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24th April, 2019

Mr. Kilisimasi Ma'asi
Acting CEO
Electricity Commission
Tu'atakilangi
Nuku'alofa

Dear Kilisimasi

PROGRESS REPORT for February 2019

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 **February 2019**.

2. SYSTEM LOSS

System Losses for the month of **February 2019** were as follows: -

MONTH	TONGA	TBU	VV	HP	'EUA
February 2019	12.79%	12.92%	13.35%	8.02%	7.96%

Table 1: System Losses February 2019

System Losses for February 2019 (Table 1) of 12.79% includes parasitic losses of 2.68% and Line Losses of 10.12%. System Losses target figure for 2018-19 is at 10%. For February 2019, System Losses was at an unsatisfactory level of 12.79% which is above the target.

Line losses for Tonga in the last three months increased. For Vava'u, the lines losses significantly decline reflecting strong winds and weather during the month of February. The increase losses for both islands has impacted the overall System Losses to be above the target.

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. Line losses slightly spiked for the month by almost double from 5.70% to 10.12% this month and parasitic losses generally remained stable at 2.68%.

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 exceeded this target in the month of February 2019. The actual result for February 2019 is 4.42kWh/litre, remaining generally stable from 4.52 kWh/litre in January 2019 (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.

3. SYSTEM RELIABILITY

There are no service standards for reliability imposed upon Tonga Power in the 2015 Regulatory Addendum. However for 2018-19, 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.

4. FAULTS/OUTAGES

Table 2 below shows the faults and outages comparison between 2018-2019 and 2017-2018 for Tonga as a whole.

Month	2017-18	2018-19 Faults	2018-19 Outages
July	262	328	3
August	340	338	0
September	264	289	2
October	248	365	1
November	314	259	2
December	311	307	1
January	332	283	1
February	246	298	3
March	146	235	3
April	793		
May	373		
June	304		
TOTAL	3,933	2,702	16

Table 2: Faults and Outages 2018/19

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.

Table 2 above shows that for the month of March 2019. There were a total of two hundred thirty-eight (238) reported faults and outages. There were three major unplanned outages for the month. The one major power outage that causes power off to all of Tongatapu was due to vehicle accident damaging a power pole at Havelu disrupting power customers connecting to feeder 1.

Refer Appendix 3: Major HV Faults detailing the major fault occurring and other minor faults. However, total faults on the other hand has been fluctuating over the last 6 months with improvement from the previous month. Majority of the faults reported were in LV lines and customer premises.

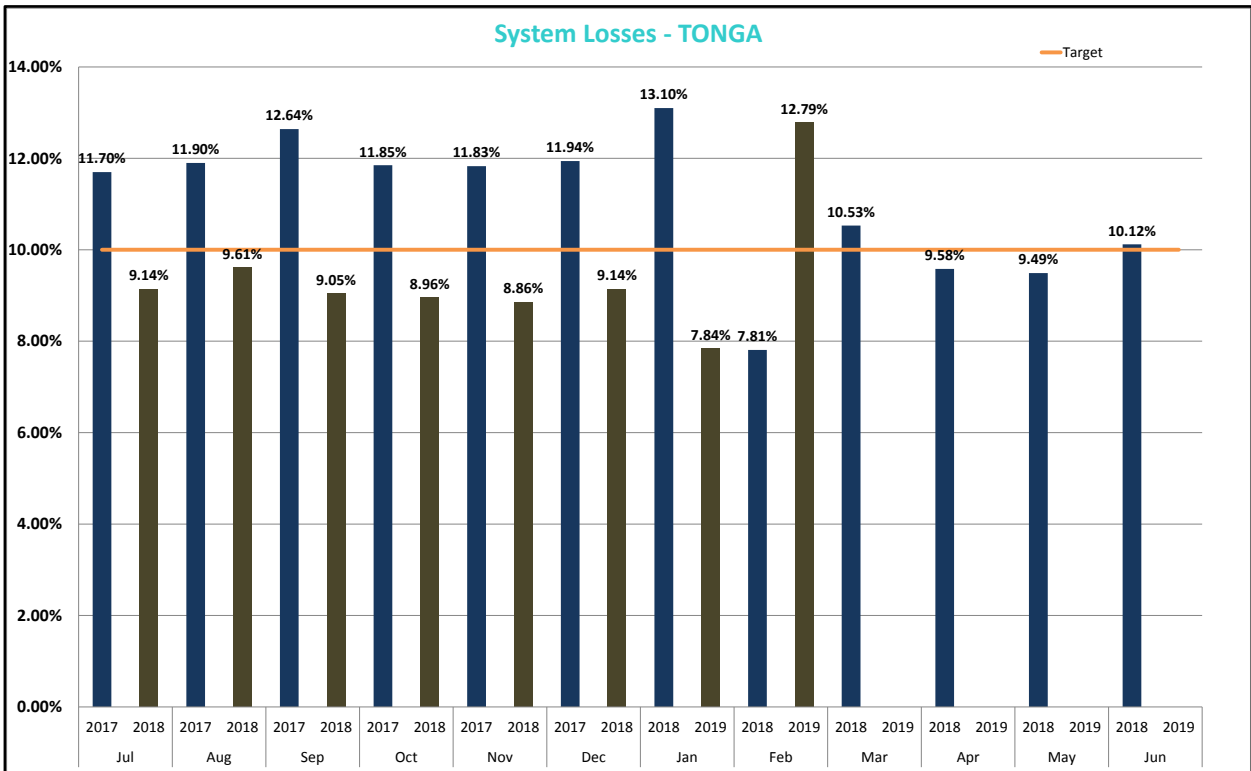
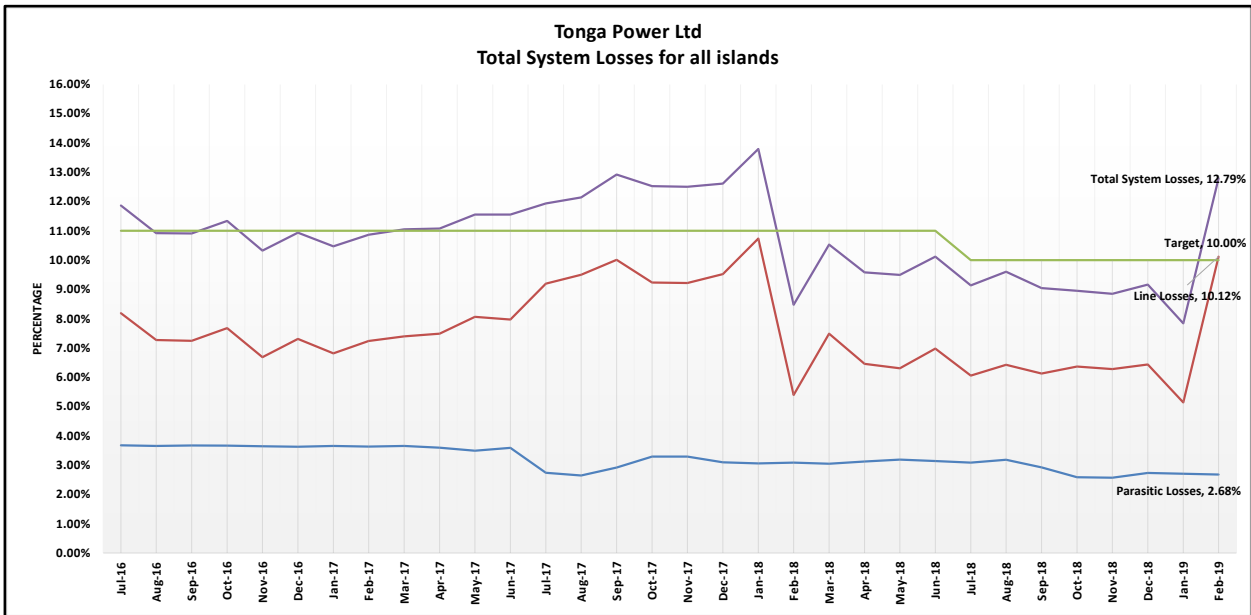
Appendix 4 gives details of each planned outages and unplanned fault events.

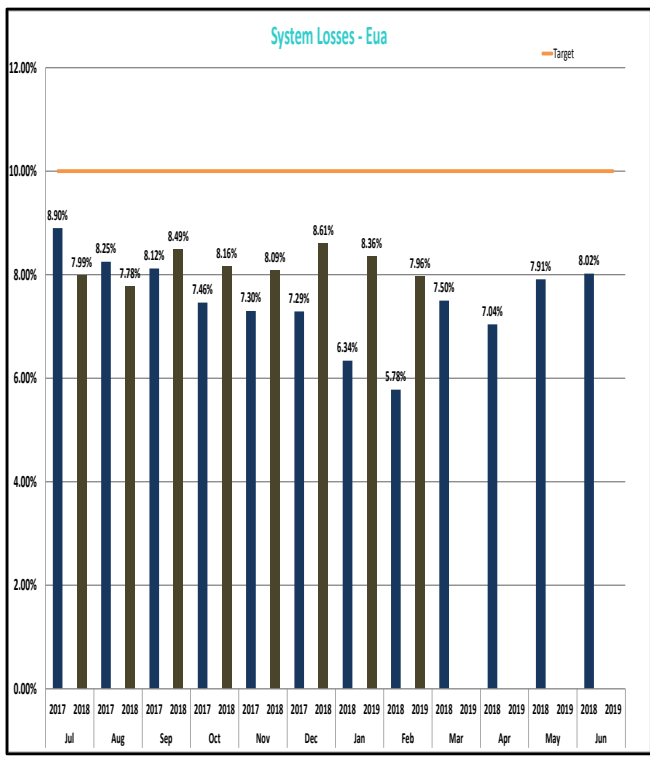
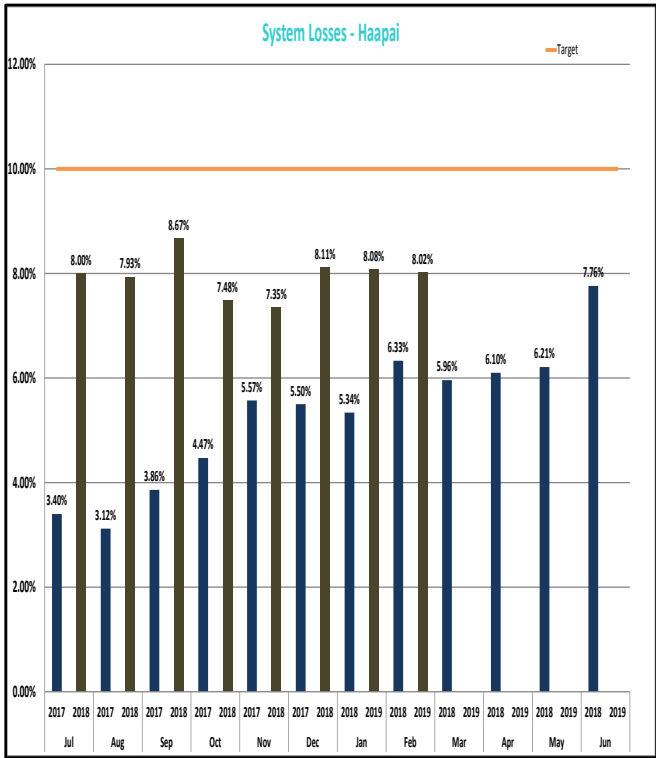
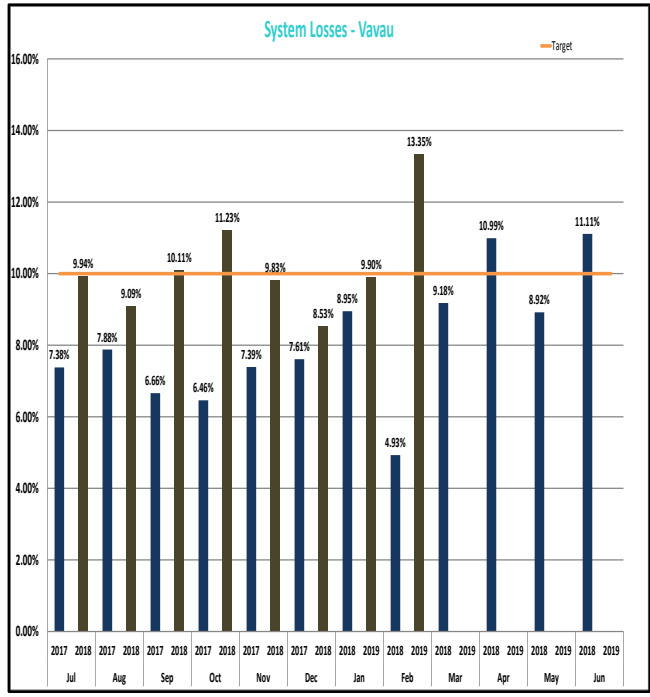
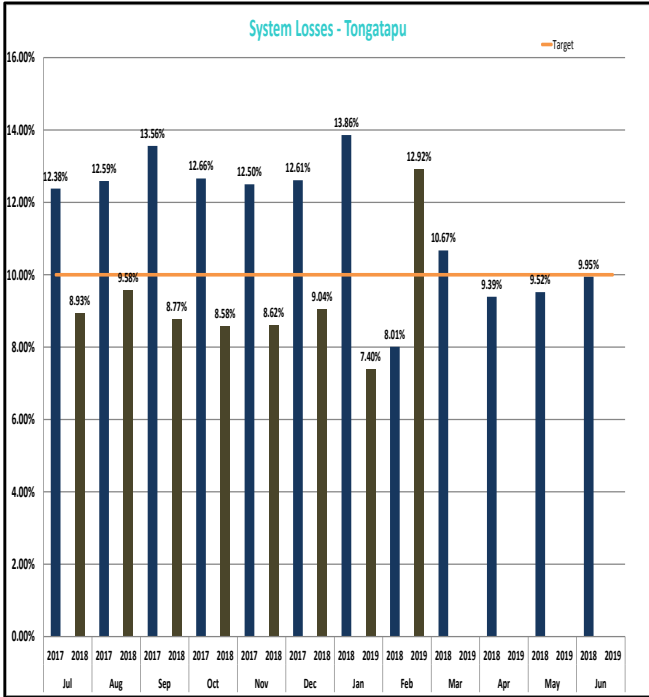
Yours faithfully,

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

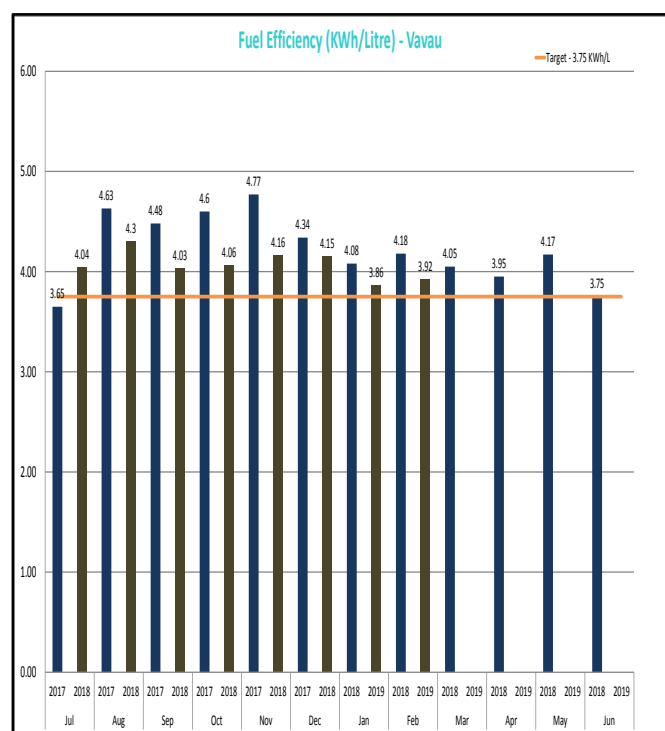
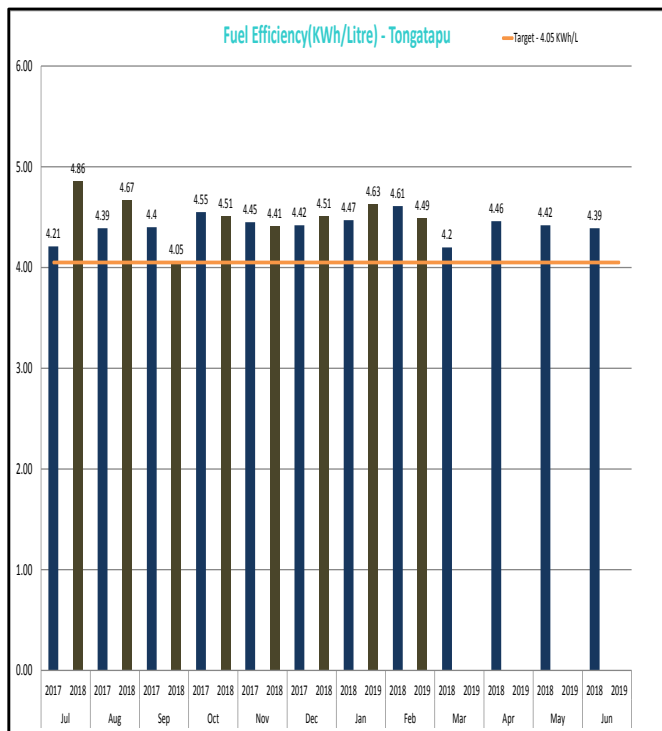
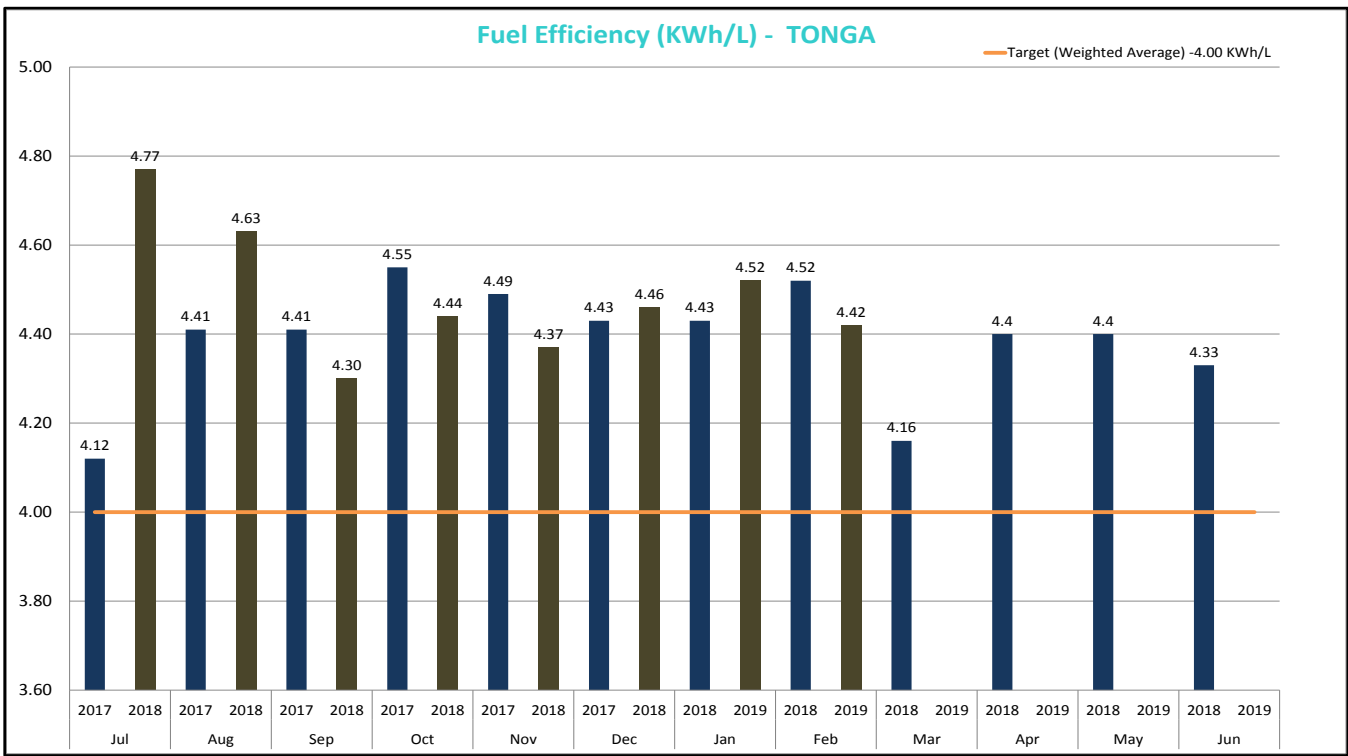
Cc: Mr. Setitaia Chen, CEO of TPL

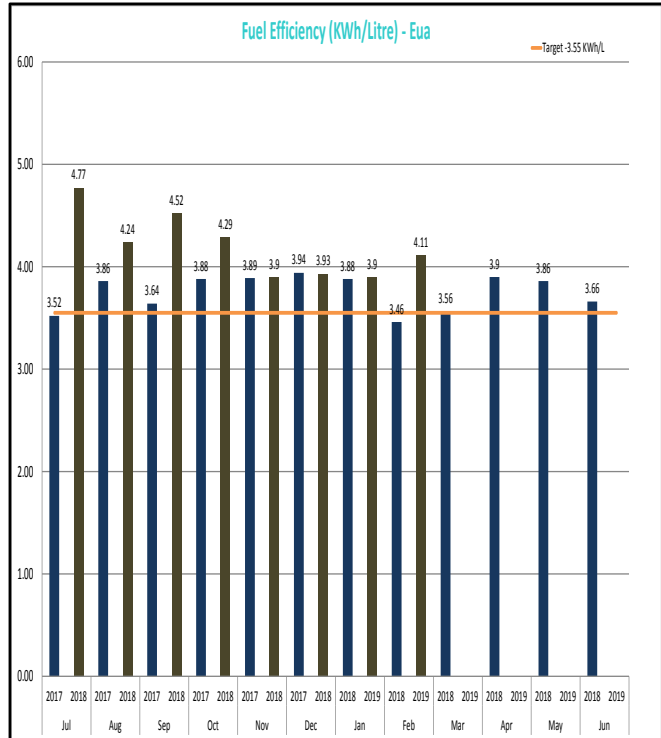
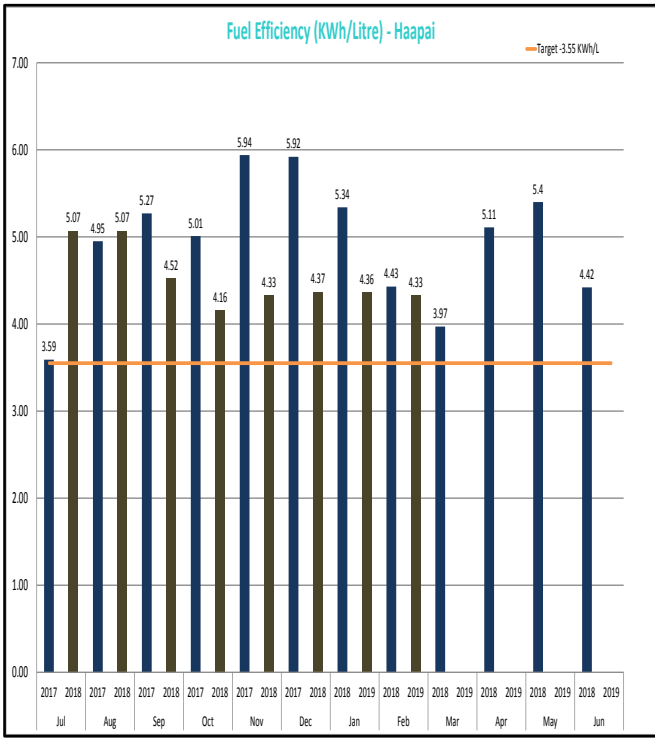
APPENDIX – 1: SYSTEM LOSS GRAPHS





APPENDIX – 2: DIESEL GENERATION FUEL EFFICIENCY

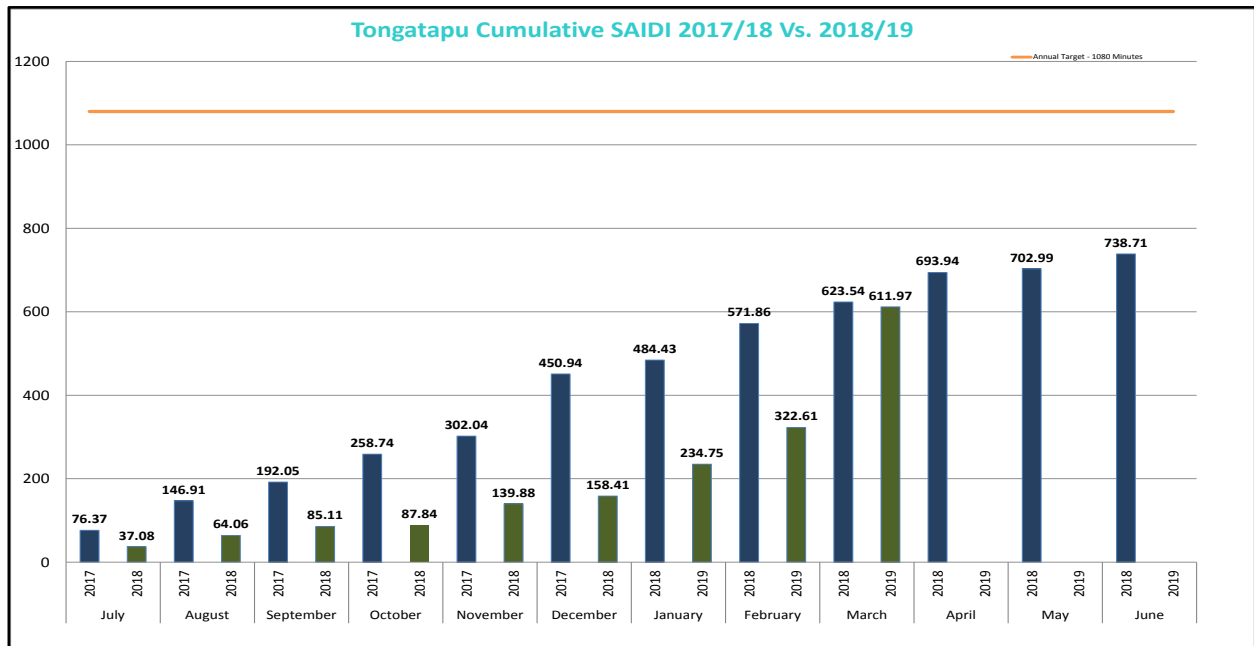


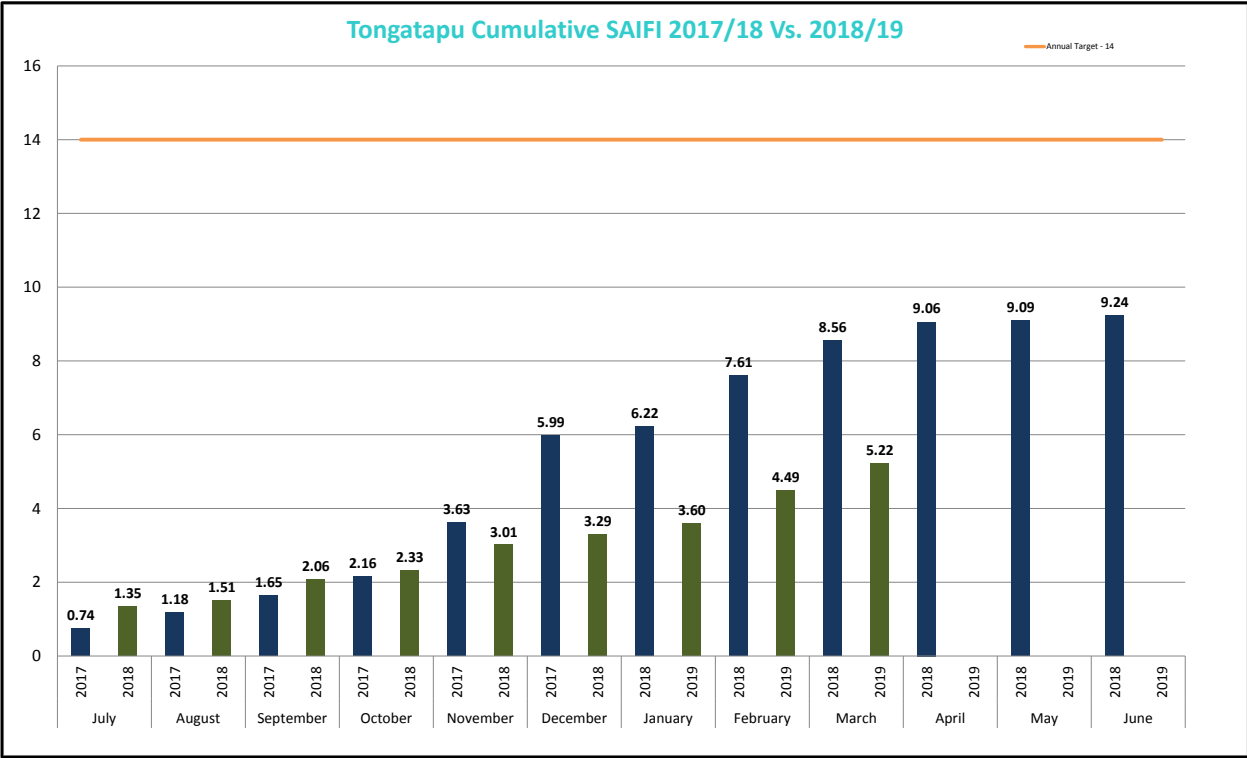
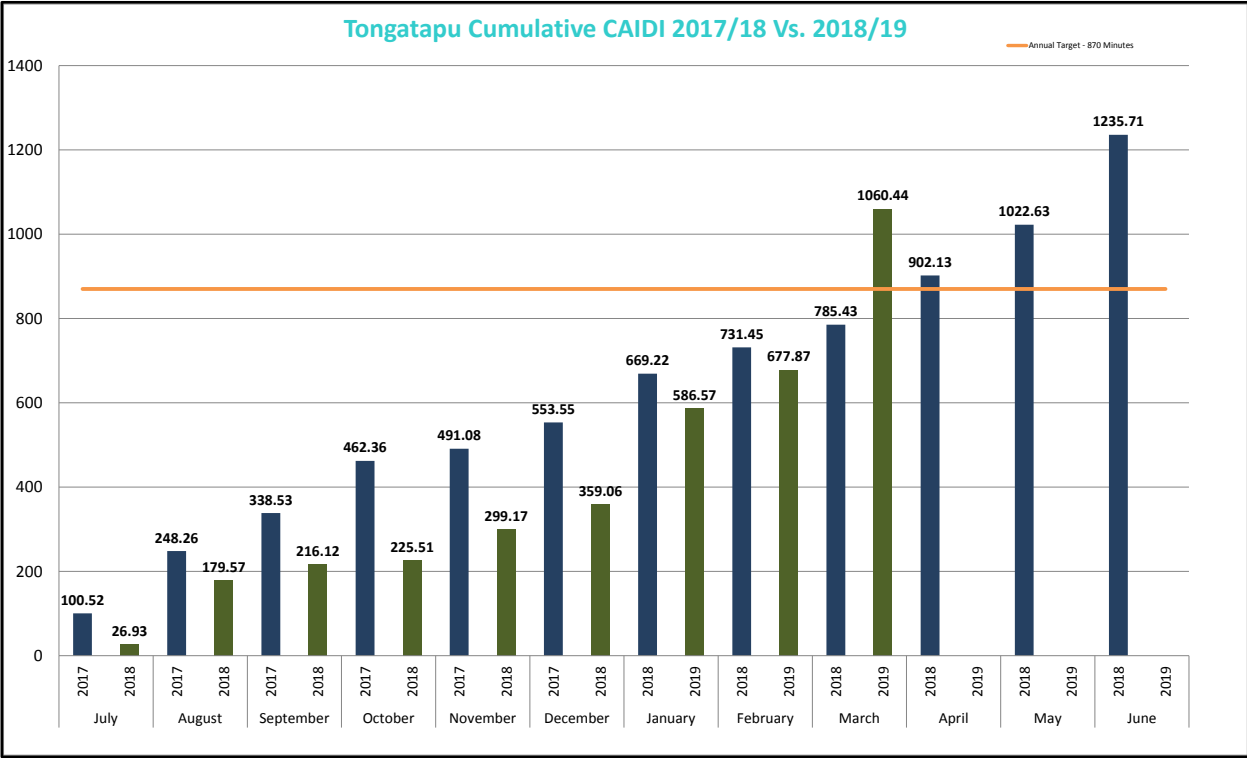


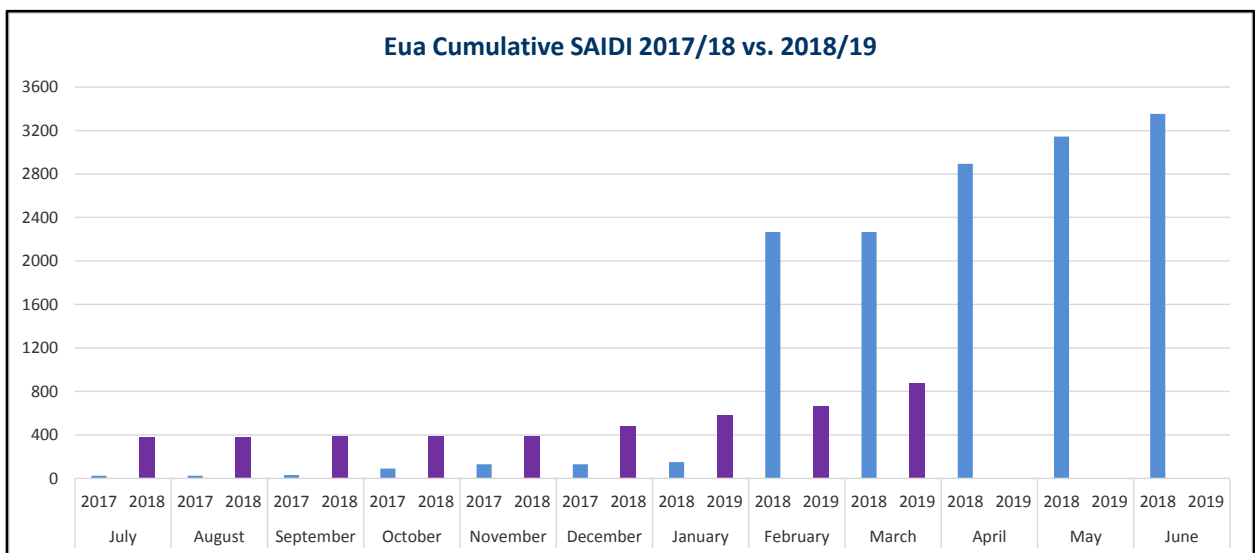
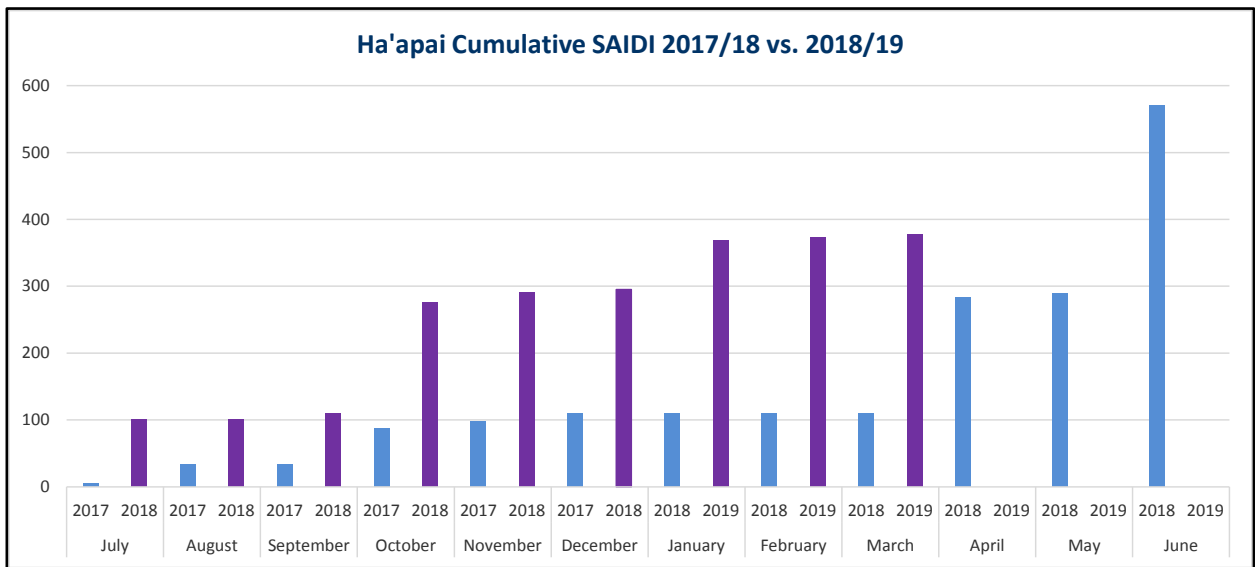
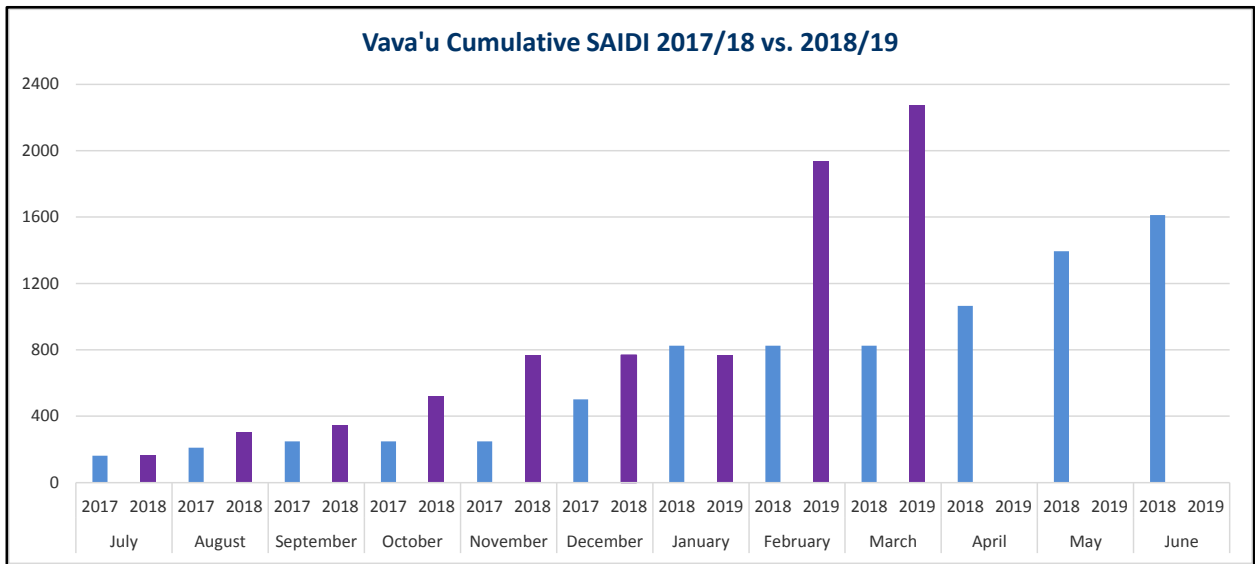
APPENDIX – 3: SYSTEM RELIABILITY

Major HV Fault for March 2019

Report_Date	Disruption_Time2	No_of_Customers_Off	Fault_Description	Repair_Comment	Fault_Class	Fault_Type. fp7::Category_Type
29/03/2019	467	9,000	power blackout	03:45 - On from Longolongo to Hihifo. Power outage for Vaini Feeder and Feeder #1.	Network Problem	Pole
22/03/2019	86	1,489	POLE ACCIDENT	BROKEN HV POLE AT SIC MA'UFANGA [hit and run by a loader]	Network Problem	Pole
27/03/2019	180	400	power shut down	power shut down due to install new transformer at hospital rd havelu	Network Problem	Pole
14/03/2019	210	250			Network Problem	Pole
26/03/2019	41	20	pole	HV pole broken visit by a car C23171 need to replace	Network Problem	Pole
21/03/2019	19	15	partly off	PASSED TO PESA PARTLY OFF DUE TO TRANSFORMER'S PROBLEM SO THEY CHECKED IT AND PASSED IT TO PESA TO HAVE A LOOK problem fixed on the same day by Koli Palu.	Network Problem	Pole







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

March 2019

Fault Events Comparison 2017/18 vs. 2018/19																					YTD Total					
Planned/Unplanned Outage Events	Jul-17	Jul-18	Aug-17	Aug-18	Sep-17	Sep-18	Oct-17	Oct-18	Nov-17	Nov-18	Dec-17	Dec-18	Jan-18	Jan-19	Feb-18	Feb-19	Mar-18	Mar-19	Apr-18	Apr-19	May-18	May-19	Jun-18	Jun-19	2017/18	2018/19
Generator problem	0	3	0	0	0	0	0	0	1	0	2	0	0	0	1	1	0	1	0	0	0	0	0	0	4	5
HV Lines	5	18	13	12	14	13	14	11	24	10	18	11	15	10	11	19	3	7	17		8		11		153	111
HV/LV Transformer	7	6	11	5	13	9	6	4	13	7	7	11	13	15	5	13	1	16	15		10		8		109	86
HV Pole	1	2	4	5	0	2	1	1	1	4	1	1	2	3	1	1	1	4	3		3		1		19	23
LV Lines	58	80	59	65	63	56	41	111	48	52	52	69	40	71	40	88	33	56	194		86		60		774	648
Service lines	78	101	112	125	85	80	85	124	141	91	117	95	121	71	114	77	60	52	301		130		99		1443	816
Customer premises	110	112	134	121	93	126	96	113	82	90	108	118	136	111	71	98	47	100	254		133		122		1386	989
Street Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0		0		0	0
Meter	3	10	7	5	4	5	5	2	5	7	3	3	5	3	3	4	1	2	9		4		3		52	41
Total	262	332	340	338	272	291	248	366	315	261	308	308	332	284	246	301	146	238	793		374		304		3940	2719