



Tonga Power Limited
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29th March 2020

Kilisimasi Ma'asi
Electricity Commission
Tu'atakilangi
Nuku'alofa
Tonga

Dear Sir,

Re: TPL Response to EC Comments Received 21st May 2020

Tonga Power Limited is pleased to submit its comments and supporting documents as part of the Regulatory Reset Proposal based on the comments and information request received.

The main document is named "**TPL Response to Electricity Commission_290520**".

A full set of documents are provided to the Commission electronically by way of a repository via Drop Box for ease of access to the documents.

Please do not hesitate to contact Tonga Power Ltd should you have any further queries on the Comments. Looking forward to the teleconference call with the Independent Expert together with the Commission at your available time.

Yours Sincerely,

Setitaia Pasivaka Chen
Chief Executive Officer
Tonga Power Limited

- When calculating TPL Reliability, TPL recommends to calculate SAIDI First, then SAIFI then from there you calculate CAIDI – Please refer to TPL Fault Recording Reference Manual pages 28 onwards.
 - The IEEE-1366-Reliability-Indices-2-2019 presentation supports the above, as they have been represented in the formulae recommended.
- *Insofar the definitions applied by TPL are not in line with IEEE 1366, are you willing to discuss options to do so in future?*
 - As per the above information provided, TPL is complying with IEEE 1366. TPL is willing to discuss options on the reliability measures and targets to be benchmarked for P3. TPL notes the impacts of ongoing Network Upgrade for example, the NNUP which is expected to be completed 2023-2024. Consequently, it would not be appropriate to reduce the targets further because the expected number of planned and unplanned outages may increase with the construction of NNUP, and as a result targets might be difficult and impractical to achieve.

2. Investment

- *As mentioned in your response you would provide background information on the investment plan of TPL. Can you please provide this information?*
 - Please refer to the attached Business Plan
- *Can you confirm that any investment which is financed through grants or similar sources (i.e. without bearing any interest or repayment obligation), is not included in the proposed investment plan?*
 - TPL has excluded Grant-funded Capex
- *Can you please provide a list of these above investments: type, date of construction, amount, financing source?*
 - Please refer to the attached electronic zip files labeled “Distribution Investment Plans”

3. Fuel efficiency

- *In your response document you mention on page 23: “Please refer to the calculation analysis (refer Appendix A).” It is not clear to what Appendix A you refer. Can you please provide these separately?*
 - System loss - Separate system loss from overproduction.
 - Please refer to the attached Appendix A: Fuel Efficiency

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- **As per the Progress Report January 2020 snippet below, it is noted that the “figures includes energy generated from Renewables”**

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 exceeded this target in the month of January 2020. The actual result for January 2020 is 4.63 kWh/litre, remaining generally stable as compared to last month. Ha'apai's fuel efficiency remained above target of 4.40 kWh/litre. Fuel efficiency for 'Eua was 3.57kWh/litre. Vava'u fuel efficiency was 4.46 kWh/litre (note this figure includes energy generated from Renewables). Fuel Efficiency (diesel only) for January 2020 for Tonga is 4.59 kWh/litre.

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. Parasitic losses

- ***In your response document you mention on page 27: “TPL would appreciate EC’s endorsement of the calculation method Figure 1 and Table 7.” It is not clear to what Figure/Table you refer. Can you please provide these separately?***
 - **Please refer to the attached Appendix A: Fuel Efficiency which contains Figure 1 and Table 7**
- ***For the line losses, historical performance has in some cases been down to 5%. Can you please explain the wide variation in line losses.***
 - **It has been a combination of CT meter and three phase meter issues when combined with the read period being longer, and or shorter than other months.**
- ***Can you please provide additional analysis on why 1.5% battery losses are appropriate? For example, did TPL conduct any simulations or load flow analysis?***
 - **Please refer to the Appendix A**