2007/08 Annual Performance Report
Electricity Distributors

April 2009

Economic Regulation Authority
WESTERN AUSTRALIA

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Summary

This is the third annual report published by the Authority that examines the performance of electricity distributors who supply small use[1] customers in Western Australia. The previous report[2] presented performance information based on the record keeping requirements set out in Part 13 of the *Code of Conduct (for the Supply of Electricity to Small Use Customers) 2004* (**2004 Code of Conduct**), the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005* (**NQ&R Code**) and the Electricity Compliance Reporting Manual[3] (**Reporting Manual**) published by the Authority in May 2007.

In January 2008, the 2004 Code of Conduct was repealed and replaced by the *Code of Conduct for the Supply of Electricity to Small Use Customers 2008*[4] (**2008 Code of Conduct**). The electricity distributor performance indicators in the 2008 Code of Conduct have been aligned with the performance reporting framework adopted by the Utility Regulators Forum[5] (**2002 SCONRRR Framework**), which has reduced the number of performance indicators applicable to electricity distributors. In April 2008, the Authority published a revised Reporting Manual that includes the retail performance indicators in the 2008 Code of Conduct. This report is based on the performance indicators contained in the Reporting Manual published in April 2008.

Customer Connections

There were just under 1 million small use customer connections on distribution networks across the State as at 30 June 2008, with the number of connections growing by 2.2% during 2007/08.

Approximately 96.2% of total small use customer connections are on the South West Interconnected Network operated by Western Power followed by Horizon Power with an aggregate of 37,580 connections (3.8% of total small use customer connections). The Rottnest Island Authority (RIA) has a total of 99 connections (less than 1% of total small use customer connections).

Western Power continued to experience a slight reduction in the number of new customer connections during 2007/08, with 33,641 new connections established, a 1.7% fall compared to 2006/07. Horizon Power reported a 205% increase in new customer connections, in part due to the ongoing programme of replacing bulk meters with individual meters in aboriginal communities.

Over the past three years, approximately 1 in 5 customer connections established by Western Power and 1 in 6 connections established by Horizon Power, have not been established within the prescribed timeframes. This is the first year that Horizon Power has reported a non-zero value for the number of connections that have not been established

[1] A small use customer is a customer who consumes less than 160MWh of electricity per annum.

[2] 2006/07 Annual Performance Report – Electricity Retailers, which can be found on the Authority's web site: http://www.era.wa.gov.au/2/246/51/reports__decisi.pm

[3] Electricity Compliance Reporting Manual, which can be found on the Authority's web site: http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

[4] Code of Conduct for the Supply of Electricity to Small Use Customer 2008, which can be found on the Authority's web site: http://www.era.wa.gov.au/3/452/51/code_of_conduct.pm

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

within the prescribed time frames, due to improvements in the systems used to collect the information.

Network Reliability

Interruptions to Supply

In 2007/08, 115 Horizon Power and 20,699 Western Power customer premises experienced at least one supply interruption of more than 12 hours continuously, which equates to a reduction of 98% and an increase of 39% respectively, compared to 2006/07. Horizon Power stated the very high level of interruptions in 2006/07 was caused by high levels of cyclone activity.

The number of customers who experienced more than 9 supply interruptions in the Perth CBD and Urban areas increased by 5.6% compared to 2006/07. The total number of customers who experienced more than 16 supply interruptions in the areas of the State, other than the CBD and Urban areas, increased by 339.1% on the Western Power network and by 3.7% on the Horizon Power network.

Western Power has commented that the increased level of interruptions on its networks was predominantly due to events beyond its control such as storm activity (wind and lightning), as well as distribution equipment failures[6].

NQ&R Code Reliability Measures

In 2007/08, the average total length of interruptions to supply was 28 minutes, compared with the standard of 30 minutes prescribed for the CBD. In Urban areas, the average total length of interruptions was 290 minutes, which exceeded the NQ&R Code standard of 160 minutes by 81.3%. In the Other Areas of the State, the average total length of interruptions reported by Horizon Power and Western Power exceeded the standard of 290 minutes by 44.8% and 89% respectively. Only the RIA managed to meet the 290 minute standard, reporting an average of 168 minutes[7].

The average length of interruption to customer premises remained little changed from the values reported in 2006/07, with the exception of CBD areas where there was an increase in average length from 119 minutes to 159 minutes and Rottnest Island where there was an increase from 20.2 minutes to 27.6 minutes.

2002 SCONRRR Framework Reliability Measures

The 2002 SCONRRR Framework measures the average duration of interruptions to customer supply using SAIDI[8] for each class of distribution feeder[9] in the network.

Comparing 2006/07 and 2007/08 feeder performance, shows that the level of SAIDI has decreased on all feeder classes, with the exception of the Western Power CBD and Urban feeders. The CBD feeder SAIDI increased by 55% to 51 minutes and the Urban feeder SAIDI increased by 14% to 165 minutes.

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[6] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2008, which is available on the Western Power website: http://westernpower.com.au/subContent/aboutUs/publications/Publications.html

[7] This is based on a 3 year average rather than the 4 year average mandated in the NQ&R Code

[8] System Average Interruption Duration Index, which is defined in standard IEEE 1366-2003. Measured as minutes of interruption per annum.

[9] There are 4 classes of feeder: CBD, urban, short rural and long rural.

Street Lighting

In 2007/08, 35% of metropolitan and 17% of regional streetlights were not repaired within the prescribed time frames. This represents a marginal improvement in repair times for metropolitan streetlights (down 0.5% compared to 2006/07) and a more significant reduction in repair times for regional streetlights (down from 22% in 2006/07).

Complaints

The RIA has reported zero data for the customer complaint performance indicators for the third successive year.

In 2007/08, Horizon Power reported a 24% fall in the number of complaints, compared to 2006/07. Just over 80% of these complaints related to 'Other' issues (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other complaint categories). Western Power reported a 28.5% increase in the total number of complaints received, with the majority (89.4%) of these complaints relating to 'Other' issues. Western Power partially attributes the increase in complaints to improved systems and processes for recording complaints.

Of the technical quality of service (QoS) complaints recorded by Horizon Power and Western Power under the 2002 SCONRRR Framework, approximately 66% relate to 'Other' issues (technical matters not falling into the other complaint categories), followed by 'Low supply voltage' complaints (approximately 20%).

Service Standard Payments

The 2008 Code of Conduct and the NQ&R Code prescribe compensation payments for eligible customers[10] for supply interruptions exceeding 12 hours continuously, failure to provide 3 days notice of a planned interruption and failure to respond to a customer query or complaint within the prescribed timeframes. The RIA has reported making no service standard payments for the third successive year.

The number of service standard payments made by Western Power for failure to give the required notice of a planned interruption to supply increased by 198%, compared to 2006/07.

The number of service standard payments made by distributors for supply interruptions longer than 12 hours continuously, significantly decreased. Only 27 payments were made by Horizon Power in 2007/08, representing a significant reduction on the 323 payments made in 2006/07. Western Power reported making 3,099 payments, down from 3,709 in 2006/07.

Only one payment was made, by Western Power, in 2007/08 for failure to respond to customer complaints within the prescribed timeframes.

It should be noted that, because the payments need to be applied for by customers, changes in the levels of payments made by distributors do not necessarily reflect a change in the underlying performance of the distribution network. It is more likely that changes in the level of payments made by distributors may be indicative of the level of awareness among customers that the payments are available.

[10] Customers consuming less than 50MWh of electricity per annum.

Contact Centre Performance

Horizon Power and Western Power are the only distributors who operate contact centres.

With the exception of the percentage of unanswered calls for Western Power, which has increased, there has been a marked improvement in the performance parameters by both retailers from that reported in 2006/07. For example, the percentage of operator calls responded to within 30 seconds by Horizon Power is 83% (up from 70% in 2006/07) and by Western Power is 79% (up from 46% in 2006/07)[11].

[11] Noting that the Western Power call centre measured calls answered within 15 seconds in 2006/07.

Purpose of the Report

The purpose of this report is to bring transparency and accountability to the performance of electricity distribution[12] businesses who supply small use customers[13] and to benchmark, where possible, performance against similar businesses in other electricity markets. All 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* (**EIA**). The Authority has specified the performance information to be provided by electricity distribution licensees in the Electricity Compliance Reporting Manual published by the Authority in April 2008. The Reporting Manual combines the record keeping requirements of the 2008 Code of Conduct and the NQ&R Code with the national energy retail performance indicators published by the Utility Regulators Forum in the 2002 SCONRRR Framework.

This report focuses on the performance data provided by electricity distributors in accordance with the performance reporting obligations set out in the Reporting Manual. The report focuses on performance in the following areas:

- Customer Connections: information about the total number of connections on the distribution network and the proportion of new connections that have been established by the distributor outside the prescribed time frames.
- Network Reliability: information about the frequency and duration of supply interruptions on the distribution network.
- Street lighting: measures the proportion of faulty streetlights that are repaired by a distributor within the prescribed standards.
- Customer Service: information about customer satisfaction with the service provided by the distributor as measured by level of complaints and customer contact centre responsiveness.
- Compensation Payments: information about the number of compensation payments made by distributors for failing to meet the service standards prescribed in the 2008 Code of Conduct and the NQ&R Code.

Electricity Distribution Market Structure

The EIA includes provisions for the licensing of electricity supply. Part 2 of the EIA, which came into force on 1 January 2005, sets out the provisions pertaining to the licensing scheme for electricity service providers. The EIA prescribes 5 classes of electricity licence:

a) Distribution – construct and operate electricity distribution networks.

b) Generation – construct and operate electricity generation works.

c) Retail – sell electricity to customers.

d) Transmission – construct and operate electricity transmission networks.

e) Integrated Regional – one or more of the activities detailed in (a) to (d) above.

[12] Including Integrated Regional licensees who distribute electricity to small use customers.

[13] Small use customers consume less than 160MWh of electricity per annum.

In order to facilitate greater scope for competition in the Western Australian electricity market, the Government restructured the former Western Power Corporation into four new statutory Corporations in April 2006:

- Western Power: operates transmission and distribution networks in the South West Interconnected System[14] (**SWIS**).
- Synergy: retails electricity within the SWIS.
- Horizon Power: operates a vertically integrated electricity business that operates in areas of the State outside the SWIS.
- Verve: operates the former Western Power generation facilities.

Figure 1 details the 40 areas of the State that are subject to an electricity distribution licence, or an integrated regional licence, issued by the Authority[15] as at 30 June 2008. Western Power has a licence to operate the largest single distribution network in the State, known as the South West Interconnected Network (**SWIN**), which lies within the SWIS. Horizon Power has a distribution licence to operate the North West Interconnected System (**NWIS**)[16] and 37 smaller, isolated distribution networks in regional areas of the State. The Rottnest Island Authority (**RIA**) operates a small distribution network on Rottnest Island and 4 private companies[17] operate distribution networks in the Midwest-Goldfield area.

Western Power is the monopoly distribution network provider to small use customers within the SWIS. Horizon Power is the monopoly distribution network provider to small use customers in areas of the State outside the SWIS, other than Rottnest Island, whose distribution network is operated by the RIA.

Western Power supplies the majority of small use customers in the State, with around 956,000 customer connections (96.3% of the State total) and over 85,000km of lines. Horizon Power is the second largest small use customer network with just over 37,000 customer connections and 7,700km of lines followed by the RIA with 99 customer connections and 45km of lines.

The *Electricity Networks Access Code 2004* (Access Code) requires Western Power to provide third parties access to its transmission and distribution network through a contract known as the Access Arrangement[18]. The Access Arrangement, which is reviewed at least every 5 years, sets out a number of reference services that may be purchased from Western Power by a third party. The majority of the reference services relate to the distribution network. Reference services come with minimum service standards, which are measured and subject to reporting by the Authority on an annual basis. There is no regulatory framework in place to provide third party access to the Horizon Power and RIA distribution networks at this time.

[14] South West Interconnected System, which includes the coastal area from Kalbarri to Bremer Bay and the Goldfields.

[15] Details of electricity licenses can be found on the Authority's web site: http://www.era.wa.gov.au/2/245/51/licence_holders.pm

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

[17] These networks do not supply small use customers and their performance is not covered by this report.

[18] Details of the Access Arrangement can be found on the Authority's web site: http://www.era.wa.gov.au/1/264/48/electricity.pm

Figure 1: Electricity Licensing Areas in Western Australia

Amendment of the Code of Conduct

The Electricity Code Consultative Committee (**ECCC**) completed its review of the 2004 Code of Conduct in September 2007. As required by section 88 of the EIA, the ECCC submitted a report to the Authority for its consideration. The Authority approved the final report of the ECCC, including an amended Code, in October 2007 and published the 2008 Code of Conduct on 8 January 2008. The Authority subsequently published a revised version of the 2008 Code of Conduct to correct minor typographical and formatting errors.

Part 13 (Record Keeping) of the 2008 Code of Conduct will be consistent with the performance indicators in the 2002 SCONRRR Framework performance reporting framework. However, the 2008 Code of Conduct has retained some indicators that are not included in the 2002 SCONRRR Framework, such as compensation payments, that are specific to the Western Australian distribution market.

Amendment of the Network Quality and Reliability Code

The NQ&R Code was amended in September 2007. The amendment removed the requirement for a distributor or transmitter to prepare an annual network quality and reliability report, and an audit report under section 26 of the NQ&R Code, if they did not supply small use customers at any time during the year ending 30 June.

The intention of NQ&R Code amendment is to exclude distributors who do not supply small use customers from the performance reporting regime. Consistent with this approach, the Authority will no longer require distributors who are exempt from reporting under the NQ&R Code to provide annual reports in accordance with the performance reporting framework in the Reporting Manual.

Electricity Compliance Reporting Manual

The Authority published a revised Reporting Manual in April 2008. The Reporting Manual includes details of the reports that electricity licensees must provide to the Authority and the timing of these reports. The performance reporting obligations in the revised Reporting Manual have been updated to align with the record keeping obligations in Part 13 of the 2008 Code of Conduct, which has removed the duplication of distribution performance indicators that existed between the 2004 Code of Conduct and the 2002 SCONRRR Framework.

The Reporting Manual requires distributors who supplied small use customers during the year ending 30 June, to provide to the Authority annual performance reports by 20 September annually. The Authority has published MS Excel Distribution Data Sheets and a Distribution Licence Performance Reporting Handbook[19] to assist distributors with the reporting process.

[19] Electricity Distribution Licence Performance Reporting Handbook which can be found on the Authority's web site: http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

DISTRIBUTOR PERFORMANCE

Customer Connections

The *Electricity Industry (Obligation to Connect) Regulations 2005* (Connect Regulations) prescribe the conditions for, and the time frames associated with, establishing a connection to the distribution network for a small use customer. In general terms the time frames are:

- 20 business days for a new connection to the distribution network[20];
- between 1 and 2 business days for an existing connection to be energised in the metropolitan area; and
- between 5 and 6 business days for an existing connection to be energised outside the metropolitan area.

Both Horizon Power and Western Power use the metering information system operated by Western Power to store their customer connection data. During the 2006/07 reporting period, the metering data was transitioned from the Customer Information System (CIS) to the new Metering Business System (MBS). During the preparation of the 2007/08 data set both Horizon Power and Western Power became aware that the customer connection data, reported for the year ending 30 June 2007, contained errors. The corrected data has been included in Table 1, Table 2 and Table 3. Please note that the values in these tables may differ from those presented in the 2006/07 performance report. Western Power commented that "in the future all connections are managed on the MBS. Consequently, in future years, data will be more robust and a Data Warehouse will facilitate easy extraction of relevant data".

Table 1 shows that there are just under 1 million small use customer connections on distribution networks across the State as at 30 June 2008, with the number of connections growing by 2.2%, compared to 2006/07. The Western Power SWIN accounted for 96.2% of total small use customer connections.

Horizon Power has an aggregate of 37,580 connections on the NWIS and 30 other isolated systems across regional areas (3.8% of total small use customer connections). This represents a 2.8% increase in the number of small use connections on its networks between 2006/07 and 2007/08.

The RIA has a total of 99 connections representing less than 1% of total small use customer connections.

Table 1: Total small use customer connections

Distributor	2006/07	2007/08
Horizon Power	36,542	37,580
Rottnest Island Authority	98	99
Western Power	935,393	955,551
State Total	**972,033**	**993,230**

[20] The 20 days is subject to conditions relating to the proximity of the customer premises to the distribution network, access to land and contractual agreements being in place.

Table 2 provides details of the total number of new connections established over the 3 years to 30 June 2008. In 2007/08, Western Power reported a 1.7% decrease in the number of new connections established on the network and Horizon Power reported a 205% increase in new connections established on the network, compared to 2006/07. A significant proportion of the increase in new connections is due to the ongoing programme to replace bulk meters with individual meters in a number of aboriginal communities.

Table 2: Establishment of new connections

	Number of connections established		
	2005/06	2006/07	2007/08
Horizon Power	3,496	853	1,749
Rottnest Island Authority	1	6	1
Western Power	18,786	34,206	33,641

Table 3 provides details of the number of new connections that were not established within the time frame prescribed in the Connect Regulations over the 3 years to 30 June 2008.

For each of the past three years, approximately 1 in 5 customer connections have not been established by Western Power within the prescribed time frames, although the Authority notes that there has been a 1.8% improvement in 2007/08 when compared to 2006/07. Western Power commented that "further improvement will be achieved by expanding the "Contractor Connect" scheme (once it is approved by EnergySafety[21]) and the processing of electrical contractor notices will be faster when the new ETIC system[22] is introduced in July 2009". Western Power is also increasing the use of accredited service providers and equipping them with PDA technology to allow systems to be updated in real time". Western Power also stated that new processes are being developed to improve internal communications related to customer connection workflows.

This is the first year than Horizon Power has reported a non-zero value for connections not established within the prescribed time frames, with approximately 1 in 6 customer connections not meeting the standard. Horizon Power commented that the "information systems improved over the period and more accurate information is now being collected".

Table 3: Number of connections not established within the prescribed time frames

	2005/06		2006/07		2007/08	
	Number	Percentage	Number	Percentage	Number	Percentage
Horizon Power	0	0.0	0	0.0	273	15.6
Rottnest Island Authority	0	0.0	0	0.0	0	0.0
Western Power	3,931	20.9	6,995	20.4	6,325	18.8

[21] EnergySafety is the division of the Department of Commerce responsible for the technical and safety regulation of the electricity industry in Western Australia.

[22] ETIC is an electronic ticketing system for contractors to submit work notices to Western Power via a web portal.

Network Reliability

Significant Interruptions to Small Use Customer Premises

Section 12 of the 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.
- The number of times customer premises in the Perth CBD and Urban areas[23] have experienced more than 9 interruptions during the reporting period.
- The number of times customer premises in the Other Areas of the State have experienced more than 16 interruptions during the reporting period.

Table 4 details the number of premises of small use customers that have experienced interruptions of more than 12 hours continuously.

Horizon Power reported a reduction of 98% in the number of interrupted premises compared to 2006/07. Horizon Power commented that it had "experienced an unusually high level of cyclonic conditions in 06/07 which resulted in 8,882 – 12 hour outages, hence the large reduction in 2007/08".

Western Power reported a 39% increase in the number of interrupted premises. Western Power has commented that these interruptions were predominantly due to events beyond its control such as storm activity (wind and lightning), as well as distribution equipment failures[24].

Table 4: Number of premises of small use customers that have experienced interruptions of more than 12 hours continuously

	2005/06[25]	2006/07	2007/08[26]
Horizon Power	3,136	8,882	115
Rottnest Island Authority	0	0	0
Western Power	9,985	14,889	20,699
State Total	**13,121**	**23,771**	**20,814**

Table 5 provides details of multiple interruptions to customer supply in CBD and Urban areas. Western Power is the only distributor that is subject to this multiple interruption standard.

Table 5 shows that the number of customers who have experienced more than 9 interruptions to supply in these areas has increased by 5.6% compared to 2006/07. Western Power reported that these customers were predominantly within the outer

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

[24] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2008, which is available on the Western Power website: http://westernpower.com.au/subContent/aboutUs/publications/Publications.html

[25] Electricity Industry Network Quality and Reliability of Supply Report 2005/06, which is available on the Authority's website: http://www.era.wa.gov.au/2/246/51/reports__decisi.pm

[26] As defined in section 12(1) of the NQ&R Code.

suburbs of the Perth Metropolitan area[27] and commented that "planned interruptions and overhead equipment failure contributed to the increase in customers experiencing more than 9 interruptions to supply. In addition, there has been an increase in the number of customers".

Table 5: Multiple interruptions to supply in the Perth CBD and Urban areas

	Customers who have experienced more than 9 interruptions to supply in the 12 months to 30 June			
	2005/06	2006/07	2007/08	% change 2006/07 to 2007/08
Western Power	10,305	25,577	27,006	5.6

Table 6 provides details of multiple interruptions to customer supply in Other Areas of the State.

Table 6 shows that, compared to 2006/07, the number of premises of small use customers that have experienced more than 16 interruptions to supply has increased by 3.7% for Horizon Power, increased by 339% for Western Power and fallen by 100% for Rottnest Island Authority.

Western Power has reported that the interrupted customer premises were predominantly within the inland South Country areas[28] and commented that "the increase in interruptions was due to the increase of planned interruptions, overhead equipment failure and storm activity".

Table 6: Multiple interruptions to supply in Other Areas of the State

	Small use customer premises that have experienced more than 16 interruptions to supply in the 12 months to 30 June			% change 2006/07 to 2007/08
	2005/06	2006/07	2007/08	
Horizon Power	378	2,872	2,979	3.7
Rottnest Island Authority	0	98	0	-100.0
Western Power	34	266	1,168	339.0

Network Quality and Reliability Code Interruption Standards

The NQ&R Code requires distributors to report on the following measures of system reliability for each discrete area[29] of the State:

- average total length of interruptions of supply to all customer premises expressed in minutes;
- average length of interruptions of supply to all customer premises expressed in minutes;
- average number of interruptions of supply to customer premises; and
- average percentage of time that electricity has been supplied to customer premises.

[27] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2008, page 13.

[28] Ibid, page 13.

[29] The NQ&R Code defines 3 discrete areas: Perth CBD, Urban and Rest of the State. Distributors are also required to report on the individual performance of each isolated system

The values of the NQ&R Code reliability indices reported in this section include major event days[30] in line with the requirements of the NQ&R Code. The approach taken in the NQ&R Code is unusual because, including these days, presents reliability performance that includes factors that are generally outside the control of the distributor, such as storms and other natural disasters.

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

- the average of the interruptions for each year for the 4 years ending in the current reporting period; and
- the average of the four (annual) values.

This calculation gives an overall average over a 4 year period and it is applied to the calculation of average length and average frequency of interruptions.

Table 7 sets out 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 7: Standard for average total length of interruptions to customer premises (NQ&R Code)

Discrete area of the state	Average total length of interruptions (minutes per annum)
The Perth CBD[31]	30
Urban areas other than the Perth CBD	160
Any other area of the State	290

Performance based on the Network Quality and Reliability Code

Perth CBD

Western Power is the only distributor providing service in the Perth CBD area. This report compares the 4 year average interruption data for the period ending 30 June 2007, with the 4 year average for the period ending 30 June 2008.

Table 8 shows that the 4 year average has increased by 12%, which Western Power explain as being "in part due to an increase in planned outages, which are conducted to expand and upgrade the network to mitigate unplanned interruptions, as well as equipment failure"[32].

Table 8: Average total length of interruptions to customer premises - Perth CBD (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08[33]
Western Power	25 minutes	28 minutes

[30] Standard IEEE 1366-2003 defines a major event day as a day in which the system SAIDI exceeds a threshold value Tmed. Tmed 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.

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

[32] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2008, page 14.

[33] The NQ&R Code standard is 30 minutes per annum.

Table 9 and Table 10 show that the average frequency of interruptions has remained unchanged from the 4 years ending 2006/07, but the average length of interruptions to customer premises has risen by 33.6% from the 4 years ending 2006/07. Western Power commented that the increase in the average duration of the outages is a result of the level of underground faults, which take longer to restore than faults on overhead networks.

Table 9: Average frequency of interruptions to customer premises - Perth CBD (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	0.2	0.2

Table 10: Average length of interruptions to customer premises - Perth CBD (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	119 minutes	158 minutes

Table 11 shows the average percentage of time that electricity has been supplied to customers in the CBD for the 4 years ending 2007/08. Based on the average interruption data in Table 8, the average percentage of time that electricity has been supplied to customer premises can be calculated to be 99.995%[34], which is unchanged compared to 2006/07.

Table 11: Average percentage of time that electricity has been supplied to customer premises- Perth CBD (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	99.995	99.995

Urban Areas

Western Power is the only distributor providing service in the Urban areas. This report compares the 4 year average interruption date for the period ending 30 June 2007, with the 4 year average for the period ending 30 June 2008.

Table 12 shows that although the average total length of interruptions decreased marginally, it continues to exceed the 160 minute standard prescribed in the NQ&R Code by 81.3%. Western Power has commented that "targeted maintenance work and line reinforcements planned for this and subsequent years will mitigate the frequency of unplanned interruptions from equipment failures. Automated switchgear will reduce the customer impact of all unplanned interruptions such as storms and other environmental events"[35].

[34] There are 525,960 minutes of supply in the average year.

[35] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2008, page 15

Table 12: Average total length of interruptions to customer premises – Urban areas (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08[36]
Western Power	293 minutes	290 minutes

Table 13 and Table 14 show that the average frequency of interruptions and the average length of interruptions to customer premises are little changed from the 2006/07 values.

Table 13: Average frequency of interruptions to customer premises – Urban areas (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	3.2	3.0

Table 14: Average length of interruptions to customer premises – Urban areas (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	91 minutes	94 minutes

Table 15 shows the average time that electricity has been supplied to customers in Urban areas for the 4 year period ending 2007/08. Based on the average interruption data in Table 12, the average percentage of time that electricity has been supplied to customer premises can be calculated to be 99.945%[37], which is a marginal improvement compared to 2006/07.

Table 15: Average percentage of time that electricity has been supplied to customer premises - Urban areas (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Western Power	99.944	99.945

Other Areas of the State

All three distributors supply electricity to areas of the State outside of the CBD and Urban areas.

Table 16 provides information on the average total length of interruptions on the networks operated by the three distributors in the Other Areas of the State.

Of the three distributors, only the RIA managed to meet the 290 minute standard with an average interruption duration of 168 minutes, albeit based on 3 years data rather than 4 years data.

The 4 year average total length of interruptions for the Western Power network exceeded the standard of 290 minutes in the NQ&R Code by 89%. Average interruption duration decreased by 0.7% (from 548 to 544 minutes) during 2007/08. Western Power commented that "it believes it is well recognised that the standard in the NQ&R Code is

[36] The NQ&R Code standard is 160 minutes per annum.

[37] There are 525,960 minutes of supply in the average year.

inappropriate for Western Power at present. This and other standards in the code are not reasonably achievable in the near future and should be reviewed".

The 4 year average total length of interruptions on the Horizon Power networks exceeded the standard of 290 minutes standard by 44.8%. Average interruptions decreased by 7.5% (from 454 to 420 minutes) during 2007/08. Horizon Power commented that the decrease reflects the absence of any major interruption events, i.e. cyclones, during the 2007/08 reporting period.

Table 16: Average total length of interruptions to customer premises – Other areas of the State (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08[38]
Horizon Power	454 minutes (3 years)	420 minutes
Rottnest Island Authority	236 minutes (2 years)	168 minutes (3 years)
Western Power	548 minutes	544 minutes

Table 17 and Table 18 show that the average frequency of interruptions and the average length of interruptions to customer premises are little changed from the 2006/07 values, with the exception of the RIA where there was a decrease in the average frequency of interruption from 10.3 to 7.2, and an increase in the average interruption duration from 20.2 minutes to 27.6 minutes.

Table 17: Average frequency of interruptions to customer premises – Other areas of the State (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Horizon Power	5.8 (3 years)	6.0
Rottnest Island Authority	10.3 (2 years)	7.2 (3 years)
Western Power	4.3	4.2

Table 18: Average length of interruptions to customer premises – Other areas of the State (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Horizon Power	78.3 minutes (3 years)[39]	70.6 minutes
Rottnest Island Authority[40]	20.2 minutes (2 years)	27.6 minutes (3 years)
Western Power	128 minutes	127 minutes

Table 19 shows the average percentage of time that electricity has been supplied to customers in other areas of the State for the 4 year period ending 2007/08. There has been a marginal improvement in performance by all 3 distributors compared to 2006/07.

[38] The NQ&R Code standard is 290 minutes per annum.

[39] This value was incorrectly stated as 58.7 minutes in the 2006/07 report. The corrected value is shown in the table.

[40] This is an average of 2 years data to 2006/07 and 3 years data to 2007/08.

Table 19: Average percentage of time that electricity has been supplied - Other areas of the State (NQ&R Code)

	4 years ending 2006/07	4 years ending 2007/08
Horizon Power	99.89 (3 years)	99.92
Rottnest Island Authority[39]	99.13 (2 years)	99.16 (3 years)
Western Power	99.89	99.90

Performance based on the 2002 SCONRRR Framework

The 2002 SCONRRR reliability performance reporting indicators are based on the definitions in standard IEEE 1366-2003[41]. Measures of supply reliability include:

- System Average Interruption Duration Index (SAIDI) – measures the total duration of supply interruption for the average customer on the network.
- System Average Interruption Frequency Index (SAIFI) – measures how often the average customer experiences a supply interruption.
- Customer Average Interruption Duration Index (CAIDI) – measures the total duration of supply interruption for those customers who have experienced an interruption during the year to 30 June.

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 defines 4 measures of SAIDI, SAIFI and CAIDI: Overall, Distribution Network Planned, Distribution Network Unplanned and Normalised Distribution Network Unplanned[42]. It also classifies distribution network feeders into the four categories described in Table 20.

Table 20: Distribution feeder classifications (SCONRRR)

Feeder Category	Description
CBD[43]	A feeder supplying predominantly commercial, high rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy compared to urban areas.
Urban	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
Short Rural	A feeder, which is not a CBD or urban feeder, with a total feeder route length less than 200km
Long Rural	A feeder, which is not a CBD or urban feeder, with a total feeder route length greater than 200km

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

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

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

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 feeders reflect the higher levels of interconnection and redundancy that apply to the design of CBD and Urban distribution networks.

Two measures of SAIDI, SAIFI and CAIDI are presented in this section; overall and normalised. The 2002 SCONRRR[44] definitions of these two measures are:

- Overall Interruptions - includes all sustained interruptions including transmission, directed load shedding, planned and unplanned.
- Normalised Interruptions - excludes transmission outages, directed load shedding, outages that exceed a SAIDI threshold of 3 minutes, outages caused by exceptional natural or third party events, and outages where the distributor cannot reasonably be expected to mitigate the effect of the event on interruptions by prudent asset management.

System Average Interruption Duration Index (SAIDI)

This is the first year that distributors have been required to report SAIDI for the Total Network. The Total Network measure aggregates the reliability of each class of feeder, so that it can be used to track trends in overall distributor reliability performance over time.

Table 21 and Table 22 illustrate the difference in rural feeder reliability compared to feeders that service urban areas. For example, the average customer on a Western Power Short Rural and Long Rural feeder experienced normalised interruptions that were between 1.6 and 3.7 times longer than a customer on an Urban feeder. The average customer on Horizon Power's Short Rural and Long Rural feeders experienced normalised interruptions between 1.4 and 18.9 times longer than a customer on an Urban feeder.

Comparing Table 21 and Table 22 shows that, with the exception of the RIA Short Rural feeders, the overall SAIDI values are much higher than the normalised SAIDI. This implies that a significant proportion of the SAIDI was attributable to events that were beyond the reasonable control of the distributors.

Table 21: Overall SAIDI (SCONRRR) - 2007/08

	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	115	281	1,923	318
Rottnest Island Authority	N/A	N/A	3.39	N/A	3.39
Western Power	57	231	353	825	317

[44] 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

Table 22: Normalised SAIDI (SCONRRR) – 2007/08

	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	75	103	1,420	165
Rottnest Island Authority	N/A	N/A	9	N/A	9
Western Power	51	165	260	611	230

Table 23 compares the normalised SAIDI performance for 2007/08, with the performance in 2006/07. It can be seen that all SAIDI values have declined, with the exception of the Western Power CBD and Urban feeders. Western Power commented that "both CBD and Urban increases in SAIDI are predominantly due to equipment failures. The network covered by the CBD is small and therefore any reliability statistics generated can be volatile over time relative to other networks".

Table 23: Normalised SAIDI (SCONRRR) – 2007/08

	Average Interruption Duration (minutes per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08
Horizon Power	N/A	N/A	123	75	303	103	2,798	1,420	NR	165
Rottnest Island Authority	N/A	N/A	N/A	N/A	212	9	N/A	N/A	NR	9
Western Power	33	51	145	165	333	260	625	611	NR	230

NR – Not Reported

System Average Interruption Frequency Index (SAIFI)

Table 24 and Table 25 illustrate the difference between the overall and normalised average interruption frequency across feeder types. For example, the average customer on a Horizon Power Short Rural and Long Rural feeder experienced overall interruption frequencies that were 4.2 and 1.6 times the normalised values respectively. A greater difference between the overall and normalised values indicates the level of unplanned interruptions that were caused by factors beyond the reasonable control of the distributor.

Table 24: Overall SAIFI (SCONRRR) – 2007/08

	Average Interruption Frequency (per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	1.5	8.1	20.6	6.7
Rottnest Island Authority	N/A	N/A	0.8	N/A	0.8
Western Power	0.3	2.5	3.8	6.2	3.2

Table 25: Normalised SAIFI (SCONRRR) – 2007/08

	Average Interruption Frequency (per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	0.91	1.94	12.69	2.19
Rottnest Island Authority	N/A	N/A	0.03	N/A	0.03
Western Power	0.22	1.91	3.13	4.99	2.5

Table 26 compares the normalised SAIFI performance for 2007/08 with the performance in 2006/07. It can be seen that all values have declined, with the exception of the Western Power Urban and Long Rural feeders. Western Power commented that "the faults {that gave rise to the increases in SAIFI} were predominantly due to an increase in equipment failures".

In 2007/08, the normalised SAIFI for the Western Power's Short Rural and Long Rural feeders was between 1.6 and 2.6 times higher than that on Urban feeders respectively. The SAIFI for Horizon Power's Short Rural and Long Rural feeders was 2.1 and 13.9 times longer than that on Urban feeders respectively.

Table 26: Normalised SAIFI (SCONRRR) – 2006/07 and 2007/08

	Average Interruption Frequency (per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08
Horizon Power	N/A	N/A	1.77	0.91	2.04[45]	1.94	15.44	12.69	NR	2.19
Rottnest Island Authority	N/A	N/A	N/A	N/A	22.01	0.03	N/A	N/A	NR	0.03
Western Power	0.26	0.22	1.83	1.91	3.84	3.13	4.73	4.99	NR	2.5

NR – Not Reported

Customer Average Interruption Duration Index (CAIDI)

Table 27 and Table 28 show the effect of interruptions of supply at the customer level. The pattern of CAIDI is different to that of SAIDI and SAIFI, because SAIDI and SAIFI measure the effect of interruptions averaged over all customers that are supplied by each class of feeder. CAIDI on the other hand, measures the effect of interruptions only for those customers who have experienced at least one interruption during the reporting period[46].

Table 28 shows a particularly high normalised value for CBD CAIDI on Western Power's network (223 minutes) in 2007/08. This is a 603% increase on the equivalent value for 2006/07. Western Power commented that "both CBD and Urban increases in SAIDI are predominantly due to equipment failures. The network covered by the CBD is small and therefore any reliability statistics generated can be volatile over time relative to other networks. The large increase was predominantly due to a single cable failure event in which the restoration time was exacerbated by access and isolation issues in conjunction with trading hours".

[45] This value was 6.63 in the 2006/07 report, which included generation outages. The corrected value, with the generation outages removed is 2.04.

[46] IEEE 1366-2003 defines CAIDI as being the ratio of SAIDI/SAIFI.

Table 27: Overall CAIDI (SCONRRR) – 2007/08

	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	78	35	93	48
Rottnest Island Authority	N/A	N/A	90	N/A	90
Western Power	223	93	93	133	100

Table 28: Normalised CAIDI (SCONRRR) – 2007/08

	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	83	53	112	75
Rottnest Island Authority	N/A	N/A	234	N/A	234
Western Power	232	86	83	123	92

Table 29 compares the normalised CAIDI performance in 2007/08, with the performance in 2006/07. It can be seen that all values of CAIDI have declined, with the exception of the Western Power CBD feeders and the RIA Short Rural feeders. The Authority notes that Horizon Power achieved significant reductions in CAIDI across all applicable feeder types in 2007/08.

Table 29: Normalised CAIDI (SCONRRR) – 2006/07 and 2007/08

	Average Interruption Duration (minutes per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08	2006/07	2007/08
Horizon Power	N/A	N/A	123	83	303	53	2,798	112	NR	75
Rottnest Island Authority	N/A	N/A	N/A	N/A	212	234	N/A	N/A	NR	234
Western Power	33	232	145	86	333	83	625	123	NR	92

NR – Not Reported

Comparing Table 28 with Table 22 shows that the values of SAIDI and CAIDI for a given type of feeder can be very different. By way of example, Western Power's CBD feeders have a SAIDI value of 51 minutes and a SAIFI value of 0.22, leading to a CAIDI value of 232 minutes (51/0.22). CAIDI provides a more direct measure of the average length of interruption that the customers who have been interrupted over the reporting period experience.

Street Lighting

The 2008 Code of Conduct requires distributors to report on the number of occasions that they have failed to repair faulty streetlights before the "agreed date". The Electricity Distribution Licence Performance Reporting Handbook defines "agreed date" as meaning:

- 5 business days for the metropolitan[47] area; and
- 9 business days for regional areas.

The time to repair commences from the time that a distributor becomes aware that the streetlight is faulty. The 2008 Code of Conduct has also introduced a requirement for distributors to record the number of streetlights they are responsible for maintaining.

Table 30 provides details of the number of streetlights faults that have been logged over the three years to 30 June 2008. Comparing 2007/08 with 2006/07, shows a 27.9% increase in the number of metropolitan streetlight faults logged and a 4.8% increase in the number of regional streetlight faults logged.

Table 30: Number of streetlight faults logged (Code of Conduct)

	2005/06		2006/07		2007/08	
Metropolitan	**Number of Streetlights**	**Total Faults Logged**	**Number of Streetlights**	**Total Faults Logged**	**Number of Streetlights**	**Total Faults Logged**
Horizon Power	NR	NR	NR	314	4,344	432
Western Power	NR	21,622	NR	21,560	179,320	27,554
Metropolitan Total	**NR**	**21,622**	**NR**	**21,874**	**183,664**	**27,986**
Regional						
Horizon Power	NR	60	NR	304	8517	264
Rottnest Island Authority	NR	4	NR	13	190	30
Western Power	NR	2,255	NR	1,026	33,765	1,114
Regional Total	**NR**	**2,319**	**NR**	**1,343**	**42,472**	**1,408**

NR – not reported

Table 31 provides details of the number of streetlights that were not repaired within the prescribed time frames.

Table 31 shows that 35.1% of metropolitan and 17% of regional streetlights were not repaired within the prescribed time frames. This represents a marginal improvement in repair times for metropolitan streetlights (down from 35.5% in 2006/07), and a more significant reduction in response times for regional streetlights (down from 21.9% in 2006/07). The number of streetlights not repaired within the prescribed time frames in 2007/08 remains significantly higher, however, than 2005/06 levels.

Western Power commented that "in October 2006, Western Power saw a sharp decline in streetlight {repair} performance due to its service delivery method. In 2007, following a review, Western Power changed its operating model and established single point accountability within Western Power. Under this new operating model, performance for 2008/09 should improve significantly".

[47] Part 1.5 of the Code of Conduct defines the metropolitan and regional areas of the State.

Table 31: Street lighting repair performance (Code of Conduct)

	2005/06		2006/07		2007/08	
Metropolitan	**Faults fixed in > 5 days**	**Faults fixed in > 5 days (%)**	**Faults fixed in > 5 days**	**Faults fixed in > 5 days (%)**	**Faults fixed in > 5 days**	**Faults fixed in > 5 days (%)**
Horizon Power	N/A	N/A	101	31.2	89	20.6
Western Power	1,781	8.2	7,654	35.5	9,738	35.3
Metropolitan Total	**1,781**	**8.2**	**7,755**	**35.5**	**9,827**	**35.1**
Regional	**Faults fixed in > 9 days**	**Faults fixed in > 9 days (%)**	**Faults fixed in > 9 days**	**Faults fixed in > 9 days (%)**	**Faults fixed in > 9 days**	**Faults fixed in > 9 days (%)**
Horizon Power	0	0.0	41	13.5	16	6.1
Rottnest Island Authority	0	0.0	0	0.0	0	0.0
Western Power	236	10.5	253	24.7	224	20.1
Regional Total	**236**	**10.5**	**294**	**21.9**	**240**	**17.0**

Complaints

The RIA has reported zero data for the customer complaint performance indicators. This is the third successive year that the RIA has recorded zero complaints. Consequently the remainder of this section will focus on the complaints recorded by Horizon Power and Western Power.

Complaints Recorded under the Code of Conduct Framework

The number of customer complaint categories in the 2008 Code of Conduct has been reduced by removing complaints related to network quality and reliability, which are dealt with by the NQ&R Code and the 2002 SCONRRR Framework.

Table 32 shows that the total number of complaints received by distributors under the 2008 Code of Conduct reporting categories. Instead of requiring licensees to report on the average time taken to resolve a customer complaint, the Authority has introduced a new performance indicator that records the number of customer complaints concluded within 15 business days.

In 2006/07, 185 complaints were reported by Horizon Power, decreasing to 140 complaints in 2007/08, a reduction of 24%. Just over 80% of these complaints related to 'Other' issues (which includes meter reading, privacy considerations, health and safety issues, and any other matter not falling into the other complaint categories).

Western Power reported a 28.5% increase in the total number of complaints received. As with Horizon Power, the majority (89.4%) of these complaints related to 'Other' issues. Western Power commented that "is has recently introduced an improved customer complaint reporting system, which in itself has enabled customers to make complaints more easily and for Western Power to record them. The increase in complaints is consequently partially attributable to the improved systems and processes {for recording complaints}".

Both distributors reported a high percentage of complaints concluded within 15 business days.

Table 32: Customer complaints received by distributors (Code of Conduct)

Code of Conduct	2005/06		2006/07		2007/08	
	Horizon Power	Western Power	Horizon Power	Western Power	Horizon Power	Western Power
Total number of complaints	4	1,583	185[48]	1,938	140	2,491
Administrative processes and customer service complaints	4	222	0	266	51	263
Other complaints	0	1,361	0	1,672	207	2,228
Percentage of customer complaints concluded within 15 business days	NR	NR	NR	NR	100.0%	95.0%[49]

NR – not reported

Complaints Recorded under the SCONRRR 2002 Framework

The 2006/07 report included a number of complaint categories related to network reliability and quality that were recorded under the 2004 Code of Conduct. As discussed earlier in this report, network quality and reliability reporting is dealt with in the NQ&R Code and the 2002 SCONRRR Framework. Because the distributor complaint categories in the 2002 SCONRRR Framework are more detailed than those in the NQ&R Code, the Authority has decided to focus on reporting against the 2002 SCONRRR complaint indicators.

Table 33 provides details of the technical quality of service (**QoS**) complaints that have been received by distributors during the year ending 30 June 2008. It can be seen that around 66% of QoS complaints relate to 'Other' issues (technical matters not falling into the other complaint categories), followed by 'Low supply voltage' complaints (at around 20%).

Of the remaining complaints, Horizon Power reported 12.5% 'Voltage swell' complaints and a small number of 'Voltage spike' and 'TV or radio interference' complaints. Western Power reported 13% 'TV or radio interference' complaints.

Table 33: Technical Quality of Service (QoS) complaints (SCONRRR 2002) – 2007/08

Complaint Category	Horizon Power	Western Power
Total number of technical QoS complaints	96	1874
Low supply voltage complaints (%)	19.8	20.0
Voltage dip complaints (%)	0.0	0.0
Voltage swell complaints (%)	12.5	0.0
Voltage spike complaints (%)	1.0	0.0
Waveform distortion complaints (%)	0.0	0.0
TV or radio interference complaints (%)	1.0	13.0
Noise from appliances complaints (%)	0.0	0.0
Other complaints (%)	65.6	67.0

[48] The value in the 2006/07 report was 0. However, Horizon Power has subsequently reported the correct value should have been 185 complaints.

[49] Western Power has reported the percentage of customer complaints resolved within 20 business days, rather than the 15 business days prescribed in the Electricity Compliance Reporting Manual. However, the Authority notes that the 20 business days complaint resolution target is consistent with the threshold for making a guaranteed service level payment under part 14.3 of the Code of Conduct.

The 2002 SCONRRR Framework also requires distributors to report on the likely cause of the problem that led to a technical QoS complaint.

Table 34 provides a breakdown of the cause of the technical QoS complaints detailed in Table 33. This shows that for:

- Horizon Power, the likely cause is fairly evenly distributed between 'Network equipment faulty' (43.8%) and 'No problem identified' (41.7%), followed by a small percentage of 'Customer internal problem' (6.3%) and 'Environmental' (8.3%).
- Western Power, the majority of likely causes is 'No problem identified' (54.6%), followed by a smaller percentage of 'Network equipment faulty' (12.3%), 'Network limitation' (9.2%) and 'Other' (18.4%).

Table 34: Technical Quality of Service (QoS) complaints (SCONRRR 2002) – 2007/08

Likely cause of technical QoS complaints	Horizon Power	Western Power
Network equipment faulty (%)	43.8	12.3
Network interference by network service provider equipment (%)	0.0	3.7
Network interference by another customer (%)	0.0	0.0
Network limitation (%)	0.0	9.2
Customer internal problem (%)	6.3	0.6
No problem identified (%)	41.7	54.6
Environmental (%)	8.3	1.3
Other (%)	0.0	18.4

Service Standard Payments

Service standard payments are dealt with in the 2008 Code of Conduct and the NQ&R Code.

Part 14.4 of the 2008 Code of Conduct makes provision for service standard payments for failure to acknowledge or respond to a customer query or complaint within the prescribed time frames, at $20 per occurrence.

Part 3 of the NQ&R Code makes provision for service standard payments to 'eligible'[50] small use customers 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).

The RIA has reported zero data for all service standard performance indicators for the third successive year.

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

Table 35 provides details of the service standard payments made by distributors for failure to give the required notice of a planned interruption to supply. This shows a 197.5% increase in payments made by Western Power in 2007/08, compared to 2006/07.

Western Power commented that the number of payments has increased because "{Western Power} is promoting availability of these payments more, customers are becoming aware of it, and {Western Power} is paying when customers have had an issue with planned outage notifications even when they are unaware of their right to the payment[51]. It should also be noted that while Western Power is generally being more proactive in this matter, there has also been a significant increase in our capital works program, which results in more planned outages. Western Power has also voluntarily increased the payment from the $20 required under the {NQ&R Code} to $50 from the beginning of the 08/09 financial year".

Table 35: Service standard payments for failure to give notice of a planned interruption (NQ&R Code)

	2005/06	2006/07	2007/08
Horizon Power	0	0	1
Rottnest Island Authority	0	0	0
Western Power	30	81	241

Table 36 provides details of the service standard payments made by distributors for supply interruptions longer than 12 hours continuously. This shows that only 27 payments were made by Horizon Power in 2007/08. This represents a significant decrease from the 323 payments made in 2006/07. Western Power also reported a material decrease in the number of payments with 3,099 payments made, representing a 16% reduction on 2006/07 levels.

Horizon Power commented "The unusually high level of cyclonic conditions in 06/07 caused higher than expected outages. The decrease in 07/08 is largely due to the decreased level of adverse weather conditions".

Table 36: Service standard payments for supply interruptions >12 hours continuously (NQ&R Code)

	2005/06	2006/07	2007/08
Horizon Power	124	323	27
Rottnest Island Authority	0	0	0
Western Power	2,676	3,709	3,099

It should be noted that, because customers need to apply for service standard payments for supply interruptions, changes in the level of payments made by distributors do not necessarily reflect a change in the underlying performance of the distribution network. It is more likely that changes in the level of payments made by distributors may be indicative of the level of awareness among customers that the payments are available.

Table 37 provides details of the service standard payments made by distributors for failure to respond to customer complaints within the prescribed timeframes. Only one payment was made in 2007/08, by Western Power.

[51] The Code of Conduct states that the customer must apply for a service standard payment.

Table 37: Service standard payments for failure to respond to customer complaints within prescribed timeframes (Code of Conduct)

	2005/06	2006/07	2007/08
Horizon Power	0	0	0
Rottnest Island Authority	0	0	0
Western Power	21	0	1

Call Centre Performance

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

Only Horizon Power and Western Power operate call centres. Horizon Power has outsourced its call centre to Synergy, the largest electricity retailer in the State.

Table 38 provides details of call centre performance. It can be seen that comparable performance has been reported by Horizon Power and Western Power across all three performance indicators.

Table 38: Call centre performance (Code of Conduct) – 2007/08

Retailer	Total number of calls to an operator	Operator calls responded to within 30 seconds (%)	Unanswered calls (%)	Average duration before call is answered by an operator (seconds)
Horizon Power	85,356[52]	83.0	4.5	11.5
Western Power	360,114	79.0	4.3	16.3
State Total	**445,470**	**80.0**	**4.4**	**13.9**

Table 39 provides details of the key call centre responsiveness performance over the two years to 30 June 2008.

With the exception of the percentage of unanswered calls for Western Power, which has increased, there has been a marked improvement in the performance parameters by both retailers compared to 2006/07. For example, the percentage of operator calls responded to within 30 seconds for Horizon Power is 83% (up from 70% in 2006/07), and for Western Power is 79% (up from 46% in 2006/07)[53]. Horizon Power commented that the improvement in their performance can be attributed to improved staff training.

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

[53] Noting that the Western Power call centre measured calls answered within 15 seconds in 2006/07.

Table 39: Call centre performance (Code of Conduct)

	Operator calls responded to within 30 seconds (%)		Unanswered calls (%)	
	2006/07	2007/08	2006/07	2007/08
Horizon Power	70.0	83.0	9.4	4.5
Western Power	46.0[54]	79.0	0.1	4.3
State Total	**60.9**	**80.0**	**8.1**	**4.4**

[54] The Western Power call centre measured calls answered within 15 seconds in 2006/07. The 2007/08 data is based on the standard 30 second answer period.

Appendix 1 – Additional Network Reliability Information for 2007/08

Network Reliability (SCONRRR 2002)

The following definitions[55] apply to the measures reported in this section:

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

SAIDI

Table 40 provides details of the four SAIDI measures for Western Power.

Table 40: Western Power SAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	57	231	353	825	317
Distribution Network (Planned)	4	43	63	106	54
Distribution Network (Unplanned)	51	172	275	696	247
Normalised Distribution Network (Unplanned)	51	165	260	611	230

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

Table 41 provides details of the four SAIDI measures for Horizon Power.

Table 41: Horizon Power SAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	115	281	1,923	318
Distribution Network (Planned)	-	15	23	384	40
Distribution Network (Unplanned)	-	96	108	1,430	175
Normalised Distribution Network (Unplanned)	-	75	103	1,420	165

Table 42 provides details of the four SAIDI measures for the RIA.

Table 42: Rottnest Island Authority SAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	3.4	-	3.4
Distribution Network (Planned)	-	-	34.3	-	34.3
Distribution Network (Unplanned)	-	-	0.1	-	0.1
Normalised Distribution Network (Unplanned)	-	-	8.6	-	8.6

SAIFI

Table 43 provides details of the four SAIFI measures for Western Power.

Table 43: Western Power SAIFI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	0.3	2.5	3.8	6.2	3.2
Distribution Network (Planned)	0.0	0.2	0.4	0.6	0.3
Distribution Network (Unplanned)	0.2	2.0	3.2	5.2	2.6
Normalised Distribution Network (Unplanned)	0.2	1.9	3.1	5.0	2.5

Table 44 provides details of the four SAIFI measures for Horizon Power.

Table 44: Horizon Power SAIFI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	1.5	8.1	20.6	6.7
Distribution Network (Planned)	-	0.2	0.4	1.3	0.4
Distribution Network (Unplanned)	-	1.1	2.0	12.7	2.3
Normalised Distribution Network (Unplanned)	-	0.9	1.9	12.7	2.2

Table 45 provides details of the four SAIFI measures for the RIA.

Table 45: Rottnest Island Authority SAIFI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	0.79	-	0.8
Distribution Network (Planned)	-	-	0.03	-	0.0
Distribution Network (Unplanned)	-	-	0.54	-	0.5
Normalised Distribution Network (Unplanned)	-	-	0.03	-	0.0

CAIDI

Table 46 provides details of the four CAIDI measures for Western Power.

Table 46: Western Power CAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	223	93	93	133	100
Distribution Network (Planned)	423	221	170	186	196
Distribution Network (Unplanned)	232	86	86	133	95
Normalised Distribution Network (Unplanned)	232	86	83	123	92

Table 47 provides details of the four CAIDI measures for Horizon Power.

Table 47: Horizon Power CAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	78	35	93	48
Distribution Network (Planned)	-	67	64	296	109
Distribution Network (Unplanned)	-	86	54	112	76
Normalised Distribution Network (Unplanned)	-	83	53	112	75

Table 48 provides details of the four CAIDI measures for the RIA.

Table 48: Rottnest Island Authority CAIDI Performance (SCONRRR)

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	90	-	90
Distribution Network (Planned)	-	-	936	-	936
Distribution Network (Unplanned)	-	-	0	-	0
Normalised Distribution Network (Unplanned)	-	-	234	-	234

Appendix 2 - Network Asset Information

Table 49 provides an overview of the network assets deployed in the distribution networks operated by Horizon Power, the RIA and Western Power.

Table 49: SCONRRR Distribution Network Asset Descriptions by Distributor (as at 30 June 2008)

Asset Type	Asset Sub-Type	Horizon Power	Rottnest Island Authority	Western Power
Number of metered supply points	CBD	0	0	5,112
	Urban	11,377	0	658,069
	Short Rural	24,080	191	310,332
	Long Rural	2,051	0	Inc in short rural
Feeder Length (km)	CBD	0	0	204
	Urban	578	0	15,668
	Short Rural	3,550	45	18,377
	Long Rural	3,619	0	50,933
Number of Transformers	Sub-transmission	34	2	N/A
	Distribution	3,624	13	60,900
Total Capacity of Transformers (MVA)	Sub-transmission	9	2	N/A
	Distribution	476	3	6,218
Number of streetlights		12,861	190	213,085
Number of Poles		55,232	80	668,027

There has been an overall growth in network assets across all three distribution networks in 2007/08, particularly with respect to Horizon Power's total feeder length (27.6% increase from 2006/07), and Horizon Power's total number of metered supply points (10.3% increase from 2006/07).