

**ELECTRICITY  
STANDARDS OF SERVICE:  
2006-07**

**MARCH 2008**



**Level 9, 38 Cavenagh Street Darwin NT 0800**

**GPO Box 915, Darwin NT 0801**

**[utilities.commission@nt.gov.au](mailto:utilities.commission@nt.gov.au)**

**[www.utilicom.nt.gov.au](http://www.utilicom.nt.gov.au)**



## Table of Contents

<b>1. Background .....</b>	<b>1</b>
Standards of Service Code .....	1
Establishment of minimum standards .....	1
Annual Reporting requirements .....	2
Purpose of this paper.....	3
<b>2. Commission’s Analysis of 2006-07 Performance .....</b>	<b>5</b>
Performance measures .....	5
Reliability of supply .....	5
<i>Networks</i> .....	6
<i>Generation</i> .....	7
Poorly performing segments .....	8
<i>Feeder performance</i> .....	8
Quality of supply .....	9
Customer service.....	9
Commission’s view .....	9



**CHAPTER****1****BACKGROUND****Standards of Service Code**

1.1 In December 2005, the Commission published an Electricity Standards of Service Code, pursuant to section 24 of the Utilities Commission Act 2000, in accordance with the authority granted to the Commission by, and as necessary or convenient to be done for or in connection with or incidental to the performance of its functions under:

- section 92(1) of the Electricity Reform Act 2000;
- section 10 of the Electricity Networks (Third Party Access) Act and clause 9A and Part 3 of the Network Access Code; and
- section 6 of the Utilities Commission Act.

1.2 The Code took effect from 1 January 2006.

1.3 The Code applies only to the Power and Water Corporation for the foreseeable future.

1.4 The objectives of the Code are to:

- establish minimum standards of reliability, quality and customer service in the NT electricity supply industry;
- develop, monitor and enforce compliance with and promote improvement in standards and conditions of service and supply by Power and Water; and
- require that Power and Water has in place arrangements which regularly report actual service performance against the key service performance indicators in terms of reliability, quality and customer service.

1.5 The Code does not yet include any incentive or penalty mechanisms, such as:

- price control adjustments in response to service performance; or
- customer compensation (or guaranteed service level) schemes.

1.6 The scope for such mechanisms will be considered in the context of the next network's regulatory reset, due to take effect from July 2009.

**Establishment of minimum standards**

1.7 The Code established a process by which certain minimum standards of service benchmarks are set.

1.8 Pursuant to clause 5 of the Code, on 19 July 2006 the Commission approved the initial minimum standards for reliability, quality and customer service submitted by Power and Water on 24 May 2006 and 1 August 2006 respectively, being satisfied that

these Minimum Standards give effect to the principles set out in Schedules 1 and 2 of the Code.

1.9 The Commission's approval of the Minimum Standards is subject to the following conditions:

- the Minimum Standards are approved for use until 30 June 2009;
- reporting of actual performance against the approved standards is to include the available time series for each indicator back to 1999-00;
- reporting of actual performance against the approved standards is to be undertaken on a disaggregated basis as and when such disaggregated information becomes available to the Corporation;
- the Corporation, in consultation with the Commission, is to review the effectiveness of the Minimum Standards prior to 30 June 2009; and
- the Minimum Standards must be resubmitted for approval following any changes to the Code affecting the Procedures.

1.10 The approved Minimum Standards can be found on the Commission's website.

## **Annual Reporting requirements**

1.11 The Code also requires that – commencing after the end of each financial year from 2005-06 – Power and Water report to the Commission as to the actual standards achieved each year against each of the benchmarks. For the immediate future, reporting is restricted to the Territory's regulated networks.

1.12 To supplement the Code, the Commission promulgated Procedural Guidelines which sets out the processes the Commission is to follow in making public the results of Power and Water's performance against the minimum standards each year. Specifically, once Power and Water has reported to the Commission on actual standards of service attained during the year, the Commission will publish a compliance report.

1.13 The Commission's annual compliance report is intended to assist customers, media and other stakeholders in critically assessing and making a judgment on the level of performance by Power and Water compared to the minimum standards of service benchmarks. It will also play a role in facilitating informed discussion between consumers and Power and Water on local or generalised standards of service improvements.

1.14 At this stage, the Commission has not undertaken comparison or benchmarking with the performance of similar service providers elsewhere in Australia. In the short term, the Commission will be considering Power and Water's standards of service performance against the approved minimum standards until sufficient history has been established to give some basis for the review of minimum standards that is to be undertaken prior to June 2009.

1.15 The Commission is of the view that before effective interstate comparisons can be made, Power and Water should be allowed a couple of years to allow it to fine-tune its data collection procedures. The Commission and stakeholders will be better placed to interpret differences in performance across jurisdictions once the accuracy and consistency of Power and Water's own data is settled.

1.16 The framework established under the Standards of Service Code currently does not include any incentive or penalty mechanisms, such as a price control adjustment in response to service performance or a guaranteed service level (GSL) scheme. When establishing the framework, the Commission considered its first priority was to ensure that Power and Water's reporting mechanisms were effective and the minimum standards used were valid (over the second regulatory period).

1.17 The Commission commenced the 2009 Regulatory Reset process with the release of an issues paper in October 2007. The 2009 Regulatory Reset will provide an opportunity to examine the scope for the introduction of incentive or penalty mechanisms in support of the NT Electricity Standards of Service framework.

1.18 As poor standards of service may result under price controls which provide incentives to reduce costs in order to maximise profits, standards of service are inextricably intertwined with price regulation. Accordingly, it is intended that the effectiveness of the Minimum Standards (required to be undertaken prior to 30 June 2009) will either form part of the 2009 Regulatory Reset process or be conducted in close conjunction with it.

### **Purpose of this paper**

1.19 This paper constitutes the Commission's annual compliance report of Power and Water's performance in 2006-07 against the Minimum Standards of reliability, quality and customer service established under the Code.

1.20 Power and Water's report provides data on a quarterly basis and historical data on an annual basis to show the basis of any trends over time, as well as an explanation of any recent material variations in year-on-year performance. It should be noted that the minimum standards relate to the full year performance.

1.21 While Power and Water has been required (as a condition of approval of the Minimum Standards) to provide historical data for each performance indicator, data has not previously been collected and collated for this specific purpose or in this format. Accordingly, while the Commission acknowledges that Power and Water has done its best to provide historical data, Power and Water has advised that there are concerns regarding the robustness of some of the historical data.

1.22 In particular, reporting systems for data from the Tennant Creek regulated network are still in the process of being implemented. Data that has been provided is collated based on verbal reporting.

1.23 Once again, the Commission has opted to let Power and Water's service performance data largely speak for itself.

1.24 The Commission's compliance report concentrates on providing a general overview of performance and a closer look at those performance indicators that involve a second successive year breaching the minimum standard set for the performance indicator.

1.25 For full details of actual performance figures, Power and Water's report to the Commission is also provided on the Commission's website.





**CHAPTER****2****COMMISSION'S ANALYSIS OF 2006-07  
PERFORMANCE****Performance measures**

2.1 The Standards of Service Code sets minimum standards for performance in three key areas:

- Reliability of supply – how often electricity supply is interrupted and for how long;
- Quality of supply – for example, whether electricity is supplied at a constant voltage; and
- Customer service – for example responding promptly to customer calls, ensuring connections are undertaken within reasonable timeframes and handling complaints properly.

**Reliability of supply**

2.2 Reliability is measured by how often and for how long consumers are subject to interruption of their electricity supply during a given period.

2.3 An interruption is any loss of electricity supply to a customer which is associated with an outage on 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).

2.4 The Code requires Power and Water to report on the following key indicators of system-wide reliability:

- the average minutes of off-supply per customer (“interruption duration” or SAIDI);
- the average number of interruptions per customer (“interruption frequency” or SAIFI); and
- the average interruption duration per customer (CAIDI).

2.5 Interruptions are to be reported as having occurred under one of the following categories:

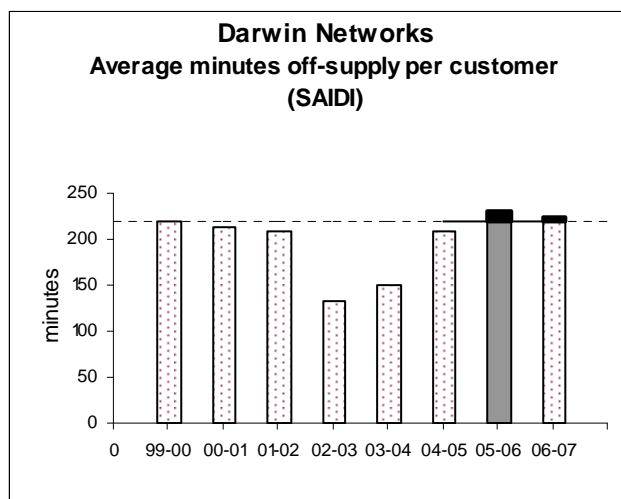
- distribution and transmission system – interruptions within the network; and
- generation – interruptions due to generation deficiency normally resulting in load shedding.

2.6 The Code allows for the effect of severe interruptions to supply on its key reliability indicators, based on the “2.5 beta method”, to be removed in order to determine the underlying reliability performance. Such severe interruptions are referred to as “exclusion events” (Power and Water also uses the term ‘Major Event Day’ or “MED”). The

values of the relevant system-wide reliability indicators must nevertheless be reported in both unadjusted and adjusted terms.

### Networks

2.7 In Darwin, the average minutes of off-supply per customer due to network problems was 225 minutes, exceeding the minimum standard of 220 minutes for the second successive year. This was a slight improvement on 2005-06.

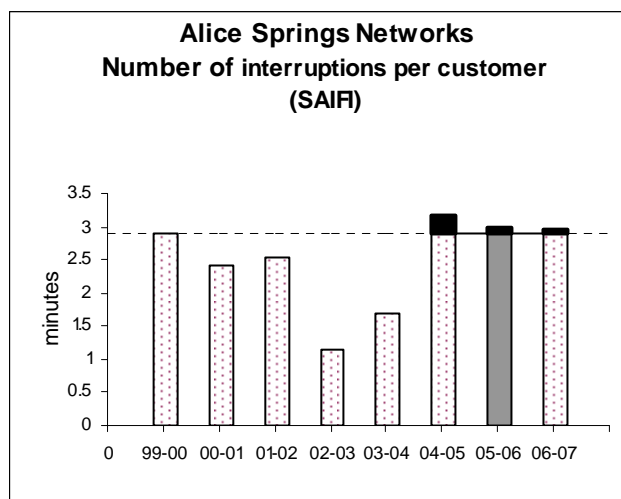


2.8 The number of interruptions per customer in Darwin improved in 2006-07 to be within the minimum standard, however the average duration of each network-related interruption breached the minimum standard in 2006-07 (57 minutes versus a minimum standard of 52 minutes).

2.9 Power and Water's report has listed a number of specific events, mainly weather related, that contributed to this result, noting that were the two larger of these events classified as Major Event Days, the minimum standard would have been met. However, in seeking clarification the Commission was advised that this information was included more as commentary rather than a formal submission to adjust the data. Accordingly, the Commission interprets this to mean that there were no exclusion events (based on the 2.5 beta method) requiring adjustment to performance figures for 2006-07.

2.10 In both Katherine and Tennant Creek, Power and Water met all the minimum standards for network reliability.

2.11 In Alice Springs, the minimum standards for the average minutes of off-supply (111 minutes versus minimum standard of 108 minutes), and the number of interruptions per customer (3.0 versus minimum standard of 2.9) were breached, with the latter measure being breached for the second successive year. The average duration for each interruption in Alice Springs (37.0 versus the minimum standard of 37.2) was better than the agreed performance target.



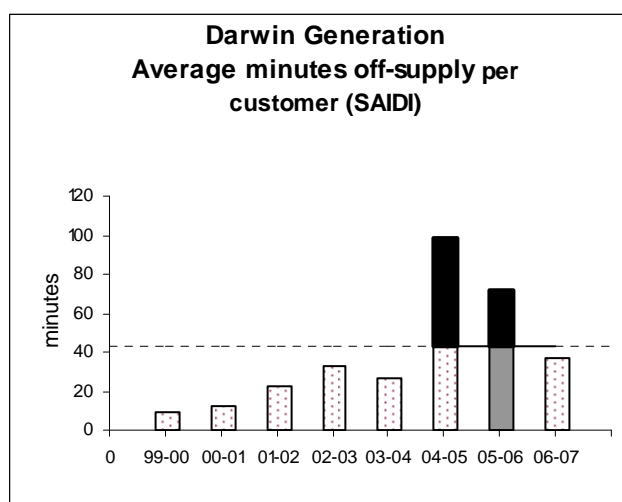
2.12 Power and Water has reported that the main cause for the increase in the duration of outages was an intermittent fault with the Larapinta feeder and an unexpected failure of the Bradshaw transformer. Bad weather was a major contributor to the high number of interruptions experienced in Alice Springs.

2.13 Network reliability performance in Katherine continues to be maintained at historic lows. However, in both Darwin and Alice Springs, while good performance was achieved in the middle years of the historic reporting period (that is, in 2002-03 and 2003-04), this has not been maintained in more recent years.

### **Generation**

2.14 Power and Water has met all the minimum standards for generation reliability across the Darwin, Katherine and Alice Springs networks in 2006-07.

2.15 In particular, there was significant improvement in the average minutes of off-supply per customer in both Darwin and Katherine (these systems being interconnected) after a breach in the minimum standards in the previous two years. Power and Water reported that this was the result of rectifying the vibration problems associated with generation set 7 at the Channel Island Power Station.



2.16 In Tennant Creek, Power and Water met the minimum standard for the total minutes of off-supply and number of outages per customer, but exceeded the minimum standards for the average interruption duration (13.6minutes versus minimum standard of 10). However, this is still an improvement on the previous year's performance.

### **Poorly performing segments**

2.17 In addition to the standard industry average measures discussed above, measures are also required that indicate the standards being achieved for the worst served consumers.

2.18 Even if a large proportion of customers are satisfied with their current level of service, there is still a role to be played by focusing on the worst served consumers to identify areas with exceptionally poor reliability (which are the areas that affected customers may be critically concerned about).

2.19 Accordingly, the Code requires that Power and Water also report on the standards being achieved for poorly-performing feeders.

2.20 For interconnected networks where supply can be maintained via a number of connections (i.e., the Darwin Urban network and the Alice Springs network), a poorly performing feeder is considered to be one which experiences more than 15 interruptions or more than 1,500 minutes of interruptions in the year.

2.21 For radial distribution networks where there is only a single supply path available (i.e., the Darwin Rural network, the Katherine network and the Tennant Creek network), a poorly performing feeder is considered to be one which experiences more than 27 interruptions or more than 2,500 minutes of interruptions in the year.

2.22 Minimum standards in relation to poorly performing network segments seek to identify the worst segments of the network so that improvement initiatives (e.g., additional maintenance) can be focused on these areas. In setting this minimum standard, the Commission does not expect that no feeder be designated poorly performing, but rather that the number of feeders identified as poorly performing not exceed a prescribed number and also that no specific feeder continues to be poorly performing on an on-going basis.

### ***Feeder performance***

2.23 For the interconnected networks in the Darwin Urban area and Alice Springs, Power and Water met the agreed minimum standards for feeder performance.

2.24 For the radial networks in the Darwin Rural area, Katherine and Tennant Creek, Power and Water also met the agreed minimum standards for feeder performance.

2.25 Full details of actual performance figures are set out in Power and Water's report to the Commission, available on the Commission's website.

2.26 At this stage, reporting systems are not yet fully in place for the Commission to be able to determine whether any specific feeders continue to be poorly performing on an on-going basis. Reporting of which feeders were poorly performing in 2005-06 was incomplete and not available at all for earlier years (with Power and Water only being required to provide historic data on a 'best endeavours' basis).

2.27 However, Power and Water Networks has advised the Commission that some feeders do not perform as well as others each year because they are in areas that are prone to outages or they are a long feeder; that is, a reflection of the nature and scale of Networks' assets, rather than being indicative of underlying operational problems.

## Quality of supply

2.28 Quality of supply refers to the electrical specification of supply, and involves measures such as voltage levels, frequency, and harmonic content.

2.29 The Code requires that the key indicator of quality to be used the number of complaints received in relation to voltage events such as voltage dips, swells, spikes etc.

2.30 Power and Water has invested resources to be in a position to report on this measure for the first time in the 2006-07 financial year, with the number of complaints relating to voltage events being 1,029 for the year.

2.31 Historic comparisons cannot be made as Power and Water has not previously had systems in place to collect detailed voltage complaint data and accordingly, no minimum standard has been set for this performance measure.

## Customer service

2.32 Customer service refers to a service provider's interaction with individual customers. It is generally monitored in terms of the service provider's responsiveness and dependability, and in relation to services provided and the level of complaints.

2.33 The Code requires that the key indicators of customer service to be used are:

- the percentage of new connections not provided within the required time limit;
- the number and percentage of telephone calls responded to within 20 seconds from when the customer selects to speak to a human operator;
- the number of customer complaints.

2.34 In setting required timeframes for new connections, Power and Water segments new connections into three different categories:

- connections to existing properties (to be provided within 24 hours);
- connections to new subdivisions (to be provided within 5 days); and
- connections requiring system augmentation (to be provided within 10 days).

2.35 Power and Water met the required minimum standard for connections to existing properties and for connections requiring system augmentation.

2.36 However, Power and Water failed to meet the minimum standard for connections to new subdivisions, with 19.3% of connections not being made within the prescribed period of 5 days (against a minimum standard of 10%). Power and Water reports that this was due to a significant increase in the number of connections requested, reflective of higher levels of building activity over the period. 2006-07 showed approximately a 50% increase over the number of connections provided in 2005-06 and 2004-05.

2.37 Power and Water met the agreed minimum standard for the time taken to respond to customer telephone calls.

2.38 Power and Water also met the agreed minimum standard for the number of customer complaints, with the number of complaints reducing considerably from 2,907 in 2005-06 to 1,917 in 2006-07 (against a minimum standard of 5,146).

## Commission's view

2.39 Overall, while there remain some areas where Power and Water is having difficulty in meeting the minimum standards of service, Power and Water's performance

in 2006-07 has improved over the previous year. Power and Water has only experienced consecutive breaches in 5 of the 49 agreed minimum standards.

2.40 Also of concern to the Commission is the level of detail provided in Power and Water's reporting on actual performance which, while meeting the basic parameters set out in the Code, is somewhat limited.

2.41 Preparatory to submitting the 2006-07 report, the Commission suggested that Power and Water should include a special commentary focusing on each and every performance indicator that involves a second successive year breaching the minimum standard set for the performance indicator. The Commission suggested that this should include a canvassing of the background, causes, plans to correct and possible constraints associated with the breach.

2.42 The Commission is disappointed that Power and Water's commentary on consecutive breaches was incomplete in some regards. The Commission hopes that this will improve in the next report which will be three years into the process of setting and reporting against agreed minimum standards. If not, the Commission will give consideration to whether Code amendments are warranted to formally require detailed explanations of such persistent breaches.

