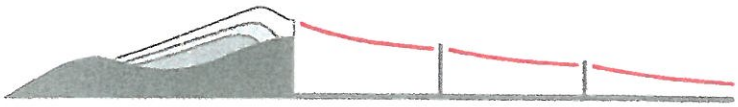

CENTRALINES
LIMITED

Default Price Quality Path
Annual Compliance Statement

For the assessment period ending 31 March 2011

Pursuant to

The Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010 and Amendment Determination 2011

11 July 2011

TABLE OF CONTENTS

1 COMPLIANCE WITH THE PRICE PATH

1.1 Compliance with the Price Path (Clause 11.1(a))

Centralines does comply with the price path at the assessment date, 31 March 2011, as specified in the Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010 (including all amendments as at 31 March 2011) and the Amendment Determination 2011 (the Gazette Notice).

1.2 Allowable Notional Revenue (Clause 8.4)

The notional revenue (NRt) of a Non-exempt EDB at any time during the Assessment Period must not exceed the allowable notional revenue (Rt) 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 illustrating that at no time during the Assessment Period is the price path breached.

Test: $\frac{NR_{2011}}{R_{2011}} \leq 1$

NR_{2011}: $ 7,251,078

R_{2011}: $ 7,467,911

Result: 0.9710 < 1

Result: Price path has not been breached

Test: $\frac{NR_{Max}}{R_{2011}} \leq 1$

NR_{Max}: $ 7,251,078

R_{2011}: $ 7,467,911

Result: 0.9710 < 1

Result: Price path has not been breached

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

2 ASSESSMENT WITH THE QUALITY STANDARDS

2.1 Compliance with Quality Standards (Clause 11.1(a))

Under clause 9.1, compliance with quality standards is not applicable in the First Assessment Period. We report our annual reliability assessment in section 2.2.

2.2 Annual Reliability Assessment (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.

Test	$\frac{SAIDI_{Assess\ 2011}}{SAIDI_{Limit}} \leq 1$
$SAIDI_{Assess\ 2011}$	191.449
$SAIDI_{Limit}$	197.549
Result:	0.9691 < 1
Result:	The SAIDI Limit has not been exceeded

Test	$\frac{SAIFI_{Assess\ 2011}}{SAIFI_{Limit}} \leq 1$
$SAIFI_{Assess\ 2011}$	4.716
$SAIFI_{Limit}$	4.526
Result:	1.0419 > 1
Result:	The SAIFI Limit has been exceeded

3 CERTIFICATION OF ANNUAL COMPLIANCE STATEMENT

I, James Aitken, being Director of Centralines Limited certify that, having made all reasonable enquiry, to the best of my knowledge and belief, the attached Annual Compliance Statement of Centralines Limited, and related information, prepared for the purposes of the Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010 and the Amendment Determination 2011 are true and accurate.

James Aitken
Director
Centralines Limited

11 July 2011

4 AUDITOR'S REPORT

Independent Auditors' Report

to the readers of the Annual Compliance Statement of Centralines Limited for the Assessment Period ended on 31 March 2011

We have audited the attached statement, which is an Annual Compliance Statement in respect of the default price-quality path prepared by Centralines Limited for the period ended 31 March 2011 and dated 11 July 2011 for the purposes of clause 11 of the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010* ("the Determination").

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 3 and 8 to 12 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 2011, 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 attest basis, of evidence relevant to the Determination, our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 4 and 13 to 18 of the Annual Compliance Statement.

Our audit also included assessment of the significant estimates and judgments, if any, made by Centralines Limited in the preparation of the Annual Compliance Statement and assessment of whether the basis of preparation has been adequately disclosed.

Directors' Responsibilities

The Directors of Centralines Limited 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, whether due to fraud or error.

Auditor's Responsibilities

Our responsibility is to express an opinion on the Annual Compliance Statement based on our audit. We conducted our audit in accordance with International Standards on Auditing (New Zealand). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Annual Compliance Statement is free from material misstatement.

An audit involves performing procedures to obtain audit 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. In making those risk assessments, the auditor considers internal control relevant to the entity'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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, as well as evaluating the overall presentation of the Annual Compliance Statement.

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pwc

Independent Auditors' Report

Centralines Limited

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

We have no relationship with or interests in Centralines Limited other than in the provision of other professional advisory services. We are not aware of any relationships between our firm and Centralines Limited that, in our professional judgment, may reasonably be thought to impair our independence.

Opinion

In our opinion, the Annual Compliance Statement of Centralines Limited for the Assessment Period ended on 31 March 2011, has been prepared, in all material respects, in accordance with the Determination.

Our audit was completed on 11 July 2011 and our opinion is expressed as at that date.

PricewaterhouseCoopers
CHRISTCHURCH

APPENDIX A - PRICE PATH COMPLIANCE CALCULATIONS (Clause 11.1 (b) (i))

Clause 8.4

Notional Revenue for the year ending March 2011			
Term	Description	Value $	
$P_{2011} * Q_{2009}$	Prices at 31 March 2011 multiplied by 31 March 2009 Base Quantities	$ 9,575,599	Supported by P*Q schedules presented in Appendix B
K_{2011}	Transmission Charges for year ending 31 March 2011	$ 2,259,458	
	Avoided Transmission Charges for year ending 31 March 2011	$ -	
	Rates for year ending 31 March 2011	$ 19,904	
	Electricity Authority Levies for year ending 31 March 2011	$ 16,583	
	Commerce Act Levies for year ending 31 March 2011 + 1/5 of Commerce Act Levies for year ending 31 March 2010	$ 28,576	
NR_{2011}	Notional Revenue for the year ending 31 March 2011	$ 7,251,078	

Maximum Notional Revenue for the year ending March 2011			
Term	Description	Value $	
$P_{Max} * Q_{2009}$	Maximum Prices between 1 April 2010 and 31 March 2011 multiplied by 31 March	$ 9,575,599	Supported by P*Q schedules presented in Appendix B
K_{2011}	Transmission Charges for year ending 31 March 2011	2,259,458	
	Avoided Transmission Charges for year ending 31 March 2011	-	
	Rates for year ending 31 March 2011	19,904	
	Electricity Authority Levies for year ending 31 March 2011	16,583	
	Commerce Act Levies for year ending 31 March 2011 + 1/5 of Commerce Act Levies for year ending 31 March 2010	28,576	
NR_{Max}	Notional Revenue for the year ending 31 March 2011	7,251,078	

Clause 8.5

Allowable Notional Revenue 2011			
Term	Description	Value $	
$P_{2010} * Q_{2009}$	Prices at 31 March 2010 multiplied by 31 March 2009 Base Quantities	$ 9,575,598.99	Supported by P*Q schedules presented in Appendix B
K_{2010}	Transmission Charges for year ending 31 March 2010	$ 2,256,884	
	Avoided Transmission Charges for 2010	-	
	Rates for year ending 31 March 2010	$ 15,516	
	Electricity Commission Levies for year ending 31 March 2010	$ 14,946	
X	X Factor	-	
$(1 + \Delta CPI_{2011})$	Average change in Consumer Price Index	1.0247	
R_{2011}	Allowable Notional Revenue under the CPI-X Price Path for the year ending 31 March 2011	7,467,911	

ΔCPI_{2011}			
Numerator		Denominator	
$CPI_{Dec2008}$	1072	$CPI_{Dec2007}$	1037
$CPI_{Mar2009}$	1075	$CPI_{Mar2008}$	1044
$CPI_{Jun2009}$	1081	$CPI_{Jun2008}$	1061
$CPI_{Sep2009}$	1095	$CPI_{Sep2008}$	1077
Total	4323	Total	4219
ΔCPI_{2011}	2.47%		

APPENDIX B - PRICE AND QUANTITY SCHEDULES (Clause 11.1(b)(i))

Tariff Code	2008 - 09 Quantity	2009 - 2010 Price	Charge type	2008 - 2009 Q * 2009-2010 P	2010 - 2011 Price	2008 - 2009 Q * 2010 - 2011P
E-C-PRE	2,033,086	$0.0685	$/kWh	$ 139,266	$0.0685	$ 139,266
F-C-T1P	6,087	$0.9800	$/day	5,965	$0.9800	5,965
E-C-T1P-24UC	18,982	$0.1072	$/kWh	$ 2,035	$0.1072	$ 2,035
E-C-T1P-24UC	15,518	$0.1072	$/kWh	$ 1,664	$0.1072	$ 1,664
F-C-CH1	430,521	$0.1500	$/day	64,578	$0.1500	64,578
E-C-CH1-AICO	3,895,098	$0.1065	$/kWh	$ 414,828	$0.1065	$ 414,828
E-C-CH1-CTRL	206,400	$0.0835	$/kWh	$ 17,234	$0.0835	$ 17,234
E-C-CH1-CTUD	69,565	$0.1500	$/kWh	$ 10,435	$0.1500	$ 10,435
E-C-CH1-CTUN	40,086	$0.0230	$/kWh	$ 922	$0.0230	$ 922
E-C-CH1-NITE	8,235	$0.0563	$/kWh	$ 464	$0.0563	$ 464
E-C-CH1-24UC	163,910	$0.1217	$/kWh	$ 19,948	$0.1217	$ 19,948
F-C-CH2	2,431,622	$0.9800	$/day	2,382,990	$0.9800	2,382,990
E-C-CH2-24UC	27,359,413	$0.0837	$/kWh	$ 2,289,983	$0.0837	$ 2,289,983
E-C-CH2-AICO	20,263,198	$0.0685	$/kWh	$ 1,388,029	$0.0685	$ 1,388,029
E-C-CH2-CTRL	2,680,822	$0.0458	$/kWh	$ 122,782	$0.0458	$ 122,782
E-C-CH2-CTUD	1,804,999	$0.1072	$/kWh	$ 193,496	$0.1072	$ 193,496
E-C-CH2-CTUN	983,086	$0.0133	$/kWh	$ 13,075	$0.0133	$ 13,075
E-C-CH2-NITE	61,790	$0.0186	$/kWh	$ 1,149	$0.0186	$ 1,149
E-C-CH2-24UC	3,442,786	$0.0837	$/kWh	$ 288,161	$0.0837	$ 288,161
F-C-CH3	10,234	$14.5700	$/day	149,116	$14.5700	149,116
E-C-CH3-24UC	1,897,131	$0.0624	$/kWh	$ 118,381	$0.0624	$ 118,381
E-C-CH3-CTRL	0	$0.0376	$/kWh	$ -	$0.0376	$ -
E-C-CH3-CTUD	1,133,828	$0.0797	$/kWh	$ 90,366	$0.0797	$ 90,366
E-C-CH3-CTUN	730,374	$0.0099	$/kWh	$ 7,231	$0.0099	$ 7,231
E-C-CH3-DMND	2,754	$4.9700	$/kW/month	$ 13,687	$4.9700	$ 13,687
E-C-CH3-24UC	1,127,262	$0.0624	$/kWh	$ 70,341	$0.0624	$ 70,341
E-C-CH3-SOPD	1,381	$3.9000	$/kW/month	$ 5,386	$3.9000	$ 5,386
E-C-CH3-WOPD	1,342	$14.0900	$/kW/month	$ 18,909	$14.0900	$ 18,909
F-C-CH4	2,555	$29.1400	$/day	74,441	$29.1400	74,441
E-C-CH4-24UC	236,890	$0.0560	$/kWh	$ 13,266	$0.0560	$ 13,266
E-C-CH4-CTUD	254,173	$0.0717	$/kWh	$ 18,224	$0.0717	$ 18,224
E-C-CH4-CTUN	91,379	$0.0090	$/kWh	$ 822	$0.0090	$ 822
E-C-CH4-DMND	3,160	$4.3700	$/kW/month	$ 13,809	$4.3700	$ 13,809
E-C-CH4-24UC	0	$0.0560	$/kWh	$ -	$0.0560	$ -
E-C-CH4-SOPD	1,958	$3.7100	$/kW/month	$ 7,264	$3.7100	$ 7,264
E-C-CH4-WOPD	1,107	$13.3800	$/kW/month	$ 14,812	$13.3800	$ 14,812
F-C-CH5	1,460	$36.4200	$/day	53,174	$36.4200	53,174
E-C-CH5-24UC	278,560	$0.0467	$/kWh	$ 13,009	$0.0467	$ 13,009
E-C-CH5-CTUD	305,058	$0.0598	$/kWh	$ 18,242	$0.0598	$ 18,242
E-C-CH5-CTUN	103,160	$0.0074	$/kWh	$ 763	$0.0074	$ 763
E-C-CH5-DMND	2,734	$3.4800	$/kW/month	$ 9,514	$3.4800	$ 9,514
E-C-CH5-24UC	0	$0.0467	$/kWh	$ -	$0.0467	$ -
E-C-CH5-SOPD	1,704	$3.4100	$/kW/month	$ 5,811	$3.4100	$ 5,811
E-C-CH5-WOPD	1,020	$12.3100	$/kW/month	$ 12,556	$12.3100	$ 12,556
F-C-CH6	1,095	$52.4500	$/day	57,437	$52.4500	57,437
E-C-CH6-CTUD	47,400	$0.0564	$/kWh	$ 2,673	$0.0564	$ 2,673
E-C-CH6-CTUN	16,800	$0.0070	$/kWh	$ 118	$0.0070	$ 118
E-C-CH6-DMND	3,031	$3.2200	$/kW/month	$ 9,760	$3.2200	$ 9,760
E-C-CH6-24UC	319,800	$0.0428	$/kWh	$ 13,687	$0.0428	$ 13,687
E-C-CH6-SOPD	1,770	$3.3300	$/kW/month	$ 5,894	$3.3300	$ 5,894
E-C-CH6-WOPD	1,189	$12.0000	$/kW/month	$ 14,268	$12.0000	$ 14,268
F-C-CH7	730	$51.6600	$/day	37,707	$51.6600	37,707
E-C-CH7-DMND	2,507	$4.2400	$/kW/month	$ 10,630	$4.2400	$ 10,630
E-C-CH7-SOPD	1,003	$2.5500	$/kW/month	$ 2,558	$2.5500	$ 2,558
E-C-CH7-WOPD	820	$10.8000	$/kW/month	$ 8,856	$10.8000	$ 8,856

Tariff Code	2008 - 09 Quantity	2009 - 2010 Price	Charge type	2008 - 2009 Q * 2009-2010 P	2010 - 2011 Price	2008 - 2009 Q * 2010 - 2011P
F-C-CH8	730	$67.1600	$/day	49,024	$67.1600	49,024
E-C-CH8-DMND	3,133	$4.0700	$/kW/month	$ 12,751	$4.0700	$ 12,751
E-C-CH8-SOPD	1,842	$2.5400	$/kW/month	$ 4,679	$2.5400	$ 4,679
E-C-CH8-WOPD	1,259	$10.7200	$/kW/month	$ 13,496	$10.7200	$ 13,496
F-C-CH9	365	$72.3300	$/day	26,399	$72.3300	26,399
E-C-CH9-DMND	1,921	$3.9500	$/kW/month	$ 7,588	$3.9500	$ 7,588
E-C-CH9-SOPD	1,050	$2.5200	$/kW/month	$ 2,646	$2.5200	$ 2,646
E-C-CH9-WOPD	763	$10.6500	$/kW/month	$ 8,126	$10.6500	$ 8,126
F-C-CH10	365	$67.0600	$/day	24,476	$67.0600	24,476
E-C-CH10-DMND	3,005	$2.2100	$/kW/month	$ 6,641	$2.2100	$ 6,641
E-C-CH10-SOPD	1,666	$3.0500	$/kW/month	$ 5,081	$3.0500	$ 5,081
E-C-CH10-WOPD	1,207	$8.9700	$/kW/month	$ 10,827	$8.9700	$ 10,827
F-C-CH11	365	$450.8600	$/day	164,563	$450.8600	164,563
E-C-CH11-DMND	17,293	$2.1200	$/kW/month	$ 36,661	$2.1200	$ 36,661
E-C-CH11-SOPD	10,030	$3.0400	$/kW/month	$ 30,491	$3.0400	$ 30,491
E-C-CH11-WOPD	6,932	$8.9200	$/kW/month	$ 61,833	$8.9200	$ 61,833
E-C-CH1-24UC	1,332,774	$0.1217	$/kWh	$ 162,199	$0.1217	$ 162,199
F-C-CH12	365	$1,012.2600	$/day	369,476	$1,012.2600	369,476
E-C-CH12-DMND	50,521	$1.2200	$/kW/month	$ 61,636	$1.2200	$ 61,636
E-C-CH12-SOPD	29,688	$2.9000	$/kW/month	$ 86,095	$2.9000	$ 86,095
E-C-CH12-WOPD	20,125	$8.5500	$/kW/month	$ 172,069	$8.5500	$ 172,069
F-CH2	- 975	$0.9800	$/day	-$ 955	$0.9800	-$ 955
Under Veranda Lights	305,455	$0.0330	$/day	$ 10,080	$0.0330	$ 10,080
Grand total				$ 9,575,599		$ 9,575,599

APPENDIX C - PASS THROUGH COSTS (Clause 11.1(b)(ii))

Pass Through Costs for year ending March 2011				
K_{2011}	Actual ($)	Forecast ($)	Variance ($)	Variance (%)
Transmission	2,259,458	2,256,528	2,930	.13%
Avoided Transmission	-	-	-	-
Rates	19,904	18,623	1,281	6.43%
Electricity Authority Levies	16,583	14,655	1,928	11.63%
Commerce Act Levies	28,576	35,131	(6,555)	(22.94)%
Total Pass Through Costs	2,324,520	2,324,937	(416)	(.02)%

Explanation of variances

- Transmission – immaterial variation, no explanation available.
- Rates – in 2010/11 Centralines received rates for system fixed assets, which had not been budgeted for at Tamumu Road and 17 and 22 Coughlan Road.
- Electricity Authority levies - actual Electricity Authority levies are determined after Centralines has determined its charges. Forecast levies were based on the prior year levies.
- Commerce Act levies – the forecast was based on the 2009-10 total plus one fifth of the 2009/10 total. Actual Commerce Commission levies are determined subsequent to Centralines' finalising its forecasts and prices.

APPENDIX D – QUALITY STANDARD COMPLIANCE CALCULATIONS (Clause 11.1(b)(iv))

Reliability Data (Before Normalisation)

Year	SAIDI (Interruption Duration)			SAIFI (Interruption Frequency)		
	Class B	Class C	Total	Class B	Class C	Total
2005	15.60	155.79	171.39	0.07	3.38	3.44
2006	41.19	99.54	140.73	0.14	3.76	3.91
2007	38.97	148.08	187.05	0.12	3.06	3.17
2008	49.57	105.64	155.21	0.15	2.50	2.65
2009	66.24	132.52	198.76	0.26	4.69	4.95
	Reference Period Total SAIDI		**853.14**	Reference Period Total SAIFI		**18.12**
	Reference Period Average SAIDI		**170.63**	Reference Period Average SAIFI		**3.62**
2011	84.81	106.64	191.45	0.42	4.30	4.72

Reliability Limit Calculations

SAIDI Boundary Calculations

α_{SAIDI}	-1.0592	The average of the natural logarithm (ln) of each daily SAIDI Value in the non-zero data set
β_{SAIDI}	1.6883	The standard deviation of the natural logarithm (ln) of each daily SAIDI Value in the non-zero data set
$B_{SAIDI} = e^{(\alpha_{SAIDI} + 2.5 * \beta_{SAIDI})}$	23.6089	SAIDI Boundary Value

SAIFI Boundary Calculations

α_{SAIFI}	-5.3931	The average of the natural logarithm (ln) of each daily SAIFI Value in the non-zero data set
β_{SAIFI}	1.8502	The standard deviation of the natural logarithm (ln) of each daily SAIFI Value in the non-zero data set
$B_{SAIFI} = e^{(\alpha_{SAIFI} + 2.5 * \beta_{SAIFI})}$	0.4641	SAIFI Boundary Value

Event Days exceeding SAIDI Boundary Value within the Reference Dataset

Date	Pre-Normalised SAIDI	Pre-Normalised SAIFI	Normalised SAIDI	Normalised SAIFI
30-Jun-04	42.3883	0.6694	23.6089	0.4641
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

SAIDI Limit

μ_{SAIDI}	166.8715	The average annual SAIDI Value in the Normalised Reference Dataset
σ_{SAIDI}	30.6772	The standard deviation of daily SAIDI Values in the Normalised Reference Dataset multiplied by √365
$SAIDI_{Limit} = \mu_{SAIDI} + \sigma_{SAIDI}$	197.5487	SAIDI Limit Value

SAIFI Limit

μ_{SAIFI}	3.5838	The average annual SAIFI Value in the Normalised Reference Dataset
σ_{SAIFI}	0.9422	The standard deviation of daily SAIFI Values in the Normalised Reference Dataset multiplied by √365
$SAIFI_{Limit} = \mu_{SAIFI} + \sigma_{SAIFI}$	4.5260	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
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

Assessed SAIDI Value

$SAIDI_{2011}$	191.4486	The sum of daily SAIDI Values in the 1 April 2010 - 31 March 2011 Normalised Assessment Dataset

Assessed SAIFI Value

$SAIFI_{2011}$	4.7156	The sum of daily SAIFI Values in the 1 April 2010 - 31 March 2011 Normalised Assessment Dataset

APPENDIX E – POLICIES AND PROCEDURES FOR RECORDING SAIDI AND SAIFI (Clause 11.1(b)(v))

Outage Data Capture Process

The capture of outage data uses the following data sources and utilities

Data

1) Numbers of ICPs connected to the system	- GIS
2) Transformers connected between Isolation Points	- GIS
3) Real time data.	- RealFlex SCADA

The data from SCADA is accurate within the abilities of operators and field staff to report and record each manual event. The logging of SCADA connected devices is automatic.

SCADA Timing

Automatically recorded SCADA data is time stamped at the remote terminal units (RTU). These RTUs are time corrected to the master station each half hour.

Utilities

RealFlex SCADA

Centralines SCADA is part of Unison's Taupo-Rotorua SCADA System, with all Zone Substation 33kv and 11kv CBs linked by RTUs that report automatically and time stamp all changes of state of devices directly to the SCADA Daily Log File.

Each Zone Substation and 11kv Feeder is represented by a schematic picture, a SCADA tile, or series of SCADA tiles if the feeder is extensive in the real world.

The SCADA Event Search tool is used to search and print a report for each unplanned outage.

The resulting report is used with GIS data to compile a report, in preparation for entry into the Faults database.

Faults Access Database

All Unplanned and Planned Outages are processed from their initiation to completion using Access modules contained in the Faults database.

Each unplanned or planned outage has a unique identifier, the Sheet Number / Record Number.

A summary of general details for each unplanned and planned Outage is recorded by the operator.

For planned outages, the Switching Update form is used to collate all relevant data entered on the Switching Instruction.

Times of power off, power restored, ICPs affected, are entered in the database from the data entered on the Switching Instruction.

All ICP data comes from GIS.

Supply Off and Supply Restored times are annotated on the Switching Instruction in real time.

At the end of the process the calculator checks that the total number of ICPs restored is correct before final calculations are made.

The record cannot be saved until both values are equal.

Only the final, calculated data is held in the table 'Datafile'.

All the incremental step values are held in a common table, 'Outage Calculator'.

Both tables are linked using the Sheet No field of the Datafile record.

For unplanned outages, the Network Update Form is used to collate all relevant data.

The times of restoration or interruption, are taken from an extract of the SCADA Daily Log File.

The operator enters the total number of ICPs affected, time of Supply Fail, and time of Total Restoration of Supply.

In the case of faults where sequential restorations and further interruptions to supply occur, the elapsed times, interruption times, ICPs and feeder amps restored or interrupted at each step, are entered in a custom-built calculator.

At the end of the process the calculator checks that the total number of ICPs restored is correct before final calculations are made.

The record cannot be saved until both values are equal.

Only the final, calculated data is held in the table 'Datafile'.

All the incremental step values are held in a common table, 'Outage Calculator'
Both tables are linked using the Sheet Number field of the Datafile record.