



**DEFAULT PRICE QUALITY PATH COMPLIANCE STATEMENT  
FOR THE ASSESSMENT DATE 31 MARCH 2015**

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

26 May 2015

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## 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 2015, 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.

### Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2012

#### Commerce Act (Electricity Distribution Default Price- for the Assessment Date 31 March 2015

Clause 8.4 The notional revenue ( $NR_t$ ) of a Non-exempt EDB at 31 March 2015 must not exceed the allowable notional revenue ( $R_t$ ) for the Assessment Period such that:

Test:	$\frac{NR_{2015}}{R_{2015}} \leq 1$
NR <sub>2015</sub> :	\$ 28,666,166
R <sub>2015</sub> :	\$ 33,975,390
Result:	0.8437 < 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:	$\frac{NR_{Max}}{R_{2015}} \leq 1$
NR <sub>Max</sub> :	\$ 28,666,166
R <sub>2015</sub> :	\$ 33,975,390
Result:	0.8437 < 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 did not comply with all requirements of the quality standards in clause 9 at the assessment date, 31 March 2015, 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 non-compliance with the SAIDI Limit and the second table demonstrates 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:	$\frac{SAIDI_{Assess\ 2015}}{SAIDI_{Limit}} \leq 1$
SAIDI <i>Assess 2015</i>	599.923
SAIDI <i>Limit</i>	579.681
Result:	1.0349 > 1
Result:	SAIDI Limit has been breached.


Test:	$\frac{SAIFI_{Assess\ 2015}}{SAIFI_{Limit}} \leq 1$
SAIFI <i>Assess 2015</i>	6.349
SAIFI <i>Limit</i>	7.663
Result:	0.8286 < 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: 26 May 2015



## **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 2015 on pages 2 to 3 and 6 to 17 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 2015, 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**

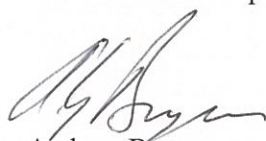
When carrying out the engagement we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the External Reporting Board. We also complied with the independent auditor requirements specified of the Determination.

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 2015, has been prepared, in all material respects, in accordance with the Determination.

Our audit was completed on 26 May 2015 and our opinion is expressed as at that date.



Andrew Burgess

**Deloitte**

On behalf of the Auditor-General  
Auckland, New Zealand



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

### Clause 8.4

Notional Revenue for the year ending March 2015		
Term	Description	Value \$
$SP_i, 2015Q_i, t-2$	Prices at 31 March 2015 multiplied by 31 March 2013 Base Quantities	44,487,126
	Notional Posted discount YE 2015	(5,154,699)
$P_{2015} * Q_{2013}$	Prices at 31 March 2015 multiplied by 31 March 2013 Base Quantities	39,332,427
$K_{2015}$	Transmission Charges for year ending 31 March 2015	5,824,018
$V_{2015}$	Ngawha Avoided Transmission Charges for year ending 31 March 2015	2,719,025
	Transpower purchase Avoided Transmission Charges for year ending 31 March 2015	1,893,130
	Rates for year ending 31 March 2015	28,365
	Electricity Authority Levies for year ending 31 March 2015	80,983
	Complaints Commission charges for year ending 31 March 2015	13,261
	Commerce Act Levies for year ending 31 March 2015 + 1/5 of Commerce Act Levies for year ending 31 March 2010	107,479
$Total\ K\&V\ 2015$	Pass through and Recoverable Costs	10,666,261
$NR_{2015}$	Notional Revenue for the year ending 31 March 2015	28,666,166

Supported by P\*Q schedules presented in Appendix B

Maximum Notional Revenue for the year ending March 2015		
Term	Description	Value \$
$PM_{\max} * Q_{2013}$	Maximum Prices between 1 April 2014 and 31 March 2015 multiplied by 31 March 2013 Base Quantities	39,332,427
$K_{2015}$	Transmission Charges for year ending 31 March 2015	5,824,018
$V_{2015}$	Ngawha Avoided Transmission Charges for year ending 31 March 2015	2,719,025
	Transpower purchase Avoided Transmission Charges for year ending 31 March 2015	1,893,130
	Rates for year ending 31 March 2015	28,365
	Electricity Authority Levies for year ending 31 March 2015	80,983
	Complaints Commission charges for year ending 31 March 2015	13,261
	Commerce Act Levies for year ending 31 March 2015 + 1/5 of Commerce Act Levies for year ending 31 March 2010	107,479
$Total\ K\&V\ 2015$	Pass through and Recoverable Costs	10,666,261
$NR_{\max}$	Notional Revenue for the year ending 31 March 2015	28,666,166

Supported by P\*Q schedules presented in Appendix B



Clause 8.3

Allowable Notional Revenue 2015		
Term	Description	Value \$
<i>Revenue adjustment term N2014-NR2014</i>	Last years under(over) recovery	2,919,015
<i>P2014*Q2013</i>	Prices at 31 March 2014 multiplied by 31 March 2013 Base Quantities (PQ2014)	37,216,891
<i>K2014</i>	Transmission Charges for year ending 31 March 2014	5,361,964
<i>V2014</i>	Ngawha Avoided Transmission Charges for 2014	2,294,765
	Transpower purchase Avoided Transmission Charges for 2014	1,711,069
	Rates for year ending 31 March 2014	25,879
	Electricity Commission Levies for year ending 31 March 2014	59,525
	Commerce Act Levies for year ending 31 March 2013 + 1/5 of Commerce Act Levies for year ending 31 March 2010	91,333
<i>PQ2014-K2014-V2014</i>	Total	30,591,372
<i>X</i>	X Factor	(0.10)
<i>(1 + DCPI2015)</i>	Average change in Consumer Price Index	1.00965
<i>R2015</i>	Allowable Notional Revenue under the CPI-X Price Path for the year ending 31 March 2015	33,975,390

Supported by P\*Q  
schedules presented in  
Appendix B

DCPI2015			
Numerator		Denominator	
CPIQ4,2012	1,169	CPIQ4,2011	1,158
CPIQ1,2013	1,174	CPIQ1,2012	1,164
CPIQ2,2013	1,176	CPIQ2,2012	1,168
CPIQ3,2013	1,187	CPIQ3,2012	1,171
Total	4706	Total	4661
DCPI2015		.97%	



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

NB: The maximum NR (2015) prices and quantities are the same as NR (2015)

Prices at 31 March 2015 multiplied by 31 March 2013 Base Quantities																																				
SP <sub>2015 Q<sub>4-2</sub></sub>		12																																		
Number of Months		365																																		
Number of Days																																				
Tariff or Fee				Description																																
Number of ICPs at 31/03/13				kWh or kw or kvarh for 31/03/13		Other Qty for 31/03/13		Line Tariff 1.4.2014 to 31.3.2015 year		Notional Distribution Revenue (\$)		Notional Other Revenue (\$)		Total Revenue \$'s		ICP Numbers eligible		Kwh discounted		Fixed Discount \$/an. ( See note 4)		Variable Discount c/kWh (Capped see note 4)		Notional Distribution Discount (\$)		Notional Distribution Discount (\$)		Total Discount (\$)		Total Revenue (\$)						
								Fixed		Variable (c/kwh)		Fixed		Variable		ΣP <sub>2015 Q<sub>1-2013</sub></sub>								Fixed		Variable				ΣP <sub>2015 Q<sub>1-2013</sub></sub> discount						
Non Time of Use																																				
UC				8,093	61,590,885		0.150	21,941	443,092	13,513,656	-	13,956,748	7,314	7,016,656	-	0.135	-	11,000	-	360,397	-	771,632	-	1,132,230	-	1,132,230	-	12,824,518								
PC				21,253	134,730,832		0.150	14,773	1,163,602	19,903,786	-	21,067,388	21,702	23,871,095	-	0.135	-	11,000	-	1,069,366	-	2,625,820	-	3,695,187	-	3,695,187	-	17,372,201								
FC					5,688,691			6,081	-	345,929	-	345,929																345,929								
DAY				906	11,578,712		0.150	16,283	49,604	1,885,362	-	1,934,965	920	1,005,953	-	0.135	-	11,000	-	45,333	-	110,655	-	155,968	-	1,778,977										
NGT					5,042,768			2,631	-	132,676	-	132,676															132,676									
CAP150				123	13,761,316		7.768	10,984	349,642	1,511,543	-	1,861,185	129	14,257,062	-	0.550	-	0.300	-	25,897	-	42,771	-	68,668	-	1,792,517										
CAP150FC				6	-		7.645	10,984	22,323	-	-	22,323															22,323									
Time of Use				60			22,420		490,998	-	-	490,998	63		-	0.550	-		-	12,647	-		-	12,647	-	478,351										
00.00 - 04.00					4,067,614			0.262	-	10,657	-	10,657															10,657									
04.00 - 08.00					5,197,416			0.415	-	21,569	-	21,569															21,569									
08.00 - 12.00					7,444,943			9,066	-	674,959	-	674,959		23,035,877		-	0.300	-	0.300	-	69,108	-	69,108	-	605,851											
12.00 - 16.00					7,131,653			10,728	-	765,084	-	765,084				-	0.300	-	0.300	-	-	-	-	-	-	765,084										
16.00 - 20.00					6,396,368			15,449	-	986,630	-	986,630				-	0.300	-	0.300	-	-	-	-	-	-	986,630										
20.00 - 24.00					4,960,436			5,059	-	250,948	-	250,948						0.300	-	0.300	-	-	-	-	-	250,948										
Industrial				2			3,537,6300		1,291,235	-	-	1,291,235	2						-	13,913.80	-	13,914	-	13,914	-	1,277,321										
0000984310TEBBE												-															-	-	-	-						
0000930130TE465																												-	-	-						
00009840000TE210				1			785,3300		286,646	-	-	286,646	1						-	6,956.90	-	6,957	-	6,957	-	279,689										
Street Lights																																				
UMCONS00						18	0.3670		-	-	2,344																2,344									
UMDECL						51	0.3600		-	-	7,074																7,074									
UMGL						75	0.1270		-	-	3,477																3,477									
UMMT						5	0.2030		-	-	370																370									
UMLDH						60	0.7600		-	-	16,505																16,505									
UMLSH											261,033																261,033									
UMLSHPMC											94,720																94,720									
UMLTH											1,663																1,663									
ΣP <sub>2015 Q<sub>1-2013</sub></sub>				30,446	267,581,654	2,650			4,097,141	40,002,799	387,186	44,487,126	30,131	69,186,643					-	1,534,511	-	3,620,186	-	5,154,699	-	39,332,427										



**Prices at 31 March 2014 multiplied by 31 March 2013 Base Quantities**

**ΣP<sub>2014 Q4-2</sub>**  
Number of Months  
Number of Days

12  
365

Number of Days	Tariff or Fee	Description	Number of ICPs at 31/03/13	kWh or kw or kvarh for 31/03/13	Other Qty for 31/03/13	Line Tariff 1.4 2013 to 31.3.2014 year		Notional Distribution Revenue (\$)		Notional Other Revenue (\$)	Total Revenue (\$)	ICP Numbers eligible	Kwh discounted	Fixed Discount \$/an. ( See note 4)	Variable Discount c/kWh (Capped see note 4)	Notional Distribution Discount (\$)	Notional Distribution Discount (\$)	Total Discount (\$)	Total Revenue (\$)	
						Variable (ckwh)		(\$)												
						Fixed	Variable (ckwh)	Fixed	Variable											
Non Time of Use																				
UC	Non Time of Use	Uncontrolled																		
		Partly Controlled	8,093	61,590,885		0.150	20,718	443,092	12,760,400	-	13,203,492	7,314	7,016,656	-	0.135	-	360,397	-	1,132,230	12,071,262
		FC	21253	134,730,832		0.150	13,939	1,163,602	18,780,131	-	19,943,733	21,702	23,871,095	-	0.135	-	1,069,366	-	3,695,187	16,248,546
		Fully controlled		5,688,691			5,729	-	325,905	-	325,905							-	325,905	
		DAY	906	11,578,712		0.150	15,376	49,604	1,780,342	-	1,829,946	920	1,005,953	-	0.135	-	45,333	-	155,968	1,673,958
CAP150	Night	NGT		5,042,768			2,472	-	124,658	-	124,658							-	124,658	
		Capacity	123	13,761,316		7.452	10,504	334,558	1,445,468	-	1,780,046	129	14,257,062	-	0.550	-	25,897	-	68,668	1,711,378
		Capacity	8	-		7.377	10,504	21,541	-	-	21,541							-	21,541	
CAP150FC	Time of Use			-				-	-	-										
			60	-		21.631		473,719	-	-	473,719	63	-	-	0.550	-	12,647	-	12,647	461,072
			00:00 - 04:00		4,067,614			0.252	-	10,250	-	10,250						-	-	10,250
			04:00 - 08:00		5,197,416			0.399	-	20,738	-	20,738						-	-	20,738
			08:00 - 12:00		7,444,943			8.719	-	649,125	-	649,125		23,035,877			-	69,108	-	580,017
			12:00 - 16:00		7,131,653			10.317	-	735,773	-	735,773				-	0.300	-	-	735,773
			16:00 - 20:00		6,386,368			14.858	-	948,887	-	948,887				-	0.300	-	-	948,887
Industrial	20:00 - 24:00			4,960,436			4.865	-	241,325	-	241,325				-	0.300	-	-	241,325	
			-																	
			-																	
			-																	
			-																	
			-																	
			-																	
Street Lights	UMCON500			-																
			2	-		3.893.9800		1,421,303	-	-	1,421,303	2	-			13,913.80	-	13,914	1,407,389	
				-														-	6,957	247,006
			1	-		695.7900		253,963	-	-	253,963	1	-			6,956.90	-	-		
			-																	
UMCON500	UMDECL			-																
			18	-		0.3670		-	-	2,344	2,344					-	-	-	2,344	
			51	-		0.3600		-	-	7,074	7,074					-	-	-	7,074	
			75	-		0.1270		-	-	3,477	3,477					-	-	-	3,477	
			5	-		0.2030		-	-	370	370					-	-	-	370	
UMLDH	UMLSH			-		60		0.7600	-	16,505	16,505					-	-	-	16,505	
			1,882	-		0.3600		-	-	261,033	261,033					-	-	-	261,033	
			555	-		0.4680		-	-	94,720	94,720					-	-	-	94,720	
			4	-		1.1390		-	-	1,663	1,663					-	-	-	1,663	
			-																	
ΣP <sub>2014 Q4-2</sub>	ΣP <sub>2014 Q4-2</sub>																			
			30,446	267,581,654	2,650				4,161,382	37,823,022	387,186	42,371,590	30,131	69,186,643	-		-	1,534,511	-	5,154,699



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

Pass Through and Recoverable Costs for year ending March 2015				
K 2015	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Transmission	5,824,018	5,824,018	(0)	(.)%
V 2015	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Avoided Transmission Ngawha	2,719,025	2,719,025	(0)	(.)%
Avoided Transmission Transpower	1,893,130	1,833,762	59,368	3.14%
Rates	28,365	26,199	2,166	7.64%
Electricity Authority Levies	80,983	64,503	16,480	20.35%
Complaints Commission	13,261	-	13,261	100.0%
Commerce Act Levies	107,479	100,594	6,885	6.41%
Total V2015	4,842,243	4,744,083	98,160	2.03%
<b>Total Pass Through and Recoverable Costs</b>	<b>10,666,261</b>	<b>10,568,101</b>	<b>98,160</b>	<b>.92%</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	The Ngawha connection charge (\$59k) difference was deducted twice.
Rates	Price increases slightly higher than anticipated.
Electricity Authority Levies	Levies higher than previous year with a prior period reconciliation of \$6k.
Complaints Comm.	Top Energy has commenced including this eligible deduction in 2015
Commerce Act Levies	Unexpected slight increase



## 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
2015	251.80	1,585.99	1,837.79	0.96	5.42	6.38

### 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
$B_{SAIDI} = e^{(\alpha_{SAIDI} + 2.5 * \beta_{SAIDI})}$	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
$B_{SAIFI} = e^{(\alpha_{SAIFI} + 2.5 * \beta_{SAIFI})}$	0.7831	SAIFI Boundary Value

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

Date	Pre-Normalised SA	Pre-Normalised SA	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 and SAIFI Boundary Value within the Assessment Dataset**

Date	Pre-Normalised SAIDI	Pre-Normalised SAIFI	Normalised SAIDI	Normalised SAIFI
17-Apr-14	78.0001		50.9313	-
8-Jul-14	1,143.0076		50.9313	-
1-Feb-15	135.1951		50.9313	-
15-Mar-15	85.3913		50.9313	-
8-Jul-14		0.8185	-	0.7831
			-	-
			-	-
			-	-

**Assessed SAIDI Value**

$SAIDI_{2015}$	599.923	The sum of daily SAIDI Values in the 1 April 2014 - 31 March 2015 Normalised Assessment Dataset
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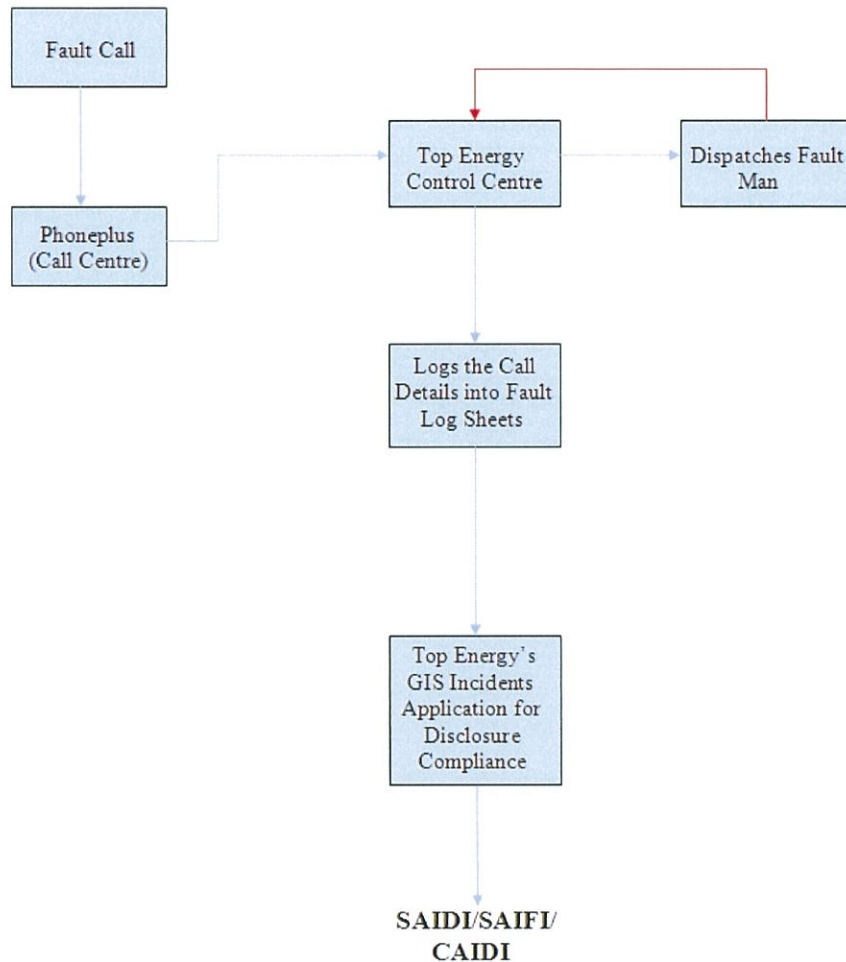
**Assessed SAIFI Value**

$SAIFI_{2015}$	6.349	The sum of daily SAIFI Values in the 1 April 2014 - 31 March 2015 Normalised Assessment Dataset
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## Appendix E – Policies and Procedures for Recording SAIDI and SAIFI (Clause 11.3(i))

Top Energy Limited records data for network performance from its network Control Centre. The following flow diagram outlines the process that manages the recording and production of quality performance statistics.



**Top Energy Faults Management Process**

### 1 PLANNED OUTAGES

Planned outages are maintained by the Control Centre. They;

1. schedule the work with the Field Staff,
2. conduct and coordinate the switching on the network. These details are recorded by action, date and time on 'Switching Procedure Sheet' following a predetermined switching plan.



## 2 UNPLANNED OUTAGES

Unplanned outages are initiated either by a fault call received by our in house Call Centre (PHONEplus) or by receiving a direct protection equipment alarm generated directly out of the SCADA system. A call detail record is entered into the Call Centre's call management system (CMS), this is completed by the Call Centre operators who identify key information about the interruption, such as: time, fault description, name and contact details of the caller.

Subsequently the control Centre Operator will dispatch a Fault Man directly or via the contractor's Faults Coordinator, log the fault, and enter the relevant details in the log. As part of managing the restoration of supply, the Control Centre Operator records the devices that are operated and the times they are operated on the 'Switching Procedure Sheet'. All HV and EHV faults are additionally recorded electronically via the SCADA system which provides an accurate record of the operation, time and date factors of the outage.

The data generated by the SCADA alarm only records faults on a feeder and the time that the circuit tripped. The event logs are not a complete switching record, as they do not provide evidence of the time that consumers down the feeder were restored.

The reason that no automatic record is created in SCADA for minor faults is that the alarms are placed on the first circuit breaker or reclosers on the feeder. The circuit breakers are designed so they do not trip needlessly with every small fault further down the feeder, meaning that there will only be alarms created for events exceeding momentary supply interruptions.

Therefore, the sources of recorded information from individual events are from three sources;

- (a) Call detail sheet from the call management system (CMS) which is logged by the Call Centre
- (b) Switching procedure sheets
- (c) Computer generated records from the SCADA System.

Once the outage is completed and all power is restored, the information gathered from the call detail sheet, switching procedure sheet, SCADA records and any other relevant information to form a network performance pack.

## 3 NETWORK PERFORMANCE PACK

The network performance pack is assembled to provide verified event data, to ensure accurate data entry into the GIS Incident Application. The time the customers are without power, number of customers affected is calculated by the GIS Incidents application. The control centre operators also allocate each fault a cause code so that they can be categorised for disclosure purposes.



## 4 GIS INCIDENT APPLICATION

Top Energy Limited has been using its fully upgraded GIS Incident Application since 1 April 2009. Top Energy Limited is recording network interruptions and generating the Network Performance Indexes, such as SAIDI and SAIFI, using this GIS Incident program. On a monthly basis, the database is reviewed for reasonableness by the Control Centre Manager. After the data is reviewed, network quality graphs and a summary monthly report of reliability statistics form part of the General Manager Network'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 out in the Company's Statement of Corporate Intent.

The GIS incidents system calculates customer outage minutes from the network outage data entered into the system.

The system calculates the customer outage minutes for each individual operation, by recording the time stamped operation of each switchable device, and counting the number of ICP's connected beyond the device. A report is then generated from the data where the SAIDI and SAIFI are stated. For disclosure the averaged ICP count is used.

The equation used by GIS Incidents to calculate customer minutes

$$\Sigma (\text{Outage Duration}_1 \times \text{ICP Count}_1) + (\text{Outage Duration}_2 \times \text{ICP Count}_2) + \dots \text{ (and so on for each outage duration)}$$

Each GIS Incident that is inputted is reviewed and checked by the Control Centre Manager. Each month's results are checked for reasonableness, thus equates to 12 checks each year end.

A report is generated from the Report Manager, which shows the SAIDI and SAIFI calculations for the period.

For all outages the GIS Incident Application calculates the number of affected customers. The ICPs affected are automatically populated from the GIS system. With a fully integrated GIS & ICP database of our network, Top Energy uses its GIS system to report the number of customers beyond every isolation device 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, Top Energy had been using the accurate customer count as at 31 March of the relevant year. To determine the total number of consumers on our network, Top Energy maintains an ICP database (Club ICP) which is based on the industry maintained Registry equivalent. The ICP database has been maintained consistently in compliance with relevant Rules and Regulations. The result is used for internal reporting and performance management throughout the year. For disclosure purposes the average of the Total ICP counts at 31 March year start and 31 March year end.

The Customer count data is taken from the Electricity Registry.

E.G. The average ICP count for 2015 was calculated as the sum of the 31 March 2014 + 31 March 2015 ICP, (31672+31901)/2, counts divided by 2.

To ensure the accuracy of ICPs in Geographical Information System (GIS) an automatic trace is set to run on a daily basis. The trace runs through the connected model and gathers total ICPs per feeder. The trace results are

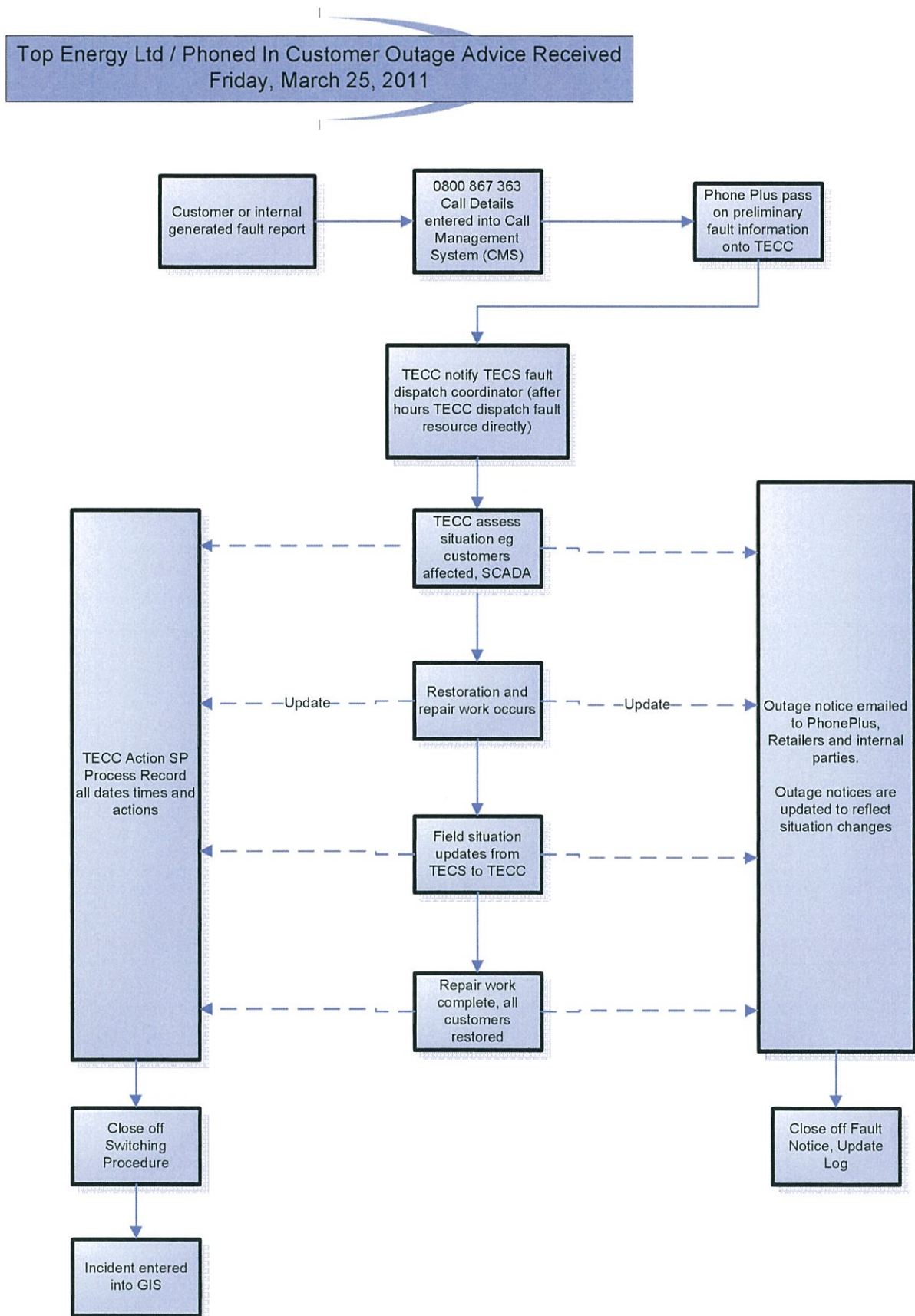


compared against the previous days trace and outputted into a report showing the difference between the two traces, categorised by feeder. The report is e-mailed to the GIS Manager each morning and reviewed. If there is a significant ICP difference the connectivity of the feeder is further investigated in GIS, and when remedied the trace is rerun manually.

In addition, a weekly trace is run to ensure number of ICP's in Club ICP database matches number of ICPs connected in GIS by the GIS Administrator. The report outputs total number of ICPs in Club ICP application and the total number of ICPs in GIS, the difference between the two databases categorised by feeders. The report also lists ICP numbers which are not placed in GIS. This report is reviewed and rectified by GIS Technician as appropriate.



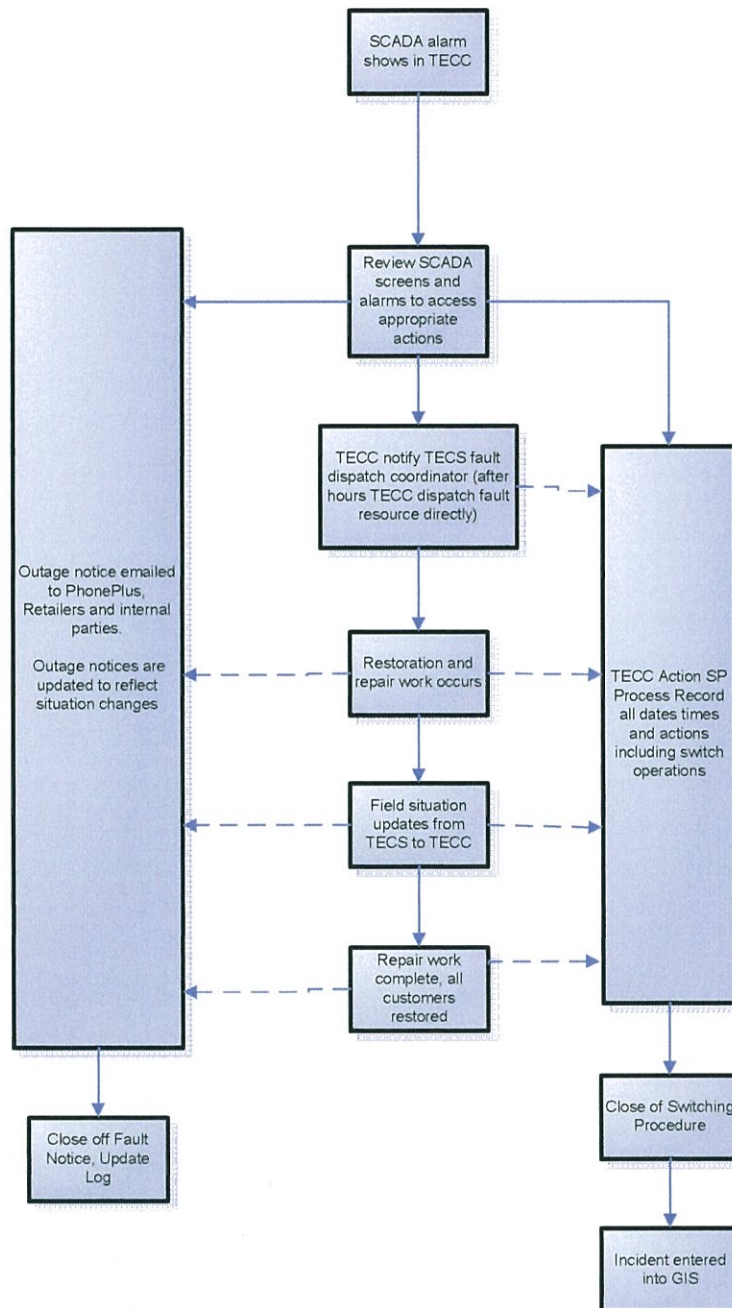
## 5 PHONED IN CUSTOMER OUTAGE ADVICE





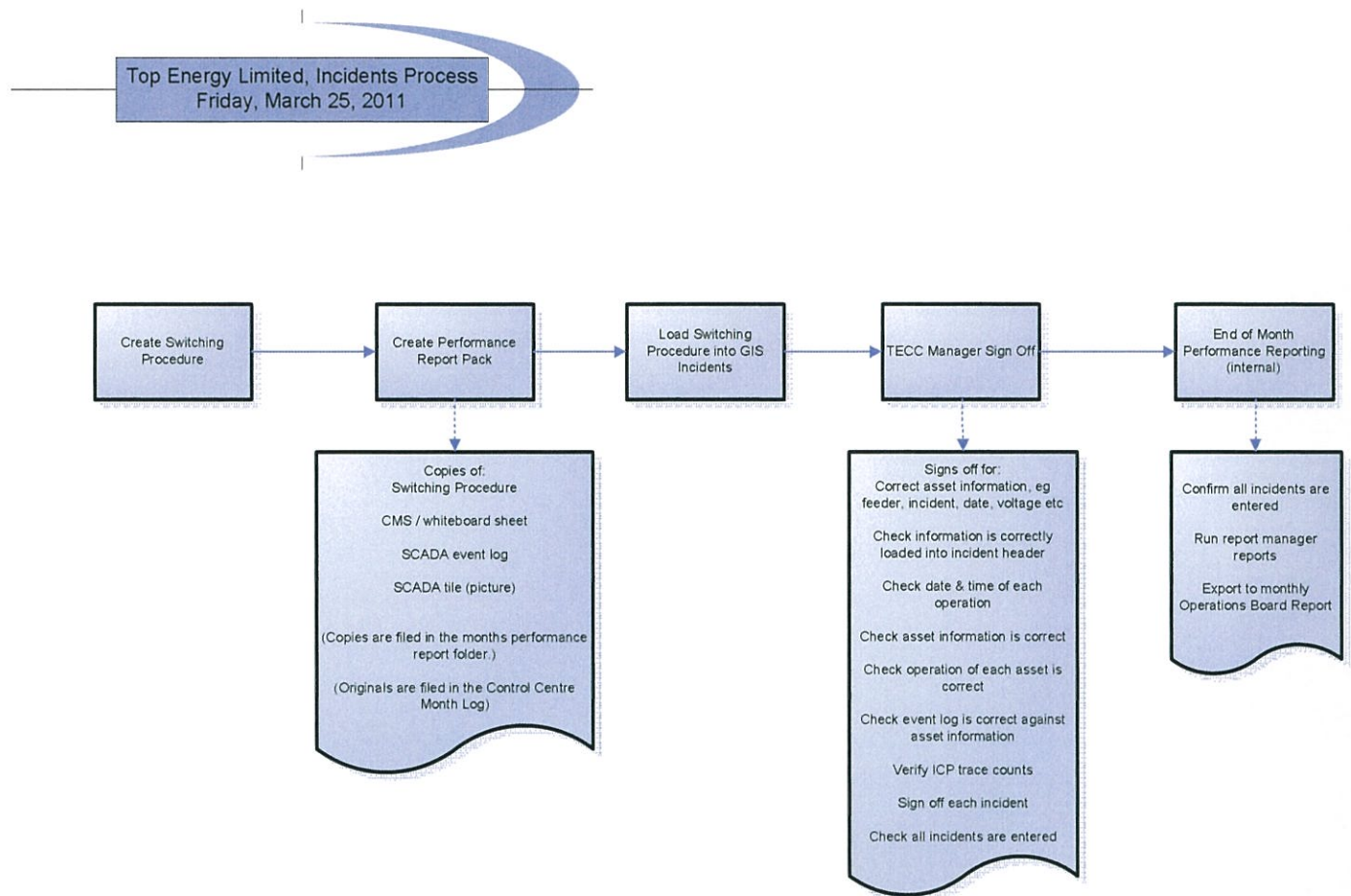
## 6 SCADA GENERATED OUTAGE ADVICE

Top Energy Ltd / SCADA Generated Fault Outage Advice  
Friday, March 25, 2011





## 7 INCIDENTS PROCESS





## 8 PROCESS FOR SUPPLYING OUTAGE DATA FOR AUDITOR

Top Energy Network Operations will receive a request in the following March of each year to provide a spreadsheet of Top Energy outage events. The Auditor will specify a selection of outage events for compliance audit. Once the audit selection process has been confirmed, Top Energy will package the relevant outage information and hold on site ready for the audit.

