

Electricity Industry Act 2004

Electricity Distribution Licence Performance Reporting Handbook

June 2009

Economic Regulation Authority



WESTERN AUSTRALIA

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1 Background

The Economic Regulation Authority (**Authority**) is responsible for administering the electricity licensing scheme under Part 2 of the *Electricity Industry Act 2004* (**Act**). A business licensed by the Authority is required to comply with a range of obligations prescribed by the Act and its associated regulations and codes.

Under section 11/Schedule 1 of the Act, the Authority may determine licence terms and conditions, including requiring a licensee to publish specified information in relation to its performance under a licence. In accordance with these powers, the Authority requires the holders of electricity distribution licences to report against the performance indicators identified in section 17.1 of the Electricity Compliance Reporting Manual (**Reporting Manual**). The annual performance report for the year ending 30 June is to be provided to the Authority by 20 September.

2 Purpose of this Handbook

This document has been developed to accompany the performance reporting obligations for electricity distribution licensees in the Electricity Compliance Reporting Manual, published by the Authority in March 2008¹.

The template in section 17.1 of the Reporting Manual applies to small use customers². It is important that there is a shared understanding amongst all stakeholders in respect of the information that is to be reported by electricity distribution licensees, including the definitions to be applied to the performance indicators and the Authority's expectations as to the manner in which the information should be presented. Consistent with this objective, the Authority has issued this guide to inform electricity distribution licensees of the:

- definitions to be applied to the performance indicators in the performance reports; and
- basis upon which inputs to the performance reports should be calculated (where appropriate).

Where reference is made to other documents within this guide, the Authority recommends that the licensee familiarise themselves with these other documents in order to obtain a fuller understanding of the reporting context. Of particular interest is the **2002 SCONRRR Report**³, which sets out a performance reporting framework for energy distributors.

¹ This document can be found on the Authority's web site:
http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

² A small use customer consumes less than 160MWh of electricity per annum

³ National Regulatory Reporting for Electricity Distribution and Retailing Businesses, Steering Committee on National Regulatory Reporting Requirements, March 2002. A copy can be obtained on the Authority's web site: http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

3 Performance Reporting Tools

The Authority has issued a Microsoft Excel workbook called the Electricity Distribution Licence Performance Report (**Performance Report**). It is mandatory for licensees to provide a completed Performance Report to the Authority. The latest version of the Performance Report can be found on the Authority's web site⁴.

The Performance Report comprises 7 datasheets, one for each of the performance reporting categories set out in section 14.1 of the Reporting Manual:

- Customer Connections;
- Network Reliability;
- Complaints;
- Compensation Payments;
- Timely Repair of Faulty Streetlights;
- Call Centre Performance; and
- Network and Asset Information.

4 Completing the Performance Report

The Performance Report comprises a number of datasheets containing tables of the format shown in Table 1 below.

Table 1: Example datasheet format

No.	Reference	Description	Basis of Reporting		
			Number	Percentage	Value (\$)
DC 1	Code of Conduct clause 13.10(1)(a)	Total number of complaints (excluding quality and reliability complaints) received			

When completing the datasheets in the Performance Report, it is important that the structure of the data entry cells is not modified by inserting, deleting or re-ordering rows/columns. A number of cells contains values that are calculated from data that has been entered into other cells. These cells have been locked to protect the calculation formula and have been shaded yellow for identification purposes.

Only enter data into the cells that are not shaded, or by entering data in relation to customer complaints by completing the tables in Annexure 1 and Annexure 2.

If it is necessary to add a comment in relation to an indicator, use the Excel "Insert Comment" function to add the comment in the unshaded cell.

⁴ The latest version of the Data Sheets can be found on the Economic Regulation Authority web site at: http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

The No. column contains the unique reference number for the indicator. In this case the indicator is the first indicator in the distribution licence indicator set (D), category C (Complaints).

The reference column identifies the document from which the indicator has been derived, if applicable.

The description provides a short form explanation of what the indicator is intended to measure.

The basis of reporting offers 3 options:

- Number. This is used to enter any numerical value other than a percentage or a dollar value.
- Percentage.
- Value (\$).

The data entry cells have been formatted to align with the required degree of accuracy appropriate for each indicator.

If it is not possible to provide the required data for an indicator then the cell should be left blank and a comment added to explain why the data cannot be provided using the Excel "Insert Comment" function.

5 Customer Connections

Purpose

To report on the scale of the electricity distribution network. The number of customers is also used to calculate other indicators.

Reported Indicators

No.	Indicator
DA 1	The total number of connections provided
DA 2	The total number of connections not provided on or before the agreed date
DA 3	Total number of customers who are connected to the distributor's network

Definitions

Connection means a customer premises that has a connection to the distribution network that has been energised and that is ready to supply electricity.

Date agreed with the customer means the default date based on the standard order lead times agreed with the retailer or, if applicable, another date that has been agreed between the distributor and the retailer with the consent of the customer.

Total number of customers connected means the average number of customer connections on the distribution network during the reporting period.

6 Network Reliability

Purpose

To report on the frequency and duration of interruptions to supply experienced by customers on the distribution network during the 12-month reporting period.

Reported Indicators

No.	Indicator
DB 1	The number of premises of small use customers to which the supply of electricity has been interrupted for more than 12 hours continuously
DB 2	The number of premises of small use customers to which the supply of electricity has been interrupted more than the permitted number of times, as defined in section 12(1) {of the Code ⁵ }
DB 3	For each discrete area, the average length of interruption of supply to customer premises expressed in minutes
DB 4	For each discrete area, the average number of interruptions of supply to customer premises
DB 5	For each discrete area, the average percentage of time that electricity has been supplied to customer premises
DB 6	For each discrete area, the average total length of all interruptions of supply to customer premises expressed in minutes
DB 7	Overall SAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 8	Distribution Network (Planned) SAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 9	Distribution Network (Unplanned) SAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 10	Normalised distribution network SAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 11	Overall SAIFI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 12	Distribution Network (Planned) SAIFI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 13	Distribution Network (Unplanned) SAIFI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 14	Normalised distribution network SAIFI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 15	Overall CAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 16	Distribution Network (Planned) CAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 17	Distribution Network (Unplanned) CAIDI by Total Network, CBD, Urban, Short Rural and Long Rural
DB 18	Normalised distribution network CAIDI by Total Network, CBD, Urban, Short Rural and Long Rural

⁵ Electricity Industry (Network Quality and Reliability of Supply) Amendment Code 2007

Definitions

CAIDI (Customer Average Interruption Duration Index) is the average time to restore service to a customer when a sustained interruption has occurred.

Discrete area means the areas defined in Schedule 1(2) of the Electricity Industry (Network Quality and Reliability of Supply) Amendment Code 2007.

Planned interruption means the interruption of supply to customer premises that has been caused by scheduled works, for example preventative maintenance, repairs, network augmentation and mains replacement. Customers are notified in advance of planned interruptions. Planned meter replacements are excluded.

Unplanned interruption means the interruption of the supply of electricity to customer premises that has not been caused by planned maintenance or repair activities.

SAIDI (System Average Interruption Duration Index) means the total duration of interruption (minutes off supply) experienced by the average customer as a result of sustained interruptions.

SAIFI (System Average Interruption Frequency Index) means the number of supply interruptions experienced by the average customer as a result of sustained interruptions.

Sustained interruption is an interruption to supply that lasts for more than 1 minute⁶.

Calculations

SAIDI is calculated as:

$$(\sum \text{Customer interruption durations}) / \text{Number of customers served}$$

SAIFI is calculated as:

$$(\sum \text{Number of customers interrupted}) / \text{Number of customers served}$$

CAIDI⁷ is calculated as:

$$(\sum \text{Customer interruption durations}) / \text{Total number of customers interrupted}$$

When calculating SAIDI, SAIFI and CAIDI the data set definitions in Table 2 should be applied.

Table 2: Reliability data sets for sustained interruptions

Label	Data Set
Overall interruptions	All sustained interruptions including transmission outages, planned interruptions and unplanned interruptions.
Unplanned and Planned	Excludes transmission outages
Normalised ⁸	Excludes interruptions that: <ul style="list-style-type: none"> • Are caused by transmission outages • Exceed a threshold SAIDI impact of 3 minutes • Are caused by exceptional natural or third party events • The distributor cannot be reasonably expected to mitigate the effect of the event on interruptions by prudent asset management

⁶ The definition has been aligned with the 2002 SCONRRR Report, previously the threshold was 5 minutes in line with the IEEE 1366 standard.

⁷ CAIDI is also calculated as the ratio SAIDI/SAIFI

7 Complaints

Purpose

To report on the level of satisfaction with the distributor's service and to provide information about the level of customer complaints against defined categories.

Reported Indicators

No.	Indicator
DC 1	Total number of complaints (excluding quality and reliability complaints) received
DC 2	Total number of administrative processes or customer service complaints
DC 3	Total number of other complaints
DC 4	Percentage of customer complaints concluded within 15 business days
DC 5	Total number of complaints relating to the installation and operation of a pre-payment meter at a pre-payment meter customer's supply address
DC 6	Percentage of complaints relating to the installation and operation of a pre-payment meter at a pre-payment meter customer's supply address concluded within 15 business days
DC 7	Total number of complaints received {that Part 2 or an instrument made under section 14(3) ⁹ has not been, or is not being, complied with}
DC 8	Total number of complaints received from customers in each of the discrete areas {that Part 2 or an instrument made under section 14(3) ¹⁰ has not been, or is not being, complied with}
DC 9	Total amount spent in addressing complaints {that Part 2 or an instrument made under section 14(3) has not been, or is not being, complied with} other than by way of payment under sections 18 and 19 {of the Code ¹⁰ }
DC 10	Total number of technical QoS complaints
DC 11	Total percentage of technical QoS complaints that are low supply voltage complaints
DC 12	Total percentage of technical QoS complaints that are voltage dip complaints
DC 13	Total percentage of technical QoS complaints that are voltage swell complaints
DC 14	Total percentage of technical QoS complaints that are voltage spike complaints
DC 15	Total percentage of technical QoS complaints that are waveform distortion complaints
DC 16	Total percentage of technical QoS complaints that are TV or radio interference complaints
DC 17	Total percentage of technical QoS complaints that are noise from appliances complaints
DC 18	Total percentage of technical QoS complaints that are other complaints
DC 19	Breakdown of technical QoS complaints into the likely cause of the problem that caused the complaint {by percentage}, separated into: <ul style="list-style-type: none"> • Network equipment faulty;

⁸ Details of all excluded outages, including the SAIDI impact, are to be individually detailed in a separate report.

⁹ Of the Electricity Industry (Network Quality and Reliability of Supply) Amendment Code 2007.

- | |
|--|
| <ul style="list-style-type: none"> • Network interference by NSP equipment; • Network interference by another customer; • Network limitation; • Customer internal problem; • No problem identified; • Environmental; and • Other. |
|--|

Definitions

Administrative processes or customer service complaints includes complaints in relation to meter reading, timeliness of correspondence and other customer communications, the complaints handling process, timeliness of response to complaints and any other process of a general administrative nature.

Complaint means an expression of dissatisfaction made to an organisation, related to its products/services, or the complaints handling process itself where a response or resolution is explicitly or implicitly expected. The reader is referred to the detailed discussion of complaints, with examples, in Appendix 1 of the 2006 SCONRRR¹⁰ Report. This document draws on the guidelines for complaints handling in Standard AS ISO 10002-2006 Customer Satisfaction – Guidelines for Complaints Handling in Organisations.

Note:

- Complaints may be received via telephone, mail, facsimile, email or in person.
- More than one complaint can be made per customer contact. If a customer makes a complaint about a network charges and costs matter, and a transfer matter in the same communication, then 2 complaints should be recorded.

Discrete area means the areas defined in Schedule 1(2) of the Electricity Industry (Network Quality and Reliability of Supply) Amendment Code 2007.

Number of complaints (excluding quality and reliability complaints) received means complaints relating to matters other than those matters covered by the Electricity Industry (Network Quality and Reliability of Supply) Amendment Code 2007.

Other complaints includes complaints including meter reading, privacy considerations, health and safety issues, and any other matter not falling into the connection and augmentation, reliability of supply, quality of supply, network charges and costs, and administrative processes or customer service categories.

Quality of supply complaints/technical QoS complaints includes complaints in relation to electricity supply quality.

Reliability of supply complaints includes complaints in relation to supply interruptions, both planned and unplanned.

Note:

The information provided in relation Code of Conduct 13.10(1)(d) [i.e. DC4] is determined by the number of complaints concluded within 15 business days captured by Code of Conduct 13.10(1)(a) [i.e. DC1] and Network and Quality of Supply code Sch 1(6) [i.e. DC7].

¹⁰ National Energy Retail Performance Indicators, Standing Committee on National Regulatory Reporting Requirements – Retail Working Group, November 2006. A copy can be obtained on the Authority's web site: http://www.era.wa.gov.au/2/281/51/regulatory_guid.pm

8 Compensation Payments

Purpose

To report on the level of compensation payments made by distributors for failure to meet service standards.

Reported Indicators

No.	Indicator
DD 1	Total number of payments made under clause 14.4 {of the Code of Conduct}
DD 2	The number and total amount of payments made by the distributor under section 18 {of the Code}
DD 3	The number and total amount of payments made by the distributor under section 19 {of the Code}

Definitions

Complaints made under section 18 of the {Network Quality} Code includes complaints in relation to failure to provide the required notice of planned interruptions to supply.

Complaints made under section 19 of the {Network Quality} Code includes complaints in relation to supply interruptions for more than 12 hours continuously.

Payments made under clause 14.4 of the Code of Conduct includes complaints in relation to failure to provide the required response to customer complaints.

9 Timely Repair of Faulty Streetlights

Purpose

To report on the timeliness of repairs to faulty streetlights.

Reported Indicators

No.	Indicator
DE 1	Total number of street lights reported faulty each month in the metropolitan area
DE 2	Total number of street lights reported faulty each month in the regional area
DE 3	Total number of street lights not repaired before the agreed date in the metropolitan area
DE 4	Total number of street lights not repaired before the agreed date in the regional area
DE 5	Total number of street lights in the metropolitan area
DE 6	Total number of street lights in the regional area
DE 7	Average number of days to repair faulty street lights in the metropolitan area
DE 8	Average number of days to repair faulty street lights in the regional area

Definitions

Agreed date means:

- for streetlights located in the metropolitan area, 5 business days; or
- for streetlights located in the regional area, 9 business days.

Metropolitan area means the areas of the State defined in Part 1.5 of the Code of Conduct for the Supply of Electricity to Small Use Customers 2008.

Number of streetlights reported faulty each month includes all fault reports that have been recorded during each calendar month.

Note:

- If a given streetlight is the subject of more than one fault report for the same fault, then only one fault report is recorded; and
- If a given streetlight is the subject of multiple fault reports that relate to different faults then the report relating to each distinct report is recorded.

Regional area means all areas in the State other than the metropolitan area.

Calculations

The “average number of days to repair faulty streetlights” is calculated by:

$$\sum(\text{number of days to repair each faulty streetlight})/\text{total number of faulty streetlights}$$

10 Call Centre Performance

Purpose

To report on the level of service provided to customers who contact the distributor by telephone.

Reported Indicators

No.	Indicator
DF 1	Total number of telephone calls to an operator
DF 2	Number of telephone calls to an operator responded to within 30 seconds
DF 3	Percentage of telephone calls to an operator responded to within 30 seconds
DF 4	Average duration (in seconds) before a call is answered by an operator
DF 5	Percentage of calls that are unanswered

Definitions

Number of telephone calls responded to within 30 seconds means the number of calls to an operator or customer service operator that were answered within 30 seconds. In the case of an IVR system the measurement period commences at the time that the customer selects an operator option.

Total number of calls to an operator means the total number of calls received by a retailer that were handled by an operator or Customer Service Officer, and in the case of an IVR system covers the number of calls where the customer has selected the relevant operator option (i.e. indicated they wish to be connected to an operator or customer service officer). This indicator excludes all calls that do not require operator attention, including IVR calls where the customer does not select an operator option, and calls that were abandoned before an operator option was selected.

Note:

- This is to include all calls to an operator or Customer Service Officer.
- This measure includes all calls that were abandoned after an operator option was selected.
- Calls to third parties, such as contractors or agents acting on behalf of the distributor, are not to be included. However, calls received by a contractor that is providing all or part of the distributor's customer service operations, i.e. an outsourced call centre, are to be included.

Unanswered call means where the customer has terminated the call before it was answered by an operator or, in the case of an IVR system, includes all calls where the customer selected an option indicating they wished to speak with an operator, but then subsequently terminated the call before it was answered by an operator. Calls to an IVR system that are terminated by the customer prior to selecting a relevant operator option are not included.

Calculations

The “average duration before call answered by operator” is calculated as:

$$\frac{\sum(\text{answer wait times})}{\text{total number of calls answered by an operator}}$$

Note:

- This measure only includes calls that are answered by an operator.
- For IVR systems, the measurement period commences at the time that the customer selects an operator option.
- For non-IVR systems, the measurement period commences when the call is received by the switchboard until the call is answered by an operator who is able to respond to the customer's enquiry rather than place the customer into a queue.
- Abandoned calls are excluded.

11 Network and Asset Information

Purpose

To report on the assets employed by the distributor in providing service and the level of energy supplied.

Reported Indicators

No.	Indicator
DG 1	Number of metered supply points by feeder category (CBD, urban, short rural and long rural), broken up into residential and non-residential customers and sub-transmission, high voltage and low voltage
DG 2	Number of unmetered supply points, by type of feeder (CBD, urban, long rural and short rural)
DG 3	Energy delivered (GWh) by type of feeder (CBD, urban, long rural and short rural) broken up into residential and non-residential customers and sub-transmission, high voltage and low voltage
DG 4	Line lengths by type of feeder (CBD, urban, long rural and short rural) broken up into underground and overhead line categories and sub-transmission, high voltage and low voltage
DG 5	Number and total capacity of transformers, separated into sub-transmission and distribution
DG 6	Total distribution losses (%)
DG 7	Size of network service area (sq km)
DG 8	Number of poles
DG 9	Peak demand (MW)

Definitions

Feeders

CBD feeder means the area supplied with electricity by -

- the Milligan Street Zone Substation; or
- the Hay Street Zone Substation,

operated by Western Power Corporation.¹¹

Short rural feeder means a feeder which is not a CBD or urban feeder with a total feeder route length less than 200 km. Rural short feeders may include feeders in urban areas with low load densities.

Long rural feeder means a feeder which is not a CBD or urban feeder with a total feeder route length greater than 200 km.

Urban feeder means:

- a feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.3 MVA/km; and

¹¹ Network Quality and Reliability of Supply Code, clause 3(1).

- the feeder is located in the areas of the State defined in Part 1.5 of the Code of Conduct for the Supply of Electricity to Small Use Customers 2008.

Note: Back-up feeders should be given the same classification as the normal supply feeder they are providing back up for.

Network and Lines

High voltage (HV) line means a line used to distribute electricity from a (zone) substation, generally operating at a nominal voltage between 1kV and 33kV.

Line Length means the route length in kilometres of lines in service, including overhead lines, underground cables or a combination of the two. Line length does not include low voltage service connections.

Note: a double-circuit line counts as two lines, and each three-phase line, single-phase line or single-wire earth return (SWER) line counts as one line.

Low voltage (LV) line means a line that operates at a nominal voltage of 1kV or below.

Network means distribution works, that are used to convey electricity under a distribution licence but does not include a line, pole, switch, transformer or apparatus that is on or a part of premises to which electricity is supplied by a distributor and situated beyond the point at which electricity is so supplied.

Sub-transmission (ST) line means a line generally 22kV or above, used to distribute electricity from a transmission connection point to one or more (zone) substations.

Total capacity of transformers means the total rated MVA capacity of the transformers installed in the distribution network.

General

Energy Delivered means the electricity consumed by end-customers of the distribution network. This includes energy produced by embedded generators and consumed within the distribution area through the distribution network, unread meters and un-metered consumption (including estimated theft).

Network service area means the area in square kilometres covered by the licensee's distribution district. Areas within the distribution area to which a service is not provided by the distributor (e.g. national parks, inset areas) are included in the service area.

Note: The peak demand should be stated in MW at the time of maximum MVA demand. A distributor's network peak demand does not necessarily coincide with system maximum demand.

Non-residential customer means a customer who is not a residential customer.

Residential customer means a customer who takes an electricity supply for domestic use, which implies that the supply is made on a residential/domestic tariff arrangement.

Calculations

Distribution Losses (%) is calculated as:

$$100 \times (\text{electricity purchased} - \text{electricity delivered}) / \text{electricity purchased}$$

Peak demand is calculated as the maximum coincident demand on each network type at the terminal stations feeding the sub-transmission network, and at the zone substations feeding the high voltage network. The total peak demand is the maximum coincident

demand in each of the network types. The total network peak demand is the maximum coincident demand of the distributor's network.