

**Appendix D**

**OtagoNet Joint Venture  
Commerce Act (Electricity Distribution Thresholds) Notice 2004 and Amendment Notice 2006  
Quality Inputs and Calculations for the  
Assessment Date 31 March 2008**

Year	SAIDI (Interruption Duration)			SAIFI (Interruption Frequency)		
	Class B	Class C	Total	Class B	Class C	Total
1999	119.80	220.80	340.60	0.87	1.58	2.45
2000	143.60	177.20	320.80	0.65	1.97	2.62
2001	64.00	133.40	197.40	0.48	1.95	2.43
2002	65.50	106.40	171.90	0.31	1.45	1.76
2003	54.00	161.80	215.80	0.29	2.33	2.62
<b>Five Year Average</b>	89.38	159.92	249.30	0.52	1.86	2.38
2004	59.00	395.40	454.40	0.29	2.87	3.16
2005	75.80	98.00	173.80	0.45	1.27	1.72
2006	174.09	133.07	307.16	0.76	1.98	2.75
2007	293.42	176.82	470.24	1.31	2.21	3.53
2008	187.57	315.83	503.40	0.81	2.29	3.10

**EXPLANATION OF BREACH OF QUALITY THRESHOLD (SAIDI / SAIFI)**

OJV has not complied with all of the requirements of the quality threshold for the assessment period ended 31 March 2008 as specified in The Notice.

**PLANNED OUTAGES**

The non-compliance is due to breaches in the thresholds for both SAIDI and SAIFI and is primarily due to the level of planned outages (Class B). The SAIDI and SAIFI for planned outages were 110% and 56% above the five year averages respectively.

As for the 2006/07 year the increase in the planned outages is due to the level of the capital works programme for the year. The average capital expenditure dating back to the 2000/01 year was \$2.5 million, including new connection work. This is significantly below the depreciation of \$3.5m throughout the same period. The OJV network is already in the lower quartile of distribution businesses when measuring the percentage of the network assets life remaining. Further continuation of capital expenditure at levels below depreciation would see this situation worsen and jeopardise the long term condition and quality of the network.

The capital works programme has been increased to above \$7.0 million as detailed in the ten year Asset Management Plan. This is an increase of 180% on the average capital spend of \$2.5 million in the period 2000/01 - 2004/05.

Consequently both SAIDI and SAIFI for planned outages increased above the levels that have occurred in the 2000/01 – 2004/05 period. The 2007/08 planned SAIDI of 188 minutes is above the 2000/01 – 2004/05 average of 64 minutes (exceeded by 124 minutes). Similarly, the planned SAIFI of 0.81 times is above the 2000/01 – 2004/05 average of 0.36 times (exceeded by 0.45 times).

With similar levels of capital work programmed for future years OJV is expecting to see planned SAIDI and SAIFI exceed the five year threshold average. At the same time we expect to see some improvement in the unplanned outages due to improvements in the reliability of the network. The decrease in the unplanned SAIDI and SAIFI is not expected to be at a level which will exceed the increase in the planned SAIDI and SAIFI. As a consequence OJV will most probably breach the quality threshold in future years although ongoing consideration will be given to live line working wherever practical.

Where it is cost effective every attempt is made to carry out planned work resulting in minimal or no disruption to customers supply, however there are a number of factors, some peculiar to the OJV area, which prevent this occurring:

- In some cases as the network dictates the condition of conductors, cross arms and poles has deteriorated to a level where live line work cannot be carried out safely.
- The network is largely radial in nature due to the geography of the region and this offers limited opportunity to back feed customers as there are few ring feeds available.
- The shortage of qualified line mechanics places a premium on live line work which takes considerably longer to complete than when supply is disconnected.

The view of the OJV Governing Committee to take a medium to long term view to managing the asset and as such considers it necessary to ensure appropriate maintenance and capital expenditure (as outlined in the Asset Management Plan) takes place for future growth and strengthening of the ageing network. This has resulted in a breach in the quality threshold for 2007/08 and is likely to result in further quality breaches in the short term.

#### **UNPLANNED OUTAGES**

On 23 October 2007 a severe storm, lasting two days, hit the Southland and Otago region that resulted in over 120 outages, some customers were not restored within 24 hours. The outages from this storm contributed 91.04 SAIDI minutes or 57% of the unplanned SAIDI target for the year. The storm contributed 0.36 to the SAIFI or 19% of the unplanned SAIFI target for the year.

In addition a number of adverse weather events impacted on the network during the year for example two outages for snow in June adding 34 minutes to the overall SAIDI but only affected 250 customers, one outage taking 42 hours to restore due to access not being possible.