2008/09 Annual Performance Report Electricity Distributors

March 2010

Economic Regulation Authority

WESTERN AUSTRALIA

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Purpose of the Report

The purpose of this report is to bring transparency and accountability to the performance of electricity distribution[1] businesses who supply small use customers[2].

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 (**Reporting Manual**) published by the Authority in April 2008. The Reporting Manual combines the record keeping requirements of the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005* (**NQ&R Code**) and the *Code of Conduct for the Supply of Electricity to Small Use Customers 2008* (**2008 Code of Conduct**), which in turn references the 2007 SCONRRR Framework.[3] 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 sets out the provisions pertaining to the licensing scheme for electricity service providers. The EIA prescribes five 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.

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

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

[3] National Energy Distribution Performance Indicators, Utility Regulators Forum Steering Committee on National Regulatory Reporting Requirement – Distribution Working Group, May 2007

d) Transmission – construct and operate electricity transmission networks.

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

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[4] (**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 Energy: operates power stations in the SWIS.

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 as at 30 June 2009.[5] 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**)[6] 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[7] operate distribution networks in the Midwest-Goldfields 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 just under 943,000 customer connections (approximately 96% of the State total) and close to 85,500km of distribution lines. Horizon Power operates the second largest small use customer distribution network with close to 35,500 customer connections and 7,400km of distribution lines. The RIA distribution network comprises 191 customer connections and 45km of distribution lines.

The *Electricity Networks Access Code 2004* requires Western Power to provide third parties access to its transmission and distribution network through a contract known as the Access Arrangement.[8] The Access Arrangement, which is reviewed at least every five 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.

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

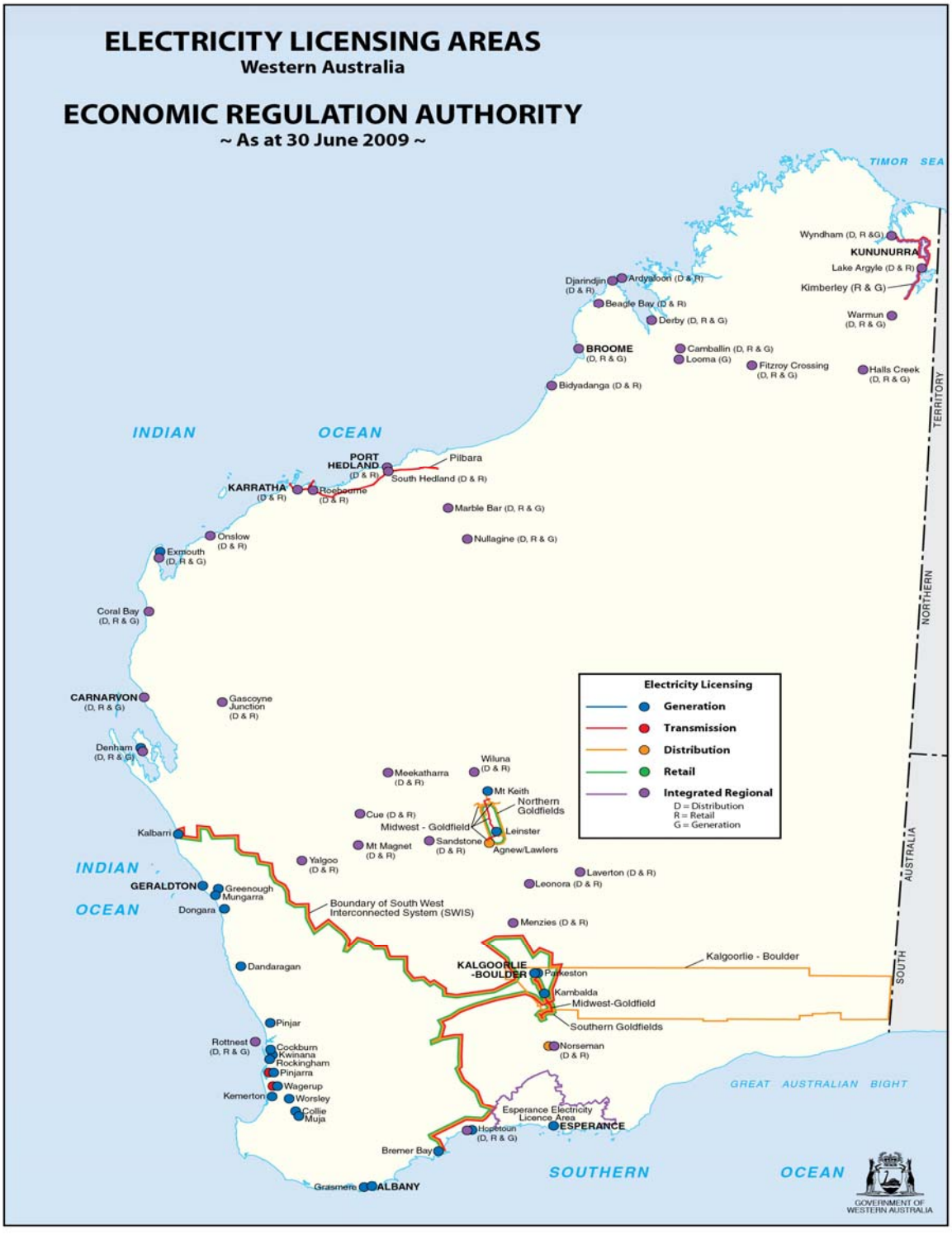
[5] Details of electricity licenses can be found on the Authority's web site: http://www.era.wa.gov.au/2/245/51/licence_holders.pm

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

[7] Because these networks do not supply small use customers, their performance is not covered by this report.

[8] 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



Review 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 in January 2008.

The electricity distribution indicators in Part 13 (Record Keeping) of the 2008 Code of Conduct have been aligned with the 2002 SCONRRR Framework[9]. However, the 2008 Code of Conduct 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.

The ECCC has, as required by the legislation, undertaken a further review of the Code of Conduct. The ECCC released a draft review report for public comment in February 2009. The final review report was provided to the Authority in August 2009. After considering the review report, the Authority published its response in September 2009. The Authority accepted all except one of the ECCC recommendations, related to service standard payments for street light repairs, and proposed further amendments in relation to wrongful disconnections. The Authority has referred these matters back to the ECCC for advice. In October 2009, the ECCC invited public comments on the amendments to the 2008 Code of Conduct proposed by the Authority.

On 29 January 2010, the Authority announced that it will be making a new Code of Conduct (2010 Code of Conduct) to come into effect on 1 July 2010. The 2010 Code includes a number of amendments resulting from the Authority's consideration of the final review report provided by the ECCC.

Review 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, if they did not supply small use customers at any time during the year ending 30 June, to prepare an annual network quality and reliability report, and an audit report under section 26 of the NQ&R Code.

The intention of the 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 no longer requires 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

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

Part 13 of the 2008 Code of Conduct.

The Reporting Manual requires distributors to provide to the Authority annual performance reports by 20 September each year. The Authority has published MS Excel Distribution Data Sheets and a Distribution Licence Performance Reporting Handbook[10] to assist distributors with the reporting process.

The Reporting Manual will be amended to incorporate the sections related to the 2010 Code of Conduct. The Authority anticipates the amended Reporting Manual will be published by April 2010.

Highlights

This is the fourth annual report published by the Authority that examines the performance of electricity distributors who supply small use customers in Western Australia. However, due to significant changes to the distributor performance reporting framework that occurred during 2007, this report only covers the past 3 years in order to preserve data integrity and comparability.

Customer Connections

During 2008/09 the total number of small use customer connections on distribution networks fell by 1.1%, to 982,149 connections.

Western Power, who operates the SWIN, is the largest distributor with 942,381 connections, which represents 95.9% of the total connections in the State. Horizon Power, who operates a number of smaller distribution networks outside the SWIN, had 39,577, or 4% of the total connections. RIA operates a small distribution network on Rottnest Island, which has a total of 191 connections.

During 2008/09, the total number of new customer connections established by the three distributors fell by 22.7%, to 27,363 connections, driven by a 24.0% reduction in new connections by Western Power. There was a substantial reduction in the number of connections not established within the prescribed time frames. Both Horizon Power and RIA reported zero late connections, and Western Power reported a 72% reduction in the number of late connections.

Network Reliability

Interruptions to Supply

During 2008/09, the total number of customer premises that experienced an interruption longer than 12 hours was 45,810, an increase of 120% compared to 2007/08. Both Horizon Power and Western Power reported substantial increases, by 208% and 120% respectively, in the number of long interruptions.

The number of customers who experienced multiple interruptions to supply fell across the State. Compared to 2007/08, 38% fewer customers in CBD and urban areas experienced more than 9 supply interruptions, and 30% fewer customers in other areas of the State experienced more than 16 supply interruptions.

[10] 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

NQ&R Code Reliability Measures

The NQ&R Code prescribes standards for the total length of interruptions to customer premises of 30 minutes in the Perth CBD, 160 minutes in urban areas and 290 minutes in other areas of the State.[11] During 2008/09, the reliability of both the Horizon Power and Western Power networks did not meet the prescribed standards.

In the Perth CBD and urban areas, which are exclusively supplied by Western Power, the standards were exceeded by 23.3% and 68.8% respectively. In other areas of the State, Horizon Power exceeded the standard by 54.5% (up from 44.8% in 2007/08), Western Power exceeded the standard by 103% (up from 87.6% in 2007/08) and RIA met the standard with an averaged interruption duration of 108 minutes.

2002 SCONRRR Framework Reliability Measures

The 2002 SCONRRR Framework measures the average duration of interruptions to customer supply using SAIDI[12] for each class of distribution feeder[13] in the network and an overall weighted average for the whole distribution network. The data is normalised to remove interruptions that are caused by factors that are beyond the reasonable control of the distributor.

Examination of the individual feeder classes shows that the normalised SAIDI fell from 2007/08 levels for all feeders, other than the Horizon Power Long Rural feeders (up 51%) and RIA Short Rural feeders (up 1,444%).

Between 2007/08 and 2008/09, Horizon Power reported a 4% increase, and Western Power reported a 2% decrease, in the whole of network SAIDI. RIA reported a significant increase in total network SAIDI consistent with the decline in Short Rural feeder reliability.

Street Lighting

The number of faulty metropolitan and regional streetlights reported to distributors were significantly higher than 2007/08 levels. Metropolitan faults increased by 46.2% and regional faults increased by 210%.

The proportion of metropolitan faults that were not repaired within 5 days improved from 35.1% in 2007/08 to 30.7% in 2008/09. However, the proportion of regional faults that were not repaired within 9 days increased from 17.0% in 2007/08 to 20.9% in 2008/09.

Complaints

The 2008 Code of Conduct requires distributors to record complaints, other than quality and reliability complaints. Complaints regarding supply quality and reliability are captured under the reporting obligations set out in the NQ&R Code.

Between 2007/08 and 2008/09, both Horizon Power and Western Power reported increases, by 26.3% and 14.2% respectively, in the number of customer complaints related to matters covered by the 2008 Code of Conduct. The majority of the 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.

[11] This is standard is calculated by taking the average total length of interruptions of supply during each year of a four year period, and then taking the average of the 4 annual figures.

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

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

The total number of supply quality and reliability complaints received by distributors fell by 13.2% between 2007/08 and 2008/09. Approximately 66% of these complaints related to matters that were not covered by the categories defined in the 2002 SCONRRR. Both Horizon Power and Western Power reported that they were unable to identify the likely cause of a significant proportion of the QoS complaints.

Service Standard Payments

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 51%, compared to 2007/08. Over the past 4 years the number of payments made has increased from 30, in 2005/06, to 364 in 2008/09.

Both Horizon Power and Western Power made more service standard payments for supply interruptions of longer than 12 hours. During 2008/09, there were a total of 5,620 payments to customers, an increase of 79.8%, compared to 2007/08.

Call Centre Performance

Horizon Power and Western Power are the only distributors who operate contact centres. During 2008/09 the total number of calls handled by the call centres was 467,799.

Comparing the Horizon Power call centre performance during 2007/08 with 2008/09, the proportion of calls answered within 30 seconds increased from 83.0% to 90.9%, and the proportion of unanswered calls fell from 4.5% to 0.3%. Over the same period of time, the Western Power call centre performance deteriorated, with a reduction in the proportion of calls answered within 30 seconds from 79.0% to 67.8%, and the proportion of unanswered calls increasing from 4.3% to 9.4%.

Western Power attributes the deterioration in their call centre performance during 2008/09 to the transition from a third party telephony platform to an in-house platform and the resultant impact on the comparability of the performance data gathered from each platform during this period.

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[14];
- 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.

Table 1 shows that the number of small use customer connections fell by 1.1%, compared to 2007/08. Western Power accounted for 95.9% of total connections, followed by Horizon Power (4.0%) and RIA (under 0.1%).

Western Power, who operates the SWIN, recorded a 1.4% fall in the number of connections, compared to 2007/08. Horizon Power, who operate the NWIS and 30 other isolated systems across regional areas, recorded a 5.3% increase in connections over the same period.

RIA recorded a 92.9% increase in connections, compared to 2007/08.

RIA attributed the increase in connection during 2008/09 to reporting adjustment. The number of connections reported in 2008/09 is based on number of metered points, whereas in previous years this was not the case.

Table 1: Total small use customer connections

Distributor	2006/07[15]	2007/08	2008/09
Horizon Power	36,542	37,580	39,577
Rottnest Island Authority	98	99	191
Western Power	935,393	955,551	942,381
State Total	**972,033**	**993,230**	**982,149**

Table 2 shows that the number of new connections established fell by 22.7%, compared to 2007/08. Western Power recorded a 24.0% decrease, and Horizon Power reported a 2.5% increase in new connections over this time. The fall in the number of new connections is consistent with the slowdown in economic activity in the State since the global financial crisis.

[14] 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.

[15] During the 2006/07 reporting period, the metering data was transitioned from the Customer Information System (CIS) to the new Metering Business System (MBS). 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.

Table 2: Establishment of new connections

Distributor	Number of connections established			
	2005/06	2006/07	2007/08	2008/09
Horizon Power	3,496	853	1,749	1,793
Rottnest Island Authority	1	6	1	2
Western Power	18,786	34,206	33,641	25,568

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 four years to 30 June 2009.

In 2008/09, Western Power has recorded a significant reduction in the percentage of connections not established, compared to the previous 3 years. Western Power has been in discussion with the Authority regarding the process for connecting new subdivisions and other land subject to planning processes that require customers to obtain confirmation of a new connection from Western Power at the early stages of development activity. Following on from these discussions, Western Power has reviewed the application of the Connect Regulations to its business processes and has amended the process for identifying and recording late customer connections.

Horizon Power has reported a zero value for connections not established within the prescribed time frames, which is a significant improvement compared to 2007/08.

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

Distributor	2005/06		2006/07		2007/08		2008/09	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Horizon Power	0	0.0	0	0.0	273	15.6	0	0.0
Rottnest Island Authority	0	0.0	0	0.0	0	0.0	0	0.0
Western Power	3,931	20.9	6,995	20.4	6,325	18.8	1,771	6.9

Distribution Network Supply Interruptions

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[16] 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 provides details of the number of customer premises that have experienced interruptions of more than 12 hours continuously. Compared to 2007/08, both Western Power and Horizon Power recorded increases, by 119.6% and 207.8% respectively, in the number of relevant premises. It can be seen that Horizon Power's performance over the past two years has been much improved compared to the preceding two years. However, Western Power's performance has deteriorated over the same 4 year period, with the 2008/09 level of interruptions being over 4.5 times greater than that recorded in 2005/06.

Horizon Power commented:

> figures for 2005/06 and 2006/07 were greatly affected by cyclonic activity which has not had as big an impact in later years.

Western Power commented:

> the increase in interruptions over the four year period was predominantly due to events beyond Western Power's control such as storms, lightening strikes, wildlife coming into contact with powerlines and build up of pollution. Equipment failure on the distribution network also contributed to extended outages.

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

Distributor	2005/06	2006/07	2007/08	2008/09
Horizon Power	3,136	8,882	115	354
Rottnest Island Authority	0	0	0	0
Western Power	9,985	14,889	20,699	45,456
State Total	**13,121**	**23,771**	**20,814**	**45,810**

Table 5 provides details of multiple interruptions to customer premises in CBD and Urban areas, which are exclusively supplied by Western Power. Compared to 2007/08, the number of customer premises that have experienced more than 9 interruptions to supply fell by 38.0%. Western Power stated that the premises affected by the interruptions were predominantly within the outer suburbs of the Perth Metropolitan area and commented that:

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

targeted remedial work for the worst served customers continues to be implemented to mitigate the current interruption frequency." [17]

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

Distributor	Customers who have experienced more than 9 interruptions to supply				
	2005/06	2006/07	2007/08	2008/09	% change 2007/08 to 2008/09
Western Power	10,305	25,577	27,006	16,733	-38.0

Table 6 provides details of multiple interruptions to customer premises in all other areas of the State. Compared to 2007/08, the number of premises that have experienced more than 16 interruptions to supply has fallen by 27.0% for Horizon Power, and by 36.7% for Western Power.

Table 6: Multiple interruptions to customer premises in all other areas of the State

Distributor	Customer premises that have experienced more than 16 interruptions to supply				% change 2007/08 to 2008/09
	2005/06	2006/07	2007/08	2008/09	
Horizon Power	378	2,872	2,979	2,176	-27.0
Rottnest Island Authority	0	98	0	0	0.0
Western Power	34	266	1,168	739	-36.7

Western Power commented that:

the fall in the number of interruptions in Perth CBD and urban areas is due to fewer interruptions being caused by pole top fires, vandalism and overgrown vegetation. A lower number of pole top fires and 'car versus pole' accidents also attributed to improvements in the number of supply interruptions experienced by customers in other areas of the State.

[17] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2009, page 18.

Distribution Network Reliability Performance (Network Quality and Reliability Code)

Schedule 1[18] of the NQ&R Code requires distributors to report on the following measures of system reliability for each discrete area[19] of the State:

- average total length of interruptions of supply to all 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 interruptions of supply to all customer premises expressed in minutes (this measure divides the total duration of interruptions by the total number of customer premises connected to the network);
- 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 include major event days,[20] 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.

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

This calculation gives an overall average over a four 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.

[18] Sections 11 and 13 Schedule 1 of the NQ&R Code deal with the reporting of network reliability.

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

[20] 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 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[21]	30
Urban areas other than the Perth CBD	160
Any other area of the State	290

Perth CBD Network Reliability

Western Power is the only distributor that supplies customers in the Perth CBD. Table 8 compares the average interruption data for the 4 years to 30 June 2008, with the four years to 30 June 2009. Comparing Table 8 with Table 7 shows that the average length of interruptions for the 4 years to 30 June 2009 exceeds the maximum prescribed in the NQ&R Code by 7 minutes.

Western Power commented:

> due to the nature of Western Power's distribution network, the Perth CBD Average Total Length of Interruptions is a volatile indicator. The majority of interruption minutes arise from underground cable faults, of which only one or two instances can cause this number to noticeably increase.

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

Distributor	4 years ending 30 June 2008	4 years ending 30 June 2009[22]
Western Power	28 minutes	37 minutes

Table 9 shows that the average frequency of interruptions over the 4 years to 30 June 2009 has remained unchanged from the value reported for the 4 years to 30 June 2008.

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

Distributor	4 years ending 30 June 2008	4 years ending 30 June 2009
Western Power	0.2	0.2

Table 10 shows that the increase in the average total length of interruptions (Table 8) has led to a 13.9% increase in the average length of interruptions to customer premises, compared to the 4 years ending 30 June 2008.

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

Distributor	4 years ending 30 June 2008	4 years ending 30 June 2009
Western Power	158 minutes	180 minutes

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

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

Table 11 shows the average percentage of time that electricity has been supplied to customers in the CBD for the 4 years to 30 June 2009 is marginally lower than in the 4 years to 30 June 2008. This is consistent with the increase in the total average length of interruptions over the same period.

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

Distributor	4 years ending 30 June 2008	4 years ending 30 June 2009
Western Power	99.995	99.993

Urban Areas Network Reliability

Western Power is the only distributor supplying customers in the Urban areas.

Table 12 compares the average interruption date for the 4 years to 30 June 2009, with the four years to 30 June 2008. Although the average total length of interruptions has fallen by 7%, the 160 minute standard prescribed in the NQ&R Code is still being exceeded by 110 minutes. Western Power commented:

> targeted maintenance work and line reinforcement have contributed to a reduction in the frequency of unplanned interruptions from equipment failure from overhead assets. Automated switchgear has reduced customer impact due to interruptions such as storms and other environmental events".[23]

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

Distributor	4 years ending 2007/08	4 years ending 2008/09[24]
Western Power	290 minutes	270 minutes

Table 13 and Table 14 detail changes in the average frequency of interruptions and the average length of interruptions to customer premises. It can be seen that there have been marginal changes to performance over the two reporting periods.

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Western Power	3.0	2.8

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Western Power	94 minutes	96 minutes

Table 15 shows the average time that electricity has been supplied to customers for the 4 years to 30 June 2009 is marginally higher than in the 4 years to 30 June 2008. This is

[23] Western Power, Annual Reliability & Power Quality Report: Financial Year ending June 2009, page 15, Section 6.3.

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

consistent with the decrease in the total average length of interruptions over the same period.

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Western Power	99.945	99.95

Other Areas of the State Network Reliability

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. For the 4 years to 30 June 2009, only RIA managed to meet the 290 minute standard (see Table 7), prescribed in the NQ&R Code, with a total average interruption duration of 108 minutes. The Horizon Power network exceeded the standard by 54.5% and the Western Power network exceeded the standard by 103%. Both Horizon Power and Western Power recorded increases in the total average duration of interruptions, by 6.7% and 8.5% respectively.

Western Power commented:

> the increase in the total average duration of interruptions can be attributed to equipment failure, bushfires and other environmental factors.

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

Distributor	4 years ending 2007/08	4 years ending 2008/09[25]
Horizon Power	420 minutes	448 minutes
Rottnest Island Authority	168 minutes (3 years)	108 minutes
Western Power	544 minutes	590 minutes

Table 17 and Table 18 show that, for the 4 years ending 30 June 2009, there have been marginal changes to the average frequency of interruptions and the average length of interruptions to customer premises for Horizon Power and Western Power. The changes to the RIA reported values can be attributed to the expansion of the averaging interval from 3 years to 4 years.

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Horizon Power	6.0	5.7
Rottnest Island Authority	7.2 (3 years)	10.7
Western Power	4.2	4.5

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

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Horizon Power	70.6 minutes	78.6 minutes
Rottnest Island Authority[26]	27.6 minutes (3 years)	12.1 minutes
Western Power	127 minutes	131 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 years ending 30 June 2009. The improvement reported by RIA in 2008/09 can be attributed to the change in the reliability data set from 3 years data to 4 year data.

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

Distributor	4 years ending 2007/08	4 years ending 2008/09
Horizon Power	99.92	99.92
Rottnest Island Authority[39]	99.16 (3 years)	99.67
Western Power	99.90	99.89

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

Distribution Network Reliability Performance (2002 SCONRRR Framework)

The 2002 SCONRRR reliability performance reporting indicators are based on the definitions in standard IEEE 1366-2003[27]. 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 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,[28] and applies them to the four classes of distribution network feeders that are described in Table 20.

Table 20: Distribution feeder classifications (SCONRRR)

Feeder Category	Description
CBD[29]	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.

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 available reserved capacity that apply to the design of CBD and Urban distribution networks.

Distributors are required to record SAIDI, SAIFI and CAIDI for the Total Network. The Total Network measure aggregates the reliability of each class of feeder, and can be used to track trends in overall distributor network reliability over time. This is the second year that distributors have reported Total Network performance.

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

[28] 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.

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

Two measures of SAIDI, SAIFI and CAIDI are presented in this section; Overall and Normalised Distribution Network - Unplanned. The 2002 SCONRRR[30] 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, 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)

Comparing Table 21 with Table 22 shows that, the overall SAIDI values are typically far higher than the normalised SAIDI values. This implies that a significant proportion of the SAIDI was attributable to events that are captured by the SCONRRR definition of excluded outages.

Table 21: Overall distribution network SAIDI (SCONRRR) - 2008/09

Distributor	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	279	203	2,645	336
Rottnest Island Authority	N/A	N/A	262	N/A	262
Western Power	50	279	469	946	399

Table 22: Normalised distribution network SAIDI (SCONRRR) – 2008/09

Distributor	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	50	76	2,143	184
Rottnest Island Authority	N/A	N/A	139	N/A	139
Western Power	29	161	241	589	225

Table 23 compares the Normalised SAIDI performance in 2008/09 with 2007/08. Over the 2 year period, the Normalised SAIDI values have fallen, with the exception of the RIA Short Rural and Horizon Power Long Rural feeders.

RIA commented:

> allowable excluded outages from distribution network unplanned interruptions were significantly reduced from the previous year.

[30] 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.

Horizon Power has commented:

> high SAIDI on rural feeders over the past two reporting periods can be attributed to a significant number of planned interruptions required as part of the Esperance Network Rural Upgrade Program.

Table 23: Normalised distribution network SAIDI (SCONRRR) – 2007/08 and 2008/09

Distributor	Average Interruption Duration (minutes per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09
Horizon Power	N/A	N/A	205[31]	50	100[32]	76	1,469[33]	2,143	177[34]	184
Rottnest Island Authority	N/A	N/A	N/A	N/A	9	139	N/A	N/A	9	139
Western Power	51	29	165	161	260	241	611	589	230	225

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

System Average Interruption Frequency Index (SAIFI)

Comparing Table 24 with Table 25 shows that, consistent with the SAIDI measures (Table 21 and Table 22), the Normalised SAIFI is lower for all classes of feeder.

Table 24: Overall distribution network SAIFI (SCONRRR) – 2008/09

Distributor	Average Interruption Frequency (per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	6.1	4.1	17.8	4.9
Rottnest Island Authority	N/A	N/A	14	N/A	14
Western Power	0.3	2.3	3.9	6.0	3.1

Table 25: Normalised distribution network SAIFI (SCONRRR) – 2008/09

Distributor	Average Interruption Frequency (per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	0.88	1.18	16.06	1.95
Rottnest Island Authority	N/A	N/A	7.0	N/A	7.0
Western Power	0.16	1.65	2.71	4.32	2.21

[31] Horizon Power reported 75 minutes in its annual performance report for financial year ending 30 June 2008, but provided revised data during compilation of this report.

[32] Horizon Power reported 103 minutes in its annual performance report for financial year ending 30 June 2008, but provided revised data during compilation of this report.

[33] Horizon Power reported 1,420 minutes in its annual performance report for financial year ending 30 June 2008, but provided revised data during compilation of this report.

[34] Horizon Power reported 165 minutes in its annual performance report for financial year ending 30 June 2008, but provided revised data during compilation of this report.

The difference between the overall and normalised values on SAIDI and SAIFI indicates the level of unplanned interruptions that were caused by factors beyond the reasonable control of the distributors.

Table 26 compares the Normalised SAIFI performance in 2008/09 with 2007/08. Over the 2 year period, the SAIFI values have fallen, with the exception of the Horizon Power Long Rural feeders.

Horizon Power commented that the rise in SAIFI for the long rural feeders is also due to the Esperance Network Upgrade Program as previously explained.

Table 26: Normalised distribution network SAIFI (SCONRRR) – 2007/08 and 2008/09

Distributor	Average Interruption Frequency (per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09
Horizon Power	N/A	N/A	3.35[35]	0.88	1.99[36]	1.18	14.34[37]	16.06	2.69[38]	1.95
Rottnest Island Authority	N/A	N/A	N/A	N/A	22.01	7.0	N/A	N/A	NR	7.0
Western Power	0.26	0.16	1.83	1.65	3.84	2.71	4.73	4.32	NR	2.21

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

Customer Average Interruption Duration Index (CAIDI)

Table 27 and Table 28 show the Overall and Normalised CAIDI during 2008/09. The level of CAIDI is different to that of SAIDI and SAIFI, because SAIDI and SAIFI measure the effect of interruptions averaged over all the 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[39].

Table 27: Overall distribution network CAIDI (SCONRRR) – 2008/09

Distributor	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	46	49	148.2	68
Rottnest Island Authority	N/A	N/A	19	N/A	19
Western Power	159	122	122	159	129

[35] Horizon Power reported 0.91 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[36] Horizon Power reported 1.94 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[37] Horizon Power reported 12.69 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[38] Horizon Power reported 2.19 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

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

Table 28: Normalised distribution network CAIDI (SCONRRR) – 2008/09

Distributor	Average Interruption Duration (minutes per annum)				
	CBD	Urban	Short Rural	Long Rural	Total Network
Horizon Power	N/A	57	64	133	94
Rottnest Island Authority	N/A	N/A	20	N/A	20
Western Power	187	97	89	136	102

Comparing Table 27 with Table 28 shows that the relationship between the overall and normalised CAIDI values differs from that for SAIDI and SAIFI. This is because the CAIDI value is the ratio of SAIDI and SAIFI, which means that it is possible for the normalised value of CAIDI to be higher than the overall CAIDI depending on the relative changes in the value of SAIDI and SAIFI.

Table 29 compares the Normalised CAIDI performance in 2008/09 with 2007/08. Over the 2 year period, RIA has reported a significant reduction in Short Rural CAIDI. Horizon Power and Western Power reported increases in the majority of their CAIDI values, resulting in an increase, by 42.4% and 10.9% respectively, in Total Network CAIDI.

Table 29: Normalised distribution network CAIDI (SCONRRR) – 2007/08 and 2008/09

Distributor	Average Interruption Duration (minutes per annum)									
	CBD		Urban		Short Rural		Long Rural		Total Network	
	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09
Horizon Power	N/A	N/A	63[40]	57	50[41]	64	102[42]	133	66[43]	94
Rottnest Island Authority	N/A	N/A	N/A	N/A	234	20	N/A	N/A	234	20
Western Power	232	187	86	97	83	89	123	136	92	102

NR – Not Reported

Comparing Table 28 with Table 22 shows that the values of SAIDI and CAIDI for a given class of feeder can be very different. By way of example, Western Power's Urban feeders have a SAIDI value of 161 minutes and a CAIDI value of 97 minutes. As stated earlier, CAIDI provides a better measure of the average length of interruption for customers, given the CAIDI measure excludes customers who have not experienced a supply interruption.

[40] Horizon Power reported 83 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[41] Horizon Power reported 53 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[42] Horizon Power reported 112 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

[43] Horizon Power reported 75 in its annual performance report for financial year ending 30 June 2008, but provided revised figure during compilation of this report.

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[44] 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 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 maintained by each distributor and the number of faults that have been logged over the four years to 30 June 2009. In 2008/09, there was a 46.2% increase in the number of metropolitan streetlight faults logged and a 210% increase in the number of regional streetlight faults logged, compared to 2007/08. Western Power reported a 47.0% increase in metropolitan faults logged and a 262.9% increase in regional faults logged.

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

	2005/06		2006/07		2007/08		2008/09	
Metropolitan	**Number of Streetlights**	**Total Faults Logged**	**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	4,636	420
Western Power	NR	21,622	NR	21,560	179,320	27,554	183,342	40,508
Metropolitan Total	**NR**	**21,622**	**NR**	**21,874**	**183,664**	**27,986**	**187,978**	**40,928**
Regional								
Horizon Power	NR	60	NR	304	8517	264	8,817	276
Rottnest Island Authority	NR	4	NR	13	190	30	190	48
Western Power	NR	2,255	NR	1,026	33,765	1,114	35,060	4,043
Regional Total	**NR**	**2,319**	**NR**	**1,343**	**42,472**	**1,408**	**44,067**	**4,367**

NR – not reported

Table 31 shows that 30.7% of metropolitan and 20.9% of regional streetlights in 2008/09 were not repaired within the prescribed time frames. There was some improvement in repair times for metropolitan streetlights (down from 35.1% in 2007/08), but the repair times for regional streetlights deteriorated (up from 17.0% in 2007/08). All three distributors reported increases in the percentage of regional streetlight repairs outside the prescribed timeframes.

[44] 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		2008/09	
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 (%)**	**Faults fixed in > 5 days**	**Faults fixed in > 5 days (%)**
Horizon Power	N/A	N/A	101	31.2	89	20.6	53	12.6
Western Power	1,781	8.2	7,654	35.5	9,738	35.3	12,494	30.8
Metropolitan Total	**1,781**	**8.2**	**7,755**	**35.5**	**9,827**	**35.1**	**12,547**	**30.7**
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 (%)**	**Faults fixed in > 9 days**	**Faults fixed in > 9 days (%)**
Horizon Power	0	0.0	41	13.5	16	6.1	37	13.4
Rottnest Island Authority	0	0.0	0	0.0	0	0.0	3	6.3
Western Power	236	10.5	253	24.7	224	20.1	871	21.5
Regional Total	**236**	**10.5**	**294**	**21.9**	**240**	**17.0**	**911**	**20.9**

Complaints

Complaints Recorded under the Code of Conduct Framework

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

Table 32 shows the total number of complaints received by distributors under the two reporting categories in the 2008 Code of Conduct. It should be noted that Horizon Power has provided corrected complaints data for 2006/07 and 2007/08.

Compared to 2007/08, the number of complaints received by Horizon Power increased by 26.3%.[45] Over the same period, Western Power reported a 14.2% increase in the total number of complaints received, of which 91.1% related to 'Other' issues. The complaint resolution performance of Horizon Power and Western Power[46] has remained relatively unchanged from 2007/08.

Western Power commented:

> however, it should be noted that the total number of complaints reported by Western Power in previous years did not include Energy Ombudsman and Minister of Energy referred complaints which totalled to 494 complaints in 2008/09. Calculating a like for like comparison with the 2008/09 results shows a 5.6% decrease in complaints received by Western Power.

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

	2005/06		2006/07		2007/08		2008/09	
Code of Conduct	**Horizon Power**	**Western Power**	**Horizon Power**	**Western Power**	**Horizon Power**	**Western Power**	**Horizon Power**	**Western Power**
Total number of complaints	4	1,583	185[47]	1,938	118[48]	2,491	149	2,845
Administrative processes and customer service complaints	4	222	0	266	51	263	77	253
Other complaints	0	1,361	0	1,672	207	2,228	72	2,592
Percentage of customer complaints concluded within 15 business days	NR	NR	NR	NR	100.0%	62.0%[49]	100.0%	64.6%

NR – not reported

[45] The 2007/08 Annual Performance Report reported 140 complaints. Horizon Power subsequently reported the correct number should have been 118 complaints in 2007/08.

[46] It should be noted that Western Power's internal complaints handling processes are designed to meet the 20 day resolution target in respect of the obligation to make a guaranteed service level payment under part 14.3 of the 2008 Code of Conduct.

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

[48] The value in 2007/08 report was 140. Horizon Power has subsequently reported the correct value should have been 118.

[49] The 2007/08 Annual Performance Report reported the percentage of customer complaints resolved within 20 business days. However, Western Power has now provided data for the percentage of customer complaints resolved within 15 days during 2007/08.

Complaints Recorded under the SCONRRR 2002 Framework

Table 33 provides details of the technical quality of service (**QoS**) complaints that have been received by distributors during 2008/09. A significant proportion of the complaints received by Horizon Power and Western Power related to 'Other' issues (technical matters not falling into the other complaint categories). Just under 35% of the complaints received by Horizon Power related to Low supply voltage. RIA reported a single QoS complaint in 2008/09 that related to the 'Other' issues category.

Table 33: Technical Quality of Service (QoS) complaints (SCONRRR 2002) – 2008/09

Complaint Category	Horizon Power	Rottnest Island Authority	Western Power
Total number of technical QoS complaints	63	1	1,646
Low supply voltage complaints (%)	34.9	0.0	16.2
Voltage dip complaints (%)	0.0	0.0	0.0
Voltage swell complaints (%)	19.1	0.0	0.0
Voltage spike complaints (%)	0.0	0.0	0.0
Waveform distortion complaints (%)	0.0	0.0	0.0
TV or radio interference complaints (%)	7.9	0.0	16.3
Noise from appliances complaints (%)	0.0	0.0	0.0
Other complaints (%)	38.1	100	67.5

Table 34 compares the number of QoS complaints received by distributors in 2007/08 and 2008/09. The total number of complaints received by distributors fell by 13.2%, compared to 2007/08.

Table 34: Technical Quality of Service (QoS) complaints (SCONRRR 2002)

	2007/08	2008/09
Horizon Power	96	63
Rottnest Island Authority	0	1
Western Power	1874	1646
State Total	**1970**	**1710**

The 2002 SCONRRR Framework requires distributors to report on the likely cause of the problem that led to a technical QoS complaint, to identify those problems that were caused by equipment operated by the distributor.

Table 35 provides a breakdown of the cause of the technical QoS complaints detailed in Table 33. This shows that:

- for Horizon Power, the likely cause was evenly distributed between 'Other' (31.8%), 'Network equipment faulty' (28.6%) and 'No problem identified' (27.0%), with a small percentage of 'Customer internal problem' (4.8%) and 'Environmental' (7.9%);
- for RIA, the likely cause was 'Network equipment faulty' (100%); and
- Western Power reported a high proportion of 'No problem identified' (57.0%), followed by a smaller percentage of 'Other' (16.0%), 'Network limitation' (15.6%) and 'Network equipment faulty' (8.9%).

Table 35: Likely cause of technical Quality of Service (QoS) complaints (SCONRRR 2002) – 2008/09

Likely cause of technical QoS complaints	Horizon Power	Rottnest Island Authority	Western Power
Network equipment faulty (%)	28.6	100	8.9
Network interference by network service provider equipment (%)	0.0	0.0	0.0
Network interference by another customer (%)	0.0	0.0	0.0
Network limitation (%)	0.0	0.0	15.6
Customer internal problem (%)	4.8	0.0	0.7
No problem identified (%)	27.0	0.0	57.0
Environmental (%)	7.9	0.0	1.7
Other (%)	31.8	0.0	16.0

Service Standard Payments

The obligation for distributors to make service standard payments to customers is dealt with in both 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 (at $20 per occurrence) for failure to acknowledge or respond to a customer query or complaint within the prescribed time frames.

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 that it made no service standard payments for the fourth successive year.

Table 36 provides details of the service standard payments made by distributors for failure to give the required notice of a planned interruption to supply. In 2008/09, there was a 51.0% increase in payments made by Western Power, compared to 2007/08. This is the fourth year in succession that an increased number of service standard payments have been made by Western Power.

Table 36: Service standard payments for failure to give notice of a planned interruption (NQ&R Code)

Distributor	2005/06	2006/07	2007/08	2008/09
Horizon Power	0	0	1	2
Rottnest Island Authority	0	0	0	0
Western Power	30	81	241	364

Table 37 provides details of the service standard payments made by distributors for supply interruptions longer than 12 hours continuously. The number of payments made by Horizon Power increased marginally (to 31 payments), compared to 2007/08. Western Power reported an 80.3% increase in the number of payments made, compared to 2007/08. However, 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. Changes in the number of payments made by distributors may be also be influenced by the level of awareness among customers that the payments are available.

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

Western Power commented:

> Western Power actively promoted the availability of these payments to customers in the March and April 2009 bulletins of the *Synergy Life* magazine sent to customers together with their electricity account.

Table 37: Service standard payments for supply interruptions >12 hours continuously (NQ&R Code)

Distributor	2005/06	2006/07	2007/08	2008/09
Horizon Power	124	323	27	31
Rottnest Island Authority	0	0	0	0
Western Power	2,676	3,709	3,099	5,589

Table 38 provides details of the service standard payments made by distributors for failure to respond to customer complaints within the prescribed timeframes. Only four payments were made in 2008/09, all by Western Power.

Table 38: Service standard payments for failure to respond to customer complaints within prescribed timeframes (Code of Conduct)

Distributor	2005/06	2006/07	2007/08	2008/09
Horizon Power	0	0	0	0
Rottnest Island Authority	0	0	0	0
Western Power	21	0	1	4

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 outsources its call centre,[51] while Western Power operates an in-house call centre to handle calls related to its distribution business.

Table 39 provides an overview of call centre performance, based on three key performance measures. It can be seen that Horizon Power has performed significantly better than Western Power for all three measures of performance.

Table 39: Call centre performance (Code of Conduct) – 2008/09

Distributor	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	94,018[52]	90.9	0.3	10
Western Power	373,761	67.8	9.4	35
State Total	**467,799**	**72.5**	**7.5**	**22.5**

Table 40 details call centre performance over the three years to 30 June 2009. Horizon Power has achieved a marked improvement in performance during 2008/09. Western Power has seen the level of unanswered calls increase for the second consecutive year, while the proportion of calls answered within 30 seconds has fallen, compared to 2007/08.

Table 40: Call centre performance (Code of Conduct)

Distributor	Operator calls responded to within 30 seconds (%)			Unanswered calls (%)		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
Horizon Power	70.0	83.0	90.9	9.4	4.5	0.3
Western Power	46.0[53]	79.0	67.8	0.1	4.3	9.4
State Total	**60.9**	**80.0**	**72.5**	**8.1**	**4.4**	**7.5**

[51] Horizon Power outsourced its call centre to Synergy until 22 June 2009, when it was transferred to Serviceworks.

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

[53] The Western Power call centre measured calls answered within 15 seconds in 2006/07. The 2007/08 and 2008/09 data are based on the standard 30 second answer period.

Western Power stated:[54]

> Two key changes occurred during the year; in August 2008 Western Power transitioned fault calls from Synergy's telephony platform, to its own platform. In April 2009, Western Power transitioned the taking of fault calls by operators from Synergy to Western Power.
>
> As a result of these changes, direct comparisons between 2007/08 and 2008/09 performance is influenced by the different systems and calculation methods used by the two entities. However, going forward Western Power is now in a position to maintain consistent data calculations, thus enabling accurate year-on-year comparisons.

[54] Page 5, Western Power Record Keeping Report 2008/09 Code of Conduct for the Supply of Electricity to Small Use Customers.

Appendix 1 – Additional Network Reliability Information for 2008/09

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 41 provides details of the four SAIDI measures for Western Power.

Table 41: Western Power SAIDI Performance (SCONRRR) – 2008/09

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	50	279	469	946	399
Distribution Network (Planned)	10	44	82	114	62
Distribution Network (Unplanned)	30	218	367	817	319
Normalised Distribution Network (Unplanned)	29	161	241	589	225

[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 42 provides details of the four SAIDI measures for Horizon Power.

Table 42: Horizon Power SAIDI Performance (SCONRRR) – 2008/09

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	279	203	2,645	336
Distribution Network (Planned)	-	0.00	5.22	496	31
Distribution Network (Unplanned)	-	54	95	2,143	201
Normalised Distribution Network (Unplanned)	-	50	76	2,143	184

Table 43 provides details of the four SAIDI measures for the RIA.

Table 43: Rottnest Island Authority SAIDI Performance (SCONRRR) – 2008/09

SAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	262	-	262
Distribution Network (Planned)	-	-	0	-	0
Distribution Network (Unplanned)	-	-	262	-	262
Normalised Distribution Network (Unplanned)	-	-	139	-	139

SAIFI

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

Table 44: Western Power SAIFI Performance (SCONRRR) – 2008/09

SAIFI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	0.3	2.3	3.9	6.0	3.1
Distribution Network (Planned)	0.0	0.2	0.3	0.6	0.3
Distribution Network (Unplanned)	0.2	2.0	3.2	5.1	2.6
Normalised Distribution Network (Unplanned)	0.2	1.7	2.7	4.3	2.2

Table 45 provides details of the four SAIFI measures for Horizon Power.

Table 45: Horizon Power SAIFI Performance (SCONRRR) – 2008/09

SAIFI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	6.1	4.1	17.8	4.9
Distribution Network (Planned)	-	0.0	0.03	1.7	0.1
Distribution Network (Unplanned)	-	0.9	1.4	16.1	2.2
Normalised Distribution Network (Unplanned)	-	0.9	1.2	16.1	2.0

Table 46 provides details of the four SAIFI measures for the RIA.

Table 46: Rottnest Island Authority SAIFI Performance (SCONRRR) – 2008/09

SAIFI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	14	-	14
Distribution Network (Planned)	-	-	0	-	0
Distribution Network (Unplanned)	-	-	14	-	14
Normalised Distribution Network (Unplanned)	-	-	7	-	7

CAIDI

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

Table 47: Western Power CAIDI Performance (SCONRRR) – 2008/09

CAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	158	122	122	159	129
Distribution Network (Planned)	480	255	239	198	238
Distribution Network (Unplanned)	199	114	114	161	122
Normalised Distribution Network (Unplanned)	187	97	89	136	102

Table 48 provides details of the four CAIDI measures for Horizon Power.

Table 48: Horizon Power CAIDI Performance (SCONRRR) – 2008/09

CAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	46	49	148	68
Distribution Network (Planned)	-	0	152	295	258
Distribution Network (Unplanned)	-	58	68	133	94
Normalised Distribution Network (Unplanned)	-	57	64	133	94

Table 49 provides details of the four CAIDI measures for the RIA.

Table 49: Rottnest Island Authority CAIDI Performance (SCONRRR) – 2008/09

CAIDI Measure	CBD Feeders	Urban Feeders	Short Rural Feeders	Long Rural Feeders	Total Network
Overall	-	-	19	-	19
Distribution Network (Planned)	-	-	0	-	0
Distribution Network (Unplanned)	-	-	19	-	19
Normalised Distribution Network (Unplanned)	-	-	20	-	20

Appendix 2 - Network Asset Information

Table 50 provides an overview of the network assets deployed in the distribution networks operated by Horizon Power, the RIA and Western Power.

Table 50: SCONRRR Distribution Network Asset Descriptions by Distributor (as at 30 June 2009)

Asset Type	Asset Sub-Type	Horizon Power	Rottnest Island Authority	Western Power
Number of metered supply points	CBD	0	0	6,231
	Urban	1,876	0	630,814
	Short Rural	33,575	191	280,841
	Long Rural	2,051	0	95,022
Feeder Length (km)	CBD	0	0	161
	Urban	44.5	0	16,197
	Short Rural	3,768	45	19,086
	Long Rural	3,619	0	50,312
Number of Transformers	Sub-transmission	34	2	n/a
	Distribution	3,755	13	62,336
Total Capacity of Transformers (MVA)	Sub-transmission	9	2	n/a
	Distribution	525	3	7,074
Number of streetlights		13,453	190	218,402
Number of Poles		55,497	80	741,417