



**Electricity Distribution: Service
Quality Reporting Guidelines**

***Version 1.1
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1. INTRODUCTION

The Authority's Final Determination on Regulation of Electricity Distribution (May 2001) requires Distribution Network Service Providers (DNSPs) to provide data on specific service quality measures (Appendix D, Part 9). In working through the implementation of these measures with DNSPs, the Authority identified a small number of definitional issues that required amendment. Amendments were also made to achieve greater consistency with measures proposed by the Steering Committee on National Alignment of Regulatory Reporting Requirements. The revised service quality reporting requirements from the Final Determination are provided in these Guidelines.

1.1 Timing

DNSPs shall deliver to the Authority the quarterly information specified in these Guidelines within three calendar months of the end of the quarter to which the information relates, except for information on the final quarter of the financial year, which is to be delivered with annual information within four months of the end of the financial year to which the information relates.

1.2 Processes for revision

The Authority proposes to amend and expand the Guidelines from time to time to meet the needs of the Authority, DNSPs, customers and other interested parties. Revisions may be required to reflect (among other things):

- changing circumstances, including changes in the regulatory framework;
- developments at the national level and state level;
- the creation of new services and products by DNSPs; and
- changes to organisational structures by DNSPs.

In revising these Guidelines the Authority will have regard to the comments received on the Guidelines from interested parties. The Authority welcomes comments, discussion, or suggestions for amendments to these Guidelines, from any interested party. Any contribution in this regard should be addressed to:

The Queensland Competition Authority
Level 19
12 Creek Street
Brisbane 4000
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2. SERVICE QUALITY REPORTING GUIDELINES

2.1 Reliability indices descriptions

Average minutes off supply per customer

- Definition: Total minutes, on average, that customers are without electricity in a year (includes both planned and unplanned minutes off supply).
- Index: System Average Interruption Duration Index – SAIDI.
- Calculation:
$$\frac{\sum \text{interruptions} [\text{Interruption duration (minutes)} \times \text{Number of customers affected}]}{\text{Total number of customers}}$$

(mins/period)

Average number of interruptions per customer

- Definition: The average number of occasions per year each customer is interrupted.
- Index: System Average Interruption Frequency Index – SAIFI.
- Calculation:
$$\frac{\text{Total number of interruptions}}{\text{Total number of customers}}$$
 (interruptions/customer/period)

Average interruption duration

- Definition: Average duration of each interruption (=SAIDI/SAIFI).
- Index: Customer Average Interruption Duration Index – CAIDI.
- Calculation:
$$\frac{\sum \text{interruptions} [\text{Interruption duration} \times \text{Number of customers affected}]}{\text{Total number of interruptions}}$$

(mins/interruption)

2.2 Definitions

Interruption

An interruption is any loss of electricity supply to a customer which is associated with an outage of any part of the electricity supply system up to, but not including, the service fuse, and which is of greater than one minute duration (a momentary interruption has a duration of one minute or less).

An interruption is reported as starting when remote monitoring equipment signals the loss of supply, or where monitoring equipment is not installed, when the customers first report the loss of supply.

Interruption categories

Interruptions are reported to have occurred under the following categories:

- Distribution Network – interruptions within the DNSPs network;
- Exceptions – interruptions within the DNSPs network where at least 5% of the customers in the DNSPs geographical area are affected by widespread storms and flooding or other natural disaster;
- Transmission – interruptions within the Powerlink network; and
- Generation – interruptions due to generation deficiency normally resulting in load shedding.

Feeder geographic categories

The following categories apply to the whole of a distribution feeder, and not sections of it:

- CBD – a feeder supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas ;
- Urban – a feeder which is not a CBD feeder, with a maximum demand per total feeder route length greater than 0.3MVA/km;
- Short Rural – a feeder which is not a CBD or urban feeder and has a total route length less than 200km; and
- Long Rural – a feeder which is not a CBD or urban feeder and has a total route length greater than 200km.

2.3 Reporting for reliability measures

Reporting Specification is made up of five sections:

1. Administrative Data;
2. Aggregate Data;
3. Reliability Data;
4. Quality of Supply Data; and
5. Customer Service Data.

Item No.	Data field	Definition	Reporting period
1	Administrative Data		
1.1	DNISP business	That is, Ergon Energy/Energex.	Monthly
1.2	Start date	First day of reporting period.	Monthly
1.3	End date	Last day of reporting period.	Monthly
1.4	Feeder ID	Code used by DNISP.	Monthly
2	Aggregate Data		
2.1	Total distribution customers	<p>The customer numbers on which minutes off supply and interruption figures are based (for the business, business centres, and feeders).</p> <p>A distribution customer is defined as a metered entity that is directly connected to the DNSPs' network. Inactive accounts are excluded.</p> <p>All distribution customers in the DNISP's area to be counted (ie: including 'lost' retail customers, and excluding 'won' retail customers in other DNSPs' areas).</p> <p>Total customer numbers to be further separately reported as CBD, Urban, Short Rural and Long Rural.</p> <p>The number of customers at the end of the reporting period to be reported.</p>	Monthly
2.2	Length of distribution lines	<p>Route length in kilometres of lines in service (the total length of feeders including all spurs).</p> <p>Each single wired earth return line, single phase line, and three phase line counts as one line.</p> <p>A double circuit line counts as two lines.</p> <p>Total line length is to be disaggregated by:</p> <ul style="list-style-type: none"> • Feeder classification – CBD, urban, short rural, long rural • Line voltage – sub-transmission, high voltage, low voltage • Line type – overhead, underground 	Annual
2.3	Number of poles	The number of poles in the DNISP's network distribution area.	Annual
2.4	Network service area	The area in square kilometres covered by the DNISP's distribution district. Areas within the distribution area to which a service is not provided by the DNISP (eg national parks, inset areas) are included in the service area.	Annual
2.5	Energy delivered (GWh)	<p>Total GWh of electricity consumed by end-users of the distribution network. This includes:</p> <ul style="list-style-type: none"> - metered customers; - unread meters; - unmetered consumption (including theft); and - electricity produced by embedded generators and consumed within the distribution area. <p>Total energy delivered to be split by CBD, Urban, Short Rural and Long Rural.</p>	Annual
2.6	Distribution losses (%)	Electrical energy losses (GWh) incurred in the conveyance of electricity over the DNISP's network. To be expressed as a percentage of the sum of energy delivered and distribution losses.	Annual
2.7	Number and capacity (MVA) of transformers	The number and total installed capacity (MVA) of transformers are to be reported by voltage level – sub-transmission (ST/HV) and distribution (HV/LV).	Annual
2.8	Asset utilisation (%)	Sub-transmission transformer utilisation factor. Electricity throughput (MWh) expressed as a percentage of sub-transformer capacity (MVA) multiplied by number of hours per year.	Annual
2.9	Maximum demand (MVA)	Coincident maximum demand for the DNISP's total network over the reporting period.	Annual

Item No.	Data field	Definition	Reporting period
3	Reliability Measure		
3.1	SAIDI	Separately reported as Distribution System, Exclusions, and Transmission and Generation. The Distribution System SAIDI to be further separately reported as CBD, Urban, Short Rural and Long Rural. The Distribution System SAIDI to be further separately reported as Planned and Unplanned. Does not include momentary interruptions.	Quarterly
3.2	SAIFI	Separately reported as Distribution System, Exclusions, and Transmission and Generation. The Distribution System SAIFI to be further separately reported as CBD, Urban, Short Rural and Long Rural. The Distribution System SAIFI to be further separately reported as Planned and Unplanned. Does not include momentary interruptions.	Quarterly
3.3	CAIDI	Separately reported as Distribution System, Exclusions, Transmission and Generation. The Distribution System CAIDI to be further separately reported as CBD, Urban, Short Rural and Long Rural. The Distribution System CAIDI to be further separately reported as Planned and Unplanned. Does not include momentary interruptions.	Quarterly
3.4	SAIDI	Applies to the 11kV feeders falling outside low reliability thresholds. These feeders are to be subsequently agreed between the Distributors and QCA. Includes Distribution System, Exclusions, and Transmission and Generation interruptions. Includes planned and unplanned interruptions. Does not include momentary interruptions.	Annual
3.5	SAIFI	Applies to the 11kV feeders falling outside low reliability thresholds. These feeders are to be subsequently agreed between the Distributors and QCA. Includes Distribution System, Exclusions, and Transmission and Generation interruptions. Includes planned and unplanned interruptions. Does not include momentary interruptions.	Annual
3.6	CAIDI	Applies to the 11kV feeders falling outside low reliability thresholds. These feeders are to be subsequently agreed between the Distributors and QCA. Includes Distribution System, Exclusions, and Transmission and Generation interruptions. Includes planned and unplanned interruptions. Does not include momentary interruptions.	Annual
3.7	Energy not supplied – unplanned (MWh)	To be based on DNSPs' best estimate of the amount of energy that may have been consumed in the period when supply was interrupted.	Annual
3.8	Energy not supplied – planned (MWh)	See Item 3.7	Annual
3.9	Reliability Of Supply Complaints	Reported on a Total basis, not feeder by feeder. Derived from the Distributor's electronic complaints recording system.	Quarterly

Item No.	Data field	Definition	Reporting period
4	Quality of Supply Data		
	Quality of supply complaints – categorised according to symptoms		
4.1	Total quality of supply complaints	The total number ^a of quality of supply complaints received ie the total of 4.11 to 4.19	Quarterly
4.11	Low supply voltage	Number of complaints attributed to low supply voltage based on symptoms such as dim lights and overheating motors.	Quarterly

4.12	Voltage dips – minor or nuisance	Number of complaints attributed to minor voltage dips based on symptoms such as flickering lights and resetting digital clocks.	Quarterly
4.13	Voltage dips – severe	Number of complaints attributed to severe voltage dips based on symptoms such as interrupted production, contactors dropping out, and direct financial loss.	Quarterly
4.14	Voltage swell	Number of complaints attributed to voltage swell based on symptoms such as blown lights, motor protection operates, and minor equipment damage, with no clear initiating event (likely to cause a spike).	Quarterly
4.15	Voltage spike	Number of complaints attributed to voltage spike based on symptoms such as obvious damage to appliances and wiring arising from a clear initiating event, such as lightning.	Quarterly
4.16	Waveform distortion or unbalance	Number of complaints attributed to waveform distortion or unbalance based on symptoms such as equipment performing erratically.	Quarterly
4.17	TV or radio interference	Number of complaints based on symptoms of TV or radio interference.	Quarterly
4.18	Noises from appliances or lights	Number of complaints based on symptoms of audible noise, other than that associated with the normal operation of the appliance, or audio-frequency interference on audio systems and telephones.	Quarterly
4.19	Other	Number of complaints based on any other symptoms	Quarterly
	Quality of supply complaints – possible cause and response		
4.2	Network initiated quality of supply complaints	The number ^a of quality of supply complaints which, after investigation, are found to be caused by network restrictions or events on the network which may or may not be under network control (ie the sum of 4.21 to 4.26)	Annual
4.21	Faulty network equipment	The number of quality of supply complaints which, after investigation, are found to be caused by the failure of a network element (including clamps, fuse carriers, insulators and attachments) and require action by the DNSP.	Annual
4.22	Network interference – standard breached by the DNSP	The number of quality of supply complaints which, after investigation, are found to be caused by the operation of DNSP plant or equipment and require action on the part of the DNSP to change the equipment or mode of operation.	Annual
4.23	Network interference caused by another customer	The number of quality of supply complaints which, after investigation, are found to be caused by the operation of customer equipment and require the DNSP to take action to ensure that the customer operates the equipment to required standards.	Annual
4.24	Network limitation	The number of quality of supply complaints which, after investigation, are found to be caused by limitations of the network such that the DNSP is required to carry out investment on their own network to improve performance and remove the limitation (for example, by increasing network capacity, upgrading plant or altering control settings).	Annual
4.25	Environment	The number of quality of supply complaints which, after investigation, are found to be caused by external influences outside the DNSP's control eg. Lightning, wildlife.	Annual
4.26	Other	The number of quality of supply complaints which, after investigation, are found to be caused by some factor other than those covered in 4.21 to 4.25.	Annual
4.3	Quality of supply complaints initiated on the customer side of the meter	The number of quality of supply complaints which, after investigation are found to be caused by faulty customer equipment or customer's operation.	Annual
4.4	Quality of supply complaints for which no cause was found	The number of quality of supply complaints for which, after investigation, no cause was found.	Annual

^a Expressed as a total number organisation-wide, which can then be normalised in the appropriate way, e.g. complaints per 100,000 customers.

Item no.	Data field	Definition	Reporting period
5	Customer Service Network Call Centre Performance		
5.1	Calls to the call centre	The total number of calls to the call centre including any answered by an automated response service even if terminated without being answered by an operator. Where a joint call centre exists, calls are to be identified as either distribution or retail.	Quarterly
5.11	Calls to the s call centre answered by an operator	The number of calls answered by a human operator.	Quarterly
5.12	Calls to the call centre not answered within 30 seconds	The total number of calls not answered by a human operator within 30 seconds. The time to answer begins when the call is diverted to an operator and includes any time spent in a queue.	Quarterly
5.13	Average time to speak to an operator	The average time spent waiting to speak to an operator. The time begins when the call is diverted to an operator.	Quarterly
5.14	Abandoned calls	The number and percentage of calls diverted to a human operator that are abandoned before being answered.	Quarterly
5.15	Number of overload events	An event where a major supply interruption or emergency results in the call centre reaching capacity.	Quarterly
	Appointment Punctuality		
5.2	Customer arranged appointments	The number of appointments requested by the customer for a meeting with the DNSP's staff, at any location.	Quarterly
5.21	Appointments not met within 15 minutes of agreed time	The number of appointments where the DNSP was more than 15 minutes late.	Quarterly
	Timely Provision of Connections		
5.3	New connections made	The total number of new supply connections made to customers' premises.	Quarterly
5.31	New connections not made on agreed date	The number of new supply connections to customers' premises made after the date agreed with the customer. In the case of bundled contracts the agreed date is the date agreed between the retailer and the DNSP.	Quarterly
5.32	New connections with a one to four day delay	The number of new supply connections to customers' premises that are one to four business days after the date agreed with the customer. In the case of bundled contracts the agreed date is the date agreed between the retailer and the DNSP.	Quarterly
5.33	Average time taken for new connections	The average is to be calculated from receipt of the request.	Quarterly
5.34	Re-Connections made	The total number of re-connections made to a customers' premises.	Quarterly
5.35	Re-Connections not made on agreed date.	The number of re-connections to customers' premises made after the agreed date with the customer. In the case of bundled contracts the agreed date is the date agreed between the retailer and the DNSP.	Quarterly
5.36	Re-Connections with a one to four day delay	The number of re-connections to customers' premises that are one to four business days after the agreed date with the customer. In the case of bundled contracts the agreed date is the date agreed between the retailer and the DNSP.	Quarterly
5.37	Average time taken for re-connections	The average is to be calculated from receipt of the request.	Quarterly
	Technical Supply Faults		
5.4	Average time taken to fix a technical supply fault.	The average time taken to investigate and resolve a power quality complaint. Power quality complaint events are defined in Section 4.	Quarterly
	Street light Maintenance		
5.5	Street lights	The number of street lights in the distribution area.	Quarterly
5.51	Street lights out during period	The number of street lights reported by customers as not working.	Quarterly
5.52	Street lights not repaired by agreed date	The total number of street lights reported as not working which were not fixed by the date agreed with the customer.	Quarterly
5.53	Average time taken to repair faulty street lights	To be calculated from receipt of the notification of the fault.	Quarterly

Guaranteed Service Levels			
5.6	Number of GSL payments made	The total number of events that attracted a GSL payment.	Quarterly
5.61	Amount paid out in GSL payments	The total amount paid in GSL payments.	Quarterly
Interruptions			
5.7	Planned interruptions	The number and percentage of occasions on which the required notice of a planned interruption to supply was not given.	Quarterly
5.71	Planned interruption	The number and percentage of occasions on which the duration of a planned interruption exceeded the time specified in the notification.	Quarterly
Complaints Management			
5.8	Total complaints	The assessment of how DNSPs responded to customer requests. The total number of complaints, the reason for the complaint and the service to which the complaint relates (the specific classifications used are at the discretion of the DNSPs).	Quarterly
5.81	Average time taken to resolve	The average time taken to investigate and resolve complaints both in aggregate and using the classifications used in item 5.8.	Quarterly
5.82	Complaints resolved within 20 days	The number and percentage of complaints not investigated and responded to within 20 days.	Quarterly
5.83	Repeat complaints	The total number of complaints with respect to previous complaints.	Quarterly
5.84	Average time taken to resolve repeat complaint	The average time taken to investigate and resolve repeat complaints.	Quarterly