

## Appendix D

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

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

### 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 2006 as specified in The Notice.

The non-compliance is due to breaches in the thresholds for both SAIDI and SAIFI and is primarily due to the significant increase in planned outages (Class B). The SAIDI and SAIFI for planned outages were 95% and 46% above the five year averages respectively.

The increase in the planned outages is due to the significant increase in the capital works programme in the 2005/06 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 2005/06 capital works programme increased to \$4.3 million and is planned to increase above this level in future years. This is an increase of 72% on the average capital spend in the period 2000/01 – 2004/05.

Planned interruptions of 295 in 2005/06 showed an increase of 93% from the 153 which occurred in 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 2005/06 planned SAIDI of 174 minutes is above the 2000/01 – 2004/05 average of 64 minutes (exceeded by 110 minutes). Similarly, the planned SAIFI of 0.76 times is above the 2000/01 – 2004/05 average of 0.36 times (exceeded by 0.40 times). The level of SAIDI and SAIFI identified as exceeded above due to planned outages is greater than the overall 2005/06 breach of 58 minutes for SAIDI and 0.36 times for SAIFI.

With the high level 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.

#### **SUMMARY**

The view of the OJV Management 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 2005/06 and is likely to result in further quality breaches in the short term.