



*P.O BOX 429, NUKU'ALOFA, Tel: (676) 21-400 Fax: (676) 23-047 Email: [afernando@tongapower.to](mailto:afernando@tongapower.to)*

19 August 2013

Lord Dalgety  
Electricity Commission  
Tu'atakilangi  
Nuku'alofa

Dear Lord Dalgety

### **Compliance Reporting for the Month of August 2013**

In accordance with the reporting requirements of the Electricity Concession Contract and in response to your request for additional information as specified in the suggested MOU dated May, 2012, TPL submits the following reports for the month of August, 2013.

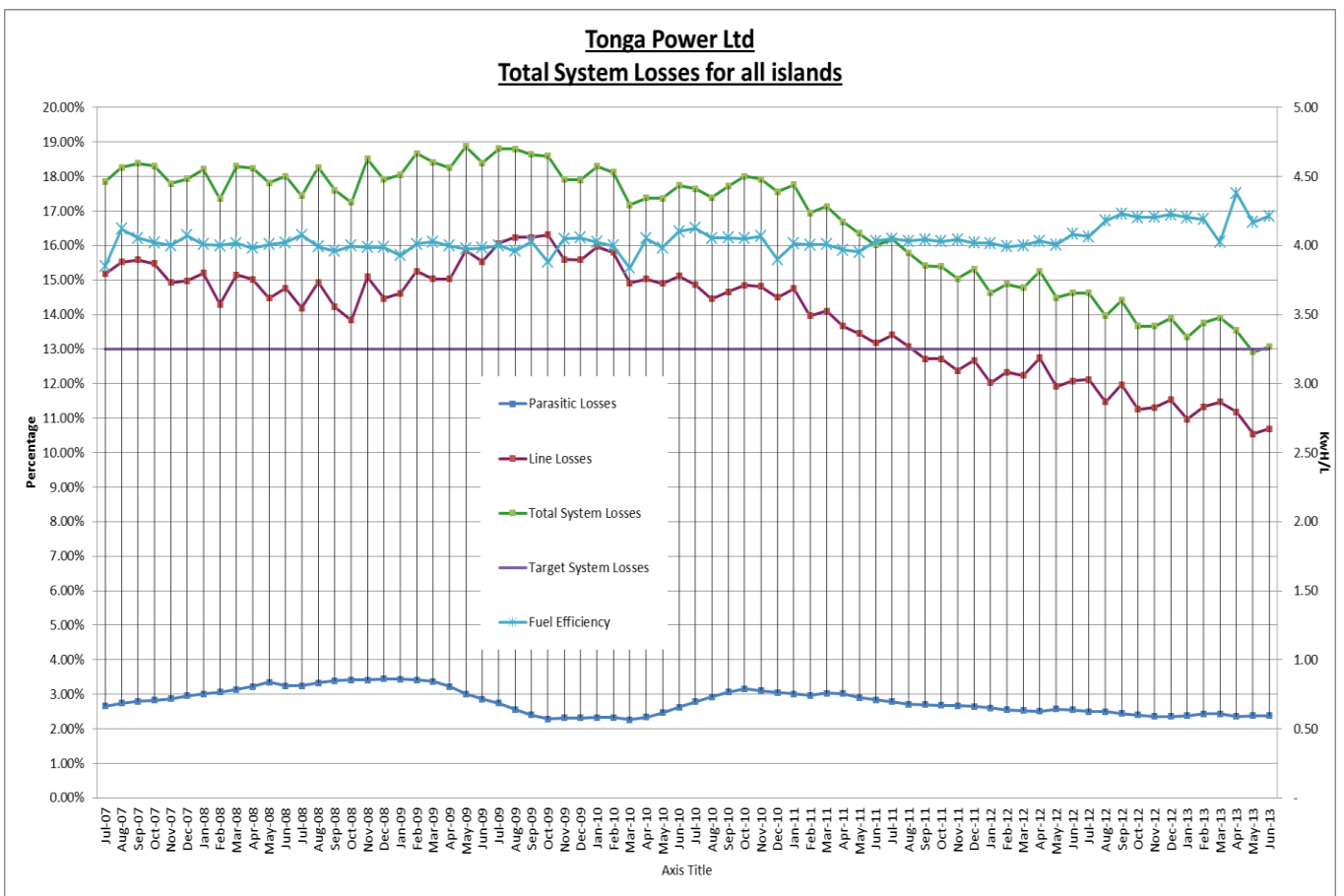
1. System Loss Report – July, 2013
2. Reliability Measures – July, 2013
3. Monthly Outage Events – July, 2013

The above report items are described in detail below.

#### **1. System Loss Report**

The following graph illustrates that the past 12 months moving average (smoothed) of systems losses for all four islands for the period July 2007 – June 2013. The graph indicates that the total losses for all four islands have slightly increased from 12.92% (May, 2013) to 13.07% (June, 2013). However, on a real time basis (disregarding 12 months moving average), total systems losses have increased from 2.05% (May, 2013) to 17.62% (June, 2013) for all four islands. The real time monthly losses variability can be explained by the impact of the number of days and fall of the weekends in respect to meter reading cycle. It was noticed that smaller increase of moving average system losses in all four islands.

Fuel efficiency for all four islands has increased from 4.17 Kwh/Litre (May, 2013) to 4.21 Kwh/Litre (May, 2013).



## 2. Reliability Measures

SAIDI minutes (measuring average total duration of interruption per connected customer) for the month of July, 2013 have significantly increased from 2.36 (June, 2013) to 142.12 (July, 2013) minutes (see the table below).

Reliability Measures														
SAIDI Monthly Performance					CAIDI Monthly Performance					SAIFI Monthly Performance				
Month	2010/11	2011/12	2012/13	2012/14	Month	2010/11	2011/12	2012/13	2012/14	Month	2010/11	2011/12	2012/13	2013/14
Jul	7.74	4.74	638.62	142.12	Jul	60.7	143.09	90.44	290.95	Jul	0.13	0.03	7.06	0.49
Aug	935.29	4.51	57.31		Aug	443.33	161.45	148.47		Aug	2.11	0.03	0.39	
Sep	933.55	59.19	5.66		Sep	477.69	649.6	92.61		Sep	1.95	0.09	0.06	
Oct	9.35	253.89	16.05		Oct	64.33	243.63	11.23		Oct	0.15	1.04	1.43	
Nov	4.35	25.49	150.73		Nov	123.68	69.34	62.32		Nov	0.04	0.37	2.42	
Dec	20.42	115.19	74.28		Dec	19.48	358.97	33.78		Dec	1.05	0.32	2.2	
Jan	984.8	622.62	177.39		Jan	889.45	280.26	114.76		Jan	1.11	2.22	1.55	
Feb	162.32	3010.76	282.85		Feb	131.96	412.1	363.77		Feb	1.23	7.31	0.78	
Mar	296.37	23.32	134.9		Mar	219.53	55.81	62.17		Mar	1.35	0.42	2.17	
Apr	157.89	336.9	339.33		Apr	63.18	219.97	190.62		Apr	2.5	1.53	1.78	
May	8.22	294.55	122.31		May	222.5	98.59	31.29		May	0.04	2.99	3.91	
Jun	62.22	14.72	2.36		Jun	387.96	66.45	71.86		Jun	0.16	0.22	0.03	

SAIDI targets for 2013/14 will be made available to the board on the next month's risk & compliance report.

The major HV faults contributed to the SAIDI minutes for the July, 2013 are described below:

Report Date	Fault Description	Repair Comment	No of Customers Off
27/07/2013	Shut down	Planned to shut down Vaha'akolo rd and part longolongo teufaiva , vaololoa , Geo services , tonga print , taulua press , Ecumencial center , toutaimana, maamaloa side school , havelutokelau , havelu , apimataka , tu'itakilangi , tonga , electric commssion, tofoa	1933
21/07/2013	Power off	Power off due to broken HV line as a result of a vehicle accident at talasiu so the crew called they shut down from tatakamotonga-niutua to fix the HV line for the safety of power	1500
21/07/2013	shut down	Shut down from tatakamotonga to niutoua because the HV line between lapaha and talasiu was broken	1500
24/07/2013	Partly Off	Partly off Malapo - Niutoua one inline fuse trip at Malapo.	1106
21/07/2013	Shut down	Shut down to fix HV line from tatakamotonga to nakolo and then they connect power line	650

CAIDI minutes (measuring average total duration of interruption per interrupted customer) for the month of July 2013 have also increased significantly from 71.86 minutes (June, 2013) to 290.95 (July, 2013) minutes.

SAIFI (measuring average number of interruptions per customer) has increased from 0.03 (June, 2013) to 0.49 (July, 2013). Refer to the table above.

### 3. Monthly Outage Events

Unplanned Outage Events	Jul-12	Jul-13	Aug-12	Aug-13	Sep-12	Sep-13	Oct-12	Oct-13	Nov-12	Nov-13	Dec-12	Dec-13	Jan-13	Jan-14	Feb-13	Feb-14	Mar-13	Mar-14	Apr-13	Apr-14	May-13	May-14	Jun-13	Jun-14
Generator problem	0	0	2		0		2		2		2		3		1		3		2		8		0	
HV Lines	8	10	12		15		11		11		12		9		42		5		9		14		4	
HV/LV Transformer	10	16	9		12		6		2		4		6		16		7		3		10		5	
HV Pole	2	1	0		1		0		4		2		1		1		2		4		4		2	
LV Lines	37	17	22		28		34		34		12		61		69		68		35		39		48	
Service lines	238	341	238		340		255		291		301		235		354		569		328		443		268	
Customer premises	173	350	190		209		192		244		201		234		221		360		220		284		228	
Street Lights	27	21	26		15		15		221		217		224		155		36		34		23		29	
Meter	3	6	8		7		6		1		5		3		6		9		4		3		3	
Total	498	762	507		627		521		810		756		776		865		1059		639		828		587	

There were total of 762 unplanned fault events for the month of July 2013 affecting 7,468 customers. As per the table above, the number of fault events has increased from 587 events in June, 2013 to 762 events in July, 2013. The increase was due to customer (350 faults) and service lines (341 faults). In July, 2013, both service line and customer premises faults increased due to adverse weather conditions. Most of the customer services faults included fuses at the service line tap off point for a premise. Street lights faults have decreased slightly. There is no correlation between the 2012 and 2013 figures.

Should you have any queries with the information provided, please do not hesitate to contact me.

Yours Faithfully,  
Ajith Fernando  
Risk & Compliance Manager  
Tonga Power Limited

Attachments:

- System Loss Report July 2013
- Reliability Measures July 2013
- Faults Events July 2013