ELECTRICITY COMMISSION

Before	:	Commissioners ‘Atiola, Vaihū and Kitekei’aho :
Assisted by	:	Mr. Morris Pita of Messrs Shea Pita & Associates (Reset Independent Expert Advisor to the Commission):
		Mr. Tavake B. Afeaki (Reset Legal Advisor to the Commission): and
		Rt. Hon. Lord Dalgety Q.C.: (Chief Executive of the Commission):
Clerk	:	Miss Meleseini V. Folau (Secretary to the Commission):
In Re	:	**ELECTRICITY RESET 2015**
Decision Date	:	Friday 7th August 2015

D E C I S I O N N U M B E R 3

I N D E X

NOTE: The amount of approved Capital Expenditure (see paragraph 17) and provisionally approved Operating Expenditure (see paragraph 23) are nominal amounts, i.e. inclusive of inflation

C A P E X

1: In their December 2014 submission to the Electricity Commission ("the Regulator") Tonga Power Limited ("Tonga Power Limited") requested approved for Capital Expenditure ("Capex") of 45,210,000 Pa'anga during the 2015-2020 Second Reset Period : see **Doc. TPL-1.** This was intended to cover for : -

Generation	12,330,000
Renewable Generation	1,570,000
Distribution	27,290,000
Retail + Corporate	4,020,000
	45,210,000

2: The Regulator's Independent Expert, Mr. Morris Pita of Shea Pita & Associates (the "Independent Expert") at pages 35-41 of his Report dated 22nd March 2015 – **Doc. EX-1** – raised concerns about certain aspects of Tonga Power's proposed capital expenditure for the period 2015 to 2020 : -

- the projected expenditure of 7 million Pa'anga on **Smart Metering,** the cancellation of which (or its postponement until the third Reset Period, i.e. 2020+) could lead to a reduction in the proposed Non-Fuel Tariff of approximately 1 seniti/kWh :
- the need for a **Fourth Feeder** (or distribution loop) on Tongatapu given that insufficient information had been provided to justify the 1.2 million Pa'anga cost of this Project. Were it not to proceed there could be a Non-Fuel Tariff reduction of 0.3 seniti/kWh from that proposed by Tonga Power :
- the need for two new **Submarine Cables** across the Lagoon on Tongtapu, the total cost of which was budgeted at 1.2 million Pa'anga. The replacement of **one cable** was considered "sensible and economically justified capital replacement expenditure" but the replacement AT THIS POINT IN TIME (i.e. 2015-2020) of

two new cables was “much harder to justify” and would provide an “unnecessary degree of security.” Therefore there was a potential to reduce the Capex budget by 600,000 Pa’anga and the tariff by 0.2 seniti/kWh : and,

- the need for a replacement **Diesel Genset** at ‘Eua if the contemplated Biomass projected was not implemented. If the Biomass Project came to pass then ‘Eua would enjoy **n-1** security and early replacement of the genset would be unnecessary. Cancellation or postponement of the projected expenditure of 0.15 million Pa’anga would enable the required Non-Fuel Tariff to be lowered by a further 0.05 seniti/kWh.

3: To put matters in perspective the Independent Expert was taking significant objection only to around 4.75 million Pa’anga of Tonga Power’s proposed capital expenditure of some 45.2 million Pa’anga. If these objections were accepted in full by the Regulator the **projected Non-Fuel Tariff** of **46.25 seniti/kWh** could be reduced by 1.55 seniti/kWh to 44.70 seniti/kWh which, perhaps quite fortuitously, is remarkable close to the current Non-Fuel Tariff of 43.77 seniti/kWh.

4: Matters however did not rest there for during April, May and June 2015 Tonga Power produced a raft of further documentation in part augmenting and justifying their original capital expenditure proposals but also to some extent varying them – see **Docs. TPL. 24-35.**

5: **Smart Metering** – In **Doc. TPL-24** dated 30th April 2015 Tonga Power proposed to reduce substantially their expenditure on Smart and Prepaid Meters to 3 million Pa’anga after taking into account a projected Aid grant of some 800,000 NZD for the New Zealand Government. This would allow the installation of some 3,000 prepaid meters for “those most vulnerable to disconnection, update network metering and install smart meters for larger commercial and industrial customers.” The Regulator’s Expert in **Doc. EX-2** dated 25th June 2015 at pages 1 and 2 of that Report concludes his remarks on this Project by saying that Tonga Power have not made available “a compelling business case” for this expense which even at the reduced level now proposed would equal about 0.75 seniti/kWh of the Non-Fuel Tariff.

On 2nd July 2015 the Regulator expressly requested Tonga Power to produce such a **compelling business case** for their consideration otherwise they would require to disallow Capex for this Project. Tonga Power were forthcoming the very same day – see **Doc. TPL 36** which was a follow-up to the earlier paper intended to support expenditure of 7 million Pa'anga **(Doc. TPL-28).** From its date it was apparent that **Doc. TPL-36** had been in existence for some time (since 17th April 2015) and could have been produced to the Regulator before now. However having reviewed these documents the Regulator was persuaded that a maximum spend at this time on Smart Metering of 3 million Pa'anga was a not unreasonable request.

6: Of the 4 million Pa'anga "saved" from the original Smart Metering cost Tonga Power now proposed to spend 1 million pa'anga on implementing an **Enterprise Resource Planning (ERP) System** to enable them to improve quality and efficiency of their business processes. Tonga Power's case for this was explained in their **Doc. TPL-34** received by the Regulator on 24th June 2015 but not seen by the Expert by the time he had completed his second report, **Doc. EX-2** on 25th June 2015. He had said there that a proper business case needed to be presented to the Regulator (page 3). In the opinion of the Regulator **Doc. TPL-34** does just that, explaining the fundamental efficiencies to be gleaned from the integration of eight separate electronic systems which had been developed on an *ad hoc* basis in years gone by. In principle therefore this is considered a legitimate project for which the proposed expenditure of about 1 million Pa'anga can be included in the projected Capex for Reset Period 2. There will still need to be made available to the Regulator in due course when the Annual Capex Plan is submitted to the Regulator for approval "a more detailed implementation process and timeline" and detailed costings.

7: **Fourth Feeder** – In **Doc. EX-2** the Regulator's Expert (at pages 3 and 4), having for the first time had on opportunity to review two AECOM Reports – **Docs. TPL-31 and 32** –

recommended to the Regulator that they accept Tonga Power proposals for a Fourth Feeder and Capex associated therewith, and the Regulator is persuaded that it is appropriate so to do.

8: **Submarine Cables** – At one time there were two submarine cables under the lagoon, although for some years now there has been but one. The core issue is not whether there should be a second (new) cable to supplement the existing cable, but whether there should be two new cables at this point in time. The Expert's view expressed quite succinctly in **Doc. EX-2** is that the **case for one new cable has been made out** and the Regulator has no difficulty accepting this advice. He considers however (page 4) that "building a second new cable is an over investment and inefficient use of scare resources and more significantly a cost (Tonga Power) wants to pass on to the ordinary consumer, the very person the (Regulator) is there to protect from the cost of inefficient capital spending decisions." The Regulator understands that there is still life in the existing cable which makes **its** replacement during the Second Reset Period unjustifiable. Capex therefore will be allowed only for one new Cable. Maintenance of the existing cable must be covered by the Opex provision for R + M (Repairs and Maintenance).

9: **'Eua Generation** – Something urgently requires to be done to ensure that 'Eua is provided with acceptable **n-1** security. Tonga Power's proposal is that this be achieved by the construction of a Biomass Generation Plant on 'Eua (and possibly also a donor funded solar facility). The Regulator in this Reset is not required to assess the viability of the Biomass or Solar Projects as Tonga Power are not seeking any Capex provision therefor, being optimistic that any such projects would be Donor funded.

If no such funding materialises and either of the Biomass or Solar project does not eventuate then the Regulator and their Expert (page 5 of **Doc. EX-2)** are satisfied that new generation machinery would be required on 'Eua.

However at the present time the need for such expense, projected by Tonga Power at 0.15 million Pa'anga in 2019 or thereby, is **Speculative** and the Regulator is not persuaded that this is a suitable basis for including that possible expenditure in the Capital Expenditure plans now under review.

But if such expenditure does in fact require to be made at a future date the Regulator **undertakes**, and that **irrevocably**, that it would receive then an Extraordinary Review by Tonga Power for that purpose. In effect therefore consideration of this speculative item is **deferred** to see with transpires with the Biomass and Solar Projects.

In any event it is worth noting that the Tariff implications of including a new diesel genset for 'Eua are modest, reasonably estimated at only 0.05 seniti/kWh.

10: In their April 2015 Response **(Doc. TPL-24**) to the Independent Expert's 1st Report **(Doc. EX-1)** Tonga Power expressed the desire to use 3 million Pa'anga no longer required for Samrt Metering as **Additional Distribution Capex** – see page 10 where they said :

> "Please see Appendix 3 (to **TPL-24)** for a list of projects currently not funded that will benefit from the additional (3 million Pa'anga) over three years.

They added that this revised proposal "is predicated on the metering capital being substituted into these other projects." The additional distribution projects they identified are described at pages 30-32 of **TPL-24.**

11: Appendix 3 commences with the aspirational claim that "There are numerous areas where the re-allocation of metering CAPEX can be utilized." True as that may be from an objective standpoint the Regulator began his review of this revised proposal from the position that these other projects were not considered by Tonga Power as so crucially important as to warrant inclusion in their original Capex Proposal of December 2014 **(Doc. TPL-1).**

12: The reference on page 10 (paragraph 20.2.1) is to the two AECOM Reports **(Docs. TPL-31 and 32)** and expenditure required on the Fourth Feeder and Submarine Cable and "other significant investment requirements." But as already remarked upon earlier in this Decision the Fourth Feeder and Submarine Cable(s) were specific Capex requests in the original proposal and the Regulator's approval of these projects has already been signalled by the Decision, so plainly these two items cannot be viewed as components of the replacement projects for the 3 million Pa'anga no longer required as part of the Smart Metering spend.

13: What follows on pages 30-32 in paragraphs 20.2.2 and 20.2.3 is a very generalised summary of projects which Tonga Power believe would benefit from access to the released 3 million Pa'anga. The projects identified are : -

- The **Outer Islands Energy Efficiency** project in respect of which no details whatsoever amounting to a business case have been presented to the Regulator : furthermore the Regulator is not persuaded, on the information produced so far, even that a generic Energy Efficiency programme properly is a core function of an electricity producer and distributor the cost of which should be borne by electricity consumers through the electricity Tariff :
- **Cyclone Ian Recovery in Ha'apai** upon which Tonga Power very responsibility expended some 800,000 Pa'anga in 2014-2015 (Reset Period 1) but no precise figures are given as to what further amount will be spent (and or what) on these Recovery works in Reset Period 2 : and,
- **Subdivisions** and **Other Developments** including the Pacific Games; Water Board electricity reticulations project at Mataki'eua and Tongamai; Patangata Sub-Division; and a new Fua'amotu Resort.

14: For any capital project substituted at a late stage in the Reset process the very least the Regulator would have expected was a reasonably precise, detailed and costed plan for each such item; a compelling case why Energy Efficiency costs should be borne by electricity consumers via the Tariff rather than as an item of Government expenditure funded out of general taxation; and a credible Cost : Benefit Analysis explaining why electricity consumers as a whole should fund prestige items such as the Pacific Games or new Development Projects. Historically new connections are the responsibility of the developer alone! Why change? Why now shift this burden of expense for certain identified development projects onto the Electricity Tariff and the general body of consumers?

15: The Independent Expert in **Doc. EX-3** is not supportive of Capital Expenditure on these projects. His comments thereon merit repetition here *ad longum* : -

> "TPL proposes to spend $3 million in "savings" from the original $7 million smart metering plan, on additional distribution CAPEX. These include :
>
> - OIEEP and HCIRP – Outer Island Energy Efficiency Project and Ha'apai Cyclone Ian Recovery Project
> - Pacific games
> - Waterboard project
> - Sub division – Patangata
> - Resort development – Fua'amotu
>
> First, we note that none of these projects were set out in the TPL Reset Proposal submitted in December 2014; nor were they mentioned during our meetings and extensive correspondence with TPL during February and March 2015. Given they were not considered strategic priorities or even issues worth raising at that time, we find it difficult to accept that within a month of our report's release priorities have transformed so dramatically. It is also notable that the costs of these new projects matches the exact difference in cost TPL is proposing it achieves through reducing its smart metering project.
>
> Of the projects raised in Appendix 3 of TPL's response :
>
> 1. Major Distribution Areas – in our view the Commission cannot be asked to approve funds based on evidence that hasn't been presented.
> 2. Outer Islands projects – *prima facie* these projects seem to be important. However, very little information and justification has been

provided. In our view, given Tonga's stage in the development of electricity reticulation, these projects should be given priority over smart metering.

3. Sub-divisions and other developments – based on the descriptions given these projects seem to be of no direct benefit to electricity consumers and are social projects. Subject to other constitutional and legislative constraints the Government, as owner of TPL, has a right to commit funds to discretionary projects. However, in our view these projects should be funded from TPL equity and not from electricity consumers."

16: It transpired from dialogue between the Regulator and Tonga Power that the reduction in the proposed smart metering cost resulted directly from the change in the senior management of Tonga Power early in 2015. The new Chief Executive took a fundamentally different approach to expenditure priorities than had his predecessor. The Regulator, in principle, agrees with his decision to moderate the Smart Metering capital cost from 7 million to 3 million Pa'anga and accepts in principle that there are other useful projects whose priority can be enhanced. The core issue at this point in time in whether these substituted projects have been justified to the satisfaction of the Regulator. Presently they have not been, but perhaps in the future they could be.

17: Accordingly the Commission at this juncture just cannot sanction the inclusion of the "surplus" 3 million Pa'anga as part of Tonga Power's approved Capital Expenditure for Reset Period 2 (2015-2020) and the original request for 45,210,000 Pa'anga will be adjusted accordingly. The 'Eua Genset cost of 150,000 Pa'anga is also removed meantime as already signaled herein at Paragraph 9 of this Decision.

DECISION : The approved Capital Expenditure for the new Reset Period shall be 42,060,000 Pa'anga.

18: The Regulator from their dialogue with Tonga Power appreciates that at some future date they may be in a position to provide the essential information required in respect of one or more of these projects, namely along the lines highlighted in Paragraph 14 of this Decision. That being the case then, as with the 'Eua Genset (Paragraph 9 of this Decision), the Regulator **undertakes**, and that **irrevocably**, that it would at some future date during the Second Reset Period receive from Tonga Power on Extraordinary Review in respect of any one or more of these projects. In effect therefore consideration of these items is **deferred** meantime. It may be that such a review becomes unnecessary if Tonga Power request and seek approval to substitute any one or more of these items for a project included in the overall CAPEX approval. This is permitted as part of the Annual Capex Plan approval process and may well come to pass if a project for which Tonga Power presently expects to fund from borrowings or retained earnings were to receive donor funding.

O P E X

19: For Reset Period 2 the request by Tonga Power was for OPEX of 55.038 million Pa'anga (page 34 of **Doc. TPL-1**) being : -

Generation	13,128,000
Renewable Generation	2,040,000
Distribution	13,150,000
Retail	6,040,000
Corporate	<u>20,680,000</u>
	<u>55,038,000</u>

20: The Independent Expert commented thereon in **Doc. EX-1** at pages 42-44 and suggested that consideration be given to an efficiency saving of 3% which he regarded as "achievable" albeit he accepted that he had "no evidential been for an efficiency target of 3% nominal." As a cost efficiency OPEX target based on CPI-3% could reduce the projected Opex spend by over One Million Pa'anga during the whole of Reset Period 2 and would result in a reduction in the proposed Non-Fuel Tarriff of 0.8 seniti/kWh this suggestion, superficially, was attractive to the Regulator. However upon detailed consideration they did not consider it would be prudent to require 3% downward adjustments in operating costs across the board in the absence of credible evidence that such an approach would leave Tonga Power with adequate revenue to fund an efficient operation. The Experts' comments on Distribution and Generation OPEX gave the Regulator cause for thought. In the matter of Corporate Opex the Expert highlighted five areas where there was a substantial percentage difference (ranging from 188% to 544%) between what was now requested and the historic average expense in the period 2010-2014. But were these exceptional items or indicative of an overall over-spend?

21: Not unsurprisingly there was a robust response to this from Tonga Power in their Doc. **TPL-24** at pages 14-15. The Independent Expert's riposte thereto in **Doc. Ex-3** at pages 7 and 8 was that he was not convinced by the said response. They have "not provided sufficient compelling data or arguments from our perspective to deal with the issues we raised regarding what appears to be OPEX overspending."

22: Without access to and analysis of Tonga Power's detailed expenditure records during the first reset period the Regulator has no sound basis for moderating between the diametrically opposed views of the Independent Expert and Tonga Power. The Annual Audit Reports and Financial Statements of Tonga Power, professionally prepared and wholly acceptable to the Regulator, cannot be used to provide a solution as they do not provide the details or the analysis required to resolve this difference of opinion. The Independent Expert himself appreciated this difficulty for the Regulator for he suggested as a solution "a more detailed independent audit" of operating expenditure. After mature consideration this approach endeared itself to the Regulator. Subsequently Tonga Power agreed that this would be an appropriate path to follow.

23: Therefore there will be a special audit of Tonga Power's expenditure over the last three years and their Opex proposals for the Second Reset Period. The Terms of Reference therefor are set out in the Appendix to this Decision. Tonga Power will fund this special audit.

In the meantime : -

DECISION : **Provisional approval is given to Tonga Power's Opex amounting to 55.038 million Pa'anga during the 2015-2020 Reset Period : but subject to adjustment (if required) or confirmation when the special Audit has been completed and the Auditor's Report presented to the Electricity Commission for consideration.**

NON-FUEL TARIFF

24: On 31st January 2009 the Regulator fixed the Non-fuel Tariff, effective from the date of the **February 2009** meter readings at **38.69 seniti/kWh**. As provided for in the July 2008 Electricity Concession Contract that tariff was subject to adjustment annually in line with inflation, using the Tonga Government's CPI Index. Thus adjusted the Non-Fuel Tariff effective **January 2015** stood at **43.77 seniti kWh**.

25: In their original Reset Proposal of December 2014 **Doc. TPL-1** Tonga Power requested an opening Non-Fuel Tariff for Reset Period 2 of 46.25 seniti/kWh, an increase of 2.48 seniti/kWh on the existing Tariff, or 5.66% in percentage terms.

26: In their revised proposal of April 2015 **(Doc. TPL-24)** the Non-Fuel Tariff request was reset downwards at 45.25 seniti/kWh, resulting in an increase of only 1.48 seniti/kWh on the existing Tariff, or 3.27% in percentage terms.

27: The deferment of approval for (a) the 'Eua Genset (paragraph 9 of this Decision) and (b) reallocation of the Smart Metering savings of 3 million Pa'anga (paragraph 17 of this Decision) results in further savings to the new opening Non-Fuel Tariff of 1.00 seniti/kWh being :

‘Eua Genset	0.15 seniti/kWh
3 million Pa’anga reallocation	0.75 seniti/kWh
Submarine Cables	0.10 seniti/kWh
	______________
	1.00 seniti/kWh
	______________

When that amount is deducted from the 45.25 seniti/kWh referred to herein at Paragraph 26, there emerges the new Non-Fuel Tariff of **44.25 seniti/kWh,** which is only 0.48 seniti/kWh higher than the present Tariff, a percentage **increase of only 1.06% on the existing tariff.**

DECISION : **The opening Non-Fuel Tariff for Reset Period 2 effective 1st September 2015 is 44.25 seniti/kWh.**

BY ORDER OF THE COMMISSION

APPENDIX / . . . .

APPENDIX : SPECIAL OPEX AUDIT

AUDIT INSTRUCTIONS

Background

Operating expenditure (OPEX) is an area which places electricity consumers at greatest direct exposure to cost pass-through from Tonga Power Limited (TPL) as customers face the full impact of company operating costs annually, unlike capital costs (CAPEX) which are spread out and recovered from customers under the non-fuel tariff over time via depreciation and Return on RAV (Regulatory Asset Value). TPL has set out as a part of the current Reset process its forecast OPEX requirements for the period 2015-2020. Given Tonga is, due to limitations of scale, a non-competitive electricity generation, distribution and retailing environment, in order to provide both TPL and the Commission (on behalf of electricity consumers) with high levels of confidence that TPL's proposed OPEX budgets reflect an optimal and efficient use of scarce electricity consumer resources, a special audit will be conducted by a firm of Chartered Accountants with requisite electricity industry and audit experience and credentials. The auditor is to be selected by the Electricity Commission and the Audit Report will be presented to them.

Purpose

The purpose of the audit is to provide an Audit Opinion whether or not the forecast OPEX budgets proposed by TPL as part of the Reset process begun in December 2014, reflect an optimal and efficient use of scarce electricity consumer resources and that all spending is reasonable and justifiable for a business of its size and operating environment in a small Pacific Island Country with three separate island grids.

Scope

The audit scope will include :

(a) a detailed audit and review of all OPEX costs dating back to 1 July 2012 (including distribution, retail, diesel generation, renewable generation, corporate or otherwise);

(b) a detailed audit and review of all forecast OPEX budgets for the period 1 July 2015 – 30 June 2020 (including distribution, retail, renewable generation, diesel generation, corporate or otherwise);

(c) a detailed assessment of the level of efficiency and reasonableness of historical OPEX spend for the period 1 July 2012 – 30 June 2015, including any movements in costs from year to year; and

(d) a detailed assessment of the level of efficiency and reasonableness of forecast OPEX spend for the period 1 July 2015 – 30 June 2020, including any movements in costs from year to year.