

## **THRESHOLD COMPLIANCE STATEMENT**

**FOR THE ASSESSMENT DATE, 31 MARCH 2008**

*Pursuant to the Commerce Act (Electricity Lines Thresholds) Notice  
2004 and the Amendment Notice 2006*

15 May 2008

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### **Contents**

- 1) Disclosure of Information Required (Clause 7(1)(a)(i) – The Price Path Threshold)
  - 2) Disclosure of Information Required (Clause 7(1)(a)(ii) and (iii) – The Quality Threshold)
  - 3) Auditor’s Report on the Threshold Compliance Statement (Clause 7(1)(b))
  - 4) Certification of the Threshold Compliance Statement (Clause 7(1)(c))
- 
- APPENDIX A – Notional Revenue & Allowable Notional Revenue at 31.3.2008
- APPENDIX B – Maximum Notional Revenue at Assessment date 31.3.2008
- APPENDIX C – SAIDI and SAIFI Statistics
- APPENDIX D – Adjustment of Network Reliability Index Due to an Extreme Storm Event in July 2007
- APPENDIX E – Adjustment of Network Reliability Index Due to a Major Event Day in December 2007
- APPENDIX F –Customer Engagement Survey Questions

## 1. Disclosure of Information Required (Clause 7(1)(a)(i) - The Price Path Threshold)

Top Energy Limited does comply with the requirements of the price path threshold at the Assessment date 31 March 2008, as specified in the Commerce Act (Electricity Distribution Thresholds) Notice 2004 and Amendment Notice 2006.

**Clause 5 (1) (a)** The Notional Revenue of a distribution business at each Assessment date (calculated in accordance with the numerator of the left-hand side of the following expression) is not to exceed the allowable Notional Revenue of the distribution business under the CPI-X price path at that Assessment date (calculated in accordance with the denominator of the right-hand side of the following expression):

<b>Test:</b>	$\frac{NR_{2008}}{R_{2008}}$	$\leq 1$
<b>Result:</b>	\$15,626,225 / \$15,760,732	< 1
<b>Result:</b>	0.9915	< 1
<b>Result:</b>	Threshold is not breached	

Supporting evidence is presented in Appendix A.

**Clause 5 (1) (b)** The Notional Revenue of a distribution business at any time during an assessment period is not to exceed the greater of the Allowable Notional Revenue of the distribution business at the Assessment date on which that assessment period ends and the Allowable Notional Revenue of the distribution business at the previous Assessment date under this clause (or, if the previous assessment date is the reference date, under clause 5 of the initial Notice).

<b>Test:</b>	$\frac{NR_{Max}}{Max(R_{2007}, R_{2008})}$	$\leq 1$
<b>Result:</b>	\$15,626,225 / \$15,760,732	< 1
<b>Result:</b>	0.9915	< 1
<b>Result:</b>	Threshold is not breached	

There has been no change to tariffs within the assessment period.

Supporting evidence is presented in Appendix B.

### **Notional Revenue:**

In accordance with the Gazette Notice, the following sources of revenue have been included in the calculation of Notional Revenue:

- Network line charges to retailers
- Network line charges to end customers

### **Excluded Services:**

In accordance with the Gazette Notice the following sources of revenue have been excluded from the calculation of Notional Revenue:

- Non Conveyance items such as
  - Rents
  - Interest
  - General Contracting services
  - Customers' interest in network assets.
- Connection services such as:
  - Metering
  - Disconnections and reconnections.

These services are competitive and have not altered from previous years.

### **Pass Through Costs:**

In accordance with the Gazette Notice, the following components of transmission charges have been included in pass through costs:

- Connection charges
- Interconnection charges
- Voltage support charges
- New investment charges
- EVA adjustments
- Loss Rental
- Avoided transmission charges

Other costs that have been passed through in accordance with the Gazette Notice are:

- Local body rates applying to system fixed assets: lines, cables, equipment, sub-station land and substation buildings.
- Electricity Commission levy costs.

## 2. Disclosure of Information Required (Clause 7(1)(a)(ii) and (iii) - The Quality Threshold)

Top Energy Limited does not comply with all requirements of the quality threshold at the Assessment date 31 March 2008, as specified in the Commerce Act (Electricity Distribution Thresholds) Notice 2004 and the Amendment Notice 2006.

### Clause 6 (1) (a) Interruption Duration (Class B&C)

<b>Test:</b>	$SAIDI_{2008} \leq \left( \frac{SAIDI_{1999} + SAIDI_{2000} + SAIDI_{2001} + SAIDI_{2002} + SAIDI_{2003}}{5} \right)$		
<b>Result:</b>	818.30	>	463.60
<b>Result:</b>	SAIDI breaches the threshold by 354.7 minutes		

### Clause 6 (1) (b) Interruption Frequency (Class B&C)

<b>Test:</b>	$SAIFI_{2008} \leq \left( \frac{SAIFI_{1999} + SAIFI_{2000} + SAIFI_{2001} + SAIFI_{2002} + SAIFI_{2003}}{5} \right)$		
<b>Result:</b>	6.39	<	6.48
<b>Result:</b>	SAIFI does not breach the threshold		

Supporting evidence is presented in Appendix C.

The following section provides additional information to support Top Energy's claim that the breach of Clause 6(1)(a) reflects the impact of extreme events consistent with the guidelines provided by the Commerce Commission titled, *"Supplementary Guidelines for Investigating Breaches of the Reliability Criterion of the Quality Threshold"*.

Using the guidelines provided Top Energy has identified two Major Event Days which caused it to breach the reliability thresholds. The first event occurred during the period of 10 July to 13 July 2007, which was an extreme weather event that occurred over several days. The overall SAIDI impact of this 'extreme event' contributed to 50% of Top Energy's total SAIDI for the regulatory assessment period.

The storm caused a significant number of fault events distributed throughout the network that hampered access to fault sites due to road closures. Of the 410.84 minutes recorded during this period, a total of 410.33 minutes (99.88%) is directly attributed to the adverse weather event (i.e. extreme wind or flooding). In accordance with Commerce Commission's *"Supplementary Guidelines for Investigating Breaches of the Reliability Criterion of the Quality Threshold"*, a reduction of 367.96 SAIDI minutes and 0.45 SAIFI can be claimed. Further explanation supporting the adjustment of the Network Reliability Index due to the extreme storm event in July 2007 is presented in Appendix D.

In addition, seven major interruptions occurred on 6 December 2007 which resulted in a Major Event Day. Most of these were directly or indirectly caused by the adverse weather conditions (wind, rain, lightning, slippery roads) which exceeded the daily allowable aggregate. In accordance with Commerce Commission's *"Supplementary Guidelines for Investigating Breaches of the Reliability Criterion of the Quality Threshold"*, a reduction of 3.67 SAIDI minutes can be claimed. Further explanation supporting the adjustment of the Network

Reliability Index due to the Major Event Day in December 2007 is presented in Appendix E.

As such Top Energy's reliability performance can be reduced as follows, consistent with the Commerce Commission's Beta Method for identifying extreme events.

<b>Date</b>	<b>SAIDI</b>	<b>SAIFI</b>
10-13 July 2007	367.96	0.45
6 December 2007	3.67	0
Total Reduction due to MEDs	371.63	0.45

Accordingly, the compliance position, after applying the Beta Method for the assessment period ending 31 March 2008 is as follows:

<b>Test:</b>	$SAIDI_{2008} \leq \left( \frac{SAIDI_{1999} + SAIDI_{2000} + SAIDI_{2001} + SAIDI_{2002} + SAIDI_{2003}}{5} \right)$		
<b>Result:</b>	446.67	<	463.60
<b>Result:</b>	SAIDI does not breach the threshold		

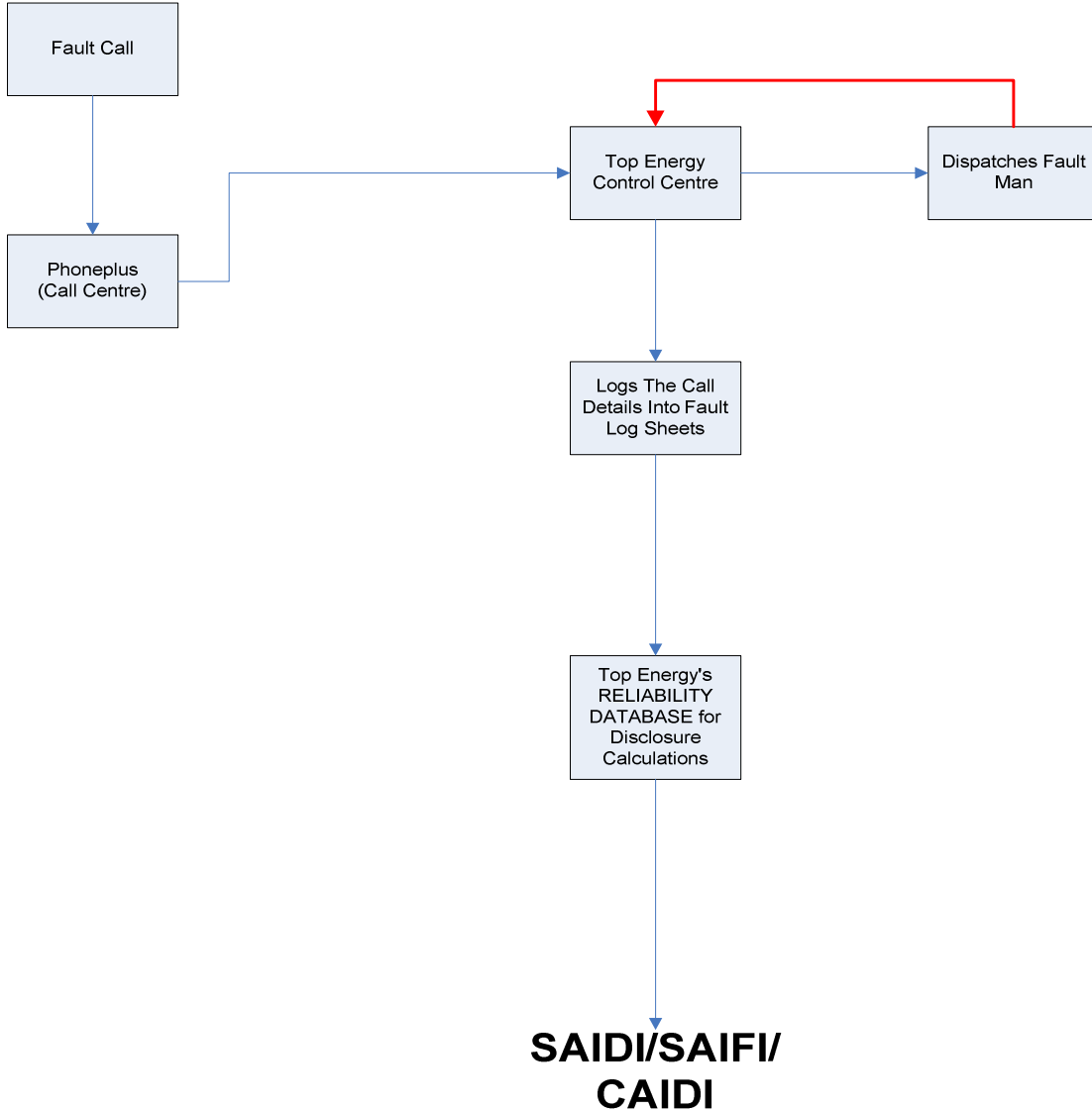
**Test:**  $SAIFI_{2008} \leq \left( \frac{SAIFI_{1999} + SAIFI_{2000} + SAIFI_{2001} + SAIFI_{2002} + SAIFI_{2003}}{5} \right)$

**Result:** 5.94 < 6.48

**Result:** SAIFI does not breach the threshold

Clause 7 (a) (iii) Procedures used for recording SAIDI and SAIFI statistics

Top Energy Limited records data for network performance from its network Control Room source. The following flow diagram outlines the business process that results in the recording and production of quality performance statistics.



**Top Energy Faults Management Process**

## Recording Interruptions:

Any interruption in supply is recorded by the Control Room Operators:

- Planned outages – are managed by the Control Room that (1) schedule the work with the Field staffs, and (2) conduct and coordinate the switching on the network. These details are recorded by action, date and time on a 'Switching Procedure Sheet'.
- Unplanned outages - are initiated either by a fault call received by our in house Call Centre (PHONE*plus*) or by receiving a direct protection equipment alarm generated directly out of the SCADA system. A call detail record \*(CMS) is completed by the Call Centre operators who identifies key information about the interruption, such as: time, fault description, name & contact details of the caller. Subsequently the Control Room Operator will despatch the Fault Man, log the fault, and conduct any switching that is required. All EHV and HV faults are recorded electronically via the SCADA system which provides an accurate record of the operation, time and date factors of the outage.

(\*"CMS" Call Management Service, is a sheet Call Centre uses to record the customer fault call information such as the time and date.)

For either type of outage the Control Room Operator records the following information which is entered into an access database:

- Substation reference number
- Feeder affected
- Interruption class type – A,B,C or D
- Cause Code – where known

As a part of managing the restoration of supply, the Control Room Operator records the times that the customer(s) are without power. This may involve recording the time for both (1) a Partial Restoration and (2) the Complete

Restoration. Where there is an intermittent fault which is immediately restored, for instance if a recloser trips and then restores supply a second later, then an interruption will not be recorded. The Control Room works on a roster basis with 4 operators manning on site from 7 am to 7pm for five days a week. Outside of these normal working hours, a standby roster is used.

### **Consumer Numbers:**

Historically, in the absence of a fully integrated GIS & ICP database of our network it was not possible to determine the exact number of customers affected by the fault. Therefore, Top Energy has been using a model (i.e. Reliability) which estimates the customers affected by monitoring the demand immediately before and after the interruption measured in Amperes. For outages affecting small number of customers, a Manual Customer Count may be used instead. Instead of using this model described above, Top Energy has used its newly upgraded GIS system to obtain the number of customers beyond every isolation devices on the network. The customer count is extracted from the GIS system, which is linked to the ICP database. For the assessment period ending 31 March 2008, Top Energy had been using the more accurate customer count rather than the estimation based on Amperes for the majority of interruptions. To determine the total number of consumers on our network, Top Energy maintains an ICP database which is based on the industry maintained MARIA equivalent. An average number of ICPs connected for the financial year is used to as the yearly customer base.

### **Reliability Database:**

Top Energy Control Room Operators import data of all interruptions (e.g. cause code, voltage, number of customers affected, etc) to the Reliability Access Database. On a monthly basis, the database is reviewed for reasonableness by the Operations Manager. After the data is reviewed, network quality graphs and a

summary monthly report of reliability statistics form part of the Network Manager's report to the Board of Directors. On a six monthly basis, the statistics are summarised and reported as part of the Company's Financial Report, with comparison against targets set in the Company's Statement of Corporate Intent.

**Future Improvements:**

It is proposed that Top Energy Limited be using its fully upgraded GIS Incident Application from 1 April 2008. This will be run in parallel with our existing aspatial database for the next 12 months.

## **Customer Communication (Clause 6(1)(c))**

### **Background**

The targeted control regime established under Part 4A of the Commerce Act 1986 and promulgated by the Commerce Act (Electricity Distribution Thresholds) Notice 2004 dated 31 March 2004 requires each lines company to consult with their consumers on the options of price and supply quality available to those consumers during the two year period ended on 31 March 2008 and to take those consumers views into account when making asset management decisions. Top Energy has used, and will continue to use, its asset management plan as the primary means of taking these views into account when setting service levels.

Section 7(1) of the Notice broadly defines the process of disclosure, auditing and director certification that is required to verify that such consultation has occurred.

### **Purpose of this section**

The purpose of this section is to demonstrate pursuant to Section 7(1)(a)(ii) of the Notice that Top Energy has consulted with its consumers during the 2 year period ending 31 March 2008.

### **Consumer consultation requirements**

#### Threshold Notice Requirements

The consumer consultation requirements are defined in Section 6(1)(c) of the Notice, and broadly require a lines business to

- (i) Properly advise (or ensure that another person properly advises on its behalf) its consumers (or another person that accurately reflects the interests of those consumers) about the price and quality trade-offs available to them in relation to the goods and services provided by the distribution business.
- (ii) Consult (or ensure that another person consults on its behalf) with those consumers (or another person that accurately reflects the interests of those consumers) about the quality of goods and services that they require, with reference to the price of those goods and services.
- (iii) Properly consider the views expressed by consumers during and after that consultation.
- (iv) Adequately take these views into account when making asset management decisions.

### Consultation Methodology

Top Energy has followed the recommendations laid out in Tables 7.1(a), 7.1(b), 7.2(a) and 7.2(b) of the PB Associates report, 'Electricity Distribution Business Asset Management Plans and Consumer Engagement: Best Practice Recommendations', dated April 2005. Top Energy has consulted;

- By using a telemarketing call centre (*PHONEplus*) to consult with a random sample of 1,000 mass market consumers.
- By using a specialist energy consultant to engage by phone with the 12 largest consumers (Top 12 consumers) NOTE: The top 12 consumers is the same consumer group Top Energy surveyed in 2006 and an additional 15 random commercial customers from the Top 13-100 commercial consumer

group. A detailed description of scope of the survey is presented in the next sub-section.

with the following classes of consumers.

The questionnaire used for this survey is in Appendix F.

#### Definition of Large and Small Consumers

In its consumer consultation for the period ending 31 March 2006, Top Energy consulted with its 12 largest consumers (by energy consumption). Top Energy has defined these customers as “large” and this definition was accepted by the Commerce Commission in 2006, hence Top Energy adopted this definition again for 2008 and classified its other 29,600 consumers as “small” or “mass-market”. Due to the inclusion of a sample of the Top 13 – 100 consumers, the definition of mass market has been adjusted accordingly.

Top Energy has progressively increased the scope of its consumer surveys since 2006 as follows

<b>Period ending</b>	<b>Scope of survey</b>
31 March 2006	<ul style="list-style-type: none"><li>• Top 12 consumers.</li><li>• Random sample of 1,000 mass market consumers.</li></ul>
31 March 2008	<ul style="list-style-type: none"><li>• Top 12 consumers.</li><li>• Random sample of 15 from consumers ranked 13 to 100.</li><li>• Random sample of 1,000 mass market consumers</li></ul>

#### Survey Response Rates

Successful completion of the survey relies on many converging factors, such as knowing who to contact, reaching them on the phone, their having time to

participate, and their being willing to participate. The participation rate for the Top 12 segment is 75%, and for the Top 13–100 segment, it is 47%.

Moreover, 374 mass market responses (i.e. 37% survey response rate) from a population of about 29,600 consumers indicates a confidence interval of about  $\pm 5\%$  and a confidence level of 95%. Therefore, in general, Top Energy can have confidence that the completed survey fairly represents consumers' views and preferences.

### Definition of Quality

Top Energy has defined quality as a combination of continuity and restoration, which is justified by the following argument.

As part of the Top 12, Top 13-100 and the mass-market surveys undertaken Top Energy has asked consumers to identify what is the most important aspect of electricity supply, the second most important, and the third most important from the following list of attributes...

<b>Top 12 and Top 13 – 100 market segments</b>	<b>Mass market segments</b>
<ul style="list-style-type: none"> <li>• Answering the phone quickly when they called Top Energy.</li> </ul>	<ul style="list-style-type: none"> <li>• Keeping the power on all the time.</li> </ul>
<ul style="list-style-type: none"> <li>• Keeping the power on all the time.</li> </ul>	<ul style="list-style-type: none"> <li>• Getting the power back on quickly when it goes off.</li> </ul>
<ul style="list-style-type: none"> <li>• Quick processing of applications for new connections.</li> </ul>	<ul style="list-style-type: none"> <li>• No flicker or surges.</li> </ul>
<ul style="list-style-type: none"> <li>• Advising on technical matters.</li> </ul>	<ul style="list-style-type: none"> <li>• Answering the phone quickly when they called Top Energy.</li> </ul>
<ul style="list-style-type: none"> <li>• Getting the power back on quickly.</li> </ul>	<ul style="list-style-type: none"> <li>• Answering your enquiry then and there on the phone.</li> </ul>
<ul style="list-style-type: none"> <li>• No flicker or surge.</li> </ul>	<ul style="list-style-type: none"> <li>• Resolving proven technical complaints.</li> </ul>

<ul style="list-style-type: none"><li>• Sufficient notice of planned shutdowns.</li></ul>	<ul style="list-style-type: none"><li>• Advance notice of shutdowns.</li></ul>
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Consumer responses revealed the following

- A clear majority of consumers considered keeping the power on (continuity) to be the most important attribute.
- A clear majority considered the speed of getting the power back on when it goes off (restoration) to be the second most important.

Top Energy therefore believes interpreting “quality” as **continuity** and **restoration** is well justified, and uses the term “**reliability**” to embody both of these attributes.

## Summary of compliance

This section provides supporting evidence that the requirements of Section 6(1)(c) (i) – (iv) of the Notice have been complied with.

Compliance requirement	Top 12 consumer segment consultation activities	Top 13 – 100 segment consultation activities	Mass-market segment consultation activities
<p>Properly advise (or ensure that another person properly advises on its behalf) its consumers (or another person that accurately reflects the interests of those consumers) about the price and quality trade-offs available to them in relation to the goods and services provided by the distribution business.</p>	<ul style="list-style-type: none"> <li>• Applicants for new commercial or industrial connections are presented with a range of design/connection options for component ratings, configurations and locations applicable to their intended load, along with applicable tariffs. This is developed via series of meetings and is an iterative process whereby the customer effectively chooses the option that best meets their requirements.</li> <li>• Sections 2.3.3 and 2.4.1 of the 2006/07 AMP summarises the consumer engagement performed to that date, and sets out the projected performance measures for the next 10 years.</li> <li>• Sections 2.3.3 and 2.4.1 of the 2007/08 AMP summarises the consumer engagement performed to that date, and sets out the projected performance</li> </ul>	<ul style="list-style-type: none"> <li>• Applicants for new commercial or industrial connections are presented with a range of design/connection options for component ratings, configurations and locations applicable to their intended load, along with applicable tariffs. This is developed via a series of meetings and is an iterative process whereby the customer effectively chooses the option that best meets their requirements.</li> <li>• Sections 2.3.3 and 2.4.1 of the 2006/07 AMP summarises the consumer engagement performed to that date, and sets out the projected performance measures for the next 10 years.</li> <li>• Sections 2.3.3 and 2.4.1 of the 2007/08 AMP summarise the consumer engagement performed to that date, and sets out the projected performance measures</li> </ul>	<ul style="list-style-type: none"> <li>• Applicants for new mass-market connections are presented with a range of options applicable for standard supplies, along with applicable tariffs.</li> <li>• Top Energy offered a PC tariff to about 20,000 consumers that provided a reduction in variable charge to 7.0c/kWh in return for interrupting up to 6 hours per day. Top Energy also offered an FC tariff to about 1,500 consumers that provided a reduction in variable charges to 3.6c/kWh in return for interrupting a minimum of 10kW for up to 4 hours per day.</li> <li>• Top Energy also offered a NGT tariff which provides a reduction in variable charges to 1.6c/kWh in return for being on from 11pm to 7am only.</li> <li>• Compilation of Top Energy's SCI requires intended quality (SAIDI,</li> </ul>

	<p>measures for the following 3 years.</p> <ul style="list-style-type: none"> <li>• Top Energy negotiates the line charges with its 3 largest industrial consumers. This is done via a series of meetings and requires justification on the part of Top Energy, before the customer accepts any price changes.</li> <li>• Top Energy offers consumers taking more than 100A per phase an interruptible tariff that provides a reduction in variable charges to 7.3c/kWh for energy supply that can be interrupted by Top Energy.</li> </ul>	<p>for the following 3 years.</p> <ul style="list-style-type: none"> <li>• Top Energy offers consumers taking more than 100A per phase an interruptible tariff that provides a reduction in variable charges of 7.3c/kWh for energy supply that can be interrupted by Top Energy.</li> </ul>	<p>SAIFI and CAIDI) and price (total revenue) to be considered and approved by the Trust.</p>
<p>Consult (or ensure that another person consults on its behalf) with those consumers (or another person that accurately reflects the interests of those consumers) about the quality of goods and services that they require, with reference to the price of those goods and services.</p>	<ul style="list-style-type: none"> <li>• This market segment was surveyed to determine their preference from the following options... <ul style="list-style-type: none"> <li>• Pay a bit less to receive a bit less reliability.</li> <li>• Pay about the same to receive about the same reliability.</li> <li>• Pay a bit more to receive a bit more reliability.</li> <li>• Pay a lot more to receive a lot more reliability.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• This market segment was surveyed to determine their preference from the following options... <ul style="list-style-type: none"> <li>• Pay a bit less to receive a bit less reliability.</li> <li>• Pay about the same to receive about the same reliability.</li> <li>• Pay a bit more to receive a bit more reliability.</li> <li>• Pay a lot more to receive a lot more reliability.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• This market segment was surveyed to determine their preference from the following options... <ul style="list-style-type: none"> <li>• Pay a bit less to receive a bit less reliability.</li> <li>• Pay about the same to receive about the same reliability.</li> <li>• Pay a bit more to receive a bit more reliability.</li> <li>• Pay a lot more to receive a lot more reliability.</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>• Views were sought from retailers as to whether Top Energy was providing reliable and fairly priced infrastructure.</li> <li>• The process of compiling the SCI provides for shareholders to instruct the directors to amend <i>inter alia</i> the quality (SAIDI, SAIFI and CAIDI) and price (revenue) if the shareholders are unhappy.</li> </ul>
<p>Properly consider the views expressed by consumers during and after that consultation.</p>	<ul style="list-style-type: none"> <li>• The views obtained by the large consumer surveys (inclusive of Top 12 and Top 13-100 consumers) and the mass-market survey have been compiled into a comprehensive report that is considered at GM - Network level. The findings of the report will be considered by Top Energy and where possible these may be incorporated into the company's Asset Management Plan.</li> <li>• The company will endeavor to make formal contact with those consumers who indicated a preference for improved reliability in the 2008 engagement process to further quantify their desire to pay more. It needs to be clearly recognized that due to the distribution of the customers the costs for making such improvements will be significant and in our experience not well received by the customers.</li> </ul>		
<p>Adequately take these views into account when making asset management decisions.</p>	<ul style="list-style-type: none"> <li>• The primary means of taking those views into account when making asset management decisions is through the "Setting The Service Levels" section in the AMP which includes information from the consumer surveys. It must be noted that the technical nature of electricity distribution and the service levels set by regulatory and technical constraints do not always permit consumers views to be fully acted upon.</li> </ul>		

## **Top 12 consumer survey**

Top Energy repeated the 2006 survey of its Top 12 consumers. The results of the survey of large consumers are broadly as follows...

- The most important aspect of electricity supply is continuity.
- The second most important aspect of electricity supply is restoration.
- The third most important aspect of electricity supply was no flicker or surges, however sufficient notice of planned shutdowns has crept up in importance.
- Consumers' ratings of Top Energy's performance in the most important aspect of continuity are very good with a strong skew towards good.
- Consumers' ratings of Top Energy's performance in the second most important aspect of restoration are very good.
- Consumer preference was split about 2/3 to 1/3 between paying about the same to receive about the same reliability and paying a bit more to receive a bit more reliability.

## **Top 13-100 consumer survey**

Top Energy also surveyed a random sample of 15 consumers from its Top 13 – 100 consumers in a similar manner to the Top 12 consumers. The results of the survey of these large consumers are broadly as follows...

- The most important aspect of electricity supply is continuity.
- The second most important aspect of electricity supply is restoration.

- The third most important aspect of electricity supply was evenly split between no flicker closely followed by sufficient notice of planned shutdown.
- Consumers' ratings of Top Energy's performance in the most important aspect of continuity are evenly split between good and very good.
- Consumers' ratings of Top Energy's performance in the second most important aspect of restoration are very good.
- Just about all consumers expressed a preference for paying about the same to receive about the same reliability.

### **Mass market consumer survey**

Top Energy also surveyed 1,000 mass market consumers sampled on a pro-rata basis from four distinct areas of the network, as follows...

<b>Areas of the network</b>	<b>Number in sample</b>
Kerikeri	350
Kaitaia	250
Paihia	200
Kaikohe	200

The results of the survey of mass market consumers are broadly as follows...

- The most important aspect of electricity supply over all 4 areas is continuity.
- The second most important aspect of electricity supply over all 4 areas is restoration.
- The third most important aspect of electricity supply over all 4 areas is no flicker or surges.

- Mass market consumers rate Top Energy's performance in the most important aspect of continuity as good with a strong skew toward very good.
- Mass market consumers rate Top Energy's performance in the second most important aspect of restoration as good with a slight skew toward very good.
- Mass market consumers rate Top Energy's performance in the third most important aspect of no flicker or surges as good with a slight skew toward very good.
- Just about all consumers in all 4 mass market areas expressed a preference for paying about the same to receive about the same reliability.

## **Statement of Corporate Intent and Consumer Trust Engagement**

Top Energy is owned by a consumer trust. The strong support for this form of ownership indicates that consumers see the Trust as a vehicle for them to influence the price and quality of services delivered.

Annually and after consideration of the responses from customers, service levels are established and inserted into the new Statement of Corporate Intent (SCI). Top Energy's SCI is the principal governance mechanism, and includes a statement of intended quality (i.e. SAIDI, SAIFI and CAIDI).

As part of the process of approving the SCI, there is provision for the shareholders (the Top Energy Consumer Trust) to instruct the directors to amend any aspect of the SCI they are not happy with. In fact, the Trust is provided with price and quality information informally through specific questions resulting from consumer enquiries as well as formally through the SCI. Therefore, SCI is negotiated and ultimately agreed between the directors of the Company and the Trustees. The performance of the Company is measured, reported publicly in the annual report and reviewed at the Company's Annual General Meeting. This information is also published and presented at the Trust's annual public meeting, at which they report to the consumers/beneficiaries.

The Asset Management Plan, financial statements and pricing information are also available to the Trust (and consumers) via the Top Energy website.

### **Impact of customer views on asset management decisions.**

Both the 2006/07 and the 2007/08 AMP discuss the consumer engagement conclusions and set out projected performance measures for the following years. Furthermore, Top Energy intends to take into account results obtained from this consumer survey, while preparing the 2009/10 AMP and the following AMP for future years.

One of the major issues impacting on service level performance for Top Energy is the rural nature of much of our area. This results in a significant challenge in dealing with tree and other vegetation interference with the lines. After considering the price sensitivity information obtained from the customer perception survey, it has been decided to maintain the current level of expenditure on vegetation control. The new Trees Regulations will increase the ongoing maintenance cost but we would hope to slowly reduce the future expenditure on tree clearance costs.

Top Energy operates a predominantly radial based distribution system. The use of radio controlled equipment has allowed Top Energy to reduce the number of consumers affected by faults that occur in rural/remote areas. Because of the relatively low cost of this option, compared to the service level improvements achieved as a result, the Top Energy Asset Management Plan will continue to extend this programme while significant improvements continue to be achieved.

Similarly, since its introduction, the use of live line techniques has had a major impact on the number of planned outages and will continue to be used and expanded where gains can be made at reasonable cost.

## **Conclusions**

Top Energy has demonstrated that it complies with both the letter and the intent of the regulations through the key processes of:

- Direct consultation with customers over new and altered connection requirements.
- Direct involvement by the Top Energy Trust in setting the SCI.
- Repeated surveys of customer satisfaction and preferences, and
- Inclusion of price/quality trade-off preferences into the Asset Management Plan and Asset management activity.

These key processes combine to ensure that customer preferences are appropriately responded to.

Consumers across all 6 market segments surveyed have indicated that supply continuity and restoration are, respectively, the first and second most important aspects of electricity lines service. The third most important aspect was no flicker or surges, however answering the phone quickly (mass market) and sufficient notice of planned shutdowns (large consumers) has crept up in importance.

Top Energy's performance in the most important area of Continuity is rated by consumers as being between good and very good, whilst performance in the second most important area of Restoration is similarly between good and very good. In the third most important aspect of no flicker or surges. Top Energy's performance is perceived to be good with a slight skew towards very good for mass market and a wide spread between good and very good for large consumers.

Consumers in all market segments except the Top 12 have indicated a strong preference for paying about the same line charges as present to receive about the same reliability. In the Top 12 segment, about 1/3 of respondents indicated a willingness to pay a bit more to have a bit more reliability.

#### *Disclaimer*

*The information presented in this Threshold Compliance Statement has been prepared solely for the purpose of complying with the requirements of the Commerce Act (Electricity Lines Thresholds) Notice 2004 and the Amendment Notice 2006.*

*This statement has not been prepared for any other purpose and Top Energy Limited expressly disclaims any liability to any other party who may rely on this statement for any other purpose.*

**REPORT OF THE AUDITOR-GENERAL**

To the readers of the threshold compliance statement of Top Energy Limited for the assessment period ended on 31 March 2008

We have audited the attached statement, prepared by Top Energy Limited for assessment as at 31 March 2008 and dated 16 May 2008. The attached statement is a threshold compliance statement in respect of the price path threshold and the quality threshold, for the purposes of information requirements set out in clause 7 of the Commerce Act (Electricity Distribution Thresholds) Notice 2004 ("the Notice"). In this report the attached statement is called "the threshold compliance statement".

**Directors' Responsibilities**

Directors of Top Energy Limited are responsible for the certification of the threshold compliance statement in accordance with the Notice.

**Auditor's Responsibilities**

Section 15 of the Public Audit Act 2001 and clause 7(1)(b) of the Notice require the Auditor-General to audit the threshold compliance statement. It is the responsibility of the Auditor-General to express an independent opinion on the threshold compliance statement and report the opinion to you.

The Auditor-General has appointed Jonathan Freeman of PricewaterhouseCoopers to undertake the audit.

**Basis of Opinion - Price Path Threshold and Quality Threshold: SAIDI and SAIFI Statistics for the Assessment Period ended 31 March 2008; and Quality Threshold: Customer Communication**

We conducted the audit in accordance with the Auditor-General's Auditing Standards which include the Auditing Standards issued by the Institute of Chartered Accountants of New Zealand.

The audit included examining, on a test basis, evidence relevant to the amounts and disclosures contained on pages 2 to 27 and Appendices A to F of the threshold compliance statement and which relate to:

- the price path threshold set out in clause 5 of the Notice;
- the SAIDI and SAIFI statistics for the assessment period ended on 31 March 2008 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice
- the customer communication part of the quality threshold set out in clause 6(1)(c) of the Notice.

It also included an assessment of the significant estimates and judgements, if any, made by Top Energy Limited in the preparation of the threshold compliance statement and an assessment of whether the basis of preparation has been adequately disclosed.

We planned and performed the audit of the threshold compliance statement so as to obtain all the information and explanation which we considered necessary, including for the purpose of obtaining sufficient evidence to give reasonable assurance that the threshold compliance statement is free from material misstatements (whether caused by fraud or error), except that our work was limited in respect of the quality threshold: SAIDI and SAIFI statistics as explained below. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the threshold compliance statement.

**REPORT OF THE AUDITOR-GENERAL**

Top Energy Limited

**Basis of Opinion - Quality Threshold: SAIDI and SAIFI Statistics for the Years Ended 31 March 1999, 2000, 2001, 2002 and 2003**

In relation to the SAIDI and SAIFI statistics for the years ended 31 March 1999, 2000, 2001, 2002 and 2003 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice, we have undertaken procedures to provide reasonable assurance that:

- The amounts and disclosures in the threshold compliance statement relating to those statistics have been correctly taken from the information disclosed by Top Energy Limited in accordance with the Electricity (Information Disclosure) Regulations 1999; and
- Those statistics have been calculated based on the source data provided to us. We have not performed audit procedures on the source data.

**Relationship and Interests**

In addition to the audit of the threshold compliance statement we have carried out other audit assignments for Top Energy Limited. This involved issuing an audit opinion on the annual financial statements for the year ended 31 March 2008 as well as audit opinions pursuant to the Electricity Information Disclosure Requirements 2004. We have also carried out other professional advisory services. Other than these assignments we have no relationship with or interests in Top Energy Limited.

**Opinions**

**Unqualified Opinion**

We have obtained all the information and explanations we have required.

***Price Path Threshold***

In our opinion, having made all reasonable enquiry, to the best of our knowledge the amounts or details set out in the threshold compliance statement relating to the price path threshold set out in clause 5 of the Notice and related information have been prepared in accordance with the Notice, and give a true and fair view of the performance of Top Energy Limited against that threshold for the assessment period ended on 31 March 2008.

***Quality Threshold: SAIDI and SAIFI statistics***

In our opinion, having made all reasonable enquiry, to the best of our knowledge:

- a) the SAIDI and SAIFI statistics for the assessment period ended on 31 March 2008 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice and related information have been calculated or prepared in accordance with Top Energy Limited's policies and procedures for recording SAIDI and SAIFI statistics as disclosed in the threshold compliance statement;
- b) the SAIDI and SAIFI statistics for the years ended 31 March 1999, 2000, 2001, 2002 and 2003, which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice, are in accordance with the Electricity (Information Disclosure) Regulations 1999. Those statistics have been properly calculated based on the unaudited source data provided to us by Top Energy Limited.

***Quality Threshold: Customer Communication***

In our opinion, having made all reasonable enquiry, to the best of our knowledge the information set out in the threshold compliance statement relating to that part of the quality threshold that is set out in clause 6(1)(c) of the Notice has been prepared in accordance with the Notice, and gives a true and fair view of the performance of Top Energy Limited against that part of the quality threshold for the assessment period ended on 31 March 2008.

**REPORT OF THE AUDITOR-GENERAL**  
Top Energy Limited

**Qualified Opinion**

Our opinion is qualified as follows:

**Quality Threshold: SAIDI and SAIFI statistics**

The scope of our audit was subject to the following limitations:

- There is no independent evidence available for the period to support the completeness and accuracy of recorded faults;
- The company's faults database only allows one partial restoration and the final restoration information to be entered for each outage. In the case of outages with multiple partial restorations this limitation has the effect of overstating SAIDI for those outages;
- As explained on page 12 of the threshold compliance statement, the SAIDI and SAIFI calculations for some outages during the period are based on estimated ICPs affected for each outage, and there are no detailed records available to verify the accuracy of ICP estimates used in those calculations; and
- Control over the completeness and accuracy of ICP data included in the SAIDI and SAIFI calculations is limited throughout the period.

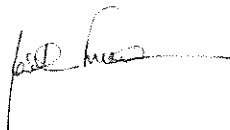
Because of these limitations, there are no practical audit procedures that we could adopt to confirm independently that all outage and ICP data was properly recorded for the purposes of inclusion in the amounts or details set out in the quality threshold: SAIDI and SAIFI statistics.

In these respects alone we have not obtained all the information and explanations that we have required.

Because of the potential effect of the limitations in the evidence available to us, we are unable to form an opinion as to whether:

- the SAIDI and SAIFI statistics for the assessment period ended on 31 March 2008 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice and related information fairly represent the performance of Top Energy Limited for the assessment period ended on 31 March 2008; and
- the amounts or details set out in the quality threshold: SAIDI and SAIFI statistics for the assessment period ended on 31 March 2008, together with the SAIDI and SAIFI statistics for the years ended 31 March 1999, 2000, 2001, 2002 and 2003, give a true and fair view of the performance of Top Energy Limited against those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice for the assessment period ended on 31 March 2008.

Our audit was completed on 16 May 2008 and our qualified and unqualified opinions are expressed as at that date.



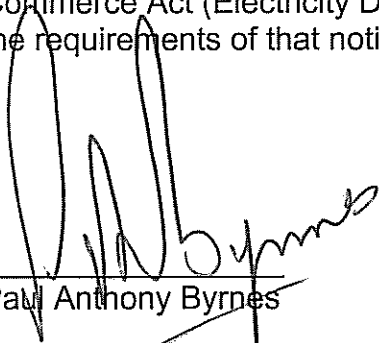
Jonathan Freeman  
On behalf of the Auditor-General

PricewaterhouseCoopers  
Auckland, New Zealand

16 May 2008


#### 4. CERTIFICATE ON THRESHOLD COMPLIANCE STATEMENT

We, Paul Anthony Byrnes and Mervyn Shane Warbrick, being directors of Top Energy Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached threshold compliance statement of Top Energy Limited, and related information, prepared for the purposes of the Commerce Act (Electricity Distribution Thresholds) Notice 2004 complies with the requirements of that notice except in the following clause 6 (1) (a).



Paul Anthony Byrnes

15 May 2008



Mervyn Shane Warbrick

**Appendix A 1**

**Clause 5 (1) (a)  
NR2008**

Notional Revenue for the year ending 31 March 2008		
Term	Description	(\$)
$\sum P_{i,2008} Q_i$	Prices at 31 March 2008 multiplied by 31 March 2003 Base Quantities	21,279,491
$K_{2008}$	Transmission Charges for year ending 31 March 2008	5,601,192
	Rates for year ending 31 March 2008	14,539
	Electricity Commission Levies for year ending 31 March 2008	37,534
$NR_{2008} = \sum P_{i,2008} Q_i - K_{2008}$	Notional Revenue for the year ending 31 March 2008	15,626,225

**R<sub>2004</sub>**

Maximum Notional Revenue at the reference date which would not have caused the distribution business to breach the price path under the Initial Notice		
Term	Description	(\$)
$\sum P_{i,0} x Q_{i,0}$	Prices at 6 September 2003 multiplied by 31 March 2003 Base Quantities	18,898,123
$C_{T2003}$	Budget Transmission Charges for year ending 31 March 2004	4,756,358
$C_{R2003}$	Budget Rates for year ending 31 March 2004	10,700
$R_{2004}$	Maximum Revenue at 31 March 2004 that would not have caused a breach under the Initial Notice	14,131,065

Note: All notation in the table above except R<sub>2004</sub> comes from the Initial Notice.

**Test for 5 (1) (a) - ( $NR_{2008} / R_{2008} \leq 1$ )**

Allowable Notional Revenue under CPI -X price path		
Term	Description	(\$)
$X$	X Factor	0%
$R_{2004}$	Maximum Revenue at 31 March 2004 that would not have caused a breach under the Initial Notice	14,131,065
$(1 + \Delta CPI_{2005})$	Average change in Consumer Price Index over 2004	1.0229
$(1-X)$	1-X Factor	1.00
$R_{2005}$	Allowable Notional Revenue under the CPI-X Price Path for the year ended 31 March 2005	14,454,702
$(1 + \Delta CPI_{2006})$	Average change in Consumer Price Index over 2005	1.0304
$(1-X)$	1-X Factor	1.00
$R_{2006}$	Allowable Notional Revenue under the CPI-X Price Path for the year ended 31 March 2006	14,893,694
$(1 + \Delta CPI_{2007})$	Average change in Consumer Price Index over 2006	1.0337
$(1-X)$	1-X Factor	1.00
$R_{2007}$	Allowable Notional Revenue under the CPI-X Price Path for the year ended 31 March 2007	15,394,927
$(1 + \Delta CPI_{2008})$	Average change in Consumer Price Index over 2007	1.0238
$(1-X)$	1-X Factor	1.00
$R_{2008}$	Allowable Notional Revenue under the CPI-X Price Path for the year ended 31 March 2008	15,760,732
$NR_{2008} / R_{2008}$	Expression must be less than or equal to 1 to avoid breaching 5(1)(a)	0.9915
$R_{2008} - NR_{2008}$	Value of Compliance or (Breach)	134,507

For presentation purposes, the CPI Index has been presented to four decimal places, however, for the calculation of  $R_{2008}$ , the full index (with no rounding) has been applied.

$\Delta CPI_{2005}$			
Numerator		Denominator	
<i>CPI</i> <sub>Q1,2004</sub>	928	<i>CPI</i> <sub>Q1,2003</sub>	913
<i>CPI</i> <sub>Q2,2004</sub>	935	<i>CPI</i> <sub>Q2,2003</sub>	913
<i>CPI</i> <sub>Q3,2004</sub>	941	<i>CPI</i> <sub>Q3,2003</sub>	918
<i>CPI</i> <sub>Q4,2004</sub>	949	<i>CPI</i> <sub>Q4,2003</sub>	924
Total	3753	Total	3669
$\Delta CPI_{2005}$		2.29%	

Source: Statistics New Zealand All Groups SE9A Index (Note this index was rebased to June 2006 -Consumers Price Index Review information paper published on 28 September 2006. The 2006 September quarter CPI was the first index published using the new base)

$\Delta CPI_{2006}$			
Numerator		Denominator	
<i>CPI</i> <sub>Q1,2005</sub>	953	<i>CPI</i> <sub>Q1,2004</sub>	928
<i>CPI</i> <sub>Q2,2005</sub>	962	<i>CPI</i> <sub>Q2,2004</sub>	935
<i>CPI</i> <sub>Q3,2005</sub>	973	<i>CPI</i> <sub>Q3,2004</sub>	941
<i>CPI</i> <sub>Q4,2005</sub>	979	<i>CPI</i> <sub>Q4,2004</sub>	949
Total	3867	Total	3753
$\Delta CPI_{2006}$		3.04%	

Source: Statistics New Zealand All Groups SE9A Index (Note this index was rebased to June 2006 -Consumers Price Index Review information paper published on 28 September 2006. The 2006 September quarter CPI was the first index published using the new base)

$\Delta CPI_{2007}$			
Numerator		Denominator	
<i>CPI</i> <sub>Q1,2006</sub>	985	<i>CPI</i> <sub>Q1,2005</sub>	953
<i>CPI</i> <sub>Q2,2006</sub>	1000	<i>CPI</i> <sub>Q2,2005</sub>	962
<i>CPI</i> <sub>Q3,2006</sub>	1007	<i>CPI</i> <sub>Q3,2005</sub>	973
<i>CPI</i> <sub>Q4,2006</sub>	1005	<i>CPI</i> <sub>Q4,2005</sub>	979
Total	3997	Total	3867
$\Delta CPI_{2007}$		3.37%	

Source: Statistics New Zealand All Groups SE9A Index (Note this index was rebased to June 2006 -Consumers Price Index Review information paper published on 28 September 2006. The 2006 September quarter CPI was the first index published using the new base)

$\Delta CPI_{2008}$			
Numerator		Denominator	
<i>CPI</i> <sub>Q1,2007</sub>	1010	<i>CPI</i> <sub>Q1,2006</sub>	985
<i>CPI</i> <sub>Q2,2007</sub>	1020	<i>CPI</i> <sub>Q2,2006</sub>	1000
<i>CPI</i> <sub>Q3,2007</sub>	1025	<i>CPI</i> <sub>Q3,2006</sub>	1007
<i>CPI</i> <sub>Q4,2007</sub>	1037	<i>CPI</i> <sub>Q4,2006</sub>	1005
Total	4092	Total	3997
$\Delta CPI_{2008}$		2.38%	

## Appendix A 2

$\Sigma P_{i,2008} Q_i$ Prices at 31 March 2008 multiplied by 31 March 2003 Base Quantities									
Number of Months		12							
Number of Days:		365							
Tariff or Fee	Description	Number of ICPs at 31/03/03	kWh or kw or kvarh for 31/03/03	kVA for 31/03/03	Other Qty for 31/03/03	Line Tariff			Total Revenue (\$)
						Fixed		Variable (c/kwh)	
						\$/day	c/kVA/day		\$/kVA
<b>Non Time of Use</b>		25542				0.15			1,398,425
UC	Uncontrolled		55,175,747					<b>10</b>	5,517,575
PC	Partly Controlled		128,649,299					<b>7</b>	9,005,451
FC	Fully Controlled		9,217,653					<b>3.6</b>	331,836
Day	Partly Controlled Day		13,345,471					<b>7.7</b>	1,027,601
NGT	Night		6,165,165					<b>1.6</b>	98,643
CAP150	Capacity	69	5,348,561			4.50		<b>7.3</b>	503,777
<b>Time of Use</b>		55				14.00			280,624
00:00 - 04:00			1,887,795					<b>0.1</b>	1,888
04:00 - 08:00			3,088,718					<b>0.1</b>	3,089
08:00 - 12:00			4,795,011					<b>5.2</b>	249,341
12:00 - 16:00			4,857,661					<b>6.7</b>	325,463
16:00 - 20:00			4,143,808					<b>10</b>	414,381
20:00 - 24:00			2,822,827					<b>3.2</b>	90,330
<b>Industrial</b>									
0000984310TEBBE				11,000			102.43		1,126,730
00009840000TE210						<b>884.36</b>			322,791
000984200TE817						<b>656.96</b>			239,790
<b>Street Lights</b>									
Group Lighting 11 Hours					156	<b>0.09</b>			5,146
Intermittent					6	<b>0.15</b>			330
Street Lights					1,976	<b>0.28</b>			203,528
Unmetered Continuous < 500 Watts					184	<b>0.27</b>			18,032
Pole mounted streetlight					898	<b>0.35</b>			114,720
<b><math>\Sigma P_{i,2008} Q_i</math></b>									<b>21,279,491</b>

## Appendix A 3

<b><math>\Sigma P_{i,0} Q_{i,0}</math> Prices at 6 September 2003 multiplied by 31 March 2003 Base Quantities</b>									
Tariff or Fee	Description	Number of ICPs at 31/03/03	kWh or kw or kvarh for 31/03/03	kVA for 31/03/03	Other Qty for 31/03/03	Line Tariff		Total Revenue (\$) <b><math>P_{i,0} Q_{i,0}</math></b>	
						Fixed			Variable (c/kwh)
						\$/day	\$/kVA		
<b>Non Time of Use</b>		25542				0.15		1,398,425	
UC	Uncontrolled		55,175,747				8.70	4,800,290	
PC	Partly Controlled		128,649,299				6.30	8,104,906	
FC	Fully Controlled		9,217,653				3.10	285,747	
Day	Partly Controlled Day		13,345,471				6.90	920,838	
NGT	Night		6,165,165				1.40	86,312	
CAP150	Capacity	69	5,348,561			4.00	6.80	464,442	
<b>Time of Use</b>		55				7.00		140,312	
00:00 - 04:00			1,887,795				0.10	1,888	
04:00 - 08:00			3,088,718				0.10	3,089	
08:00 - 12:00			4,795,011				4.70	225,366	
12:00 - 16:00			4,857,661				4.60	223,452	
16:00 - 20:00			4,143,808				8.00	331,505	
20:00 - 24:00			2,822,827				3.10	87,508	
<b>Industrial</b>									
0000984310TEBBE				11,000			86.65	953,112	
00009840000TE210						1,207.73		440,821	
000984200TE817						524.39		191,402	
<b>Street Lights</b>									
Group Lighting 11 Hours					156	0.09		5,146	
Intermittent					6	0.15		330	
Street Lights					1,976	0.27		193,648	
Unmetered Continuous < 500 Watts					184	0.27		18,032	
Pole mounted streetlight *					898	0.07		21,552	
<b><math>\Sigma P_{i,0} Q_{i,0}</math></b>								<b>18,898,123</b>	

\* The Income from Pole Mounted Streetlights of \$21,552 was omitted in error from revenue at the First assessment date this has been corrected in the above schedule.

## Appendix B

### Clause 5 (1) (b)

$NR_{Max}$

Maximum Notional Revenue for the period 1 April 2007 to 31 March 2008. P x Q using 31 March 2008 Prices and 31 March 2003 Base Quantities if there has been no change in prices over this period, otherwise the prices which generate the maximum notional revenue over the period when using 31 March 2003 quantities		
Term	Description	(\$)
$\Sigma P_{Max} Q_i$	Maximum Price Between 1 April 2007 and 31 March 2008 multiplied by 31 March 2003 Base Quantities	21,279,491
$K_{2008}$	Transmission Charges for year ending 31 March 2008	5,601,192
	Rates Charges for year ending 31 March 2008	14,539
	Electricity Commission Levies for year ending 31 March 2008	37,534
$NR_{Max}$	Maximum Notional Revenue for 1 April 2007 to 31 March 2008	15,626,225

Test for 5 (1) (b) -  $(NR_{Max} / \text{Max}(R_{2007}, R_{2008})) \leq 1$

Notional Revenue during the period is not to exceed the maximum of the Allowable Notional Revenue at the end of the assessment period and the Allowable Notional Revenue at the end of the previous assessment period		
Term	Description	(\$)
$NR_{Max}$	Maximum Notional Revenue for 1 April 2007 to 31 March 2008	15,626,225
$R_{2007}$	Allowable Notional Revenue at 31 March 2007	15,394,927
$R_{2008}$	Allowable Notional Revenue at 31 March 2008	15,760,732
$\text{Max}(R_{2007}, R_{2008})$	Maximum of the Allowable Notional Revenue at 31 March 2007 and the Allowable Notional Revenue at 31 March 2008	15,760,732
$NR_{Max} / \text{Max}(R_{2007}, R_{2008})$	If expression is greater than 1, Clause 5 (1) (b) is breached	0.9915
$\text{Max}(R_{2007}, R_{2008}) - NR_{Max}$	Value of Compliance or (Breach)	134,507

## Appendix C

### Historic SAIDI and SAIFI (Class B and C)

Input required

Year	SAIDI (Interruption Duration)			SAIFI (Interruption Frequency)		
	Class B	Class C	Total	Class B	Class C	Total
1999	160	611	771	1.30	8.40	9.70
2000	181	295	476	1.30	5.50	6.80
2001	79	252	331	0.50	4.50	5.00
2002	44	286	330	0.30	4.40	4.70
2003	37	378	415	0.30	5.90	6.20
	<b>Five Year Average SAIDI</b>		<b>464</b>	<b>Five Year Average SAIFI</b>		<b>6.48</b>
2008	37	782	818	0.34	6.05	6.39

## **Appendix D**

### **Adjustment of Network Reliability Index Due to an Extreme Storm Event in July 2007**

This section is a pursuant of an adjustment to the value of the Top Energy System Average Interruption Duration Index (SAIDI), and System Average Interruption Frequency Index (SAIFI) for the regulatory compliance assessment period, 2007 - 2008.

Top Energy believes there are reasonable grounds for this adjustment, the basis being the occurrence of an unusually heavy rain and severe wind event during the period 10 and 13 July 2007, which coincided with a high number of fault events concentrated in Northland (i.e. covers the whole Top Energy electricity distribution network) and other parts of the north and east of the North Island (as defined by the Met Service) accounting for 410.33 SAIDI minutes (99.88%) of all 410.84 SAIDI minutes incurred during the period of 10 to 13 July 2007.

Top Energy commissioned the Met Service to report on this weather event, from which they concluded that the sustained wind speed qualified as 'Near Gale' condition, and the heavy rain on Tuesday 10 July alone was around 80 to 120% of the average monthly rainfall for the whole July. The heavy rain and many instances of wind damage in Northland caused widespread flooding and infrastructure disruption, which affected the electricity distribution network operated by Top Energy Limited. Additional to the direct effect of the weather event, there were lengthy network outages as the response of our contractors was obstructed due to road closures affected by flooding and landslides. According to the Met Service's report, in March 2007, the eastern coast of Northland received between 30-50mm of rain in the 30 days preceding a similar "deluge" experienced in March 2007. In July, 20 of the preceding 30 days were

wet with totals around 200 – 250 mm. Consequently the July storm arrived on top of already saturated ground conditions and the percentage of runoff would have been considerably higher than the March 2007 deluge, which was considered a 1:150 year event.

From the network operation's point of view, Top Energy responded by ensuring that all available staff were aware of the eminent weather event, a full response action was activated using our internal contracting team. This is the only High Voltage and Extra High Voltage qualified group located in the area. Following the severe weather warning, all crews were put on alert prior to the weather event's arrival. Three fault response crews were dispatched to and accommodated in, outlying areas, which had previously been cut off during heavy rains in March 2007, due to widespread flooding. This meant Top Energy had manpower and equipment in areas likely to be inaccessible during the event. This proved to be the case as the storm developed. However, the forward posting of resource allowed us to carry out fault clearance work in areas that would otherwise have been inaccessible to personnel, vehicles, and machinery.

All available operational staff were committed to the restoration effort during the event, and staff were rostered on and off duty in shifts to ensure maximum availability was achieved with minimum risk to staff. Administration staff were seconded into the operations team to provide operational support at various levels, including faults dispatch, process management, staff welfare, and to manage material/equipment logistics. External contractors were used extensively to create access by clearing and removing vegetation and tree debris. A helicopter was engaged to provide situation and damage reports and to provide Top Energy with information on road usability and access information. This information was in turn passed on to the local and regional Civil Defense Emergency Operations Centres.

The Top Energy Emergency Preparedness plan was activated early in the event to the appropriate level to deal with the requirements of a full scale event. Part of this was establishment, on day one, of a team/site that had direct means of communication with both the local and regional Civil Defense Emergency Operations Centres, to allow for rapid and immediate exchanges of critical information and situation reports, on a regular basis throughout the event.

In general Top Energy's capacity to respond was restricted only by access, due to road closures affected by flooding and landslides. Top Energy was able to restore supply relatively quickly to the majority of its customers by the afternoon of 12 July, largely due to our ability to back feed into many of the effected areas. A majority of Top Energy one hundred Line Mechanics, inclusive of trainees, were actively involved in the response and recovery efforts.

Although Top Energy employed an appropriate strategy to mitigate the effect on customers, the event and resulting system interruptions directly or indirectly caused by the extreme weather during the period of 10 July to 13 July 2007 were beyond Top Energy's control; therefore the statistics are not representative of the reliability of the Top Energy network.

In accordance with the Commerce Commission's Beta Method for identifying extreme events, in order for an extreme weather event day to be considered as a Major Event Day in the assessment year 2007-2008, the associated daily total SAIDI must be greater than 42.88 minutes (as per stated in the 19 December 2007 Parsons Brinckerhoff Associates' investigation report titled "*Resetting the 2009 Quality Thresholds*" prepared for the Commerce Commission). Moreover, the corresponding exemption boundary of SAIFI on the Major Event Day is 0.6604 as calculated by Top Energy using the Beta Method.

Of the 410.84 minutes Top Energy recorded for the period of 10 July to 13 July 2007, a total of 410.33 minutes were directly or indirectly attributed to the adverse weather event (i.e. extreme storm or flooding). In accordance with Commerce Commission *“Supplementary Guidelines for Investigating Breaches of the Reliability Criterion of the Quality Threshold”*, reductions of 367.96 SAIDI minutes and 0.45 SAIFI can be claimed after replacing the MED with the boundary value for the first day and 0 for subsequent days.

In accordance with the Major Event Day Exemption Criteria, the analysis of the network performance during the Extreme Weather Event is included below:

<b>Date</b>	<b>Daily SAIDI Minute</b>	<b>Daily SAIDI After Exemption</b>	<b>Total Adjustment for MEDs</b>
10 July 2007	356.62	42.88	
11 July 2007	46.80	0	
12 July 2007	6.82	0	
13 July 2007	0.59	0	
<b>Total</b>	<b>410.84</b>	<b>42.88</b>	<b>367.96</b>

<b>Date</b>	<b>Daily SAIFI</b>	<b>Daily SAIFI After Exemption</b>	<b>Total Adjustment for MEDs</b>
10 July 2007	0.8237	0.6604	
11 July 2007	0.1836	0	
12 July 2007	0.1017	0	
13 July 2007	0.0017	0	
<b>Total</b>	<b>1.1107</b>	<b>0.6604</b>	<b>0.4503</b>

## **Appendix E**

### **Adjustment of Network Reliability Index Due to a Major Event Day in December 2007**

A number of events contributed to a Major Event Day being recorded on 6 December 2007. Brief descriptions of the interruptions are listed below.

*Interruption 1: "car V pole tripped CB then isolated from SW 215 to replace pole and hardware"*

Car crashed into a pole on State Highway 10 in Kerikeri. Top Energy Control Centre isolated the effected area. Supply was restored to as many customers as using other adjoining feeders and by isolating the faulted segment of line. Top Energy's fault crews were dispatched to site immediately on receipt of initial accident notification to effect the necessary repairs and to restore supply.

*Interruption 2: "Lightning in area suspect caused CB1152 and R883 to trip"*

Lightning struck the 33kV sub-transmission line supplying the Waipapa Substation, which affected six 11kV feeders. Fault crews were dispatched to conduct a patrol of the line to determine whether any damage was sustained by the assets. Once clearance was received from the lines crew the lines and substation was restored.

*Interruption 3: "R426 tripped found faulty Ins TX Snelgars Rd"*

Lightening damaged a 100kVA SWER insulating transformer, causing Recloser 426 to trip. The feeder was restored once the damaged SWER insulating transformer was isolated from the supply, and the remaining customers were restored once the transformer was replaced.

*Interruption 4: "R750 tripped initially went back in after sectionalising, after second tripping the Pawarenga SWER Ins Tx was found to be faulty, isolated Tx and replaced and restored power fully"*

A defective 100kVA SWER insulating transformer caused Recloser 750 to trip. The feeder was restored once the SWER insulating transformer was isolated from the supply, and the remaining customers were restored once the transformer was replaced.

*Interruption 5: "Tree in line pole 419793 Utukura"*

Under the heavy rain and strong wind weather condition, a river bank was washed away by flood waters, which resulted in a tree growing along the river bank to fall into the power line. Due to the current network configuration, it was not possible to back feed customers beyond the isolation devices.

*Interruption 6: "Tree brought line down Waiare Rd, Isolated area, flooding in area prevented specific area being isolated until later, i.e. between SW 587 and 500 not 587 and 114. Offload part of Totara Nth Feeder to break parallel between Whangaroa Feeder before putting the load back on"*

A plantation tree fell across the HV power line during an adverse weather conditions. Fault response crew sectionalised the line, and isolated the faulted section. However, repair work could not be undertaken immediately due to access issue for repair vehicles and equipment, which were blocked by rising

rivers. Part of the area was back fed via another HV feeder, this minimised the number of customers affected by the outage.

*Interruption 7: "Wattle trees near Hives Rd Oue, brushing line isolated area to clear trees, paralleled with Rawene Feeder, Rawene Recloser 385 could not cope with load bypassed recloser to restore power"*

Wattle trees near Hives Rd brushed into the power line during the period of heavy rain and strong wind event. The fault response crew was sent out and isolated area to clear trees. The HV feeder was back fed via another feeder, the remaining customers in the isolated area were restored once the tree was cut clear.

The total daily SAIDI for 6 December 2007 was 46.55 minutes (i.e. it exceeded the boundary value of 42.88 as stated in 19 December 2007 Parsons Brinckerhoff Associates' investigation report titled "*Resetting the 2009 Quality Thresholds*" prepared to the Commerce Commission), which qualified it as an Major Event Day. In accordance with Commerce Commission "*Supplementary Guidelines for Investigating Breaches of the Reliability Criterion of the Quality Threshold*", the daily SAIDI is therefore reduced by 3.67 minutes for 6 December 2007, being the difference between the total recorded SAIDI and the boundary value. As the recorded SAIFI on this day did not exceed the boundary value, no adjustment to SAIFI is required.

## **Appendix F**

### **Mass Market and Large Consumer Questionnaire**

#### **Importance of electricity service components**

**Q1.** There are many components of electricity service, some of which are provided by your electricity retailer and others which are provided by Top Energy. Some of the aspects provided by Top Energy include the following...

- (a) Supply continuity – keeping the power on all the time.
- (b) Supply restoration – getting the power back on when it goes off.
- (c) Supply quality – no power flickers or surges.
- (d) Call center speed of response – answering the phone quickly when you call.
- (e) Call center helpfulness – answering your inquiries then and there on the phone.
- (f) Technical complaints – resolving proven technical complaints.
- (g) Shutdown notification – advance notice of shutdowns.

Without thinking about how well Top Energy does any of the above, please tell me which item you see as most important, second most important, and third most important aspects of electricity supply.

#### **Top Energy's Performance**

**Q2.** Now I would like to go back to the questions on importance of electricity service components. Using the phrases Excellent, Very Good, Good, Average and Poor, please tell me how well is Top Energy performing in each of these areas.

- (a) Supply continuity – keeping the power on all the time.
- (b) Supply restoration – getting the power back on when it goes off.
- (c) Supply quality – no power flickers or surges.

- (d) Call center speed of response – answering the phone quickly when you call.
- (e) Call center helpfulness – answering your inquiries then and there on the phone.
- (f) Technical complaints – resolving proven technical complaints.
- (g) Shutdown notification – advance notice of shutdowns.

### **Flicker and Power Interruptions**

*(For Mass Market Consumers ONLY)*

**Q3.** Please tell me if you think the following events could ever cause your power to go off...

- (a) Storms.
- (b) Animals or birds climbing into power lines.
- (c) Cars hitting poles.
- (d) Trees hitting power lines.
- (e) Other customers' equipment.
- (f) Big generators like those at Huntly breaking down.

*(For Mass Market Consumers ONLY)*

**Q4.** Please tell me if you think the following events might ever cause your power to flicker or surge...

- (a) Storms.
- (b) Animals or birds climbing into power lines.
- (c) Cars hitting poles.
- (d) Trees hitting power lines.
- (e) Other customers' equipment.

- (f) Big generators like those at Huntly breaking down.

(For Large Consumers ONLY)

**Q5.** Using the phrases Never, Rarely, Sometimes, and Often, please tell me how often flicker or surge was noticed and how often it is actually a problem.

(For Large Consumers ONLY)

**Q6.** Please tell me if you think the following events might ever cause your power to flicker or surge...

- (a) Trees brushing against power lines on a windy day.
- (b) Switching on the network.
- (c) Other consumer's plant.
- (d) A consumer's own plant.
- (e) Animals or birds.

**Preferences for Price and Reliability**

**Q7.** Now I would like to talk about possible alternatives to the reliability of your present electricity supply and the amount you pay for that supply. Please tell me which of the following four options you would prefer...

- (a) Pay a bit less to receive a bit less reliability.
- (b) Pay about the same to receive about the same reliability.
- (c) Pay a bit more to receive a bit more reliability.
- (d) Pay a lot more to receive a lot more reliability.