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25 October, 2017

Paula Tupou
Electricity Commission
Tu'atakilangi
Nuku'alofa

Dear Paula

PROGRESS REPORT for AUGUST 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 **August 2017**.
2. SYSTEM LOSS

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

TONGA	TBU	VV	HP	'EUA
11.90%	12.59%	7.88%	3.12%	8.25%

System Losses for August 2017 includes Parasitic losses of 2.65% and Line Losses of 9.25%. The Combined figure is 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.

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 August 2017. The actual result is 4.41 kWh/litre, which has generally remained stable as compared to 4.39 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 slight increase in the August 2017 data is largely attributed to the increase in reported faults as compared to last month.

Month	2016-17	2017-18 Faults	2017-18 Outages
July	364	257	5
August	376	261	3
September	312		
October	338		
November	346		
December	363		
January	317		
February	581		
March	406		
April	344		
May	604		
June	268		
TOTAL	4,619	518	8

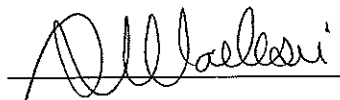
¹ SAIDI: System Average duration of Interruption per Connected Customer.

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

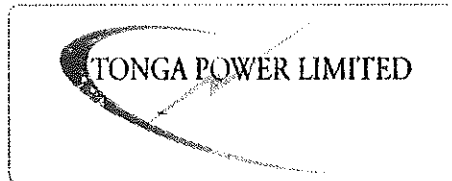
³ SAIFI: Average number of Interruptions per Customer.

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

Yours faithfully,



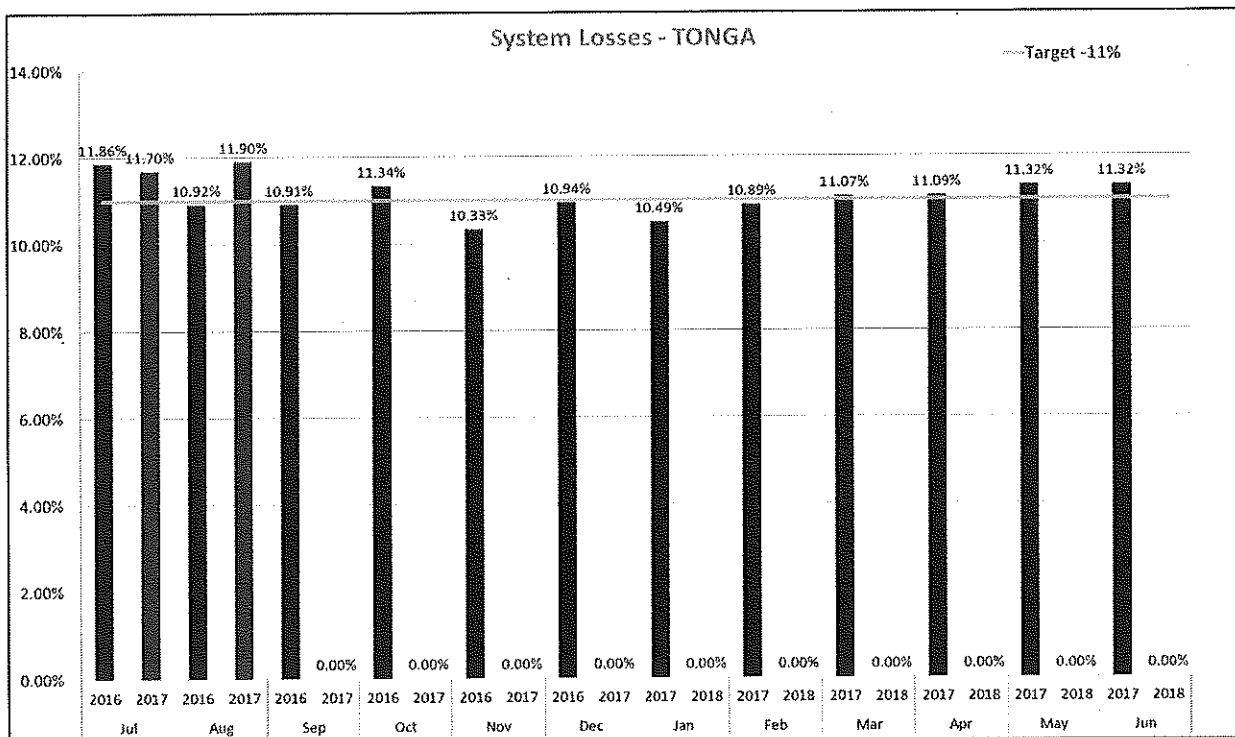
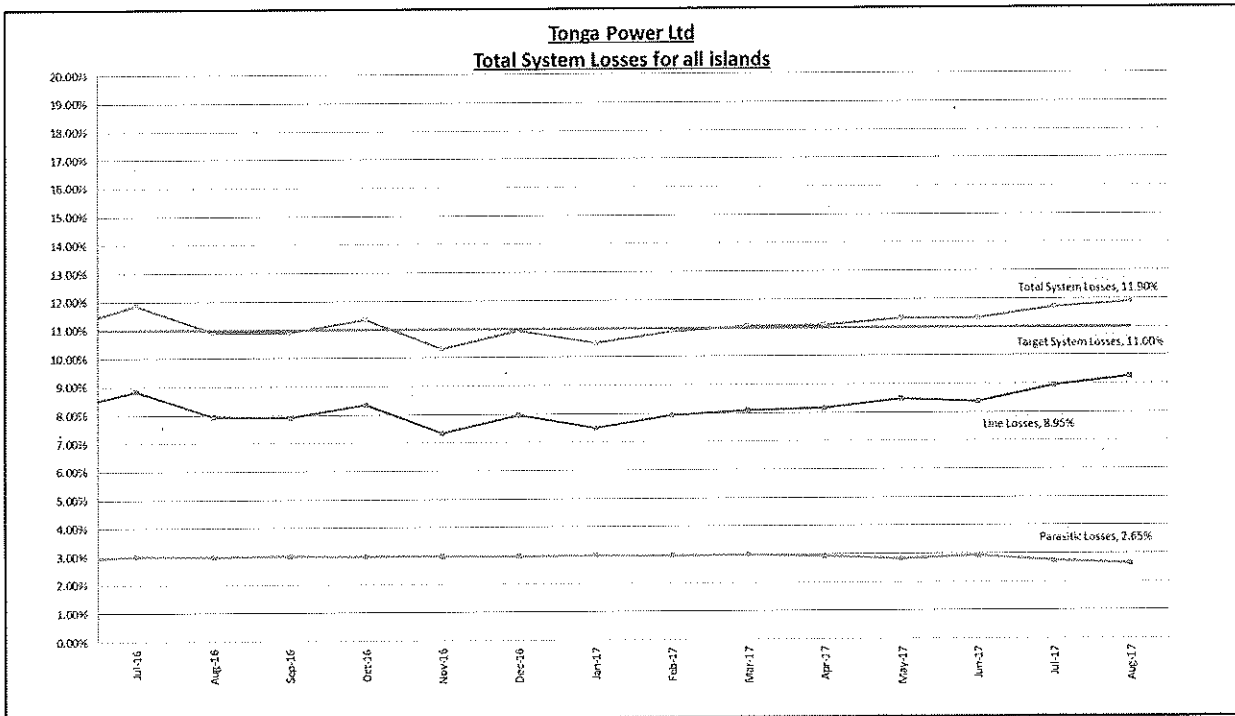
Ms. Sosefina S Maileseni
Risk and Compliance Manager
Tonga Power Limited

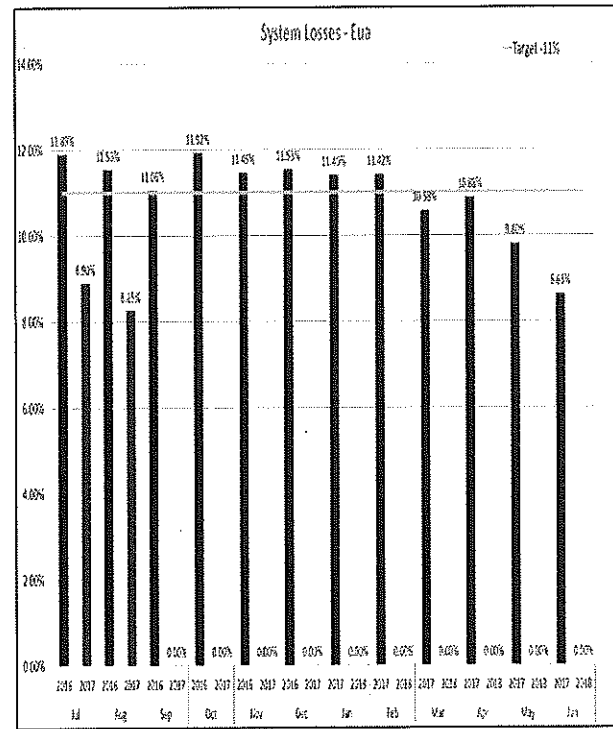
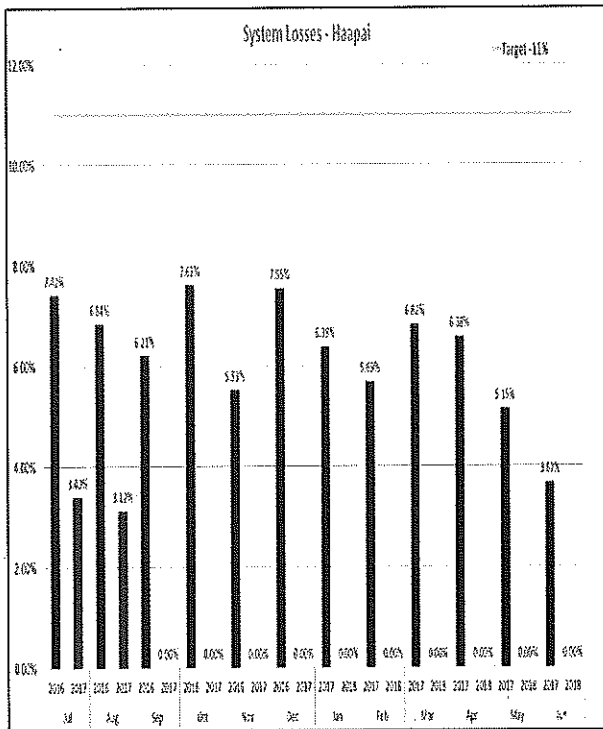
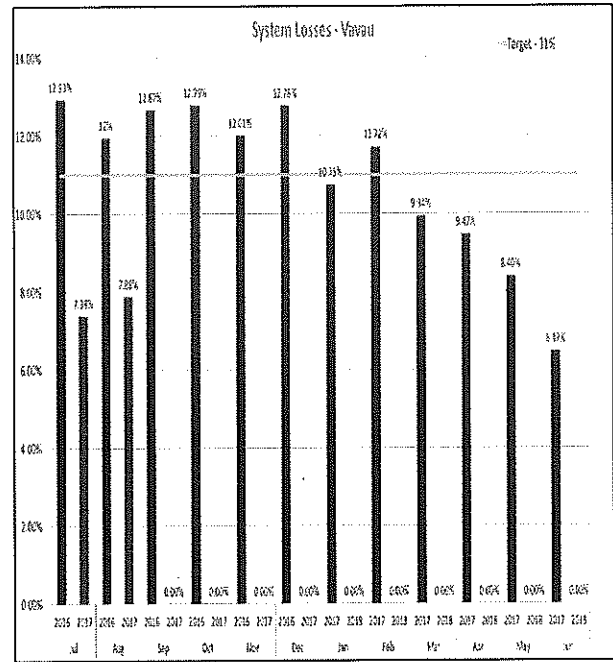
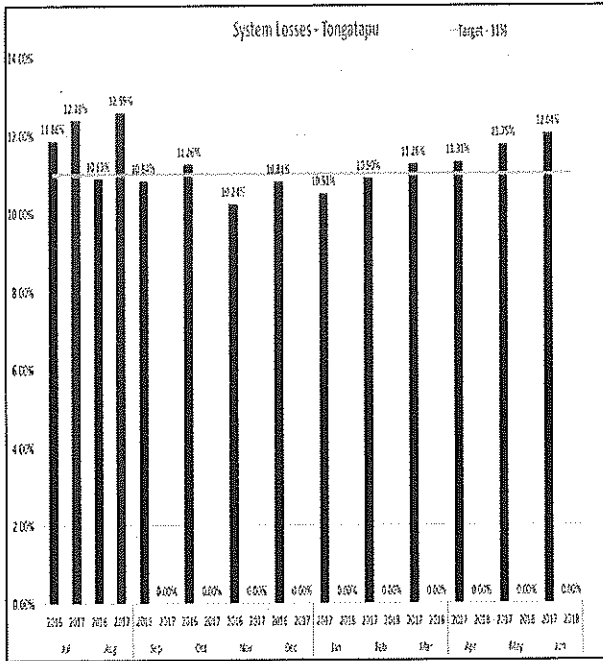


Cc: Mr. Robert Matthews, CEO of TPL

APPENDIX - 1:

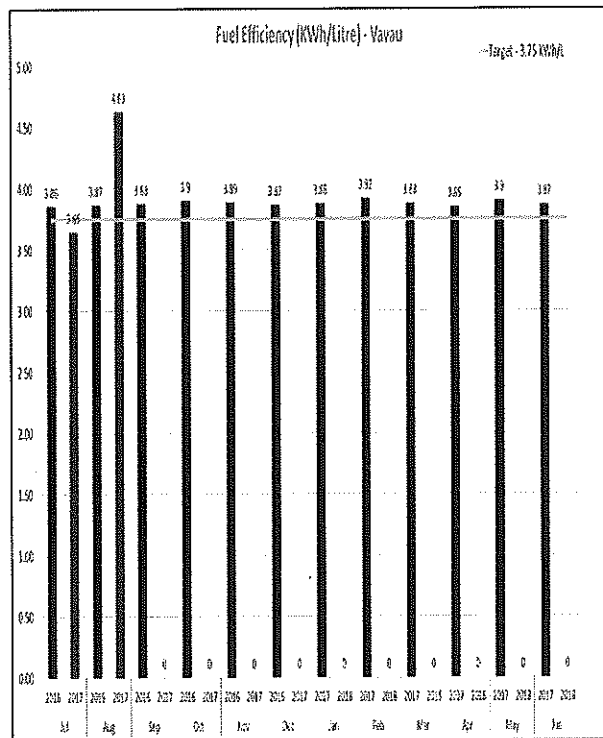
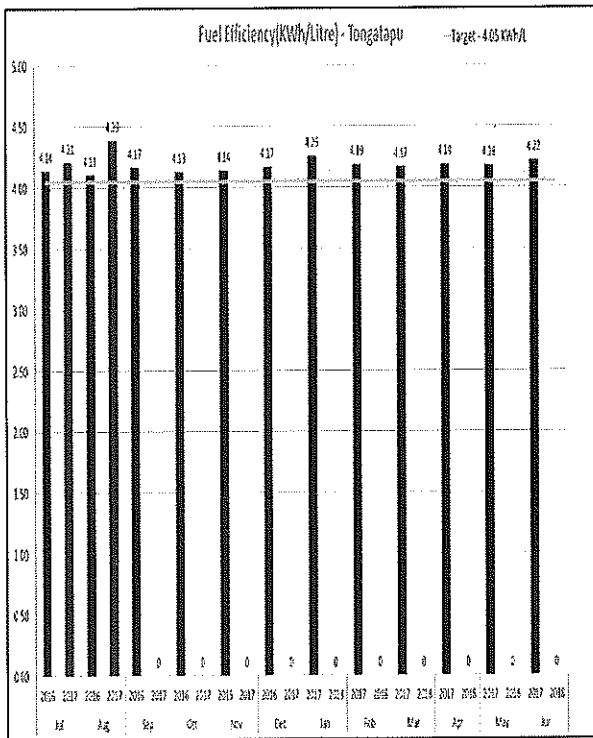
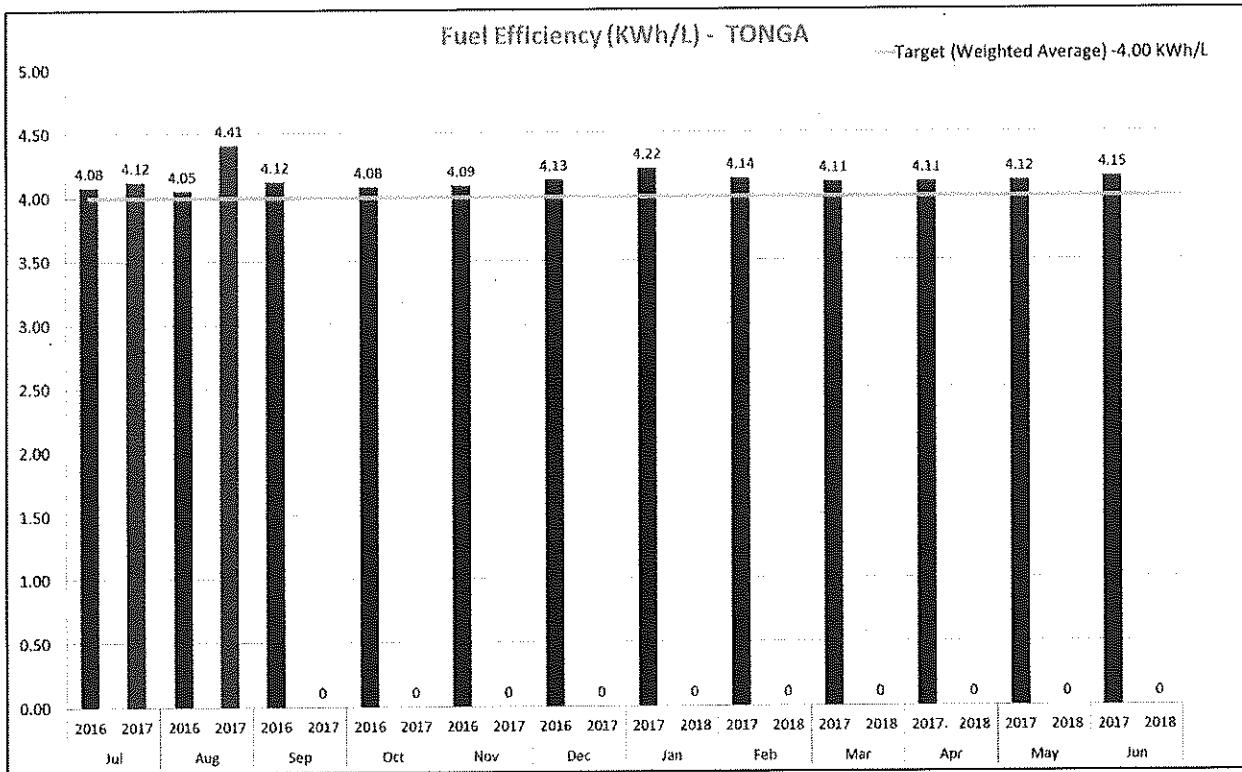
SYSTEM LOSS GRAPHS

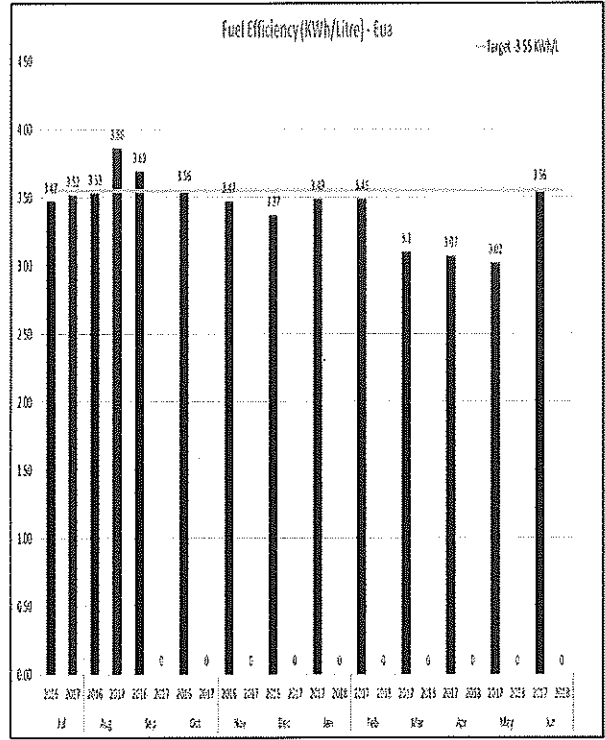
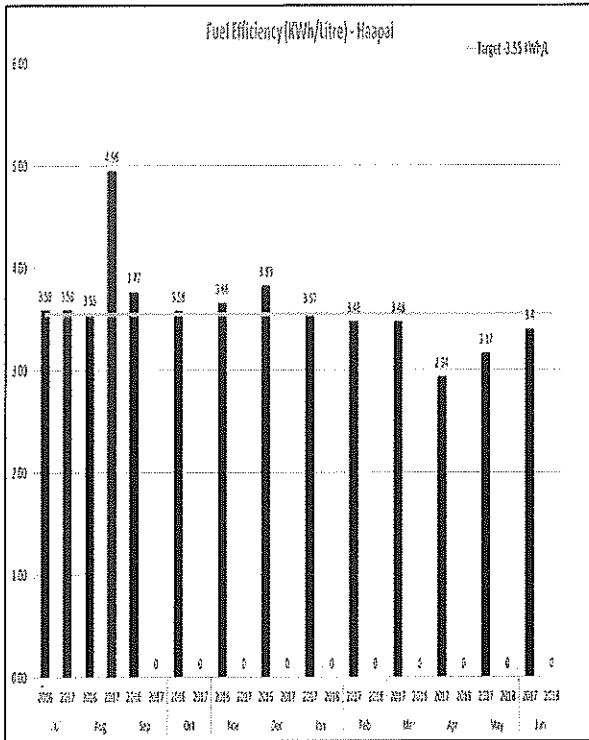




APPENDIX - 2:

DIESEL GENERATION FUEL EFFICIENCY



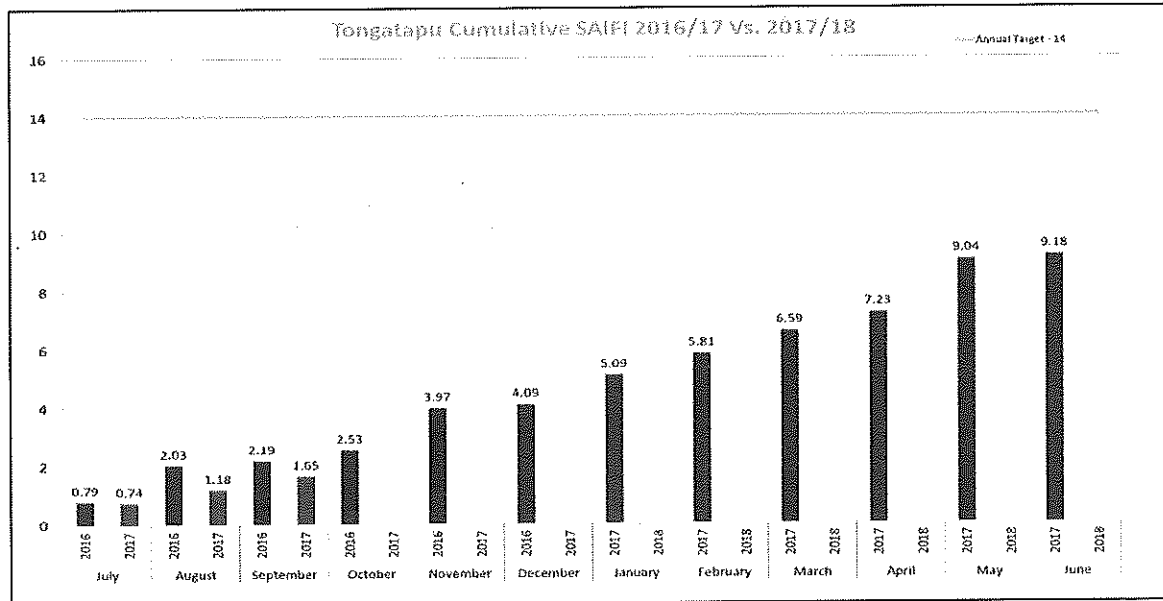
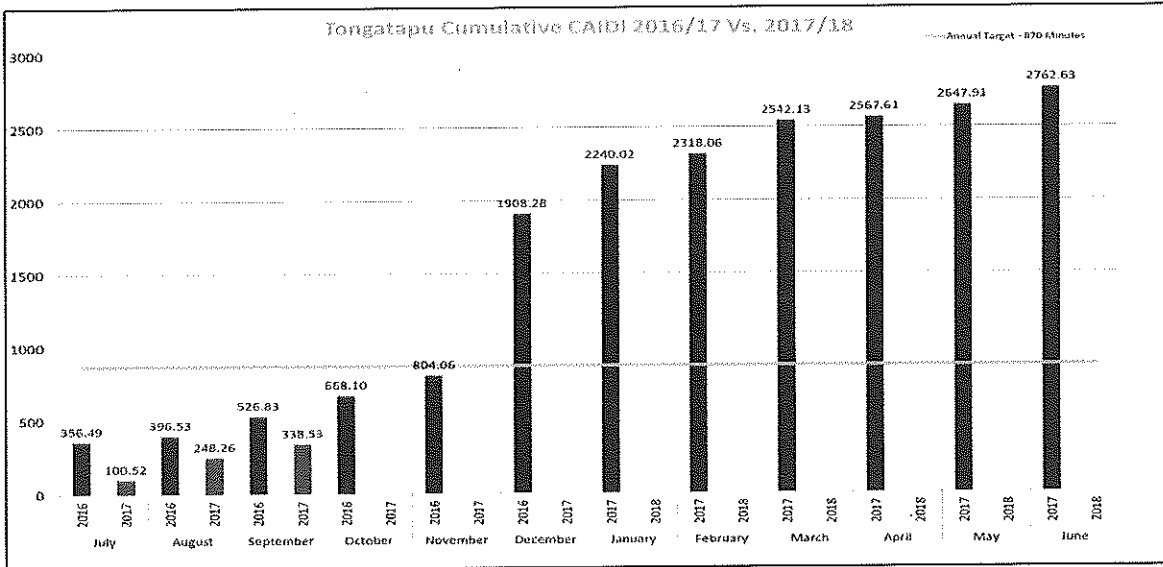
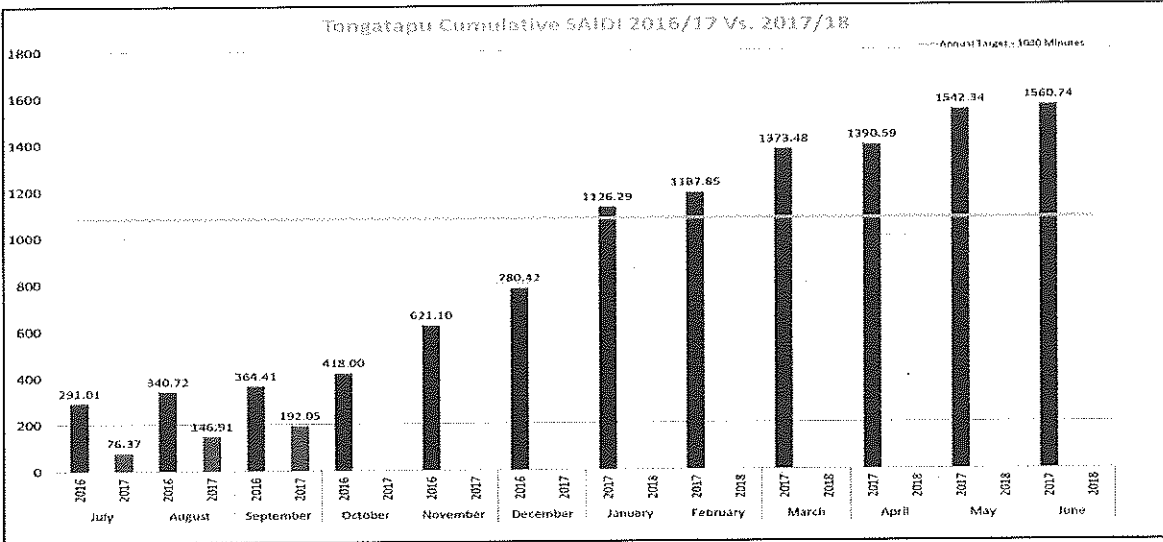


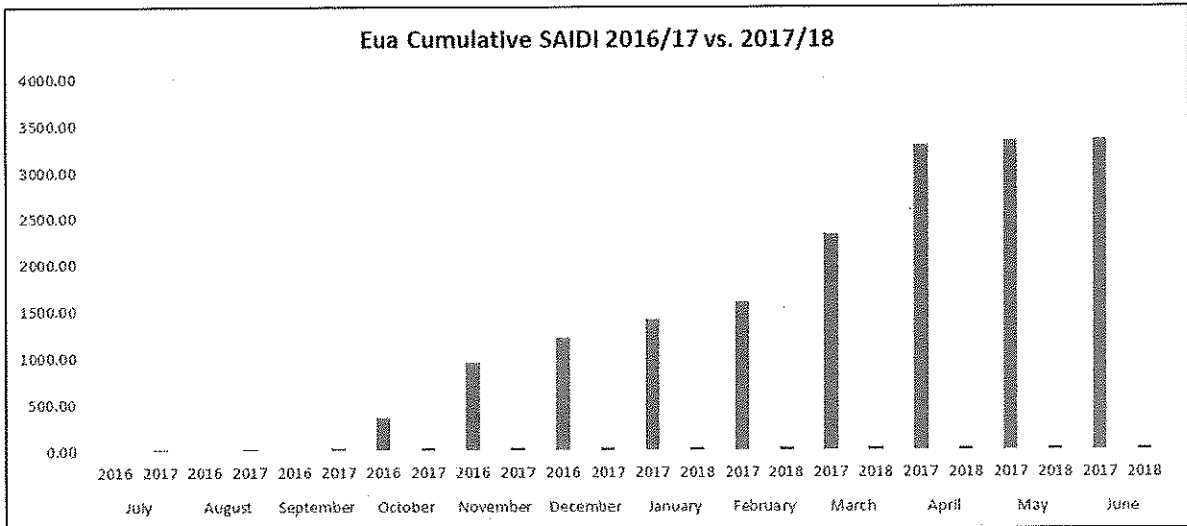
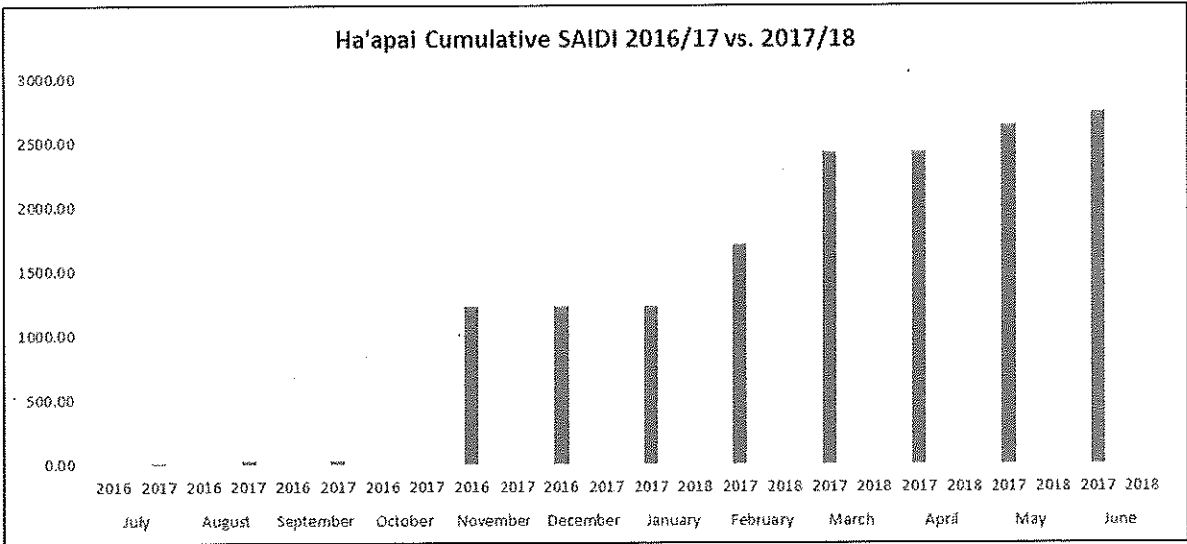
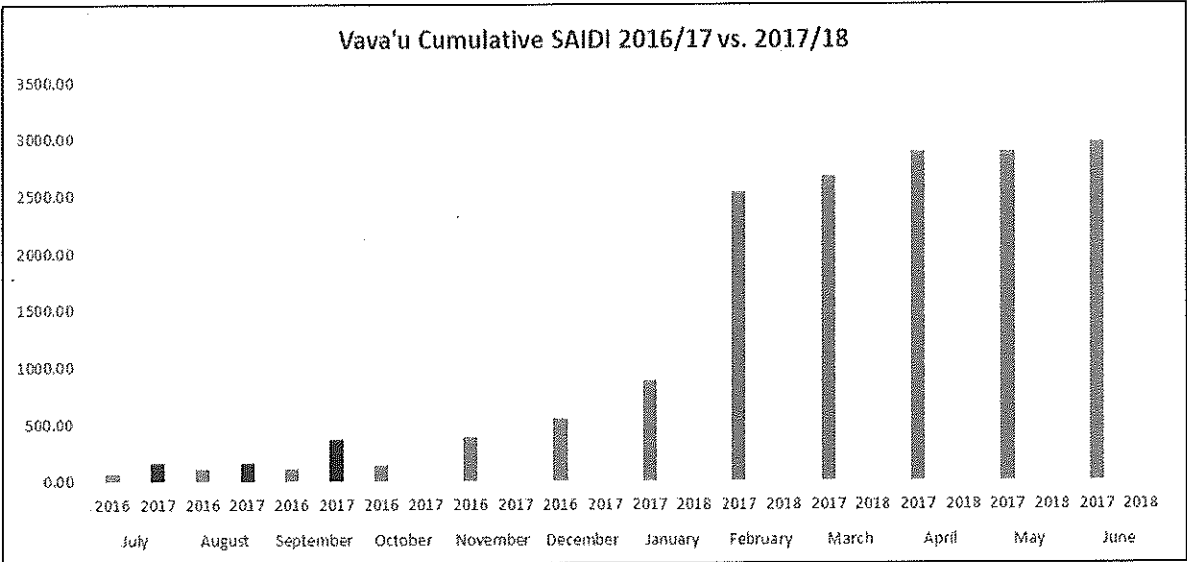
APPENDIX – 3:

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	2016/16	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		Oct	74.58	22.74	141.27		Oct	1.12	2.405	0.345	
Nov	123.66	15.55	203.1		Nov	190.511	31.481	135.97		Nov	0.649	2.367	1.44	
Dec	28.04	9.56	159.32		Dec	43.97	165.29	1104.21		Dec	0.638	0.058	0.17	
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	192.06	Total	980.637	1246.061	2762.608	338.51	Total	16.937	18.776	9.234	1.65

Report Date	No_of_Customers	Fault Description	Repair Comment
30/09/2017	4,106	PARTLY OFF HAHAKE	switch on vaini feeder
02/09/2017	1,538	SHUT DOWN	SHUT DOWN POWER
03/09/2017	1,499	feeder 1	power off at Hihifo due to HV conductor broken at Lakepa between pole H02200-H02201 Note -- recloser at Maui was trip then caused power off to Hihifo area so repair open inline fuse to lakepa and switch on again Maui recloser so power back on to Hihifo area.
21/09/2017	35	partly off	phase red pole fuse burnt and broken, repairer jump started connections test after: 244V, 243V, 242V tong: 12.1A, 13.2A, 7.5A Phasing: 419, 415, 419
04/09/2017	35	PARTLY OFF	PARTLY OFF DUE TO 1 X 125A SO THEY USE WIRE TO RELOAD IT (PHASE RED BLOWN) (NEED TO REPLACE FUSE TOMORROW)
13/09/2017	32	partly off	power partly off due to 160A link blown - Phase #1 so they replace it then test power line Materials: 1 x 160A Phase #1 Test After: 240V, 243V, 242V
13/09/2017	30	partly off	partly off due to fuse blown lv line from transformer (phase red) material used: amps 160 x 1 test after - 250v, 252v, 253v test phasing - 435v, 434v, 439v transformer tong - 170, 85.6, 83.9
13/09/2017	30	partly off	partly off due to fuse blown lv line (phase red) material used: amps 200 x 1 test after - 250v, 252v, 253v test phasing - 435v, 434v, 439v transformer tong - 170, 85.6, 83.9
15/09/2017	23	power off	LV phase 1 blown on transformer materials: link 200A x 1 test after: 244V, 243V, 244V tong: 143V, 140V, 142V
19/09/2017	20	antenna cable was on the lv blown fuse 160A by replace it with 1x10A by	
04/09/2017	16	power off	Power partly off due to line looses so they fixed it then test power line. Materials: 1 x 16/95 IPC Test After=232V
02/09/2017	15	power off	phase 1 off materials: link 80A x 1 test: 244V
27/09/2017	15	partly off	partly off due to fuse blown (lv line) from transformer so the repair replaced fuse then test. material used: amps 100 test after - 240V
19/09/2017	15	partly off	Material used: service cap, sleeve 10mm x 4, link 232v





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	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	2016/17	2017/18
Generator problem	0	0	1	0	0	0	1	0	0	0	1	1	2	0	0	0	0	0	0	0	6	0
HW Lines	9	5	16	13	12	14	9	12	18	8	41	21	10	24	11	0	0	0	0	0	191	32
HW/LV Transformer	11	7	11	11	5	13	2	15	7	15	22	17	12	18	5	0	0	0	0	0	140	31
HW Pole	3	1	4	4	0	0	11	2	0	0	0	0	7	3	0	0	0	0	0	0	30	5
LV Lines	79	58	69	59	50	63	60	57	72	70	146	76	52	102	45	0	0	0	0	0	958	180
Service lines	96	78	96	112	99	85	89	104	98	75	210	164	137	216	96	0	0	0	0	0	1470	275
Customer premises	142	110	157	134	124	93	142	128	164	146	166	126	119	160	110	0	0	0	0	0	1684	337
Street Lights	21	0	19	0	20	0	22	25	0	0	0	0	0	0	0	0	0	0	0	0	107	0
Meter	3	3	3	7	2	4	3	2	4	3	6	1	6	6	1	0	0	0	0	0	40	14
Total	364	262	376	340	312	272	338	0	346	0	363	0	317	0	581	0	416	0	344	0	4626	874