Economic Regulation Authority

Electricity Distribution Licence Performance Reporting Handbook

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Economic Regulation Authority

Level 4, Albert Facey House

469 Wellington Street, Perth WA 6000

Telephone 08 6557 7900

Email info@erawa.com.au

Website www.erawa.com.au

This document can also be made available in alternative formats on request.

National Relay Service TTY: 13 36 77

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1. Purpose of this Handbook

The Economic Regulation Authority is responsible for administering the electricity licensing scheme under Part 2 of the *Electricity Industry Act 2004*.

Electricity licences contain terms and conditions, including a requirement for licensees to provide to the ERA specified information on matters relevant to the licence. Clause 4.5 of electricity distribution licences and electricity integrated regional licences states:

> The licensee must provide to the ERA, in the manner and form prescribed by the ERA, specified information on any matter relevant to the operation or enforcement of the licence, the operation of the licensing scheme provided for in Part 2 of the Act, or the performance of the ERA's functions under that Part.

The obligation to provide performance data only applies to the holders of electricity distribution licences and electricity integrated regional licences who supply electricity to small use customers (customers who consume not more than 160 MWh of electricity per year).

This handbook sets out the non-financial performance data licensees must provide to the ERA, including the date by which it must be submitted.

To be able to interpret and compare the data, there must be a shared understanding amongst stakeholders of the information that must be reported, including the definitions that apply to the performance indicators and how the information should be presented. Accordingly, this handbook informs electricity distribution licensees about:

- the performance indicators that distributors are required to provide data for
- the definitions that apply to the performance indicators
- how to calculate the performance data (where applicable)
- how and when the data must be provided to the ERA.

Where reference is made to other documents within this Handbook, licensees should familiarise themselves with these documents to fully understand the reporting context, in particular the Code of Conduct for the Supply of Electricity to Small Use Customers (Code of Conduct), the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005* (NQ&R Code) and the 2017 SCONRRR Report, to fully understand the reporting framework.[1]

[1] Utility Regulators Forum, discussion paper, March 2002, National regulatory reporting for electricity distribution and retailing businesses (online) [accessed 24 March 2022].

2. Distribution Datasheets

The ERA has published two Microsoft Excel workbooks called the Electricity Reporting Datasheets – Distribution and the Electricity Reporting Datasheets - Network Quality & Reliability Code (together referred to as Distribution Datasheets).

The first workbook covers obligations from the Code of Conduct and the second workbook covers obligations from the NQ&R Code and feeder category reliability reporting.[2, 3]

The *Electricity Reporting Datasheets – Distribution* have five worksheets:

- Customer connections
- Complaints
- Compensation payments
- Timely repair of faulty streetlights
- Call centre performance.

The *Electricity Reporting Datasheets - Network Quality & Reliability Code* have four worksheets:

- Network reliability
- Complaints
- Compensation payments
- Network and asset information.

2.1 Completing the Distribution Datasheets

The Distribution Datasheets contain tables in the format shown in the table below.[4]

Indicator No.	***Description***	***Basis of Reporting***		***Comments***
		Number	Percentage	
CCD 1	Total number of new connections provided			

When completing the tables in the Distribution Datasheets the structure of the data entry cell should not be modified by inserting, deleting or re-ordering rows / columns. A number of cells contain values that are calculated from data that has been entered into other cells. These cells have been shaded yellow to identify them.

Only enter data into the cells that are not shaded.

2 The feeder category reliability indicators have the prefix 'FC'.

3 The four feeder categories are defined in the discussion paper referenced in footnote 1. Each FC indicator reports values for each feeder category as well as a 'Total Network' value.

4 See footnote 8.

Referring to the example in the table:

The 'indicator number' column contains the unique reference number for the indicator.[5]

- The 'description' column provides a short explanation of what the indicator is intended to measure.
- The 'basis of reporting' column contains data entry cells for:
- Number [6]

  or

- percentage[7]
- In some worksheets, the table includes a value ($) column.[8]
- The 'comments' column allows licensees to add explanatory notes, for example where there has been significant change in values from previous reporting periods, or where the licensee feels that additional information will assist the reader to understand the data.
- This handbook uses the term 'distribution system' and 'network'. The use of these terms reflect that the *Electricity Industry (Metering) Code 2012* (Metering Code) uses the term 'distribution system' and the NQ&R Code uses the term 'network' to describe the infrastructure that supplies electricity to customer premises.

The data entry cells have been formatted to align with the required degree of accuracy (that is, the number of decimal places) for each indicator. When completing the tables in the Distribution Datasheets, the structure of the data entry cells should not be modified.

2.2 Submission of completed datasheets to the ERA

The completed Distribution Datasheets for the year ending 30 June must be submitted to the ERA by no later than 30 September. They must be sent by email to: licensing@erawa.com.au

Compliance with clause 4.5 of the licence is only achieved when an electronic copy of the completed Distribution Datasheets has been received by the ERA.

Submitting the Distribution Datasheets to the ERA after the due date is a non-compliance with the licence and the licensee must include it in its annual compliance report that it submits the following year.[9]

After the ERA has reviewed a licensee's Distribution Datasheets and the licensee has addressed any comments the ERA may have, the ERA will instruct the licensee to publish the Datasheets on the licensee's website by a date specified by the ERA.[10]

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5 In this example the indicator is in the 'Customer Connections' worksheet.

6 Section 3 provides more information on how to complete the 'number' column.

7 This is automatically calculated from numerical data entered into other cells

8 The 'Complaints' (NQ&R Code workbook only) and 'Compensation payments' worksheets include a Value ($) column to report dollar amounts paid to customers by the licensee.

9 Information on submitting annual compliance reports is in the ERA's Water Compliance Reporting Manual.

10 Under clause 3.8 of distribution and integrated regional licences, the ERA can direct a licensee to publish information relevant to the licensee's obligations under the licence.

3. Performance reporting indicators

Licensees should complete the 'number' column in each worksheet as follows:

- **If data is available**: enter the data.
- **If the activity is applicable to the licensee but did not occur in the year**: enter '0'.
  - For example, if the licensee did not provide any new connections on its distribution system, the data for indicator CCD 1 should be '0'.
- **If the activity is not applicable**: enter 'n/a'.
  - Reporting an indicator as 'n/a' should only be done in circumstances where it is not relevant to a licensee's operations.
- **If the data is unavailable:** leave the data cell blank and add a comment in the 'comments' cell explaining why the data cannot be provided.

If the data shows a change of more than 10% compared to last year's data, the licensee should include in the 'comments' column the likely reason(s) for the change.

Reporting basis: point in time vs whole reporting year

Some indicators are based on a moment in time (i.e. 30 June) whereas others cover the whole reporting year.

For example:

- Indicator CCD 7 (total number of connections on the distribution system(s)) should be reported as the number of connections that are on the distribution system(s) on 30 June of the reporting year.
- Indicator CCD 1 (total number of new connections provided) should be reported as the number of new connections provided throughout the reporting year.

Reporting basis: per customer/premises vs per incident

Some indicators require reporting to be on a per customer/premises basis whereas others are on a per incident basis.

For example:

- Indicator NQR 1 (Number of premises of small use customers interrupted for more than 12 hours continuously) should be reported on a per customer/premises basis. This means that if a premises of a small use customer is interrupted for more than 12 hours continuously, and more than once during a reporting year, the premises should only be counted once.
- Indicator CCD 4 (Total number of reconnections provided) should be reported on a per incident basis. This means that if a premises is reconnected more than once during a reporting year, each reconnection should be recorded separately.

3.1 Customer connections

This section reports the number of:

- small use customer connections on each electricity distribution system.
- new customer connections that were not provided on time.
- reconnections that were not provided on time.

3.1.1 Reported indicators

No.	Indicator
CCD 1	Total number of new connections provided
CCD 2	Total number of new connections not provided on or before the agreed date
CCD 3	Percentage of new connections not provided on or before the agreed date
CCD 4	Total number of reconnections provided
CCD 5	Total number of reconnections that were not provided within the prescribed timeframe
CCD 6	Percentage of reconnections that were not provided within the prescribed timeframe
CCD 7	Total number of connections on the distribution system(s)[11]

3.1.2 Definitions

Attach has the same meaning as in the *Electricity Industry (Obligation to Connect) Regulations 2005*.[12]

Connection means a customer premises that is attached to the distribution system and energised.

Connection provided means the establishment of a new distribution connection on the distribution system during the year ending 30 June.

De-energise means the removal of the supply voltage from the meter at the customer's premises, while leaving the premises connected to the distribution system.

Disconnection means to de-energise a customer's supply address.

Distribution system has the same meaning as in the Metering Code, which takes its definition from the Act.[13]

[11] If a distributor operates more than one distribution system, indicator CCD 7 should record the total number of connections on the systems. Use the 'Comments' cell to provide a breakdown of connections by each system.

[12] The definition is: "*attach*" means to do all that is needed to connect premises to a distribution system except energise the premises.

[13] The definition is: "*distribution system*" means any apparatus, equipment, plant or buildings used, or to be used, for, or in connection with, the transportation of *electricity* at nominal voltages of less than 66 kV.

Energise has the same meaning as in the *Electricity Industry (Obligation to Connect) Regulations 2005*.[14]

Not provided on or before the agreed date means connections or reconnections not provided within any regulated time limit, or by the date agreed with the customer.

Reconnection means to re-energise a customer premises following **disconnection**.

Explanatory notes:

- A reconnection does not include when a pre-payment meter is recharged and the customer premises status changes from de-energised to energised.
- For reporting purposes, reconnections must include all reconnections carried out by the distributor at the request of a retailer regardless of the reason for disconnecting the customer premises.

[14] The definition is: "*energise*" means to complete a connection by establishing, at the meter through which electricity is to be supplied to a customer's premises, a voltage that is capable of being sustained under the expected load conditions.

3.2 Network reliability

This section reports the frequency and duration of interruptions to supply experienced by customers on the distribution system(s) during the reporting year.

3.2.1 Reported indicators

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

No.	Indicator
FC 12	Normalised distribution network CAIDI by Total Network, CBD, Urban, Short Rural and Long Rural

Explanatory note: Indicators NQR 1 to NQR 6 relate to the NQ&R Code. The NQ&R Code requires a distributor to report its annual performance and its average performance over the past four years. The values that the distributor puts in NQR 3 to NQR 6 should be the four-year average.

3.2.2 Calculations

SAIDI is calculated as:

(∑ Customer interruption durations) / Total number of customers served

SAIFI is calculated as:

(∑ Number of customers interrupted) / Total number of customers served

CAIDI[15] is calculated as:

(∑ Customer interruption durations) / Total number of customers interrupted

When calculating SAIDI, SAIFI and CAIDI, apply the data set definitions in the table below.

Label	Data Set
Overall interruptions	All sustained planned and unplanned interruptions including those caused by generation outages, transmission outages and directed load shedding
Unplanned and Planned	Excludes generation outages, transmission outages[16] and directed load shedding
Normalised	All unplanned sustained interruptions with the exclusion of interruptions: • that are caused by generation outages • that are caused by transmission outages[17] • that are caused by directed load shedding • where the daily unplanned SAIDI exceeds the Major Event Day boundary[18]

3.2.3 Definitions

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

15 CAIDI is also calculated as the ratio SAIDI / SAIFI.

16 The calculation of unplanned interruptions must include interruptions caused by the failure of the transmission system connected to a distribution system where the responsibility for the transmission system lies with the distributor.

17 See the above footnote.

18 The SAIFI and CAIDI associated with the interruption should also be excluded from the calculation of normalised SAIFI and normalised CAIDI.

Directed load shedding means load shedding that has been directed by the Australian Energy Market Operator (AEMO) system management.

Discrete area means the areas defined in Schedule 1, item 2 of the NQ&R Code.

Outage means a state on the network where it is not able to perform its intended function due to an event associated with a network component (Note: an outage may not always result in an interruption of supply to a supply address).

Major Event Day is as defined in the Institute of Electrical and Electronics Engineers (IEEE) standard *1366-2003, IEEE Guide for Electric Power Distribution Reliability Indices*. Distributors are required to apply the "2.5-beta method" described in this standard to calculate the major event day boundary (T_{MED}). If four years of interruption data is not available to calculate T_{MED}, then distributors are required to calculate T_{MED} using the maximum available period of time for which interruption data is available.

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

SAIDI (System Average Interruption Duration Index) is the total duration of interruption (minutes without supply) for the average customer as a result of sustained interruptions.

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

SCADA (Supervisory Control and Data Acquisition) is an industrial computer system that monitors and controls a process. In the case of the transmission and distribution elements of electrical utilities, SCADA will monitor substations, transformers and other electrical assets.

Sustained interruption means a loss of electricity associated with an outage on any part of the network of more than one minute in duration. The interruption starts when it is recorded by equipment (such as a SCADA system) or, where such equipment does not exist, at the time that the first customer call relating to the network outage is received. The interruption ends when supply has been restored to that part of the distribution network affected by the outage, or when the supply is reasonably assumed to have been restored if there is no equipment available to record the time of restoration.

Unplanned interruption means a sustained interruption that is not a planned interruption, or a planned interruption where the required advance notice of the interruption has not been given to the customer.

3.3 Complaints

This section reports the level of satisfaction with the distributor's service and the customer complaints it receives.

3.3.1 Reported indicators

No.	Indicator
CCD 8	Total number of complaints (excluding complaints under indicator NQR 19) received
CCD 9	Total number of administrative processes or customer service complaints
CCD 10	Total number of other complaints
CCD 11	Number of customer complaints {received in relation to CCD 8} concluded within 15 business days
CCD 12	Percentage of customer complaints {received in relation to CCD 8} concluded within 15 business days
CCD 13	Number of customer complaints {received in relation to CCD 8} concluded within 20 business days
CCD 14	Percentage of customer complaints {received in relation to CCD 8} concluded within 20 business days
CCD 15	Total number of customer complaints {received in relation to CCD 8 and NQR 19 combined} concluded within 15 business days
CCD 16	Percentage of customer complaints {received in relation to CCD 8 and NQR 19 combined} concluded within 15 business days
CCD 17	NOT USED
CCD 18	NOT USED
CCD 19	Total number of complaints relating to the installation and operation of a pre-payment meter at a pre-payment meter customer's supply address
CCD 20	Total number 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
CCD 21	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
NQR 7	Total number of complaints received {that Part 2 or an instrument made under section 14(3) of the NQ&R Code has not been, or is not being, complied with}
NQR 7A	Total number of complaints received {that Part 2 or an instrument made under section 14(3) of the NQ&R Code has not been, or is not being, complied with} that were concluded within 15 business days
NQR 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) of the NQ&R Code has not been, or is not being, complied with}

No.	Indicator
NQR 9	Total amount spent in addressing complaints {that Part 2 or an instrument made under section 14(3) of the NQ&R Code has not been, or is not being, complied with} other than by way of payment under sections 18 and 19 {of the NQ&R Code}
NRR 1	Total number of technical QoS complaints
NRR 2	Total number of technical QoS complaints that are low supply voltage complaints
NRR 3	Percentage of technical QoS complaints that are low supply voltage complaints
NRR 4	Total number of technical QoS complaints that are voltage dip complaints
NRR 5	Percentage of technical QoS complaints that are voltage dip complaints
NRR 6	Total number of technical QoS complaints that are voltage swell complaints
NRR 7	Percentage of technical QoS complaints that are voltage swell complaints
NRR 8	Total number of technical QoS complaints that are voltage spike complaints
NRR 9	Percentage of technical QoS complaints that are voltage spike complaints
NRR 10	Total number of technical QoS complaints that are waveform distortion complaints
NRR 11	Percentage of technical QoS complaints that are waveform distortion complaints
NRR 12	Total number of technical QoS complaints that are TV or radio interference complaints
NRR 13	Percentage of technical QoS complaints that are TV or radio interference complaints
NRR 14	Total number of technical QoS complaints that are noise from appliances complaints
NRR 15	Percentage of technical QoS complaints that are noise from appliances complaints
NRR 16	Total number of technical QoS complaints that are other complaints
NRR 17	Percentage of technical QoS complaints that are other complaints
NRR 18	Breakdown of technical QoS complaints into the likely cause of the problem that caused the complaint {by percentage}: • Network equipment faulty • Network interference by NSP equipment • Network interference by another customer • Network limitation • Customer internal problem • No problem identified • Environmental • Other

3.3.2 Calculations

- CCD 12 = 100 x CCD 11/CCD 8
- CCD 16 = 100 x (CCD 11 + NQR 19A)/(CCD 8 + NQR 19)

3.3.3 Definitions

Administrative processes or customer service complaints includes complaints about meter readings, 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 or about an organisation, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required.

Explanatory notes:

- *Complaints may be received via a variety of media, including telephone, mail, email, social media or a mobile phone app.*
- *More than one complaint can be made per customer contact. If a customer makes a complaint about a meter reading matter and a transfer matter in the same communication, then two complaints should be recorded.*
- *For reporting purposes, complaints must include complaints resolved at the first point of contact.*

Discrete area means the areas defined in Schedule 1, item 2 of the NQ&R Code.

Other complaints include poor service, privacy considerations, failure to respond to complaints, health and safety issues, and any other matter that is not covered by the NQ&R Code.

Technical QoS complaints includes complaints about electricity supply quality.

3.4 Compensation payments

3.4.1 Purpose

To report on the number of payments and the amounts paid by distributors for failing to meet specified standards of service to customers.

3.4.2 Reported indicators

No.	Indicator
CCD 22	Total number of payments made, and the total amount paid under clause 14.4 of the Code of Conduct
CCD 23	Total number of payments made, and the total amount paid under clause 14.5 of the Code of Conduct
NQR 10	The number of payments made, and the total amount paid under section 18 of the NQ&R Code
NQR 11	The number of payments made, and the total amount paid under section 19 of the NQ&R Code

Explanatory note: the distributor should only include the payment of the statutory amount required by each section of the NQ&R Code, or the Code of Conduct, as applicable. The payment of ex-gratia sums over and above these amounts should be included in indicator NQR 21.

Payments that have been claimed by customers during the reporting year, but have not been paid as at 30 June, should be excluded.

3.5 Timely repair of faulty streetlights

3.5.1 Purpose

To report on the timeliness of repairs to faulty streetlights.

3.5.2 Reported indicators

No.	Indicator
CCD 24	Total number of streetlights reported faulty in the metropolitan area
CCD 25	Total number of streetlights reported faulty in the regional area
CCD 26	Total number of streetlights not repaired within five (5) business days in the metropolitan area
CCD 27	Percentage of streetlights not repaired within five (5) business days in the metropolitan area
CCD 28	Total number of streetlights not repaired within nine (9) business days in the regional area
CCD 29	Percentage of streetlights not repaired within nine (9) business days in the regional area
CCD 30	Total number of streetlights in the metropolitan area
CCD 31	Total number of streetlights in the regional area
CCD 32	Average number of business days to repair faulty streetlights in the metropolitan area
CCD 33	Average number of business days to repair faulty streetlights in the regional area

3.5.3 Calculations

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

> ∑(number of business days to repair each faulty streetlight) / total number of faulty streetlights

3.5.4 Definitions

Metropolitan area means the areas of the State defined in Part 1.5 of the Code of Conduct.

Number of streetlights reported faulty each month includes all fault reports that have been recorded during each calendar month. If a faulty streetlight is the subject of more than one fault report for the same fault, then only one fault is recorded.

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

3.6 Call centre performance

3.6.1 Purpose

To report on the level of service provided to customers who contact the distributor by telephone.[19]

3.6.2 Reported indicators

No.	Indicator
CCD 34	Total number of telephone calls to a call centre of the distributor
CCD 35	Total number of telephone calls to a call centre answered by a call centre operator within 30 seconds
CCD 36	Percentage of telephone calls to a call centre answered by a call centre operator within 30 seconds
CCD 37	Average duration (in seconds) before a is call answered by a call centre operator
CCD 38	Number of the calls that are unanswered
CCD 39	Percentage of the calls that are unanswered

3.6.3 Calculations

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

∑(answer wait times) / total number of calls answered by an operator

Explanatory note:

- *This measure only includes calls that are answered by call centre staff.*
- *For IVR systems, the measurement period commences at the time that the customer selects an option indicating they wish to speak to a call centre operator.*
- *For non-IVR systems, the measurement period commences when the call is received by the switchboard.*
- *Calls that are unanswered are excluded from the calculation of this indicator.*

[19] Reporting against these indicators is mandatory for distributors who operate a call centre that is capable of automatically recording some or all of the responsiveness indicators. Distributors who have other systems to handle customer calls may report on a voluntary basis the responsiveness indicators that they record.

Worked example

Distributor A operates a single call centre with integrated IVR technology with a single 13 number for customers to call. During the reporting year the following call data was recorded:

Total calls to the 13 number = 467,450

Number of calls to the call centre = 265,328

Number of calls answered within 30 seconds = 221,846

Number of calls that were unanswered = 4,921

Sum of wait times for answered calls = 217,006 minutes

Calculation of indicators:

- CCD 34 = 265,328
- CCD 35 = 221,846
- CCD 36 = 100x221,846/265,328 = 83.6%
- CCD 37 = 60x217,006/(265,328-4,921) seconds = 50 seconds
- CCD 38 = 4,921
- CCD 39 = 100x4,921/265,328 = 1.9%

3.6.4 Definitions

Call centre means a dedicated facility that has the purpose of receiving and transmitting telephone calls in relation to customer service operations of the distributor, consisting of call centre staff (operators) and one or more information technology and communications systems that are designed to handle customer service calls and record call centre performance information.

Call that is unanswered means where the customer has terminated the call before it was answered by a call centre operator (in the case of IVR system calls that are terminated by the customer prior to selecting an option indicating they wish to speak with a call centre operator are not included).

Telephone calls to a call centre answered by a call centre operator within 30 seconds means the number of calls to call centre operators that were answered within 30 seconds (in the case of an IVR[20] system the measurement period commences at the time that the customer selects an option indicating they wish to speak with a call centre operator).

Total number of telephone calls to a call centre means the total number of calls received by the call centre operators (in the case of an IVR system the measurement only includes the calls where the customer has selected an option indicating they wish to speak with a call centre operator).[21] [22]

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

[21] This indicator excludes calls that do not require operator attention, including IVR calls where the customer does not select an option indicating they wish to speak with a call centre operator, and calls that were terminated **before** an option to speak with a call centre operator was selected.

[22] Do not include calls to third parties, such as contractors acting on behalf of the distributor. However, do include calls received by a contractor that is providing all or part of the distributor's customer service operations, i.e., an outsourced call centre.

3.7 Network and asset information

3.7.1 Purpose

To report on the assets employed by the distributor to provide the distribution service, and the amount of energy supplied at the time of peak demand.

3.7.2 Reported Indicators

No.	Indicator
NQR 12	Number of metered supply points by feeder category (CBD, urban, short rural and long rural), reported against the categories of residential and non-residential customers and sub-transmission, high voltage and low voltage
NQR 13	Number of unmetered supply points, by type of feeder (CBD, urban, long rural and short rural)
NQR 14	Energy delivered (GWh) by type of feeder (CBD, urban, long rural and short rural) reported against the categories of residential and non-residential customers and sub-transmission, high voltage and low voltage
NQR 15	Line lengths by type of feeder (CBD, urban, long rural and short rural) reported against the categories of underground and overhead line categories and sub-transmission, high voltage and low voltage
NQR 16	Number and total capacity of transformers, separated into sub-transmission and distribution
NQR 17	Total distribution losses (%)
NQR 18	Size of network service area (sq km)
NQR 19	Number of poles
NQR 20	Peak demand (MW)

3.7.3 Calculations

Distribution losses (%) is calculated as:

100 x (electricity supplied – electricity delivered) / electricity supplied

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. 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.

Explanatory note: 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.

3.7.4 Definitions

Feeders

CBD feeder means the area supplied with electricity by the Milligan Street Zone Substation, or Hay Street Zone Substation.[23]

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

Short rural feeder means a feeder that 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.

Urban feeder means:

- a feeder, which is not a CBD feeder, with actual maximum demand greater than 0.3MVA/km over the reporting period; and
- the feeder is located in the areas of the State defined under “metropolitan area” in Part 1.5 of the Code of Conduct.

Explanatory 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 1 kV and 33 kV.

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.

Explanatory 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 1 kV or below.

Network means distribution works that are used to convey electricity under a distribution licence.

Sub-transmission (ST) line means a line generally 22 kV 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).

[23] See clause 3(1) of the NQ&R Code. These feeders are operated by the Electricity Networks Corporation (trading as Western Power).

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

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

Residential customer means a customer who receives a residential tariff for the electricity that is supplied to them, or who is otherwise identified as consuming electricity for residential purposes.