



**DEFAULT PRICE QUALITY PATH COMPLIANCE STATEMENT  
FOR THE ASSESSMENT DATE 31 MARCH 2014**

*Pursuant to the Electricity Distribution Services Default Price-Quality Path Determination 2012*

27 May 2014

---

**Contents**

- 1) Compliance with the Price Path (Clause 11.2(a))
- 2) Compliance with the Quality Standards (Clause 11.2(a))
- 3) Director Certification (Clause 11.3)
- 4) Auditor's Report (Clause 11.6)

**Supporting Information (Clause 11.3)**

- APPENDIX A Price Path Compliance Calculations
- APPENDIX B Price and Quantity Schedules
- APPENDIX C Pass Through and Recoverable Costs
- APPENDIX D Quality Standard Compliance Calculations
- APPENDIX E Policies and Procedures for Recording SAIDI and SAIFI

1) Compliance with the Price Path (Clause 11.2(a))

Top Energy Limited does comply with the price path in clause 8 at the assessment date 31 March 2014, as specified in the Electricity Distribution Default Price-Quality Path Determination 2012.

**Clause 8.4** - The notional revenue ( $NR_t$ ) of a Non-exempt EDB at any time during the Assessment Period must not exceed the allowable notional revenue ( $R_t$ ) for the Assessment Period.

Compliance is demonstrated in the following tables. The first table demonstrates that notional revenue derived using posted prices at the end of the Assessment Period is less than allowable notional revenue. The second table demonstrates that the maximum notional revenue during the Assessment Period does not exceed allowable notional revenue thus illustrating that at no time during the Assessment Period is the price path breached.

**Clause 8.4** The notional revenue ( $NR_t$ ) of a Non-exempt EDB at 31 March 2014 must not exceed the allowable notional revenue ( $R_t$ ) for the Assessment Period such that:

Test:	$\frac{NR_{2014}}{R_{2014}} \leq 1$
NR <sub>2014</sub> :	\$ 28,638,115
R <sub>2014</sub> :	\$ 31,557,130
Result:	0.9075 < 1
Result:	Price Path has not been breached

**Clause 8.4** The notional revenue ( $NR_t$ ) of a Non-exempt EDB at any time during the Assessment Period must not exceed the allowable notional revenue ( $R_t$ ) for the Assessment Period such that:

Test:	$\frac{NR_{Max}}{R_{2014}} \leq 1$
NR <sub>Max</sub> :	\$ 28,638,115
R <sub>2014</sub> :	\$ 31,557,130
Result:	0.9075 < 1
Result:	Price Path has not been breached

Supporting evidence is presented in Appendices A, B and C.

2) Compliance with the Quality Standards (Clause 11.2(a))

Top Energy Ltd does comply with all requirements of the quality standards in clause 9 at the assessment date, 31 March 2014, as specified in the Electricity Distribution Default Price-Quality Path Determination 2012.

**Clause 9.2 - A Non-exempt EDB's Assessed Values for an Assessment Period must not exceed its Reliability Limits for that Assessment Period.**

Compliance is demonstrated in the following tables. The first table demonstrates compliance with the SAIDI Limit and the second table compliance with the SAIFI Limit.

**Clause 9.2 A Non-exempt EDB's Assessed Values for an Assessment Period must not exceed its Reliability Limits for that Assessment Period, such that**

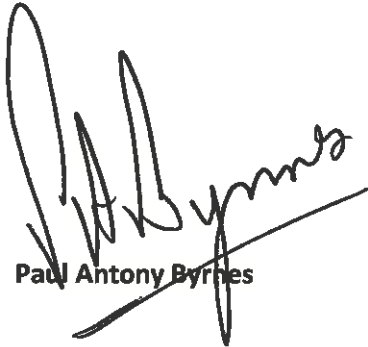
Test:	$\frac{SAIDI_{Assess\ 2014}}{SAIDI_{Limit}} \leq 1$
SAIDI <sub>Assess 2014</sub>	464.915
SAIDI <sub>Limit</sub>	579.681
Result:	0.8020 < 1
Result:	SAIDI Limit has not been breached

Test:	$\frac{SAIFI_{Assess\ 2014}}{SAIFI_{Limit}} \leq 1$
SAIFI <sub>Assess 2014</sub>	5.458
SAIFI <sub>Limit</sub>	7.663
Result:	0.7123 < 1
Result:	SAIFI Limit has not been breached

Supporting evidence is presented in Appendices D and E.

**3) Director Certification (Clause 11.3)**

We, Paul Anthony Byrnes and Gregory Mark Steed, being directors of Top Energy Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached Annual Compliance Statement of Top Energy Limited, and related information, prepared for the purposes of the Electricity Distribution Default Price-Quality Path Determination 2012 are true and accurate.



**Paul Anthony Byrnes**



**Gregory Mark Steed**

Date: 27 May 2014



## **INDEPENDENT AUDITOR'S REPORT**

### **TO THE DIRECTORS OF TOP ENERGY LIMITED AND TO THE COMMERCE COMMISSION**

The Auditor-General is the auditor of Top Energy Limited (the company). The Auditor-General has appointed me, Andrew Burgess, using the staff and resources of Deloitte, to provide an opinion, on her behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2014 on pages 2 to 3 and 6 to 16 complies, in all material respects, with the Electricity Distribution Services Default Price-Quality Path Determination 2012 (the Determination).

#### **Directors' responsibilities for the Annual Compliance Statement**

The directors of the company are responsible for the preparation of the Annual Compliance Statement in accordance with the Determination, and for such internal control as the Directors determine is necessary to enable the preparation of an Annual Compliance Statement that is free from material misstatement.

#### **Auditor's responsibility for the Annual Compliance Statement**

Our responsibility is to express an opinion on whether the Annual Compliance Statement has been prepared, in all material respects, in accordance with the Determination.

#### **Basis of opinion**

We conducted our engagement in accordance with the International Standard on Assurance Engagements (New Zealand) 3000: *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* issued by the External Reporting Board and the Standard on Assurance Engagements 3100: *Compliance Engagements* issued by the External Reporting Board.

These standards require that we comply with ethical requirements and plan and perform our audit to provide reasonable assurance (which is also referred to as 'audit' assurance) about whether the Disclosure Information has been prepared in all material respects in accordance with the Determination.

An audit involves performing procedures to obtain evidence about the amounts and disclosures in the Annual Compliance Statement. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Annual Compliance Statement, whether due to fraud or error or non-compliance with the Determination. In making those risk assessments, the auditor considers internal control relevant to the company's preparation of the Annual Compliance Statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.

In relation to the price path set out in clause 8 of the Determination, our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 and 6 to 10 of the Annual Compliance Statement.

In relation to the SAIDI and SAIFI statistics for the Reference Period and the Assessment Period ended on 31 March 2014, including the calculation of the Reliability Limits and the Assessed Values, which are relevant to the quality standards set out in clause 9 of the Determination, our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 3 and 11 to 16 of the Annual Compliance Statement.



Our audit also included assessment of the significant estimates and judgements, if any, made by the company in the preparation of the Annual Compliance Statement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Use of this report

This independent auditor's report has been prepared for the directors of the company and for the Commerce Commission for the purpose of providing those parties with independent audit assurance about whether the Disclosure Information has been prepared, in all material respects, in accordance with the Determination. We disclaim any assumption of responsibility for any reliance on this report to any person other than the directors of the company or the Commerce Commission, or for any other purpose than that for which it was prepared.

#### Scope and inherent limitations

Because of the inherent limitations of an audit engagement, and the test basis of the procedures performed, it is possible that fraud, error or non-compliance may occur and not be detected.

We did not examine every transaction, adjustment or event underlying the Disclosure Information nor do we guarantee complete accuracy of the Disclosure Information. Also we did not evaluate the security and controls over the electronic publication of the Disclosure Information.

The opinion expressed in this independent auditor's report has been formed on the above basis.

#### Independence

When carrying out the engagement we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the External Reporting Board. We also complied with the independent auditor requirements specified in clause 4.1 of the Determination.

The Auditor-General, and her employees, and Deloitte and its partners and employees may deal with the company on normal terms within the ordinary course of trading activities of the company. Other than any dealings on normal terms within the ordinary course of business, this engagement and the annual audit of the company's financial statements, we have no relationship with or interests in the company.

#### Opinion

In our opinion, the Annual Compliance Statement of Top Energy for the year ended on 31 March 2014, has been prepared, in all material respects, in accordance with the Determination.

Our audit was completed on 27 May 2014 and our opinion is expressed as at that date.

**Andrew Burgess**

Deloitte

On behalf of the Auditor-General

Auckland, New Zealand

This audit report relates to the electronic publication of the annual compliance statement prepared under the Electricity Distribution Default Price-Quality Path Determination 2012 (the "annual compliance statement") of Top Energy Limited (the company) for the assessment period ended 31 March 2014. We have not been engaged to report on the integrity of any website on which the annual compliance statement has been published. We accept no responsibility for any changes that may have occurred to the annual compliance statement since it was initially approved and published. This audit report refers only to the annual compliance statement named above. If readers of this audit report are concerned with the inherent risks arising from electronic data communication they should refer to the original published hard copy of the annual compliance statement and related audit report dated 27 May 2014 to confirm the information included in the annual compliance statement published on this website. Legislation in New Zealand governing the preparing and dissemination of financial information may differ from legislation in other jurisdictions.

## Appendix A – Price Path Compliance Calculations (Clause 11.3)

### Clause 8.4

Notional Revenue for the year ending March 2014		
Term	Description	Value \$
<i>SPi,2014Qi, t-2</i>	Prices at 31 March 2014 multiplied by 31 March 2012 Base Quantities	43,304,074
	Notional Posted Discount YE 2014	5,121,424
<i>P2014*Q2012</i>	Prices at 31 March 2014 multiplied by 31 March 2012 Base Quantities	38,182,650
<i>K2014</i>	Transmission Charges for year ending 31 March 2014	5,361,964
<i>V2014</i>	Ngawha Avoided Transmission Charges for year ending 31 March 2014	2,294,765
	Transpower purchase Avoided Transmission Charges for year ending 31 March 2014	1,711,069
	Rates for year ending 31 March 2014	25,879
	Electricity Authority Levies for year ending 31 March 2014	59,525
	Commerce Act Levies for year ending 31 March 2014 + 1/5 of Commerce Act Levies for year ending 31 March 2010	91,333
<i>Total K&amp;V 2014</i>	Pass through and Recoverable Costs	9,544,535
<i>NR2014</i>	Notional Revenue for the year ending 31 March 2014	28,638,115

Supported by P\*Q schedules presented in Appendix B

Maximum Notional Revenue for the year ending March 2014		
Term	Description	Value \$
<i>PMax*Q2012</i>	Maximum Prices between 1 April 2013 and 31 March 2014 multiplied by 31 March 2012 Base Quantities	38,182,650
<i>K2014</i>	Transmission Charges for year ending 31 March 2014	5,361,964
<i>V2014</i>	Ngawha Avoided Transmission Charges for year ending 31 March 2014	2,294,765
	Transpower purchase Avoided Transmission Charges for year ending 31 March 2014	1,711,069
	Rates for year ending 31 March 2014	25,879
	Electricity Authority Levies for year ending 31 March 2014	59,525
	Commerce Act Levies for year ending 31 March 2014 + 1/5 of Commerce Act Levies for year ending 31 March 2010	91,333
<i>Total K&amp;V 2014</i>	Pass through and Recoverable Costs	9,544,535
<i>NRMax</i>	Notional Revenue for the year ending 31 March 2014	28,638,115

Supported by P\*Q schedules presented in Appendix B

Clause 8.3

Allowable Notional Revenue 2014		
Term	Description	Value \$
<i>Revenue adjustment term: NR2012-NR2012</i>	Last years under(over) recovery	97,389
<i>P2013*Q2012</i>	Prices at 31 March 2013 multiplied by 31 March 2012 Base Quantities	36,823,937
<i>K2013</i>	Transmission Charges for year ending 31 March 2013	4,544,524
<i>V2013</i>	Ngawha Avoided Transmission Charges for 2013	2,317,425
	Transpower purchase Avoided Transmission Charges for 2013	1,571,756
	Rates for year ending 31 March 2013	24,895
	Electricity Commission Levies for year ending 31 March 2013	70,966
	Commerce Act Levies for year ending 31 March 2013 + 1/5 of Commerce Act Levies for year ending 31 March 2010	66,603
<i>PQ2013-K2013-V2013</i>	<b>Total</b>	<b>28,325,157</b>
<i>X</i>	X Factor	(0.10)
<i>(1 + DCPI2014)</i>	Average change in Consumer Price Index	1.01282
<i>R2014</i>	Allowable Notional Revenue under the CPI-X Price Path for the year ending 31 March 2014	31,557,130

Supported by P\*Q schedules presented in Appendix B

DCPI2014			
Numerator		Denominator	
CPI <sub>Dec2011</sub>	1,158	CPI <sub>Dec2010</sub>	1,157
CPI <sub>Mar2012</sub>	1,164	CPI <sub>Mar2011</sub>	1,146
CPI <sub>Jun2012</sub>	1,168	CPI <sub>Jun2011</sub>	1,157
CPI <sub>Sep2012</sub>	1,171	CPI <sub>Sep2011</sub>	1,162
Total	4661	Total	4602
DCPI2014	1.28%		



Appendix B – Price and Quantity Schedules (Clause 11.3(a))

NB: The maximum NR (2014) prices and quantities are the same as NR (2014)

SP 2014 Q1-2 Prices at 31 March 2014 multiplied by 31 March 2012 Base Quantities

Tariff or Fee	Description	Number of CPs at 31/03/12	Number of CPs to be added for 31/03/12	Line Tariff 1.4.2013 to 31.3.2014 year		National Distribution Revenue		National Other Revenue (\$)	Total Revenue \$ SP 2014 Q1-2	Fixed Discount (\$)	Variable Discount (\$AW) (Carried over 2012)	National Distribution Discount (\$)	National Distribution Discount (\$)	Total Discount (\$)	Total Revenue (\$) SP 2014 Q1-2 plus discount
				Fixed	Variable (known)	Fixed	Variable								
Non-Tariff Fee															
UC	Uncontrolled	3,002	86,352,455	0.150	24,716	432,240	13,742,756	-	74,182,400	-	11,000	55,421	1,120,165	13,062,235	
PC	Partly Controlled	21,754	136,132,225	0.150	13,333	1,180,372	18,975,472	-	20,155,844	-	11,000	1,952,270	3,690,684	16,455,180	
FC	Fully Controlled	5,902	5,500,227	0.150	5,729	87,220	315,280	-	315,280	-	11,000	45,138	155,634	315,280	
DAY	Fixed-Distributed Day	902	11,353,181	0.150	2,472	49,385	1,745,588	-	1,004,531	-	11,000	110,098	155,634	1,004,531	
NCT	Capacity	914	4,813,239	7.452	10,504	310,078	1,187,137	-	1,401,746	-	0.300	24,291	64,172	119,107	
CAPES	Capacity	7	500,187	7.377	10,504	18,848	52,852	-	27,780	-	0.550	12,417	12,417	1,337,042	
CAMPESC	Capacity	62	4,266,543	21.681	0.232	469,510	10,728	-	469,510	-	0.550	12,417	12,417	477,663	
Time of Use															
00:00 - 04:00			4,266,543	0.232	0.232	10,728	10,728	-	10,728	-	-	-	-	10,728	
04:00 - 08:00			5,348,517	0.330	0.330	21,341	21,341	-	21,341	-	-	-	-	21,341	
08:00 - 12:00			7,030,322	0.719	0.719	587,390	587,390	-	587,390	-	0.300	67,472	67,472	618,919	
12:00 - 15:00			7,357,492	10.317	10.317	790,848	790,848	-	790,848	-	0.300	67,472	67,472	790,848	
15:00 - 18:00			5,463,133	14.858	14.858	261,153	261,153	-	261,153	-	0.300	67,472	67,472	261,153	
20:00 - 24:00			5,520,528	4.855	4.855	23,844	23,844	-	23,844	-	0.300	67,472	67,472	23,844	
Intermittent															
00:00-04:00		2	3,890,000	3.890	3.890	1,421,325	1,421,325	-	1,421,325	-	13,914	13,914	13,914	1,407,389	
04:00-08:00		1	656,780	6.568	6.568	239,261	239,261	-	239,261	-	6,957	6,957	6,957	246,218	
Street Lighting															
UP COM99		24	0.3670	0.3670	3,143	3,143	3,143	-	3,143	-	-	-	-	3,143	
UP DECL		52	0.3820	0.3820	7,212	7,212	7,212	-	7,212	-	-	-	-	7,212	
UP CL		78	0.2700	0.2700	3,552	3,552	3,552	-	3,552	-	-	-	-	3,552	
UP BT		3	0.2030	0.2030	370	370	370	-	370	-	-	-	-	370	
UP LDH		59	0.7860	0.7860	16,088	16,088	16,088	-	16,088	-	-	-	-	16,088	
UP LN		1,858	0.3600	0.3600	259,022	259,022	259,022	-	259,022	-	-	-	-	259,022	
UP SHL PWC		55	0.4659	0.4659	84,857	84,857	84,857	-	84,857	-	-	-	-	84,857	
UP LTR		5	1.3389	1.3389	3,113	3,113	3,113	-	3,113	-	-	-	-	3,113	
SP 2014 Q1-2		38,312	271,880,373			4,163,160	38,773,631	387,403	43,304,074	29,873	67,544,540	1,520,435	3,000,959	5,121,424	38,162,650



## Appendix C – Pass Through and Recoverable Costs (Clause 11.3(b) (c))

Pass Through and Recoverable Costs for year ending March 2014				
K 2014	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Transmission	5,361,964	5,583,489	(221,525)	(4.13)%
V 2014	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Avoided Transmission Ngawha	2,294,765	2,294,765	-	-
Avoided Transmission Transpower	1,711,070	1,711,070	-	(.1)%
Rates	25,879	27,331	(1,452)	(5.61)%
Electricity Authority Levies	59,525	72,558	(13,032)	(21.89)%
Commerce Act Levies	91,333	68,814	22,519	24.66%
Total V2014	4,182,572	4,174,538	8,034	.19%
<b>Total Pass Through and Recoverable Costs</b>	<b>9,544,536</b>	<b>9,758,027</b>	<b>(213,490)</b>	<b>(2.24)%</b>

Note: Top Energy Limited had system fixed assets transferred from Transpower on 1 April 2012. The Avoided Transmission Transpower charge in the above table is consistent with clause 3.3.3(1)(b) of the IM Determination as required by clause 11.3(d).

### Variance comments

**Transmission:** Decrease in NZX voltage support charges which also ceased in December 2013.

**Rates:** The forecast included land which is part of the Transpower asset transfer. This charge is assumed to be included in the Avoided Transmission Transpower charge.

**Electricity Authority Levies:** Levies were lower than previous year.

**Commerce Act Levies:** Levies were higher than previous year.

## Appendix D – Quality Standard Compliance Calculations (Clause 11.3(h))

### Reliability Data (Before Normalisation)

Year	SAIDI (Interruption Duration)			SAIFI (Interruption Frequency)		
	Class B	Class C	Total	Class B	Class C	Total
2005	39.42	342.60	382.02	0.26	4.30	4.56
2006	22.30	499.80	522.10	0.14	5.43	5.57
2007	18.23	398.79	417.02	0.12	5.42	5.54
2008	36.63	781.67	818.30	0.34	6.05	6.39
2009	73.90	841.26	915.16	0.60	10.28	10.88
	Reference Period Total SAIDI		3,054.60	Reference Period Total SAIFI		32.94
	Reference Period Average SAIDI		610.92	Reference Period Average SAIFI		6.59
2014	21.81	478.32	500.13	0.14	5.32	5.46

### Reliability Limit Calculations

#### SAIDI Boundary Calculations

$\alpha_{SAIDI}$	-0.8549	The average of the natural logarithm (ln) of each daily SAIDI Value in the non-zero data set
$\beta_{SAIDI}$	1.9142	The standard deviation of the natural logarithm (ln) of each daily SAIDI Value in the non-zero data set
$B_{SAIDI} = e^{(\alpha_{SAIDI} + 2.3\beta_{SAIDI})}$	50.9313	SAIDI Boundary Value

#### SAIFI Boundary Calculations

$\alpha_{SAIFI}$	-5.5484	The average of the natural logarithm (ln) of each daily SAIFI Value in the non-zero data set
$\beta_{SAIFI}$	2.1216	The standard deviation of the natural logarithm (ln) of each daily SAIFI Value in the non-zero data set
$B_{SAIFI} = e^{(\alpha_{SAIFI} + 2.3\beta_{SAIFI})}$	0.7831	SAIFI Boundary Value

#### Event Days exceeding SAIDI Boundary Value within the Reference Dataset

Date	Pre-Normalised SAIDI	Pre-Normalised SAIFI	Normalised SAIDI	Normalised SAIFI
18-Sep-05	92.9493	0.5012	50.9313	0.5012
10-Jul-07	356.6218	0.8237	50.9313	0.7831
15-Apr-08	76.0172	1.0207	50.9313	0.7831
26-Jul-08	223.6803	1.0487	50.9313	0.7831
30-Jul-08	102.1547	0.8342	50.9313	0.7831
			-	-
			-	-

**SAIDI Limit**

$\mu_{SAIDI}$	491.5663	The average annual SAIDI Value in the Normalised Reference Dataset
$\sigma_{SAIDI}$	88.1148	The standard deviation of daily SAIDI Values in the Normalised Reference Dataset multiplied by $\sqrt{365}$
$SAIDI_{Limit} = \mu_{SAIDI} + \sigma_{SAIDI}$	579.6811	SAIDI Limit Value

**SAIFI Limit**

$\mu_{SAIFI}$	6.4685	The average annual SAIFI value in the Normalised Reference Dataset
$\sigma_{SAIFI}$	1.1942	The standard deviation of daily SAIFI Values in the Normalised Reference Dataset multiplied by $\sqrt{365}$
$SAIFI_{Limit} = \mu_{SAIFI} + \sigma_{SAIFI}$	7.6627	SAIFI Limit Value

**Reliability Assessment Calculations**

**Event Days exceeding SAIDI Boundary Value within the Assessment Dataset**

Date	Pre-Normalised SAIDI	Pre-Normalised SAIFI	Normalised SAIDI	Normalised SAIFI
28-May-13	78.9560		50.9313	-
15-Mar-14	58.1230		50.9313	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

**Assessed SAIDI Value**

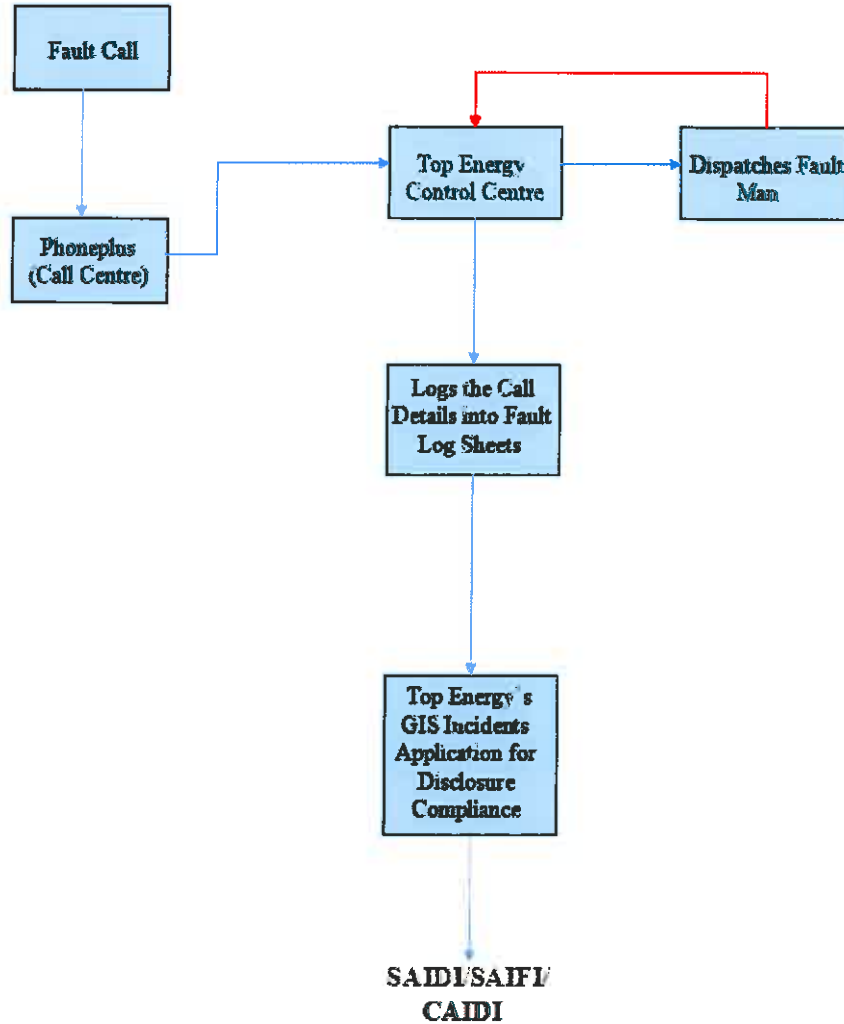
$SAIDI_{2014}$	464.915	The sum of daily SAIDI Values in the 1 April 2013 - 31 March 2014 Normalised Assessment Dataset
----------------	---------	---

**Assessed SAIFI Value**

$SAIFI_{2014}$	5.458	The sum of daily SAIFI Values in the 1 April 2013 - 31 March 2014 Normalised Assessment Dataset
----------------	-------	---

**Appendix E – Policies and Procedures for Recording SAIDI and SAIFI (Clause 11.3(i))**

Top Energy Limited records data for network performance at its network control centre. 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:**

All interruptions in electricity supply on the network are recorded by the control centre operators:

- **Planned outages** – are managed by the control centre operators who:
  - (1) schedule the work with field staff and;
  - (2) conduct and coordinate the related switching on the network.These details are recorded by action, date and time on a 'Switching Procedure Sheet'.
- **Unplanned outage records** - are initiated either by a telephone call of a fault being received by our in-house call centre (*PHONEplus*), or by receiving a protection equipment alarm generated directly from the SCADA (Supervisory Control & Data Acquisition) system. A detailed record of each telephone call about a fault, known as a 'CMS' \*, is completed by the call centre operator, who identifies key information about the interruption such as: time, fault description, name and contact details of the caller. Subsequently the control centre operator will despatch the fault response team, log the fault, and conduct any switching that is required. All extra-high voltage and high-voltage faults are recorded electronically via the SCADA system, which provides an accurate record of the extent, time of occurrence and duration of the outages.

\*CMS - Call Management Service. These are electronic records that the call centre staff use to record customer-reported fault information that are then forwarded to the control centre operators.

For either type of outage, the control centre operator records the following information:

- Substation reference number
- Feeders affected
- Interruption class type – A,B,C or D
- Cause code – where this is known

As a part of managing the restoration of supply, the control centre operator records the devices that are operated and the times at which they are operated. When this information is loaded into the GIS (Geographic Information System) incidents application software, the

time the customers are without power (customer outage minutes) is calculated by the application. The customer outage minutes are then inputted into the SAIDI calculation formula within our report manager application to calculate the SAIDI.

The control centre operates continuously on a roster basis, with four operators being present from 7 am to 9pm, Monday to Friday. Outside these hours, a standby roster is used to provide continuous coverage.

Please note, the Top Energy Control Centre has recently implemented a 24 hour, 7 day roster that means the Control Centre is continuously manned. It is likely that this roster option will be maintained in future, subject to staff agreement.

### **Consumer Numbers:**

To determine the total number of consumers on its network, Top Energy maintains an ICP database. This is based on the electricity industry's registry. The ICP database has been consistently kept in compliance with relevant rules and regulations. The numbers of ICPs is used for internal reporting and performance management purposes throughout the year.

Using a fully integrated GIS & ICP (Installation Control Point) database for its entire network, Top Energy is able to use its information systems to calculate the number of customers beyond every isolation device on the network, at any time. The required customer counts can be extracted from the GIS system, which is linked to the ICP database. The average of the network ICP counts at the beginning and the end of the year was calculated as follows:

- ICP count at 31 March 2013 was 31,436
- ICP count at 31 March 2014 was 31,672
- Average ICP count for 2014 was therefore 31,554  $((31,436+31,672)/2)$

### **GIS Incident Application**

Top Energy Limited has used its GIS incident application since 1 April 2009. This software is used to record network interruptions and to generate network performance indices, such as SAIDI and SAIFI. The results are reported to and reviewed for reasonableness by the Control Centre Manager on a daily basis with a final check at month end. After the data have been



reviewed, network quality performance graphs, together with a summary report of reliability statistics, form part of the Network General Manager's report to the Board of Directors. On a six monthly basis, the related statistics are summarised and reported as part of the company's financial reporting procedure. This provides comparisons with targets set out in the company's Statement of Corporate Intent.

The GIS incidents system automatically calculates customer outage minutes from the network outage data input. This is accomplished by recording the time stamped operation of each switchable device, and combining it with the GIS calculated number of ICPs connected beyond the device concerned. A report on the SAIDI and SAIFI effects is then generated. For disclosure purposes, the average network total ICP count, calculated as previously described, is used.

The equation used by the GIS incidents application to calculate customer outage minutes is:

$$\Sigma (\text{Outage Duration}_1 \times \text{ICP Count}_1) + (\text{Outage Duration}_2 \times \text{ICP Count}_2) + \dots$$

(and so on for each outage duration)