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8 February, 2018

Paula Tupou
Electricity Commission
Tu'atakilangi
Nuku'alofa

Dear Paula

PROGRESS REPORT for DECEMBER 2017

1. In Conforming to the reporting obligations set forth in Paragraph 5 of Schedule 13 of the 2015 Regulatory Addendum, Tonga Power Limited qua Concessionaire do now provide a **Progress Report** in respect to the month of **December 2017**.
2. **SYSTEM LOSS**

System Losses for the month of December 2017 were as follows: -

MONTH	TONGA	TBU	VV	HP	'EUA
Dec 2017	11.93%	12.61%	7.61%	5.40%	7.29%

System Losses for December 2017 includes Parasitic losses of 2.60% and Line Losses of 9.34%. The Combined figure is slightly above the Reset Target for 2017-18 of 11.0%. Appendix 1 hereto comprises Graphs going back 12 months to show results for Tonga as a whole and each of the four separate island grids. Note the slight increase in total system losses for Tonga from 11.83% to 11.93%.

3. **DIESEL GENERATION FUEL EFFICIENCY**

The Regulatory Addendum requires a weighted average for Tonga as a whole of not less than 4 kWh/litre and Tonga Power Limited has slightly exceeded this target for the month of December 2017. The actual result is 4.43 kWh/litre, which has slightly decreased from 4.49kWh last month (note this figure includes energy generated from Renewables). Appendix 2 hereto comprises bar graphs going back 12 months to show results for Tonga as a whole and each of the four separate island grids.

4. SYSTEM RELIABILITY

There are no service standards for reliability imposed upon Tonga Power in the 2015 Regulatory Addendum. However for 2017-18, the Concessionaire has set itself the following TARGETS, namely :-

SAIDI ¹	-	1,080 minutes per annum
CAIDI ²	-	870 minutes per annum
SAIFI ³	-	14

Appendix 3 hereto gives details of TPL's present and recent past performance for system reliability.

5. FAULTS/OUTAGES

The table below shows a comparison between 2017-2018 and 2016-2017 for Tonga as a whole. The decrease in the December 2017 data is largely attributed to the slight decrease in reported faults as compared to last month.

Month	2016-17	2017-18 Faults	2017-18 Outages
July	364	257	5
August	376	335	5
September	312	261	3
October	338	245	3
November	346	309	5
December	363	306	5
January	317		
February	581		
March	406		
April	344		
May	604		
June	268		
TOTAL	4,619	1,713	26

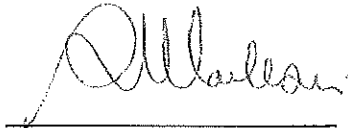
¹ SAIDI: System Average duration of Interruption per Connected Customer.

² CAIDI: Average total duration of Interruption per Interrupted Customer.

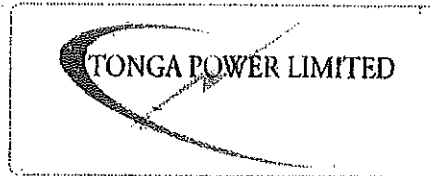
³ SAIFI: Average number of Interruptions per Customer.

Appendix 4 gives details of each planned outage and unplanned fault events.

Yours faithfully,



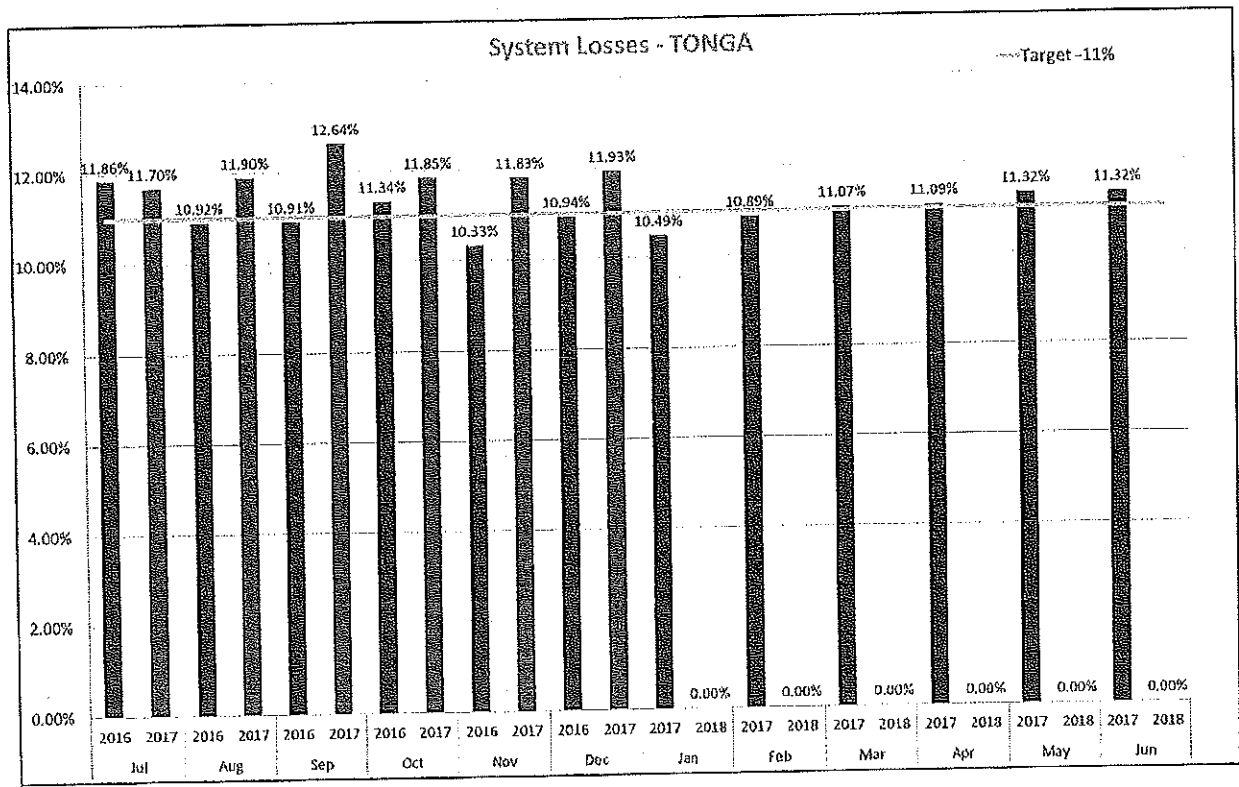
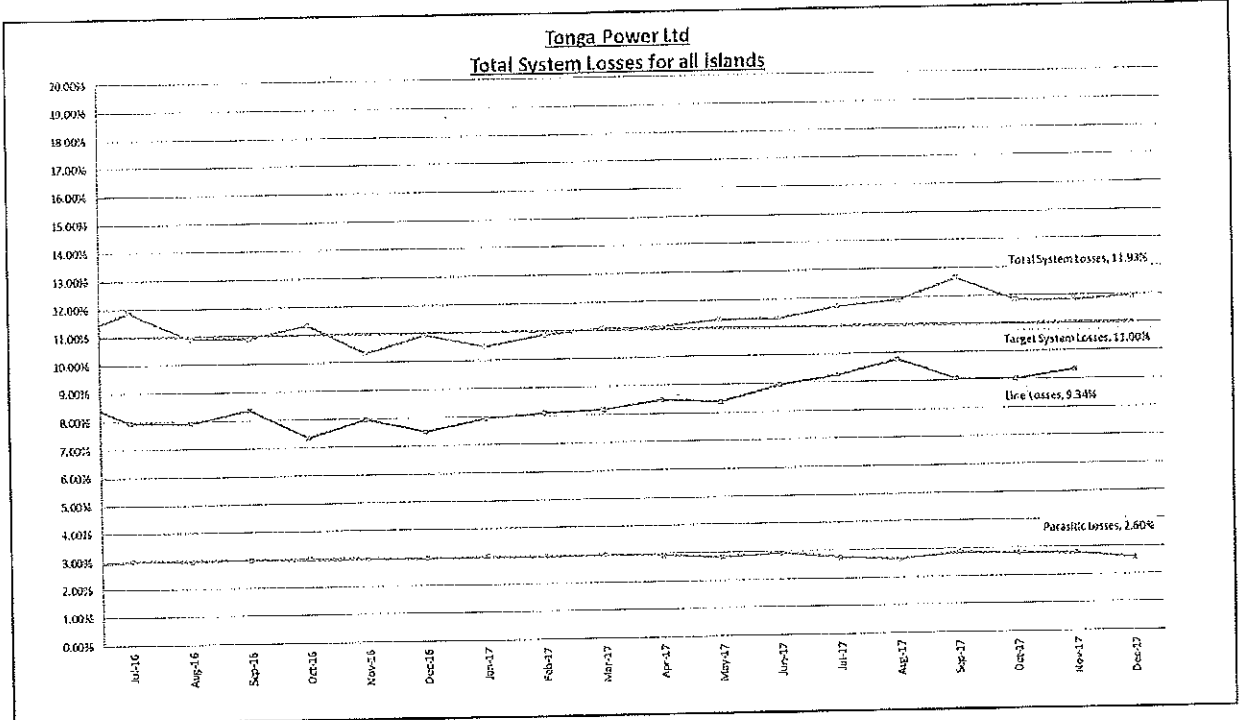
A handwritten signature in black ink, appearing to read 'S Malleseni', is written over a solid horizontal line.



Ms. Sosefina S Malleseni
Risk and Compliance Manager
Tonga Power Limited

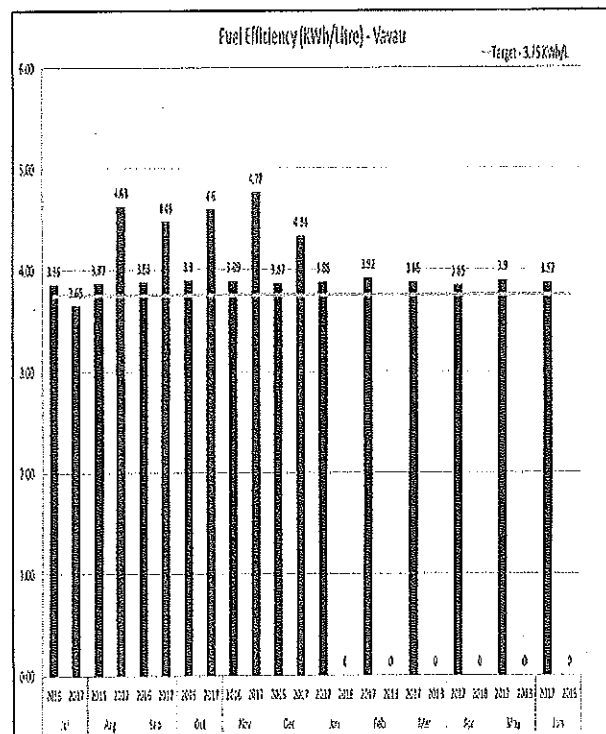
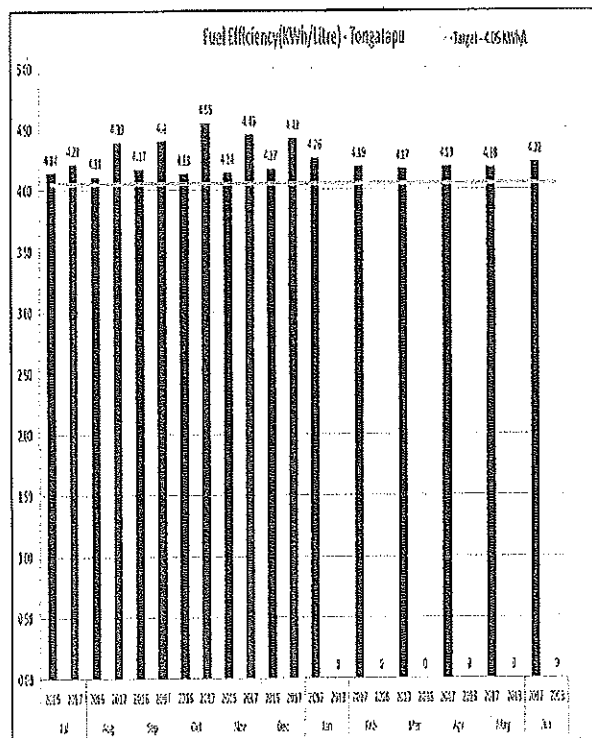
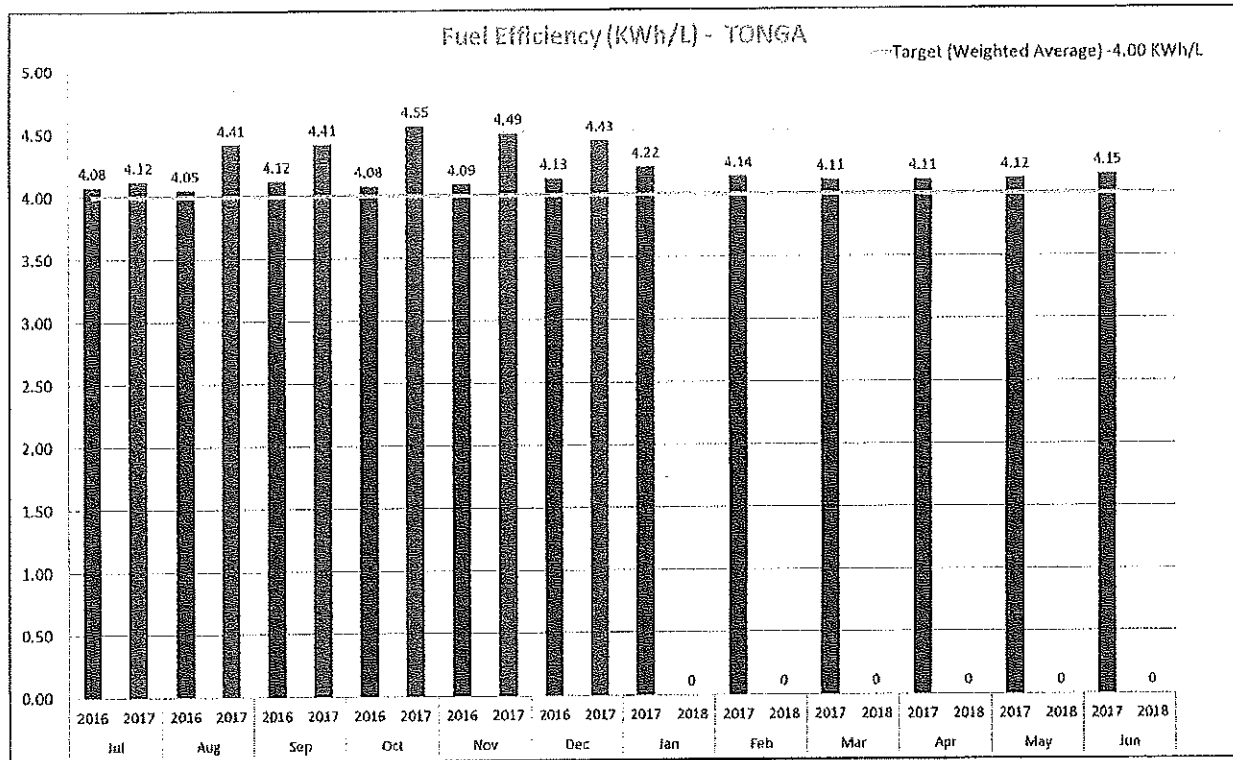
Cc: Mr. Robert Matthews, CEO of TPL

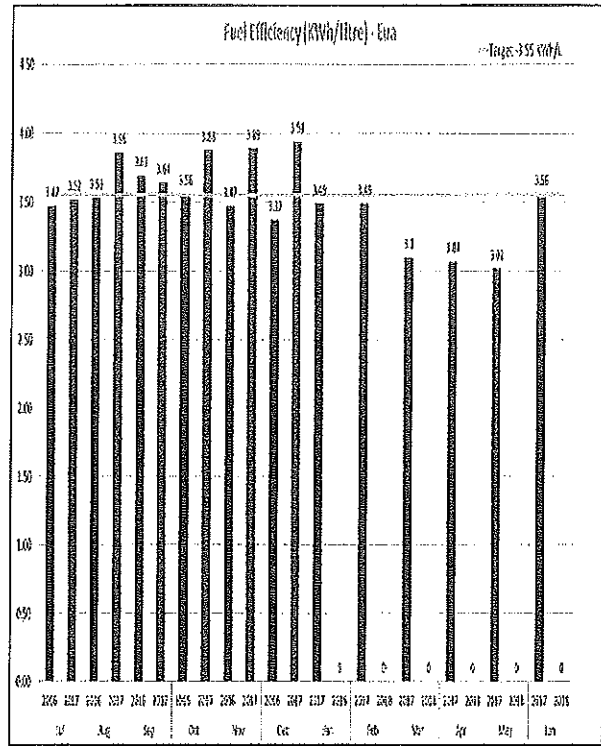
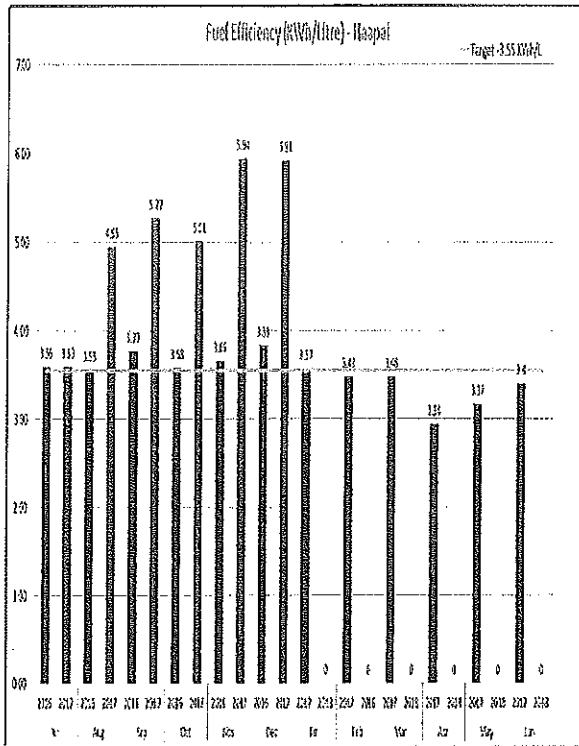
APPENDIX - 1: SYSTEM LOSS GRAPHS



APPENDIX - 2:

DIESEL GENERATION FUEL EFFICIENCY





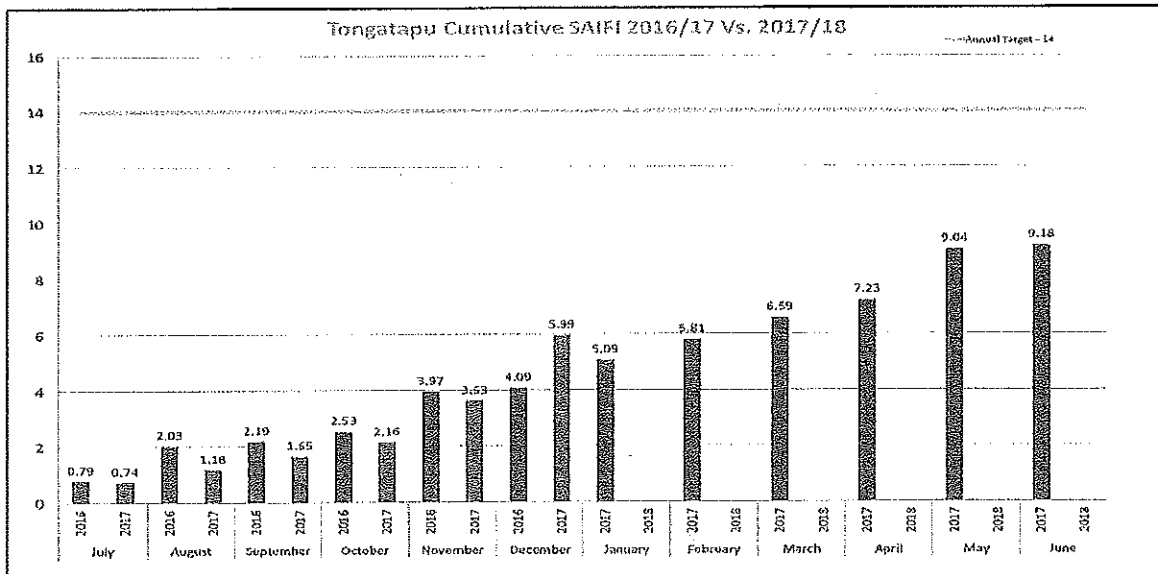
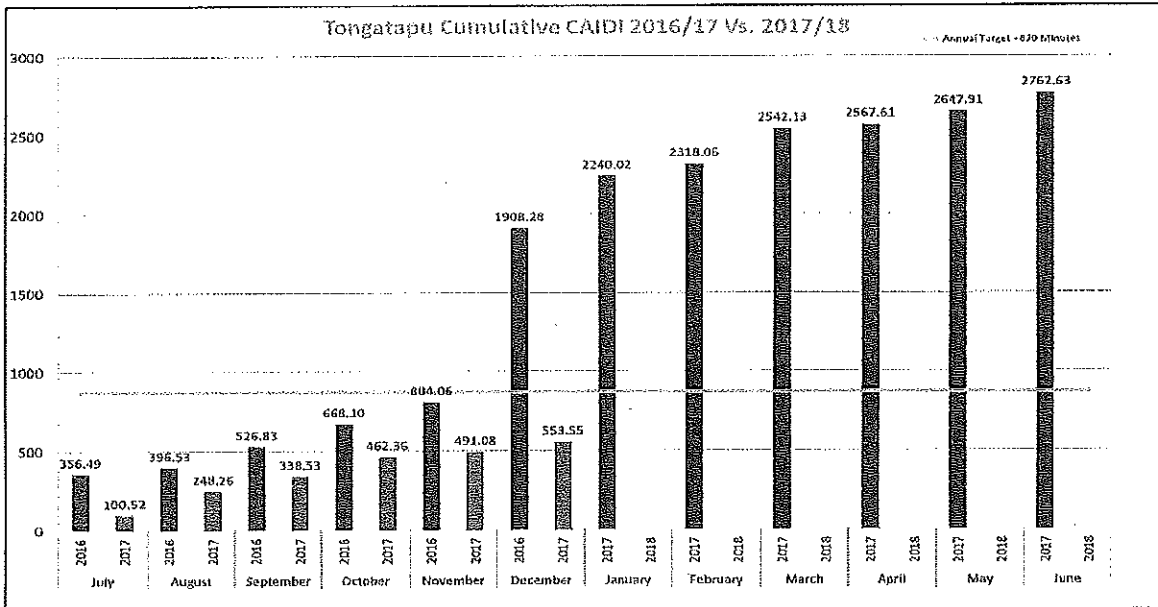
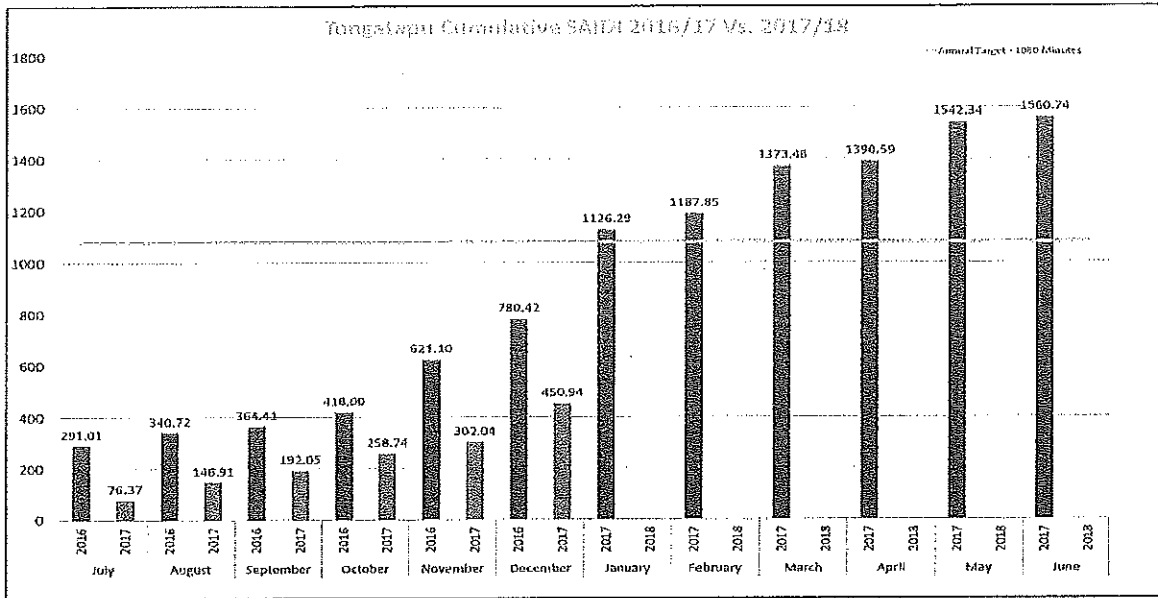
APPENDIX - 3:

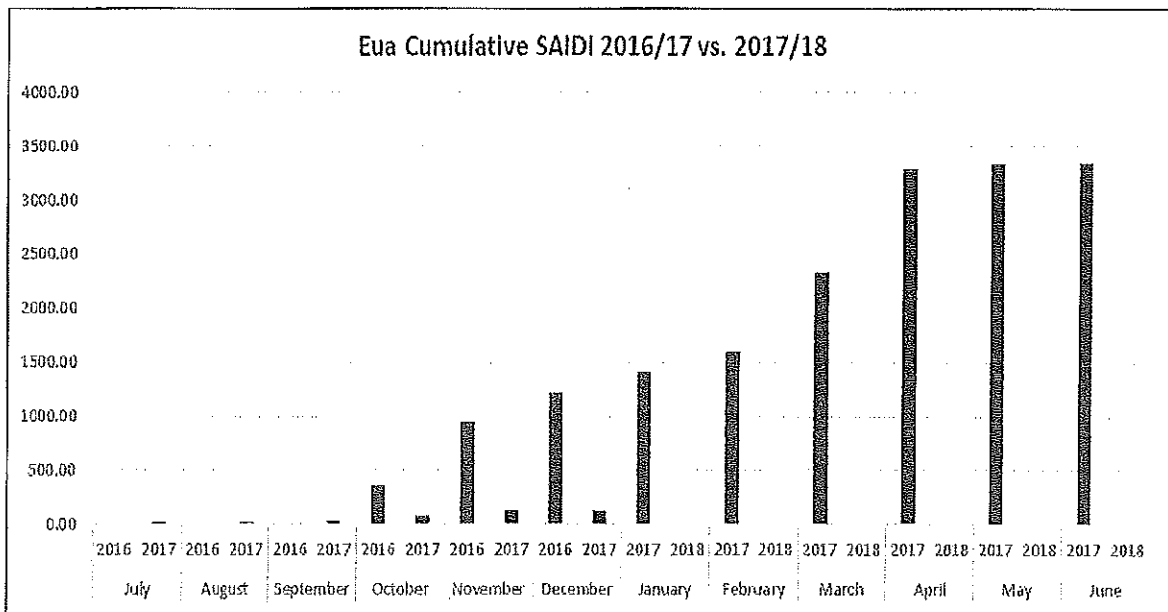
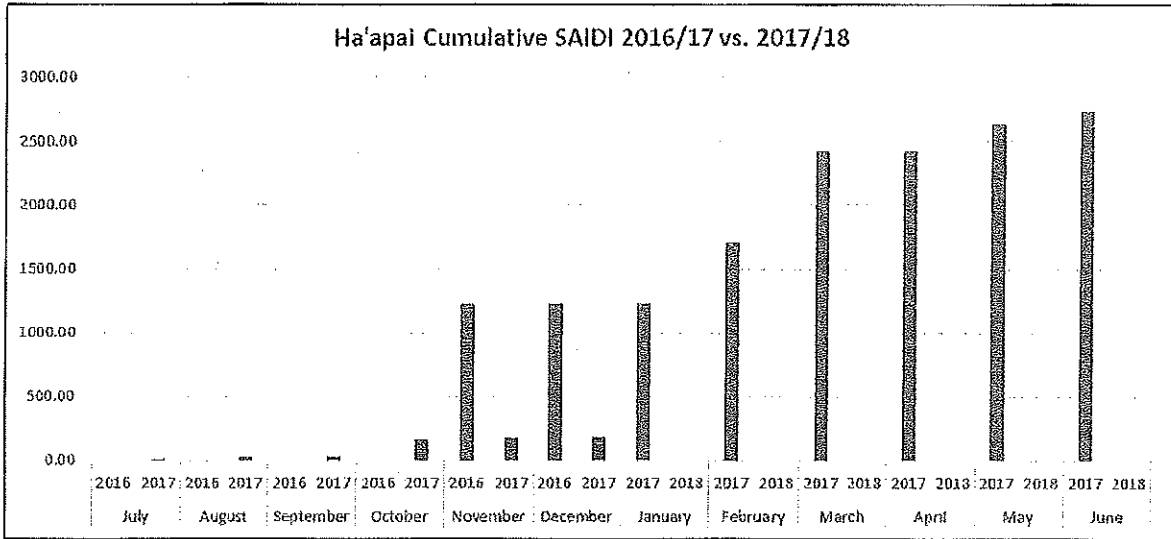
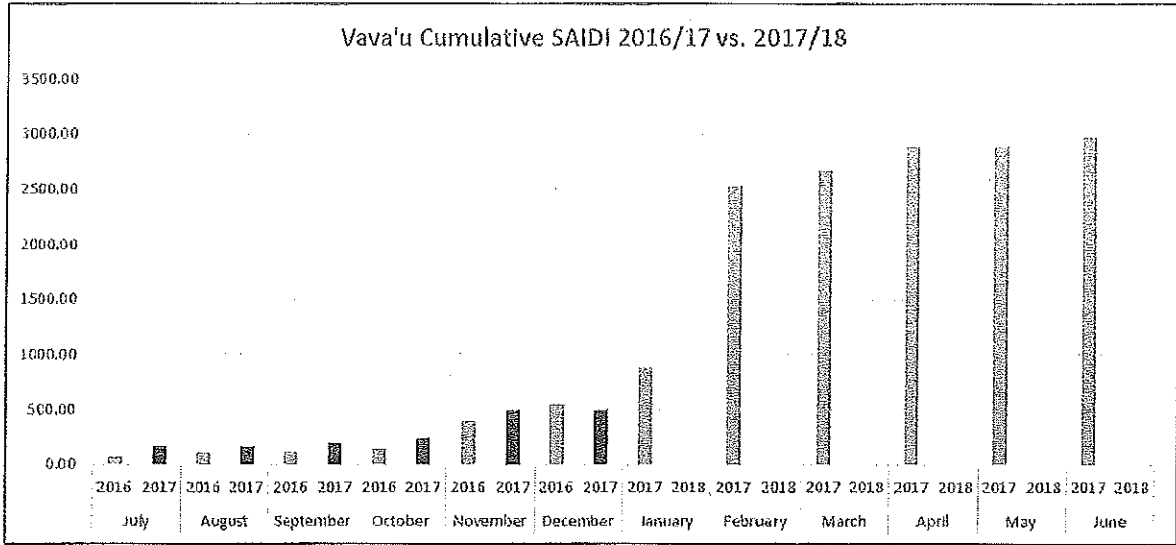
SYSTEM RELIABILITY

Reliability Measures - Tongatapu														
SAIDI Monthly Performance (Minutes)					CAIDI Monthly Performance (Minutes)					SAIFI Monthly Performance				
Month	2014/15	2015/16	2016/17	2017/18	Month	2014/15	2015/16	2016/17	2017/18	Month	2014/15	2015/16	2016/17	2017/18
Jul	171.37	17.28	291.01	76.37	Jul	106.45	12.78	356.49	100.51	Jul	1.61	1.35	0.787	0.741
Aug	161.75	151.91	49.71	70.55	Aug	118.076	74.97	40.03	147.74	Aug	1.37	2.027	1.242	0.44
Sep	167.93	98.08	23.68	45.14	Sep	95.58	44.54	130.3	90.26	Sep	1.76	2.202	0.158	0.469
Oct	83.2	54.7	53.59	66.69	Oct	74.58	22.74	141.27	123.83	Oct	1.12	2.405	0.345	0.507
Nov	123.66	15.55	203.1	43.3	Nov	190.511	31.481	135.97	28.87	Nov	0.649	2.367	1.44	1.47
Dec	28.04	9.56	159.32	148.9	Dec	43.97	165.29	1104.21	62.474	Dec	0.638	0.058	0.17	2.358
Jan	190.24	66.96	345.87		Jan	36.24	22.85	331.74		Jan	5.25	2.931	1.004	
Feb	77.52	100.53	61.56		Feb	42.54	36.4	78.038		Feb	1.82	2.763	0.72	
Mar	10.12	626.23	185.63		Mar	33.29	420.09	224.07		Mar	0.304	1.323	0.78	
Apr	26.04	44.28	17.11		Apr	35.09	76.32	25.48		Apr	0.743	0.58	0.632	
May	51.1	47.39	151.75		May	34.75	257.8	80.29		May	1.47	0.141	1.813	
Jun	34.35	76.53	18.4		Jun	169.56	80.8	114.72		Jun	0.203	0.629	0.143	
Total	1125.32	1309	1560.73	450.95	Total	980.637	1246.061	2762.608	553.684	Total	16.937	18.776	9.234	5.985

Details of Fault & Outage for the month of December 2017

Report Date	No. of Customers Off	Fault Description	Repair Comment
09/12/2017	15,432	power off	generation problems whole of tongatapu feeder were drop so they fix power line and then switch on feeder 2 at 11:38am feeder vaimi at 11:40am feeder at valola hospital at 11:43
16/12/2017	2,000	partly off	hv line broken due to accident in Kolonga so they fix the line then connect it MALAPO-MANUKA 21:43PM POWER BACK ON KOLONGA-NIUTOUA 23:14 PM POWER WAS BACK ON
16/12/2017	1,500	Shut Down	Planning Shut Down from Talasia to Ho Install the HV pole And Tree Cutting
19/12/2017	124	on&off	materials: link 10A x 1
09/12/2017	25	coconut tree broke down HV lines	Power shut down to part of Nukunuku & Matahau due a broken coconut tree broke down HV lines
11/12/2017	20	partly off	1x200A, replace fuse 1x160A ta-253v current:65
20/12/2017	19	power off	materials: link 80A x 1 test after: 241V, 242V, 241V
21/12/2017	15	power off	power off due to short circuit on LV line, repairs separate then taped line materials: Insulation tape test: 235V





APPENDIX - 4: DETAILS OF PLANNED OUTAGES AND UNPLANNED FAULT EVENTS

Fault Events Comparison 2016/17 vs. 2017/18																					YTD Total			
Planned/Unplanned Outage Events	Jul-16	Jul-17	Aug-16	Aug-17	Sep-16	Sep-17	Oct-16	Oct-17	Nov-16	Nov-17	Dec-16	Dec-17	Jan-18	Feb-18	Feb-17	Mar-17	Apr-17	Apr-18	May-17	May-18	Jun-17	Jun-18	2016/17	2017/18
Generator problem	0	0	1	0	0	0	0	0	1	1	0	2	0	0	1	1	2	0	0	0	0	6	3	
HV Lines	9	5	16	13	12	14	9	14	12	24	18	18	8	41	21	10	24	11	11	191	88	191	88	
HV/LV Transformer	11	7	11	11	5	13	2	6	15	13	7	7	15	22	17	12	18	5	5	140	57	140	57	
HV Pole	3	1	4	4	0	0	11	1	2	1	0	1	0	0	0	7	3	0	0	30	8	30	8	
LV Lines	79	58	69	59	50	60	60	41	57	48	72	52	70	146	76	52	130	130	45	98	321	98	321	
Service lines	96	78	96	112	99	85	89	85	104	141	98	117	75	200	164	137	216	96	96	1470	618	1470	618	
Customer premises	140	110	157	134	124	91	147	95	128	82	164	108	146	166	126	119	160	110	110	1634	623	1634	623	
Street Lights	21	0	19	0	20	0	22	0	25	0	0	0	0	0	0	0	0	0	0	107	0	107	0	
Water	3	3	3	7	2	3	5	2	5	4	3	3	3	3	1	6	6	6	1	40	27	40	27	
Total	354	262	376	340	312	272	338	288	345	315	363	308	317	0	381	0	406	0	611	0	268	0	456	1745

