	Western Power
Total number of technical QoS complaints	30	1,311
Complaint categories		
Low supply voltage complaints	14	138
Voltage dip complaints	0	0
Voltage swell complaints	0	17
Voltage spike complaints	0	11
Waveform distortion complaints	0	0
TV or radio interference complaints	0	195
Noise from appliances complaints	0	1
Other complaints	16	949

Table 15 details the number of QoS complaints received by distributors over the past six years. It can be seen that the total number of QoS complaints received by distributors varies year on year, but there has been a downward trend in the number of complaints received by Horizon Power over the past six years. The number of complaints received by Western Power in 2012 and 2013 were much lower than in the previous four years.

Table 15: Technical Quality of Service (QoS) complaints

Distributor	2008	2009	2010	2011	2012	2013
Horizon Power	96	63	44	29	23	30
Rottnest Island Authority	0	1	0	0	0	0
Western Power	1,874	1,646	2,068	2,158	1,307	1,311
State Total	**1,970**	**1,710**	**2,112**	**2,187**	**1,330**	**1,341**

The 2002 SCONRRR Framework requires distributors to also report on the likely cause of the problems that led to a technical QoS complaint. Table 16 provides a breakdown of the cause of the technical QoS complaints received by Horizon Power and Western Power in 2013. Horizon Power reported that 67% of the QoS complaints it received were due to "network equipment faulty". Western Power reported that they were unable to identify the

cause of 50.6% of their QoS complaints, while 19.9% of complaints were caused by "network limitations" and a further 13.9% were caused by "network equipment faulty".

Table 16: Likely cause of technical Quality of Service (QoS) complaints in 2013

Likely cause of technical QoS complaints	Horizon Power	Western Power
Network equipment faulty	20	182
Network interference by network service provider equipment	0	3
Network interference by another customer	0	0
Network limitation	0	261
Customer internal problem	0	23
No problem identified	1	663
Environmental	0	4
Other	9	175

Complaints Recorded under the Electricity Customer Code

The customer complaint categories in the Electricity Customer Code exclude complaints related to network quality and reliability, which are dealt with by the NQ&R Code and the 2002 SCONRRR Framework.

Rottnest Island Authority reported that it did not receive any complaints under the Electricity Customer Code in the six years to 2013.

Table 17 details the complaints received by Horizon Power and Western Power over the past six years. In 2013, Western Power received a record low number of complaints, with corresponding reductions in both complaint categories. The number of complaints received by Horizon Power in 2013 was over three times higher than in 2012, reaching a six year high. Almost all of the increase was the result of complaints related to "administrative and customer service" issues, which accounted for 88.3% of total.

Table 17: Complaints received by electricity distributors (Electricity Customer Code)

	2008	2009	2010	2011	2012	2013
Horizon Power						
Administrative and customer service complaints	51	77	65	58	86	414
Other complaints	207	72	113	79	51	55
Total complaints	**118**	**149**	**178**	**137**	**137**	**469**
Western Power						
Administrative and customer service complaints	263	253	181	101	33	25
Other complaints	2,228	2,592	2,514	1,637	679	639
Total complaints	**2,491**	**2,845**	**2,695**	**1,738**	**712**	**664**

Horizon Power commented:

> As an integrated electricity utility, Horizon complaints relate to the retail and network functions including customer billing (also noted in the ERA Annual Performance Report for Energy Retailers). In July 2012, Horizon Power in-sourced metering field services. Through the transition meter reading performance deteriorated which had a

> detrimental impact on billing systems. For some customers this led to longer billing cycles and subsequently higher bills. This led to an increase in the volume of complaints. These issues have now been resolved.

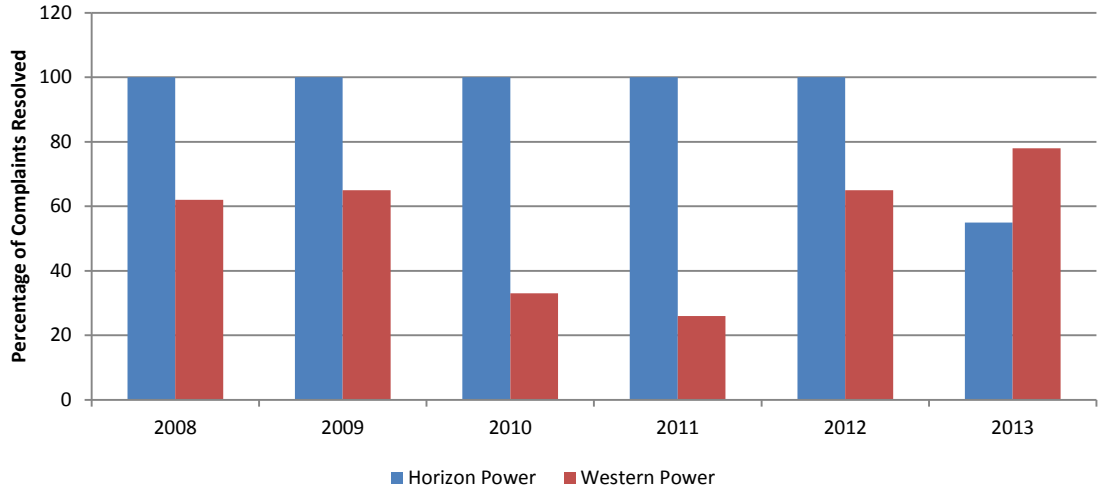
Electricity distributors are also required to report on their complaint resolution performance, which is measured as the percentage of complaints received that they conclude within 15 business days of receipt. Figure 9 shows the complaint resolution performance of Horizon Power and Western Power for the past six years.

Up until 2012, Horizon Power has resolved 100% of the complaints it has received within 15 business days, but in 2013 this fell to 55%. The drop in complaint resolution performance coincides with the large increase in complaints related to Electricity Customer Code matters. Horizon Power commented:

> As described earlier [see the previous comment] Horizon Power in-sourced metering field services in 2012. The transition led to longer billing cycles and subsequently higher bills. This led to an increase in the volume of complaints. This led to an increase in the volume of complaints which also placed significant stress on processes for resolving complaints. The drop in complaint resolution is directly attributable to the now resolved in-sourcing changes.

In 2013, Western Power reported a significant improvement in the percentage of complaints resolved within 15 business days, the second consecutive year of improvement. Western Power's complaint resolution performance in 2013 (78%) reached a six-year high; the improved performance in 2013 corresponds in part with a 1.8% reduction in the number of complaints received (Table 15 and Table 17).

Figure 9: Electricity distributor complaint resolution performance



Gas distributors

The Gas Manual incorporates the complaint reporting obligations under the *Compendium of Gas Customer Licence Obligations* (**Gas Compendium**), the complaint categories in the SCONRRR 2002 Framework and regulatory reporting frameworks in other jurisdictions.

Table 18 details the number of complaints received by gas distributors over the past six years. Comparing Table 18 with Table 15 and Table 17 shows that the level of complaints received by gas distributors is a fraction of those received by electricity distributors.

Table 18: Complaints received by gas distributors

Distributor	2008	2009	2010	2011	2012	2013
ATCO	33	30	38	35	36	25
Esperance Power Station	0	0	1	0	0	0
Wesfarmers	0	0	0	0	2	0
State Total	**33**	**30**	**39**	**35**	**38**	**25**

Table 19 categorises the complaints received by ATCO in 2013, 40% of complaints relate to "other" causes (as defined in the Gas Compendium) followed by "administrative processes" (24%).

Table 19: Categorisation of complaints received by ATCO in 2013

Complaint Category	ATCO
Total Number of Complaints	25
Complaint category	
Connection and Augmentation	4
Reliability of Supply	2
Quality of Supply	3
Network Charges and Costs	0
Administrative Processes or Customer Service	6
Other	10

Call Centre Performance

The majority of a customer's interaction with their distributor is by telephone. Accordingly, it is important that distributors are able to provide ready telephone access for customers to contact them about service related issues during business hours. The larger distributors operate call centres which employ multiple customer service agents to handle customer enquiries and complaints.

Smaller distributors offer a simpler telephone service, which is often based on the customer calling their switchboard, which then connects them to the appropriate contact person.

The distributors that have a call centre to handle customer calls are able to record a range of information about the incoming calls, including performance statistics. Some of the call centres operated by distributors handle other calls in addition to calls about the electricity or gas distribution service. Unless the retailer can separately record the statistics for the distribution calls from all other calls, the call centre performance reported for distribution customers is based on the overall performance of the call centre.

Measuring the telephone service provided by the distributor helps to assess the customer experience when they contact their distributor. There are three key responsiveness measures that are uniformly measured across service industries:

- percentage of calls answered within 30 seconds;
- average duration before a call is answered, measured in seconds; and
- percentage of unanswered calls.

The remainder of this section presents electricity and gas distribution call centre performance in relation to these responsiveness measures. If the distributor call centre uses Interactive Voice Response equipment[39] to handle calls then the responsiveness measures only apply to those calls where the customer has indicated that they wish to speak to an operator.

Electricity Distributor Call Centres

All three electricity distributors operate call centres: Horizon Power and Rottnest Island Authority outsource their call centres to other service providers, while Western Power operates an in-house call centre. The Horizon Power and Rottnest Island Authority call centres handle calls for both retail and distribution customers without distinguishing retail calls from distribution calls, and the Rottnest Island Authority call centre also handles calls related to other areas of their business.

Table 20 details the volume of calls to electricity distributor call centres over the past six years. Comparing 2012 and 2013, the volume of calls to Horizon Power's call centre rose by 25% and to Rottnest Island Authority's call centre by 5.7%, while the volume of calls to Western Power's call centre fell by 3.9%.

Horizon Power commented:

[39] Interactive Voice Response equipment allows a call centre telephone system to detect voice and keypad tone signals and then respond with pre-recorded or dynamically generated audio to further direct callers to the service they require.

Horizon Power's call centre call volumes and service level performance were similarly impacted as described in 'Residential Complaints' [this is a reference to the complaints data in the 2013 Annual Performance Report – Energy Retailers]

As described earlier Horizon Power in-sourced metering field services in 2012. The transition led to longer billing cycles and subsequently higher bills. This led to an increase in the volume of calls which also placed significant stress on the call centre. The drop in call centre performance is directly attributable to the now resolved in-sourcing changes.

Table 20: Volume of calls to electricity distributor call centres

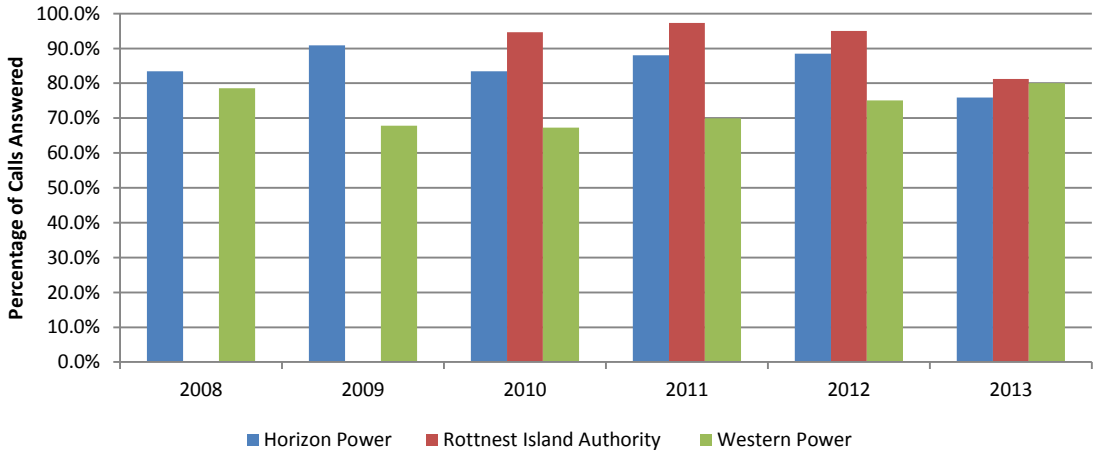
	2008	2009	2010	2011	2012	2013
Horizon Power	85,356	94,018	89,200[40]	71,215	82,587	103,301
Rottnest Island Authority	N/A	N/A	1,027	5,272	5,840	6,173
Western Power	360,114	373,761	538,903	495,626	531,554	510,935
State Total	**445,470**	**467,779**	**629,130**	**572,149**	**619,981**	**620,409**

In order to assess the overall performance of the distributor's call centres it is prudent to examine all three performance measures together. Figures 10, 11 and 12 show the distributor's performance against these performance measures over the six years to 2013.

Comparing call centre performance in 2013 with that of 2012:

- There was an overall deterioration in Horizon Power's performance: the percentage of calls answered within 30 seconds fell to a six year low (75.9%), the average duration before a call is answered doubled to 36 seconds and the percentage of unanswered calls also increased. The decline in performance coincides with an increase in call volumes (Table 20).
- Rottnest Island Authority reported a mixed result: the percentage of calls answered within 30 seconds (81.2%) was the lowest since they commenced reporting in 2010, the average duration before a call is answered was relatively unchanged and the percentage of unanswered calls fell to the lowest on record (2.1%).
- Western Power reported a solid improvement in performance: the percentage of calls answered within 30 seconds reached a six year high (80.0%), the average duration before a call is answered fell to a six year low of 12 seconds and the percentage of unanswered calls also improved.

Figure 10: Percentage of electricity distributor calls answered within 30 seconds



[40] This is the combined total of both retail and distribution calls.

Figure 11: Average duration before a call was answered by electricity distributors

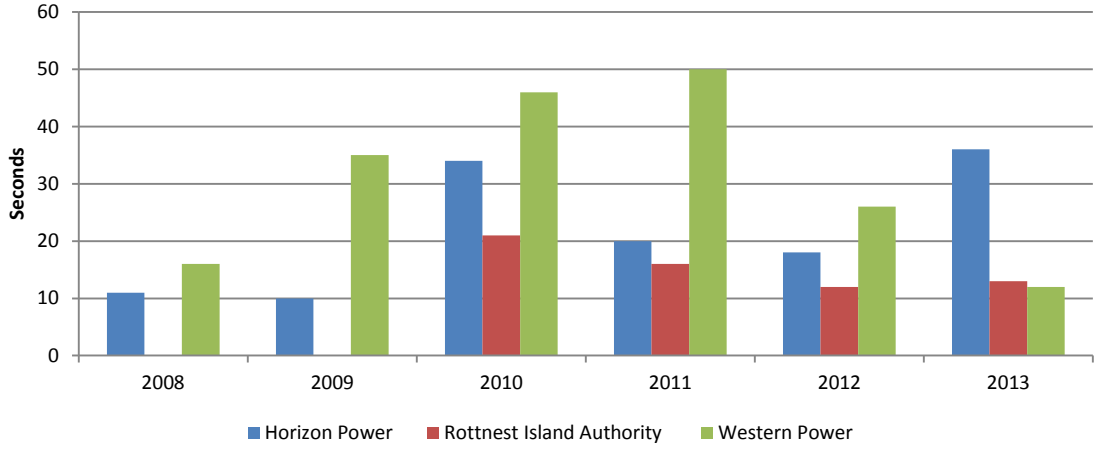
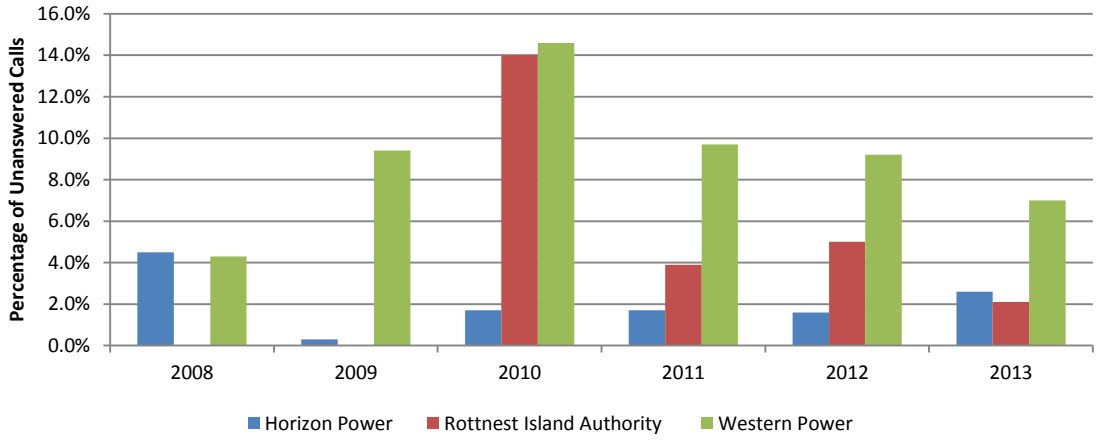


Figure 12: Percentage of calls that were unanswered by electricity distributors



Gas Distributor Call Centres

ATCO and Wesfarmers are the only gas distributors that operate call centres. Esperance Power Station provides telephone support to its customers using simpler telephone systems that do not record performance statistics. Accordingly, the remainder of this section of the report will focus on ATCO and Wesfarmers.

In 2013, ATCO informed the ERA that it had identified problems with their historical call centre performance data. Up until 2012, ATCO had only included fault call data in their reports to the ERA; calls related to "scheduling" matters had been excluded. ATCO has provided corrected data for 2012, previous year's data has not been provided due to the costs involved.

Table 21 details the volume of calls received by the ATCO and Wesfarmers call centres over the past six years. Compared to 2012, the total volume of calls to the two distributors call centres increased by 3.0%; calls to ATCO increased by 2.8% and calls to Wesfarmers increased by 3.0%.

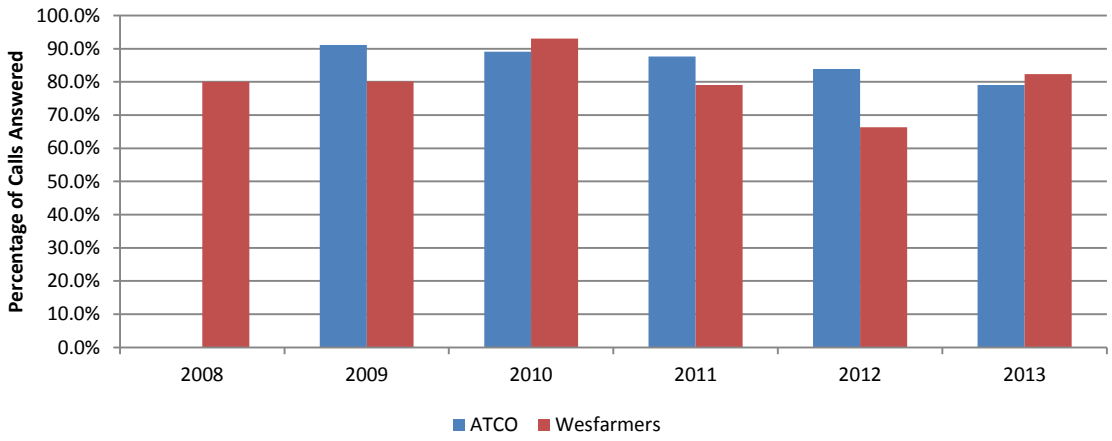
Table 21: Volume of calls to gas distributor call centres

	2008	2009	2010	2011	2012	2013
ATCO	n/a	59,802	41,132	37,391	65,098[41]	66,933
Wesfarmers	179,119	147,202	172,080	190,764	214,280	220,710
State Total	**179,119**	**207,004**	**213,212**	**228,155**	**279,378**	**287,643**

Comparing call centre performance in 2013 with that of 2012:

- ATCO reported an overall deterioration in their performance: the percentage of calls answered within 30 seconds fell to 79.1%, the average duration before a call is answered increased from 25 to 31 seconds and the percentage of unanswered calls increased from 2.5% to 3.2%. Due to the quality problems with ATCO's data, it is not possible to assess their long term call centre performance.
- Wesfarmers reported an improvement in performance: the percentage of calls answered within 30 seconds rose from 66.3% to 82.4%, the average duration before a call is answered fell from 28 seconds to 19 seconds and the percentage of unanswered calls also improved, falling from 3.7% to 2.2%.

Figure 13: Percentage of gas distributor calls answered within 30 seconds



[41] The ATCO call volume for 2012 has been corrected. The reported call volume in the 2012 report was 36,824 calls.

Figure 14: Average duration before a call was answered by gas distributors

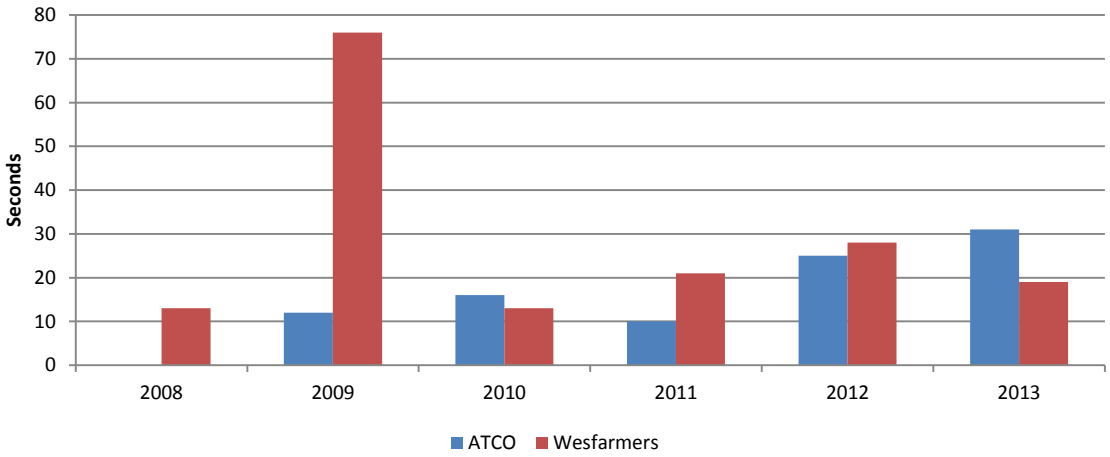
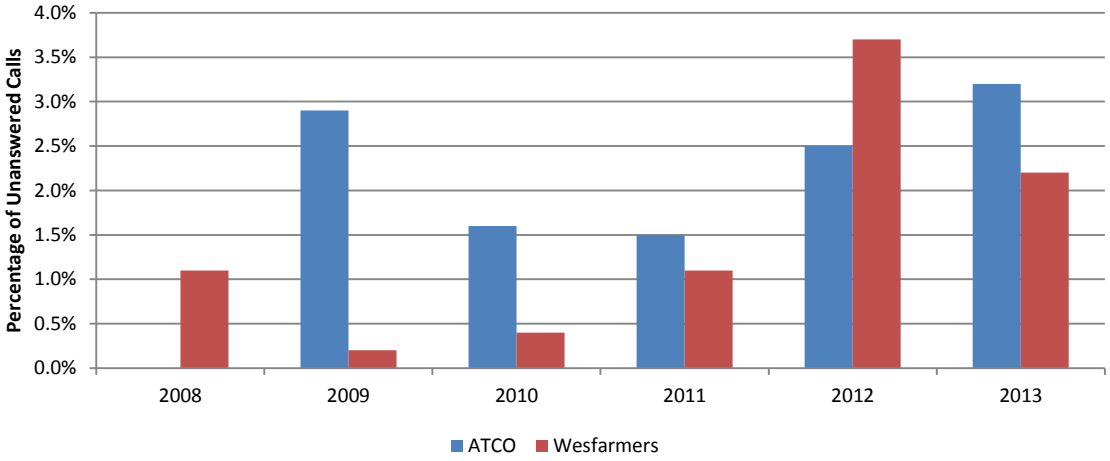


Figure 15: Percentage of calls that were unanswered by gas distributors



Service Standard Payments

Electricity Distributor Service Standard Payments

The obligation for distributors to make service standard payments to customers is dealt with in both the Electricity Customer Code and the NQ&R Code.

Part 14.4 of the Electricity Customer Code makes provision for service standard payments (at $20 per occurrence) for failure to acknowledge or respond to a written customer query or complaint within the prescribed time frames.

Part 3 of the NQ&R Code makes provision for service standard payments to 'eligible' small use customers[42] for:

- failure to give at least 72 hours notice of a planned interruption to supply, at $20 per occurrence (section 18); and
- supply interruptions exceeding 12 hours in duration, at $80 per occurrence (section 19).

Rottnest Island Authority has not made any service standard payments to customers over the past six years. Accordingly, Table 22 details the payments made by Horizon Power and Western Power.

Comparing 2013 with 2012, the number of payments made by Western Power for not providing 72 hours notice of planned power interruptions fell by 29.4%, while payments made for outages longer than 12 hours increased by 65%. Western Power commented that:

> [...] The payment volumes for the 2012/13 period include [38,659] payments relating to the June 2012 storm, which we processed and paid in the 2012/13 period.[43]

Table 22: Service standard payments made by electricity distributors

	2008	2009	2010	2011	2012	2013
Electricity Customer Code - clause 14.4						
Horizon Power	0	0	0	0	0	0
Western Power	1	4	0	1	4	0
NQ&R Code – section 18						
Horizon Power	1	2	1	0	9	1
Western Power	241	364	573	1,158	968	683
NQ&R Code – section 19						
Horizon Power	27	31	71	589	32	34
Western Power	3,099	5,589	34,151	24,328	28,800	47,523

[42] Customers consuming not more than 50MWh of electricity per annum (i.e. non-contestable customers).

[43] Section 8.2, Annual Reliability and Power Quality Report (1 July 2012 – 30 June 2013), accessed on the Western Power webpage: http://westernpower.com.au/aboutus/publications/annualreliabilitypowerquality.html

Gas Distributor Guaranteed Service Level Payments

ATCO (formerly WA Gas Networks) 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 ATCO 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.

ATCO reported a total of two payments for the late establishment of a gas service, down from three payments in the previous year. No other GSL payments were made during 2013.

Appendices

Appendix 1 - Gas Consumption and Unaccounted for Gas

Gas Consumption

The Gas 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 systems in the hour(s) of heaviest customer demand. Table 50 (Appendix 7) details gas consumption on each distributor's systems for the six years to 2013.

ATCO informed the ERA that it had identified problems with their historical non-residential gas consumption data. Up until 2012, ATCO had included consumption by customers who consumed more than 1TJ of gas per annum. ATCO has provided corrected non-residential gas consumption data for 2011 and 2012, which has been incorporated into Table 23 below, and Tables 57 and 59 in Appendix 7.

Table 23 compares gas consumption in 2013 with the previous year. During 2013, state-wide gas consumption decreased by increased by 5.1%, comprising a 5.1% increase in residential gas consumption and a 7.2% increase in non-residential gas consumption.

There were some significant changes in gas consumption on the smaller distribution systems operated by Esperance Power Station and Wesfarmers during the two years; Wesfarmers' residential gas consumption increased by 14.3% and Esperance Power Station's non-residential consumption increased by 467.5%.

Table 23: Comparison of gas consumption in 2012 and 2013

	Residential			Non-Residential		
Distributor	**2012**	**2013**	**Change (%)**	**2012**	**2013**	**Change (%)**
ATCO	9,528,366	10,017,511	5.1%	1,177,507[44]	1,241,075	5.4%
Esperance Power Station	3,536	3,567	0.9%	4,666	26,481	467.5%
Wesfarmers	5,506	6,293	14.3%	243	227	-6.6%
State Total	**9,537,408**	**10,027,371**	**5.1%**	**1,182,416**	**1,267,783**	**7.2%**

Unaccounted for Gas

Unaccounted for gas (UFG) is a measure of network efficiency for gas distribution systems. UFG represents the difference between gas metered at the input to the distribution system 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 system, thereby reducing the level of leaks and other gas loss events.

Table 24 details the level of UFG for the six years to 2013. In 2013, the state-wide level of UFG fell by 11.6%, driven by significant falls in UFG reported by ATCO and Wesfarmers. This is the first year that the state-wide level of UFG has fallen.

Esperance Power Station has reported zero UFG for the past five years. This is not surprising given that their distribution network is only eight years old, and it is constructed using modern plastic piping.

[44] This is the corrected value, the previously reported value for 2012 was 16,633,141GJ.

Table 24: Unaccounted for gas on distribution systems (GJ)

Distributor	2008	2009	2010	2011	2012	2013
ATCO	621,266	830,915	858,000	866,667	920,371	813,898
Esperance Power Station	50	0	0	0	0	0
Wesfarmers	804	415	344	931	1,158	866
State Total	**622,120**	**831,330**	**858,344**	**867,598**	**921,529**	**814,764**

Comparing Table 24 with Table 23 it can be seen that UFG accounts for 13.3% of the total gas entering the Wesfarmers distribution systems in 2013, down from 20.1% in 2012. It is not possible to calculate a percentage UFG on the ATCO distribution systems because the gas consumption data is for small use customers only, whereas the UFG is a total figure for the systems, including large use customers.

Appendix 2 - Leaks on Gas Distribution Systems

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 Gas 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 25 details the number of repairs to low, medium and high pressure gas mains during the six years to 2013. Given the relative size of the ATCO gas distribution system in comparison to the distribution systems operated by Esperance Power Station and Wesfarmers (Table 40), it is not surprising that ATCO accounts for nearly all of the mains leak repairs. Compared to 2013, ATCO reported a 0.6% increase in the number of gas main leak repairs on their networks.

Table 25: Gas main leak repairs

	2008	2009	2010	2011	2012	2013
ATCO	755	706	916	600	830	835
Esperance Power Station	0	1	3	0	0	2
Wesfarmers	0	0	0	1	0	1
State Total	**755**	**2716**	**919**	**601**	**830**	**236**

Table 26 details the number of leak repairs to property service connections during the six years to 2012. For the reasons specified above, ATCO accounts for nearly all of the repairs over the six year period. Compared to 2012, ATCO reported a 16.9% increase in the number of property service connection leak repairs carried out.

Table 26: Gas property service connection leak repairs

	2008	2009	2010	2011	2012	2013
ATCO	5,713	5,348	6,481	6,003	5,657	6,614
Esperance Power Station	2	1	0	1	0	3
Wesfarmers	0	0	0	0	0	0
State Total	**5,713**	**5,349**	**6,481**	**6,004**	**5,657**	**2,131**

Table 27 details the number of leak repairs to gas meters during the six years to 2013. Compared to 2012, ATCO reported a 40.4% reduction in the number of leak repairs to gas meters.

Table 27: Gas meter leak repairs

	2008	2009	2010	2011	2012	2013
ATCO	787	1,006	1,079	1,008	816	486
Esperance Power Station	0	0	0	0	0	0
Wesfarmers	0	0	0	0	1	0
State Total	**787**	**1,006**	**1,079**	**1,008**	**817**	**240**

Appendix 3 - Street Lighting Repairs

The Electricity Customer Code requires electricity distributors to maintain records in respect of street lights that they are responsible for, including:

- the total number of street lights they are responsible for the maintenance of in metropolitan and regional areas;[45]
- the number of street lights reported faulty each month in metropolitan and regional areas;
- the number of occasions that they have failed to repair faulty street lights within:
  - 5 business days for the metropolitan area;
  - 9 business days for regional areas; and
- the average number of days to repair faulty street lights in metropolitan and regional areas.

The time to repair commences from the time that a distributor becomes aware that the street light is faulty.

Table 28 details the number of street lights in metropolitan and regional areas that are maintained by each distributor. Over the past six years the average annual growth of metropolitan and regional streetlights was 2.3% and 2.7% respectively. The streetlight population maintained by Horizon Power and Western Power has grown over time, while the number of streetlights maintained by Rottnest Island Authority has remained unchanged over the six years to 2012, which reflects the static nature of the electricity distribution system on Rottnest Island.

Table 28: Number of street lights in metropolitan and regional areas

	2008	2009	2010	2011	2012	2013
Metropolitan areas						
Horizon Power	4,344	4,636	5,017	5,293	5,441	5,993
Western Power	179,320	183,342	187,305	192,890	198,070	199,767
Total	**183,664**	**187,978**	**192,322**	**198,183**	**203,511**	**205,760**
Regional areas						
Horizon Power	8517	8,817	9,257	9,610	9,978	10,331
Rottnest Island Authority	190	190	190	190	190	190
Western Power	33,765	35,060	35,867	37,018	37,595	37,907
Total	**42,472**	**44,067**	**45,314**	**46,818**	**47,763**	**48,428**

Table 29 details the number of faulty street lights reported to the distributors over the past five years. Compared to 2012, the number of faulty metropolitan and regional street lights reported to distributors both increased.

[45] The Electricity Customer Code defines the metropolitan area as: Perth, Mandurah, Shire of Murray, Albany, Bunbury, Geraldton, Kalgoorlie, Karratha, Port Hedland and South Hedland.

Table 29: Number of street light faults logged in metropolitan and regional areas

Metropolitan	2008	2009	2010	2011	2012	2013
Metropolitan areas						
Horizon Power	432	420	156	168	180	108
Western Power	27,554	40,508	39,978	35,912	34,271	36,525
Metropolitan Total	**27,986**	**40,928**	**40,134**	**36,080**	**34,451**	**36,633**
Regional areas						
Horizon Power	264	276	192	156	168	166
Rottnest Island Authority	30	48	24	36	18	46
Western Power	1,114	4,043	6,214	2,922	3,137	3,414
Regional Total	**1,408**	**4,367**	**6,430**	**3,114**	**3,323**	**3,626**

Figure 16 details the number of street light faults logged by distributors, expressed as a percentage of the total street light population maintained by each distributor in the metropolitan and regional areas. The proportion of faulty metropolitan street lights reported to Horizon Power and Western Power is higher than in the regional areas. The most likely explanation for this difference is that the detection rate for faulty street lights in regional areas is lower than in metropolitan areas due to their relatively isolated locations.

On average, over the past six years, the percentage of metropolitan streetlights reported faulty each year is 18.5%, and the percentage of regional streetlights reported faulty is 8.1%.

Figure 16: Percentage of faulty street lights by distributor and location

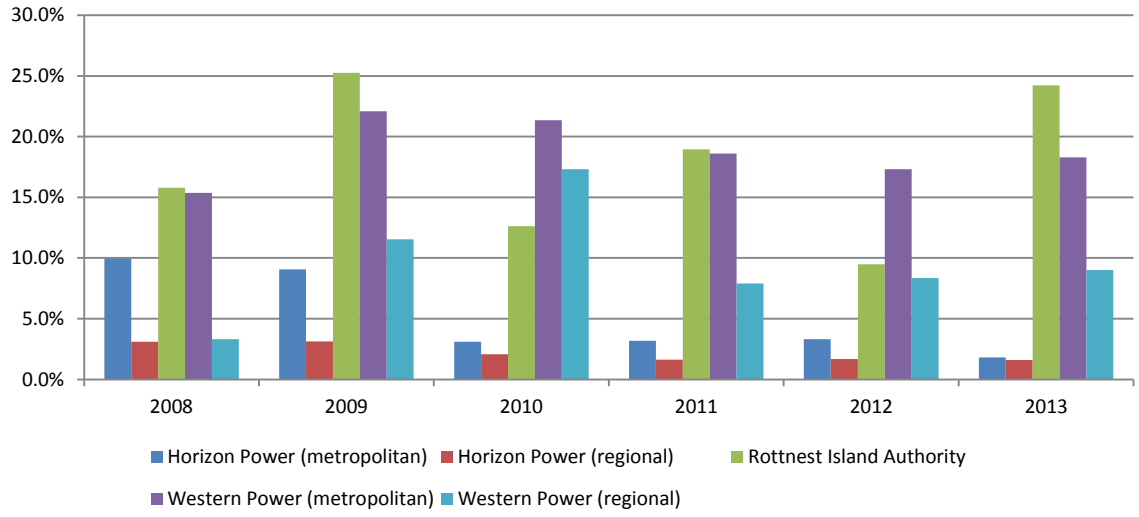


Figure 17 details the percentage of faulty metropolitan street lights that have been repaired after the five day deadline specified in the Electricity Customer Code for the past six years.

Western Power has significantly improved their metropolitan street light repair performance over the past six years; the percentage of late repairs in 2013 reached a new low of 2.5%. Horizon Power also significantly improved their on-time metropolitan streetlight repair performance; late repairs fell from 28% in 2012 to 7.8% in 2013.

Figure 17: Percentage of faulty metropolitan street lights repaired after 5 days

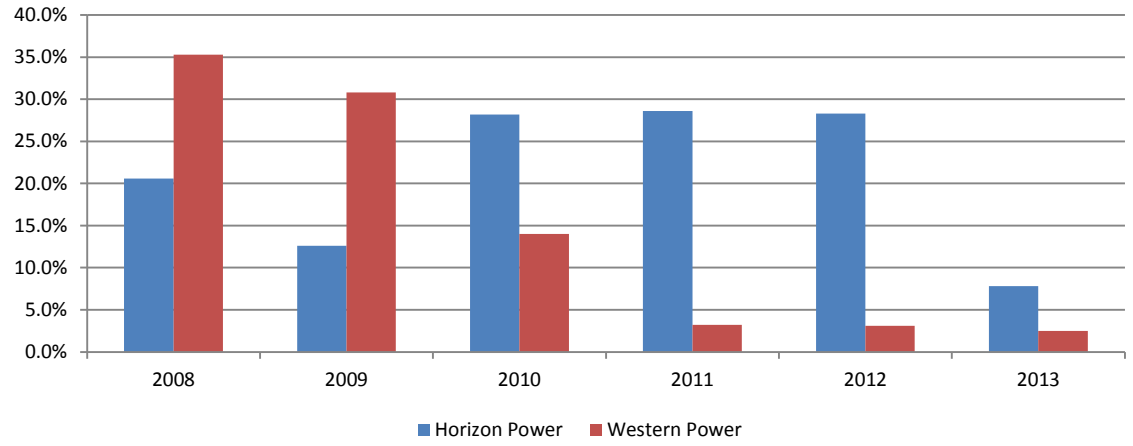
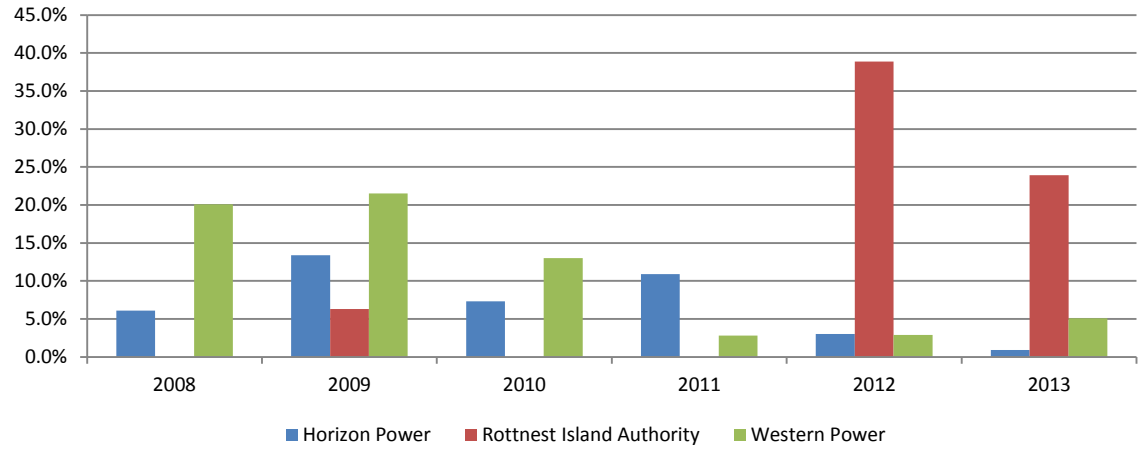


Figure 18 details the percentage of faulty regional street lights that have been repaired after the nine day deadline specified in the Electricity Customer Code over the past six years.

Compared to 2012, the percentage of late regional streetlight repairs performed by Horizon Power and Rottnest Island Authority both fell, to 0.9% (a six year low) and 23.9% respectively. Western Power's regional streetlight repair performance deteriorated slightly in 2013, late repairs rose from 2.9% in 2012 to 5.1% in 2013.

Figure 18: Percentage of faulty regional street lights repaired after 9 days



Appendix 4 Additional Electricity System Reliability Information

Network Reliability (SCONRRR 2002)

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

- Overall – includes all sustained planned and unplanned interruptions including those caused by generation outages, transmission outages and directed load shedding.
- Distribution Network (Planned) – excludes generation outages, transmission outages and directed load shedding.
- Distribution Network (Unplanned) – excludes generation outages, transmission outages and directed load shedding.
- Normalised Distribution Network (Unplanned) – excludes outages which:
  - are generation outages;
  - are transmission outages;
  - are directed load shedding; and
  - where the daily SAIDI value exceeds the threshold for a MED;[46]

SAIDI

Table 30: Western Power SAIDI performance in 2013

SAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	350	35	232	407	1,035
Distribution Network (Planned)	99	21	67	144	206
Distribution Network (Unplanned)	238	8	156	251	793
Normalised Distribution Network (Unplanned)	175	8	103	181	685

Table 31: Horizon Power SAIDI performance in 2013

SAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	318.0	N/A	251.4	295.6	964.4
Distribution Network (Planned)	80.1	N/A	47.1	85.0	133.9
Distribution Network (Unplanned)	237.9	N/A	204.3	210.6	830.5
Normalised Distribution Network (Unplanned)	201.5	N/A	132.7	183.7	780.5

[46] Standard IEEE 1366-2003 defines a Major Event Day as a day in which the system SAIDI exceeds a threshold value T_{med} minutes. T_{med} is calculated from a statistical analysis of the SAIDI data for the whole reporting period to identify events that deviate significantly from the average performance of the network.

Table 32: Rottnest Island Authority SAIDI Performance in 2013

SAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	75.8	N/A	N/A	75.8	N/A
Distribution Network (Planned)	25.8	N/A	N/A	25.8	N/A
Distribution Network (Unplanned)	50.0	N/A	N/A	50.0	N/A
Normalised Distribution Network (Unplanned)	0.0	N/A	N/A	0.0	N/A

SAIFI

Table 33: Western Power SAIFI performance in 2013

SAIFI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	2.57	0.29	1.82	3.12	6.46
Distribution Network (Planned)	0.32	0.07	0.21	0.47	0.68
Distribution Network (Unplanned)	1.99	0.03	1.36	2.45	5.33
Normalised Distribution Network (Unplanned)	1.75	0.03	1.16	2.17	4.91

Table 34: Horizon Power SAIFI performance in 2013

SAIFI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	4.09	N/A	2.88	4.22	6.84
Distribution Network (Planned)	0.48	N/A	0.37	0.50	0.57
Distribution Network (Unplanned)	3.61	N/A	2.52	3.72	6.27
Normalised Distribution Network (Unplanned)	3.40	N/A	2.29	3.51	6.04

Table 35: Rottnest Island Authority SAIFI performance in 2013

SAIFI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	5.10	N/A	N/A	5.10	N/A
Distribution Network (Planned)	0.10	N/A	N/A	0.10	N/A
Distribution Network (Unplanned)	5.00	N/A	N/A	5.00	N/A
Normalised Distribution Network (Unplanned)	0.00	N/A	N/A	0.00	N/A

CAIDI

Table 36: Western Power CAIDI performance in 2013

CAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	136	118	128	130	160
Distribution Network (Planned)	308	286	311	307	303
Distribution Network (Unplanned)	119	268	115	103	149
Normalised Distribution Network (Unplanned)	100	270	89	84	139

Table 37: Horizon Power CAIDI performance in 2013

CAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	136	118	128	130	160
Distribution Network (Planned)	308	286	311	307	303
Distribution Network (Unplanned)	119	268	115	103	149
Normalised Distribution Network (Unplanned)	100	270	89	84	139

Table 38: Rottnest Island Authority CAIDI performance in 2013

CAIDI Measure	Total Network	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders
Overall	14.9	N/A	N/A	14.9	N/A
Distribution Network (Planned)	302.0	N/A	N/A	302.0	N/A
Distribution Network (Unplanned)	10.0	N/A	N/A	10.0	N/A
Normalised Distribution Network (Unplanned)	0.0	N/A	N/A	0.0	N/A

Appendix 5 Electricity Distribution System Asset Information

Table 39 provides an overview of the assets deployed in the distribution systems operated by Horizon Power, Rottnest Island Authority and Western Power.

Table 39: Electricity distribution system assets in 2013

Asset Type	Asset Sub-Type	Horizon Power	Rottnest Island Authority	Western Power
Number of metered supply points	CBD	N/A	N/A	7,272
	Urban	8,163	N/A	674,600
	Short Rural	35,299	195	273,425
	Long Rural	2,069	N/A	98,866
Feeder Length (km)	CBD	N/A	N/A	214.9
	Urban	236.6	N/A	18,891.3
	Short Rural	3,400.8	44.9	18,204.5
	Long Rural	2,998.2	N/A	53,935.6
Number of Transformers	Sub-transmission	N/A	2	N/A
	Distribution	3,960	3	65,828
Total Capacity of Transformers (MVA)	Sub-transmission	N/A	2	N/A
	Distribution	657	3	8,704
Number of street lights		16,304	190	237,674
Number of Poles		59,144	50	758,947

Appendix 6 Gas Distribution System Construction Information

Table 40 provides an overview of the network assets deployed in the distribution systems operated by ATCO, Esperance Power Station and Wesfarmers. It can be seen that the distribution systems installed and in service for Esperance Power Station and Wesfarmers are significantly smaller and less diverse in both asset and operating pressure than the distribution systems operated by ATCO.

Table 40: Gas distribution network construction information for 2013

Asset Type	Asset Sub-Type	ATCO			Esperance Power Station			Wesfarmers		
		Low Pressure	Medium Pressure	High Pressure	Low Pressure	Medium Pressure	High Pressure	Low Pressure	Medium Pressure	High Pressure
Length of gas main (km) constructed from:	Cast Iron	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Unprotected Steel	117.1	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Protected Steel	0.0	56.1	732.4	0.0	0.0	0.0	0.0	0.0	0.0
	PVC	3,619.6	6,007.7	0.0	0.0	0.0	0.0	0.0	8.7	0.0
	Polyethylene	65.4	2,269.6	373.3	0.0	35.2	0.0	0.0	42.3	0.0
	Other	26.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total length of distribution mains installed and in service (km)		3856.3	8405.5	1105.7	0.0	35.2	0.0	0.0	51.0	0.0
Number of service connections per km of gas mains		50.4			9.4			18.4		

Appendix 7 Additional Electricity and Gas Performance Data

Table 41: Total small use customer connections on electricity and gas distribution systems

	Electricity							Gas					
	2008	2009	2010	2011	2012	2013		2008	2009	2010	2011	2012	2013
Horizon Power	37,580	39,577	41,143	43,181	44,328	45,866	ATCO	593,634	610,294	628,537	636,323	652,808	673,878
Rottnest Island Authority	99	191	83	83	527[47]	527	Esperance Power Station	209	242	266	280	313	332
Western Power	955,551	942,381	1,023,341	1,043,364	1,015,679	1,050,232	Wesfarmers	791	831	808[48]	862	903	940
State Total	**993,230**	**982,149**	**1,064,567**	**1,086,628**	**1,060,534**	**1,096,625**	**State Total**	**594,634**	**611,367**	**629,589**	**637,427**	**654,024**	**675,150**

[47] For 2011/12, Rottnest Island Authority, for the first time, included multi-unit dwellings and holiday accommodation in its electricity connections data.

[48] Wesfarmers has corrected the number of connections on their distribution systems from 796 to 808 connections.

Table 42: Establishment of new customer connections on electricity and gas distribution systems

	New connections on electricity systems							New connections on gas systems					
	2008	2009	2010	2011	2012	2013		2008	2009	2010	2011	2012	2013
Horizon Power	1,749	1,793	1,764	2,157	1,780	2,401	ATCO	18,870	16,660	16,911	19,611	14,752	15,423
Rottnest Island Authority	1	2	0	0	0	0	Esperance Power Station	16	33	24	14	20	3
Western Power	33,641	25,568	26,304	24,614	21,420	23,994	Wesfarmers	73	40	42	54	41	37
State Total	**35,391**	**27,363**	**28,068**	**26,771**	**23,200**	**26,395**	**State Total**	**20,038**	**16,733**	**16,977**	**19,679**	**14,813**	**15,463**

Table 43: Number of customer connections not established within the prescribed time frames on electricity and gas distribution systems

	Number of new connections not established on time						Percentage of total new connections					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Electricity												
Horizon Power	273	0	0	0	2	15	15.6	0.0	0.0	0.0	0.1	0.6
RIA	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Western Power	6,325	1,771	957	885	446	361	18.8	6.9	3.6	3.6	2.1	1.5
Gas												
ATCO	34	35	6	7	3	2	0.2	0.2	0.04	0.04	0.02	0.01
Esperance Power Station	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Wesfarmers	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0

Table 44: Customer reconnections on electricity and gas distribution systems

	Reconnections on electricity systems							Reconnections on gas systems						
	2008	2009	2010	2011	2012	2013		2008	2009	2010	2011	2012	2013
Horizon Power	-	-	-	-	-	95	ATCO	-	-	-	-	-	3,692
Rottnest Island Authority	-	-	-	-	-	0	Esperance Power Station	-	-	-	-	-	2
Western Power	-	-	-	-	-	13,908	Wesfarmers	-	-	-	-	-	4
State Total	**-**	**-**	**-**	**-**	**-**	**14,003**	**State Total**	**-**	**-**	**-**	**-**	**-**	**3,698**

Table 45: Number of customer reconnections not established within the prescribed time frames on electricity and gas distribution systems

	Number of reconnections not established on time						Percentage of total reconnections					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Electricity												
Horizon Power	-	-	-	-	-	5	-	-	-	-	-	5.3
RIA	-	-	-	-	-	-	-	-	-	-	-	-
Western Power	-	-	-	-	-	227	-	-	-	-	-	1.6
Gas												
ATCO	-	-	-	-	-	22	-	-	-	-	-	0.6
Esperance Power Station	-	-	-	-	-	0	-	-	-	-	-	0.0
Wesfarmers	-	-	-	-	-	0	-	-	-	-	-	0.0

Table 46: Number of small use electricity customer premises that have experienced interruptions of more than 12 hours continuously

	2008	2009	2010	2011	2012	2013
Horizon Power	115	354	334	1,138	1,875	587
Rottnest Island Authority	0	0	0	0	3	0
Western Power	20,699	45,456	112,396	54,414	179,694	38,820
State Total	**20,814**	**45,810**	**112,730**	**55,552**	**181,572**	**39,407**

Table 47: Number of Urban (including Perth CBD) and Rural electricity customer premises that have experienced multiple interruptions

	Perth CBD and Urban areas, > 9 interruptions						Rural areas, > 16 interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Horizon Power	N/A	N/A	N/A	N/A	N/A	N/A	2,979	2,176	2,535	819	1,176	3,327
Rottnest Island Authority	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0
Western Power	27,006	16,733	12,616	6,813	13,224	8,702	1,168	739	1,513	435	1,125	2,341
State Total	**27,006**	**16,733**	**12,616**	**6,813**	**13,224**	**8,702**	**4,147**	**2,915**	**4,048**	**1,254**	**2,301**	**5,668**

Table 48: Number of small use gas customers experiencing interruptions exceeding 12 hours continuously

	Customers with interruptions to supply >12 hours continuously						Customers with 5 or more supply interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
ATCO	0	0	0	0	0	640	0	0	0	0	0	0
Esperance Power Station	0	0	0	0	0	0	0	0	0	0	0	0
Wesfarmers	1	0	0	0	0	0	0	0	0	0	0	0
State Total	**1**	**2009**	**0**	**0**	**0**	**640**	**0**	**0**	**0**	**0**	**0**	**0**

Table 49: Average duration and frequency of supply interruptions in the Perth CBD (NQ&R Code)

	Duration of Interruptions						Frequency of Interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Horizon Power	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Rottnest Island Authority	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Western Power	-	37	37	39	31	28	-	0.2	0.3	0.3	0.3	0.3

Table 50: Average duration and frequency of supply interruptions in the Urban Areas (NQ&R Code)

	Duration of Interruptions						Frequency of Interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Horizon Power	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Rottnest Island Authority	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Western Power	-	270	333	341	405	390	-	2.8	2.8	2.7	2.6	2.4

Table 51: Average duration and frequency of supply interruptions in the Other Areas of the State (NQ&R Code)

	Duration of Interruptions						Frequency of Interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Horizon Power	-	448	408	297	302	318	-	5.7	5.1	4.5	3.8	4.1
Rottnest Island Authority	-	108	87	108	226	76	-	10.7	13.1	10.6	4	5.1
Western Power	-	590	679	777	947	979	-	4.5	4.9	4.9	5.1	5.3

Table 52: Average duration and frequency of supply interruptions in the Isolated Systems (NQ&R Code)

	Duration of Interruptions						Frequency of Interruptions					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
Horizon Power	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Rottnest Island Authority	-	N/A	N/A	N/A	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A
Western Power	-	-	-	-	-	537	-	-	-	-	-	11.6

Table 53: Complaints received by electricity distributors

	Year ending 30 June					
	2008	2009	2010	2011	2012	2013
Electricity Customer Code Complaints						
Horizon Power	118	149	178	137	137	469
Rottnest Island Authority	0	0	0	0	0	0
Western Power	2,491	2,845	2,695	1,738	712	664
Admin processes and customer service complaints						
Horizon Power	51	77	65	58	86	414
Rottnest Island Authority	0	0	0	0	0	0
Western Power	263	253	181	101	33	25
Other Complaints						
Horizon Power	207	72	113	79	51	55
Rottnest Island Authority	0	0	0	0	0	0
Western Power	2,228	2,592	793	1,637	679	639
Technical Quality of Supply complaints						
Horizon Power	96	63	44	29	23	30
Rottnest Island Authority	0	1	0	0	0	0
Western Power	1,874	1,646	2,068	2,158	1,307	1,311
Customer complaints concluded in 15 business days (% of total Technical Quality of Supply and Electricity Customer Code complaints)						
Horizon Power	100	100	100	100	100	55
Rottnest Island Authority	-	-	-	-	-	-
Western Power	62	65	33	26	65	78

Table 54: Complaints received by gas distributors (Gas Compendium)[49]

	Year ending 30 June					
	2008	2009	2010	2011	2012	2013
Total number of complaints						
ATCO	33	30	38	35	36	16
Esperance	0	0	0	0	0	0
Wesfarmers	0	0	1	0	2	0
Admin processes and customer service complaints						
ATCO						6
Esperance						0
Wesfarmers						0
Other Complaints						
ATCO						10
Esperance						0
Wesfarmers						0
Customer complaints concluded in 15 business days (Combined total of Gas Compendium and Quality & Reliability Complaints)						
ATCO						92.0%
Esperance	-	-	-	-	-	-
Wesfarmers						-

[49] Prior to 2013, the total complaints included reliability and quality of supply complaints as well as complaints received in relation to the two categories under the Gas Compendium. The reliability and quality of supply complaints were included in the Other Complaints category. From 2013, the report will separate the reliability and quality of supply complaints into a separate table (Table 51).

Table 55: Complaints received by Gas Distributors (Reliability and Quality of Supply)

	Year ending 30 June					
	2008	2009	2010	2011	2012	2013
Total number of complaints						
ATCO	-	-	-	-	-	9
Esperance	-	-	-	-	-	0
Wesfarmers	-	-	-	-	-	0
Connection and augmentation complaints						
ATCO	-	-	-	-	-	4
Esperance	-	-	-	-	-	0
Wesfarmers	-	-	-	-	-	0
Reliability of supply complaints						
ATCO	-	-	-	-	-	2
Esperance	-	-	-	-	-	0
Wesfarmers	-	-	-	-	-	0
Quality of supply complaints						
ATCO	-	-	-	-	-	3
Esperance	-	-	-	-	-	0
Wesfarmers	-	-	-	-	-	0
Network charges and costs complaints						
ATCO	-	-	-	-	-	0
Esperance	-	-	-	-	-	0
Wesfarmers	-	-	-	-	-	0

Table 56: Electricity and gas distributor call centre performance

	Total number of calls						Calls responded within 30 sec (%)					
Distributor	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	85,356	94,018	89,200[50]	71,215	82,587	103,301	83.4	90.9	83.4	88.0	88.5	75.9
RIA	N/A	N/A	1,027	5,272	5,840	6,173	N/A	N/A	94.6	97.3	95.0	81.2
Western Power	360,114	373,761	538,903	495,626	531,554	510,935	78.6	67.8	67.3	69.9	75.1	80.0
Electricity Total	**445,470**	**467,779**	**629,130**	**572,149**	**619,981**	**620,409**						
ATCO	N/A	59,802	41,132	37,391	65,098	66,933	N/A	91.1	89.1	87.7	83.9	79.1
Wesfarmers[51]	179,119	147,202	172,080	190,764	214,280	220,710	80.0	80.1	93.1	79.1	66.3	82.4
Gas Total	**179,119**	**207,004**	**213,212**	**228,155**	**279,378**	**287,643**						

	Average duration before a call is answered by an operator (seconds)						Unanswered calls (%)					
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	11	10	34	20	18	36	4.5	0.3	1.7	1.7	1.6	2.6
RIA	N/A	N/A	21	16	12	13	N/A	N/A	14.0	3.9	5.0	2.1
Western Power	16	35	46	50	26	12	4.3	9.4	14.6	9.7	9.2	7.0
ATCO	N/A	12	16	10	25	31	N/A	2.9	1.6	1.5	2.5	3.2
Wesfarmers	13	76	13	21	28	19	1.1	0.2	0.4	1.1	3.7	2.2

[50] This is the combined total of both retail and distribution calls.

[51] The Wesfarmers call centre also handles calls for other Wesfarmers Kleenheat Gas businesses. The data presented in this table includes all calls to the Wesfarmers call centre.

Table 57: Residential and non-residential gas consumption

	Residential gas consumption (GJ)						Non-residential gas consumption (%)					
Distributor	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
ATCO	10,279,166	10,620,391	10,806,658	10,563,707	9,528,366	10,017,511	18,978,436	17,194,904	17,231,682	1,203,416	1,177,507[52]	1,241,075
Esperance Power Station	19,935	22,875	5,100	6,268	5,506	3,567	2,036	1,847	315	250	243	26,481
Wesfarmers	2,474	2,644	2,893	3,060	3,536	6,293	17,783	19,038	19,303	25,152	4,666	227
State Total	**10,301,575**	**10,645,910**	**10,814,651**	**10,573,035**	**9,537,408**	**10,027,371**	**18,998,255**	**17,215,789**	**17,251,300**	**17,423,028**	**16,638,050**	**1,267,783**

Table 58: Unaccounted for gas (GJ)

Distributor	2008	2009	2010	2011	2012	2013
ATCO	621,266	830,915	858,000	866,667	920,371	813,898
Esperance Power Station	50	0	0	0	0	0
Wesfarmers	804	415	344	931	1,158	866
State Total	**622,120**	**831,330**	**858,344**	**867,598**	**921,529**	**814,764**

Table 59: Percentage of unaccounted for gas on distribution systems

	Total gas consumption (GJ)						Unaccounted for gas (%)					
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
ATCO	29,257,607	27,976,970	27,880,360	11,767,123	10,705,873[53]	11,258,586	2.8	3.1	3.1	7.4	8.6[54]	7.2
Esperance Power Station	20,257	21,682	22,196	28,212	8,202	30,048	0.0	0.0	0.0	0.0	0.0	0.0
Wesfarmers	21,971	24,722	5,415	6,158	5,749	6,520	1.8	1.4	17.2	17.7	3.0	13.3

[52] Prior to 2013, ATCO has included gas supplied to large use non-residential customers in their gas consumption data. The values for 2011 and 2012 are the corrected values, the values presented in the 2012 report were: 2011 – 17,397,626GJ, 2012 – 16,633,141GJ.

[53] The values for 2011 and 2012 have been corrected, see the above footnote.

[54] The values for 2011 and 2012 have been corrected, see the above footnote.

Table 60: Gas main leak repairs

	2008	2009	2010	2011	2012	2013
ATCO	755	706	916	600	830	835
Esperance Power Station	0	1	3	0	0	2
Wesfarmers	0	0	0	1	0	1
State Total	**755**	**2716**	**919**	**601**	**830**	**838**

Table 61: Gas meter leak repairs

	2008	2009	2010	2011	2012	2013
ATCO	787	1,006	1,079	1,008	816	486
Esperance Power Station	0	0	0	0	0	0
Wesfarmers	0	0	0	0	1	0
State Total	**787**	**1,006**	**1,079**	**1,008**	**817**	**240**

Table 62: Gas property service connection meter repairs

	2008	2009	2010	2011	2012	2013
ATCO	5,713	5,348	6,481	6,003	5,657	6,614
Esperance Power Station	2	1	0	1	0	3
Wesfarmers	0	0	0	0	0	0
State Total	**5,713**	**5,349**	**6,481**	**6,004**	**5,657**	**2,131**

Table 63: Number of street lights and street light faults logged

	Total number of streetlights						Street light faults logged					
Metropolitan	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	4,344	4,636	5,017	5,293	5,441	5,993	432	420	156	168	180	108
Western Power	179,320	183,342	187,305	192,890	198,070	199,767	27,554	40,508	39,978	35,912	34,271	36,525
State total	**183,664**	**187,978**	**192,322**	**198,183**	**203,511**	**205,760**	**27,986**	**40,928**	**40,134**	**36,080**	**34,451**	**36,633**
	Total number of streetlights						**Street light faults logged**					
Regional	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	8,517	8,817	9,257	9,610	9,978	10,331	264	276	192	156	168	166
RIA	190	190	190	190	190	190	30	48	24	36	18	46
Western Power	33,765	35,060	35,867	37,018	37,595	37,907	1,114	4,043	6,214	2,922	3,137	3,414
State total	**42,472**	**44,067**	**45,314**	**46,818**	**47,763**	**48,428**	**1,408**	**4,367**	**6,430**	**3,114**	**3,323**	**3,626**

Table 64: Metropolitan and regional area street light faults that are repaired after the prescribed timeframes

	Number of faults fixed in > 5 days						Percentage					
Metropolitan	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	89	53	44	48	51	13	20.6	12.6	28.2	28.6	28.3	7.8
Western Power	9,738	12,494	5,598	1,134	1,050	899	35.3	30.8	14.0	3.2	3.1	2.5
State total	**9,827**	**12,547**	**5,642**	**1,182**	**1,101**	**912**						
	Number of faults fixed in > 9 days						**Percentage**					
Regional	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Horizon Power	16	37	14	17	5	1	6.1	13.4	7.3	10.9	3.0	0.9
RIA	0	3	0	0	7	11	0.0	6.3	0.0	0.0	38.9	23.9
Western Power	224	871	808	83	91	173	20.1	21.5	13.0	2.8	2.9	5.1
State total	**240**	**911**	**822**	**100**	**103**	**185**						

Appendix 8 Energy Distribution System Regulation

Definition of a small use customer

Throughout this report, the following definitions of a customer are used:

- Customer - means a (small use) customer connection that:
  - consumes not more than 1TJ (or approximately $30,000) of gas per annum, or
  - consumes not more than 160MWh (or approximately $35,000) of electricity per annum.

Distribution Licence Performance Reporting Obligations

All energy distribution licences include obligations for the licensee to provide information to the Authority in respect of the activities covered by the licence. As described below, the Authority has restricted the obligation to provide non-financial performance information to those distributors who supply small use customers.

Electricity Licences

Electricity distribution licences include a condition that the licensee must provide to the Authority any information that the Authority may require to fulfil its functions under the *Electricity Industry Act 2004* (**Electricity Act**). The Authority has specified the non-financial performance information that is to be provided by the electricity distribution licensees who supply small use customers in the *Electricity Compliance Reporting Manual* (**Electricity Manual**) published by the Authority in May 2011. The Electricity Manual incorporates the record keeping requirements of the Electricity Customer Code, which in turn references the 2002 SCONRRR Framework.[55]

Gas Licences

Gas distribution licences include a condition that the licensee must provide to the Authority any information that the Authority may require to fulfil its functions under the *Energy Coordination Act 1994* (**Gas Act**), and the reporting requirements contained in the *Compendium of Gas Licence Obligations* (**Gas Compendium**).[56] The Authority has specified the non-financial performance information that is to be provided by the gas distribution licensees who supply small use customers in the *Gas Compliance Reporting Manual* (**Gas Manual**) published by the Authority in June 2013.[57] The Gas Manual incorporates the record keeping requirements in the Gas Compendium.

[55] National regulatory reporting for electricity distribution and retailing businesses, Utility Regulators Forum, March 2002.

[56] The Compendium of Gas Customer Licence Obligations (Gas Compendium) is made by the Authority pursuant to section 11M and Schedule 1A of the Gas Act. Obligations in the Gas Compendium are included in gas licences as conditions of the licence.

[57] Gas Compliance Reporting Manual, which can be found on the Authority's website: http://www.erawa.com.au/licensing/gas-licensing/regulatory-guidelines

Electricity Networks Access Code

The *Electricity Networks Access Code 2004* (**Access Code**) provides the framework for the independent regulation of certain electricity networks in the State. The objective of the Access Code is to promote the economically efficient investment in, and operation and use of, networks and services of networks in the State and to promote competition in electricity retail and wholesale markets.

The Authority is responsible for regulating third party access to regulated or 'covered' electricity networks. Since the commencement of the Access Code, the only covered network in the State is Western Power's network within the South West Interconnected System (**SWIS**), which comprises most, but not all of the South West Interconnected Network (**SWIN**).[58]

The Access Code requires Western Power to provide third parties access to its transmission and distribution network through an Access Arrangement.[59] Access arrangements detail the terms and conditions, including prices, which apply to third parties seeking the use of regulated electricity networks. Western Power's access arrangement for the first access arrangement period (2006/07 to 2008/09, "AA1") was approved by the Authority on 26 April 2007, to become effective from 1 July 2007. Revisions to this access arrangement for the second access arrangement period (2009/10 to 2011/12, "AA2") were approved by the Authority on 19 January 2010, to become effective from 1 March 2010. The Authority published its final decision on the third access arrangement ("AA3") for the period 2012/13 to 2016/17, on 5 September 2012. The Authority considered Western Power's Amended Proposed Access Arrangement[60] and published a Further Final Decision on 29 November 2012. The Amended Proposed Access Arrangement commenced on 1 February 2013.

Each access arrangement sets out a number of reference services that may be purchased from Western Power by a third party, the pricing of each service[61] and the service standard benchmarks that are to be met for each reference service. The majority of the reference services relate to the distribution network. Western Power is required to provide to the Authority an annual report on its performance against the service standard benchmarks.

[58] The SWIS includes the coastal area from Kalbarri to Bremer Bay and the Goldfields. The distribution and transmission systems that supply this area are collectively known as the South West Interconnected Network (**SWIN**).

[59] Details of the Access Arrangement can be found on the Authority's website: http://www.erawa.com.au/3/882/48/electricity_access__western_powers_approved_access.pm

[60] The current 2009 -2012 approved access arrangement continues in effect until a revised access arrangement is approved.

[61] Pricing matters are covered in Chapters 6 to 8 of the Access Code.

Appendix 9 Development of the Western Australian Energy Market

Historically, the Western Australian energy sector for small use customers has been dominated by government owned monopoly utilities. The State Energy Commission of Western Australia (**SECWA**) was established on 1 January 1975 as an amalgamation of the State Electricity Commission of Western Australia (established in 1945) plus the Fuel and Power Commission.

On 1 January 1995, SECWA was split into separate gas and electricity utilities: AlintaGas and Western Power Corporation. Both of these entities have subsequently been disaggregated into other businesses that focus on particular segments of the energy market. The following sections provide further details of the disaggregation of the utilities and the development of licensed electricity and gas distribution network providers.

Electricity distribution

In 2006, the Government restructured Western Power Corporation into four new statutory Corporations:

- Electricity Networks Corporation (t/a Western Power): operates the majority of the transmission and distribution networks within the SWIS;
- Electricity Retail Corporation (t/a Synergy): retails electricity within the SWIS;
- Regional Power Corporation (t/a Horizon Power): vertically integrated electricity business that operates a number of small distribution systems in areas of the State outside the SWIS; and
- Electricity Generation Corporation (t/a Verve Energy): operates the former Western Power generation facilities.

The restructuring of the former Western Power Corporation followed the deregulation of electricity supply in the State, with the commencement of the Electricity Act. The Electricity Act includes provisions for the licensing of electricity supply and in particular, Part 2 of the Electricity Act sets out the provisions pertaining to the licensing scheme for electricity service providers. The Electricity Act prescribes five classes of electricity licence:

1) Distribution – construct and operate electricity distribution networks.
2) Generation – construct and operate electricity generation plant.
3) Retail – sell electricity to customers.
4) Transmission – construct and operate electricity transmission networks.
5) Integrated Regional – undertake one or more of the activities listed in (1) to (4) above.

Since the introduction of the electricity licensing scheme in 2005, there has been a total of nine distribution licences issued by the Authority. Some of these licences have subsequently been surrendered, leaving a total of six distribution licences active as at 30 June 2012.[62]

[62] Details of electricity licenses can be found on the Authority's web site: http://www.erawa.com.au/licensing/electricity-licensing/licence-holders

In April 2013, the government announced the merger of Synergy and Verve into a single entity. The reasons cited for the merger was the need to deliver improved efficiencies in electricity delivery to consumers. On 1 January 2014, Verve and Synergy were merged into a single entity trading as Synergy.

Gas distribution

Following the split of SECWA in January 1995, the SECWA gas retail and distribution businesses were transferred to AlintaGas, which was formed in January 1995 as an integrated gas distribution and retail business that also had ownership of the Dampier to Bunbury Natural Gas Pipeline (**DBNGP**). As part of the government's policy of privatisation, the DBNGP was later sold in 1998, and is now owned and operated by the DBNGP consortium. AlintaGas retained ownership of the gas distribution and retail operations.

In 1999, the Gas Act was amended to facilitate the privatisation of AlintaGas and implement a licensing scheme covering the supply of gas to small use customers.

AlintaGas was publicly listed on the Australian stock exchange in July 2000. The privatised AlintaGas was restructured into separate distribution and retail businesses:

- Alinta Sales assumed ownership of the retailing operations of AlintaGas; and
- AlintaGas Networks - assumed ownership of AlintaGas' distribution networks in the Coastal, Goldfields-Esperance and Great Southern licence areas.

Part 2A of the Gas Act regulates the licensing scheme for gas distributors and retailers who supply small use customers. The Gas 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 network.

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

Since the introduction of the gas licensing scheme in 1999 there has been a total of four gas distribution licences[63] issued by the Authority and its predecessor, the Office of Energy. One of these licences has subsequently been surrendered, leaving a total of three distribution licences active as at 30 June 2012.

[63] Prior to 2008, licences were associated with a single supply area. At that time there were six licences issued to three licensees. The amendment of gas licences in August 2007 resulted in a single licence covering multiple supply areas, which reduced six licences to three. The fourth licence was issued to Origin Energy in 2008 for the Mid-West supply area.