



**CONCESSIONAIRES RESPONSE TO THE  
INDEPENDENT CONSULTANTS REVIEW**

**NON FUEL TARIFF RESET, SECOND  
ELECTRICITY TARIFF PERIOD 2015-2020**

**FINAL DRAFT**

**30 April 2015**

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## 1. Precursor

Tonga Power Ltd has prepared this *Concessionaires Response* after reviewing Shea Pita and Associates Independent Consultants Report (ICR) “Tonga Power Limited’s Proposal for Second Electricity Tariff Reset Period (2015-2020)”. The purpose of our response is to provide further clarity for the Electricity Commission based on the points highlighted in the ICR. We have not raised any additional points that are not covered in the ICR or TPL’s original Proposal<sup>1</sup> dated December 2014. Consequently of the 17 instruction topics discussed in the ICR, TPL wishes to discuss 11 topic areas. This can be represented as:

No.	Independent Report Instruction	TPL Provisional View	Reference	Proposed Outcome
1	Reset Period	Agree		
2	Tariff Period	Agree		
3	Rate of Return	Agree		
4	Heat Rate Target	Responded to	See Section 5	Agree with EC and average of 4.0 proposed
5	System Loss target	Responded to	See Section 6	Agree with EC recommendation
6	Fuel tariff Adjustment Period	Responded to	See Section 7	Agree three monthly with some exceptions
7	Non Fuel Tariff Adjustment Period	Agree		
8	Fuel Tariff – timing of adjustments	Responded	See Section 8	Mostly agree – please see table section 8.
8A	Hedging	Responded	See Section 9	CE’s to discuss
9	Non Fuel Tariff	Agree		
10	CAPEX (Depreciation)	Responded to	See Section 10	Some changes recommended to metering spend and reallocated distribution and IT spend.
11	OPEX	Responded to	See Section 11	No change to Proposed OPEX apart from reduced bad debts
12	Proposed Tariff	46.25 has been modified downwards slightly.	See Section 12	Now proposed as 45.25 from 1 July 2015.
13	Service, Metering and Reporting Standards	Responded to	See Section 13	Need to meet to discuss – believe majority aligned.
14	RAV	Responded to	See Section 14	Some reductions to opening 2016 RAV and Period 2 reallocations.

<sup>1</sup> With the exception of a proposed redistribution spend profile for some CAPEX

No.	Independent Report Instruction	TPL Provisional View	Reference	Proposed Outcome
15	Growth in Demand	Agree		
16	Inflation	Agree		
17	Catch All Provisions.	Responded to	See Section 15	Please see table in section 15

Tonga Power would like to meet and discuss our response and understand if the Commission requires additional information. Additionally meetings will facilitate an action plan for some of the added issues discussed in the ICR, such as modifying and improving practical applications of data inputs into the fuel model, discussing service and reporting standards etc.

It is important that the conclusion made in the ICR is debated and challenged – in it the consultant makes generic statements that the starting tariff is too high and should be lowered, although to what levels is not summated. This statement is not supported by any external benchmarking and it is important that readers of this response understand that TPL has benchmarked well in both the Pacific Power Association reviews and a PWC report commissioned by TPL to benchmark its costs. Additionally the December 2012 Pacific Infrastructure Advisory Centre (PIAC) also commented on TPL’s levels of efficiency.

## 2. Context

TPL faces a number of challenges over the next five years – aggressive but positive TERM objectives, impacts from third-party generation, challenges of maintaining fuel efficiency targets with the increasing renewable energy (RE) penetration, deficiency of safety regulations, fuel price volatility, flat overseas remittances, slow electricity demand, and a changing business landscape. However these are challenges that can be met as long as the company has sustainable cash flows, robust processes and quality management that facilitates the right investments whilst providing customers with a safe and efficiently priced electricity service. This must be done in parallel with satisfying the return requirements of the Government shareholder and aggressive strategies that reduce the fuel portion of the tariff.

## 3. Summary on Tariff

In our response we are proposing to:

- Reduce bad debts from a budgeted \$330,000 per annum to \$120,000 per annum.
- Amend the metering spend profile from \$7m for the period 2015-2017 to \$3m. This is a recent Board decision that should be reflected in the Reset.
- Transfer this \$4m to distribution and major Enterprise Resource Planning (ERP) investment spend over the period 2016-2018, some of which has a lower depreciation profile and hence softer impact on tariff.

- Update the 2015 closing RAV carried forward into Period 2 based on expected actuals, as opposed to budgets. Some of the expected actuals are lower than budget.

The impact of these 4 points means the proposed non-fuel starting tariff effective 1 July 2015 is reduced 1.0<sup>2</sup> seniti to **45.25** seniti per kWh sold (original Proposal **46.25**). There are no proposed changes to any other OPEX or CAPEX spend profile and the justification for this is described in sections 10 and 11.

We believe the revised non-fuel tariff assists the Commission with its primary objective, whilst still enabling Tonga Power to deliver an efficient and safe service for customers. Additionally the company's owners will receive returns that over time (assuming assumptions materially eventuate) deliver to their expectations.

The revised starting tariff of **45.25** seniti also ensures the company does not face an impairment risk under International Financial Reporting Standards (IFRS).

**Conditionality:**

TPL's ability to amend the original proposed tariff and to agree to system loss targets, best endeavour SAIDI measures, fuel efficiency targets etc is conditional on:

- The CAPEX program remaining intact subject to the changes referred to above.
- The OPEX program remaining intact after the adjustment for bad debts.

TPL reserves the right to reassess its position should the condition precedents above not eventuate.

## 4. Specifically

## 5. Heat Rate Target

**Instruction 4, Pages 20-21.**

We note the proposed formula has merit as a reporting efficiency measure but any calculation in the fuel model must be for diesel efficiency only inclusive of any diesel used whilst providing spinning reserve. The purpose of a diesel fuel pass through is to ensure the total cost of diesel is passed through after an assumption for an efficient level of diesel generation. This level of efficiency is likely to become increasingly difficult to maintain as renewables penetration (with minimal storage capability) relies on TPL's diesel generators to provide this spinning reserve. Spinning reserve creates grid stability and is a cost of business that should be passed through and this cannot be ignored in the fuel model. In

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<sup>2</sup> .61 seniti due to capital and RAV realignment and .39 seniti related to bad debt reduction.

summary TPL notes the comments in the ICR and has amended the fuel efficiency target (for all diesel generation only) to be a weighted average of 4.0:

Weighted Average Heat Rate Calculation using last 12 months data					
Island	Kwh	Diesel Consumption	Heat Rate		
Tongatapu	44,881,732	11,081,909	4.05	WAHR	4.00 (Method 1)
Vavau	4,407,974	1,175,460	3.75		
Haapai	1,284,080	356,689	3.55		
Eua	1,156,229	321,175	3.55		
Total=	51730015	12935233			
Proposed Heat Rates for Each Island - 2016-2020					
Island	Heat Rate				
Tongatapu	4.05				
Vavau	3.75				
Hapai	3.55				
Eua	3.55				

## 6. System Loss Target:

### Instruction 5, Pages 22-24

Once again this figure is a key input into the fuel model when calculating revised fuel tariffs. If the actual system losses are greater than those assumed in the fuel model, TPL will not recover its full fuel costs and if they are less than those modelled, TPL is ahead of the cost curve. The assumptions made in the ICR in relation to technical losses vs non-technical losses are high level only and are best acknowledged as an observation without an engineering basis on which to base these assumptions. TPL acknowledges that it will need to make a formal assessment of technical losses, currently planned for 2016.

TPL believes that the loss reductions to date have been in both areas (technical and non-technical<sup>3</sup>) and in any event the parties are only talking about bringing forward the achievement of 10% to 2019 instead of 2020. TPL agrees with this approach, *subject to the outcome of the proposed CAPEX spend program and in particular the fourth feeder project* and revises the proposed system loss targets to those Recommended by the EC:

Data Set	2016	2017	2018	2019	2020
TPL Proposed	12%	11%	11%	11%	10%
EC Recommended	12%	11%	11%	10%	10%

<sup>3</sup> As a result of improved metering, focus on theft and meter tampering, better data mining, improved sales analyses and billing accuracy etc.

## 7. Fuel Tariff Adjustment Period

### Instruction 6, Pages 25-26

TPL agrees with the three month reset window under the proviso that should there be a material movement within that period the parties reserve the right (if mutually agreed) to move the fuel price prior to the traditional quarterly movement. The recent dramatic fall in oil prices is a good case in point, where prices were adjusted downwards on a monthly basis to match the significant price decrease. In any event the standard period will remain three months.

## 8. Fuel Tariff – Timing of Adjustments

### Instruction 8, Pages 28-32.

Issue	Shea Pita ICR	TPL	Comments
Shorter Forecast Horizon for Fuel Adjustments	√	√	Will require contract change
Shorter Forecast Horizon for kWh billed	√	√	Agree in principle, formula to be refined.
Bad Debts	Change Recommended \$110,000 to \$120,000 p.a.	TPL agrees with recommendation	Has been applied to reset model at reduced rate of \$120k p.a.
Incorporating fuel savings from renewables into fuel model	√	√	TPL approach agreed – will require revised formula.
Fuel Efficiency Targets	Refer Instruction 4, Point 4.	Must be clear if reference is to a fuel efficiency target used in the fuel model or a reporting measure.	Parties need to ensure there is total clarity between diesel fuel efficiency targets that TPL contends must include spinning reserve litres and a reporting formula which includes all renewables.

## 9. Fuel Hedging

### Instruction 8A, Page 33

The Chief Executives of TPL and the Commission are discussing this issue.

## 10. CAPEX

### Instruction 10, Pages 35 – 40.

In the ICR the consultant has made several observations in relation to CAPEX. In this section we discuss each one in turn and conclude with a proposed adjustment to the metering project only. TPL does agree with the ICR in so much as proposed CAPEX (adding to the regulatory denominator) and resultant depreciation has a material impact on the starting tariff for Period 2 and as such needs to be exposed to review rigour. However we have a number of concerns with the ICR.

Firstly we do not consider the CAPEX program is too aspirational – it is CAPEX that must be completed to achieve the service and quality standards required under the Concession Contract or to honour previous contractual commitments (TVNUP)<sup>4</sup>. Secondly we do not consider using historical CAPEX is the “best starting point for benchmarking” The best starting point is to review the planning and project rationale for the upcoming five yearly spend plan, which may show little correlation to previous periods spend demanding on demand assumptions, network age profiles, generation strategies etc. With this perspective it may then be relevant to review historical spend. As a case in point the 2014-15 spend is heavily influenced by the MAK installation at Popua which immediately distorts historical comparisons. Thirdly the CAPEX program is designed to support the governments planned renewables strategy through investment in network capability.

Please Note: Best endeavours will be used to secure donor funding for the projects discussed below in sections 10.1.1 – 10.1.4. Should TPL be successful in securing donor funding (this is however most unlikely) the company will assess the impact on tariff and discuss with the Commission whether tariff reductions are appropriate.

### 10.1. Specific Projects:

#### 10.1.1. Smart and Pre Pay Metering Project

With the company’s new Chief Executive reviewing the planned project, TPL Board of Directors agreed at the March 2015 Board meeting to scale the project back to initially install metering head-ends and infrastructure across the major users coupled with some pre pay metres. Approximately 60% of the total capital cost is in the smart meters themselves. However the Itron Head-end and Agility Advanced Meter and Prepayment modules can be implemented over a relatively short period and at commissioning end the

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<sup>4</sup> Additionally there is a history of many years of negligible investment, particularly in distribution.



bulk of payments are due to both vendors. To implement the smart metering system for 3,000 prepay customers identified as those most vulnerable to disconnection, update network metering and install smart meters for larger commercial and industrial customers by the end of the June 2017 financial year, Tonga Power would need to spend \$4.0m. However the NZ Aid grant can offset some of the costs below leaving a net capital expenditure of circa \$3.0m<sup>5</sup>.

Smart Metering Capital Costs	Initial Deployment (TOP)	Whole Project (TOP)
Cost of Meters & mesh kit (Itron)	1,158,297	3,918,678
Field Installation (TPL)	37,165	161,585
Field Implementation (Itron)	225,012	225,012
Project Management (Itron)	679,784	679,784
Mesh Node Backhaul Network (TPL)	88,400	88,400
Headend Cost (Itron)	1,194,007	1,194,007
MDM & Headend Interfaces (Agility)	71,905	71,905
Prepayment System (Agility)	245,205	245,205
Deployment Management (TPL)	7,098	30,860
Asset Management System (Agility PC sum)	0	100,000
Other miscellaneous costs (TPL)	39,750	53,000
MFAT grant (NZ807,950)	-1,179,607	-1,179,607
Project Management (TPL)	214,000	535,000
Contingency @10%	109,538	219,075
<b>Total</b>	<b>2,890,554</b>	<b>6,342,905</b>

Consequently we are proposing a revised spend profile of:

Spend (Y/E)	2015	2016	2017	Total
Smart Grid/Metering Original	\$4m	\$2m	\$1m	\$7m
Revised	\$.5m	\$2m	\$.5m	\$3m

<sup>5</sup> Please refer to updated [abridged] business case, Appendix 2.

TPL wishes to apply the \$4m metering savings in Period 2 as follows:

Spend	2016	2017	2018	Total
Distribution CAPEX Additional Spend		\$1.5m	\$1.5m	\$3m
ERP System	\$1m			\$1m

TPL has modified the expected 2015 closing RAV balance to reflect expected actuals as opposed to budget spend estimates for 2015. Again this is discussed in section 14 but in summary the reduction of the Smart and Pre Pay Metering project reallocated to distribution and ERP combined with an updated spend profile for 2015 means the closing RAV is now estimated to be \$56.9m as opposed to \$61.4m. The net effect of the above is to reduce the opening tariff by **.61 of one seniti**<sup>6</sup>. Please see Appendix 3 for a list of projects currently not funded that will benefit from the additional \$4m over three years. *Additionally our revised proposal is predicated on the metering capital being substituted into these other projects.*

#### 10.1.2. Fourth Feeder

TPL maintains its position that the fourth feeder is a necessary investment and wishes to reinforce its position as described in the Proposal. A spend projection of \$600,000 real in each of years 2016 and 2017 has a minimal impact on tariff when matched against the potential implications of business as usual and not doing this. The fourth feeder is essential for security of supply to the Nukualofa CBD area, where growth can be in relatively large steps (from a low base each building represents significant increase levels). The fourth feeder is an integral part of TPL's network development. The project has been developed and recommended by SKM (Sinclair Knight Merz) following their review of the TPL Tongatapu network in 2010. Their report states on Page 11:

Without a fourth feeder, the future 2.9 MW CBD load on feeder 2 would result in very unbalanced loading. However, if load 2 is switched on to feeder 1, the peak currents in feeders 1 and 2 are 330 A and 260 A respectively. Further balancing of network spurs should be undertaken if possible, however this would depend on the CBD reticulation layout. No CBD concept design has been completed at the time of this study. Assuming the CBD would be fed by 2, annual losses could be reduced by 467 MWh with a Lynx conductor fourth feeder or 882 MWh with a 300 mm<sup>2</sup> Cu fourth feeder.

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<sup>6</sup> The remaining .39 of a seniti is related to the bad debts reduction.

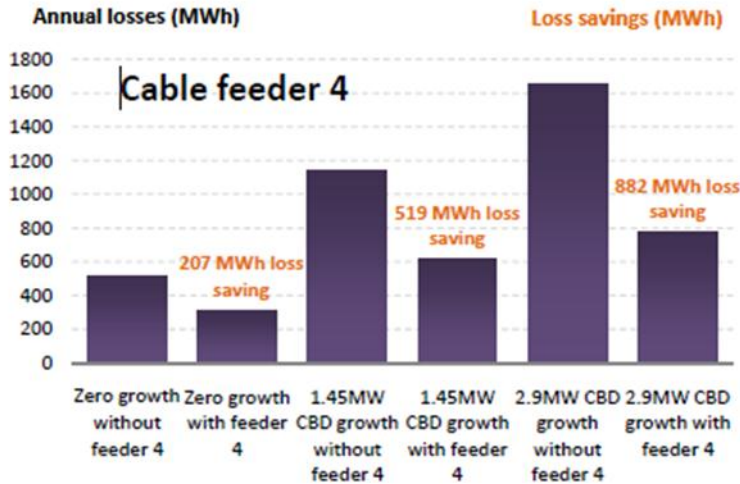


Figure 9: Graphical analysis of losses with prospective 300mm<sup>2</sup> Cu cable fourth feeder

### Economic Analysis

Reduction in 882MWh translates to reduction in losses from 12.37% to 10.74% (based on 2013/14 Year End Figures) which is a 1.62% decrease. This translates to 212,000 litres of fuel saving and 1.2 seniti/kwh tariff reduction through the Fuel Model. However, the consultant's report says if we were not to go ahead with the further feeder, the tariff reduction would be only 0.3 seniti/kwh (refer page 38) and the risks of unbalanced feeders increases. The ICR notes that this project was included in the asset management plan as potentially donor funded in 2017. TPL brought this project forward into the reset model as TPL funded in 2016-2017 @ \$600,000 per annum as it viewed the likelihood of donor funding being remote. TPL has assumed this project will progress and it is a major component of the reduced losses over Regulatory Period 2<sup>7</sup>.

#### 10.1.3. Submarine Cables

TPL maintains its position that the submarine cable is a necessary investment and reinforces its position as described in the Proposal. A spend projection of \$1,200,000 real in 2016 is critical to maintain security of supply and to enable the planned renewables via improved interconnection capability. It is not possible to supply the eastern side of the island using the two remaining feeders (Nuk 1 and 2) for all demand for every part of the day. Rolling outages would be necessary in the case of a single cable failure, affecting the connections from the University of the South Pacific campus to the airport, and to the Northern tip of the

<sup>7</sup> This is supported by an AECOM study to prepare TPL for operations with renewable energy plants. AECOM is adamant the ring topology (which required feeder 4) is required for the renewables strategy. The report will be in final form by 15 May and can be made available then. AECOM would be happy to discuss this with the Commission should it be required.

island, where a wind farm is currently proposed. The ICR does not mention why only one cable is considered sufficient.

### **Additional Justification for the Submarine Cable from TPL Engineering Team**

The existing submarine cable (armoured three core PILCSWA 70mm<sup>2</sup> Cu) is about 30 years old and it is time for replacement as it has ended its life expectancy. Also it is not a rated submarine cable. Its sister cable which was installed at the same time failed completely due to accidental interference from fisherman which damaged the cable beyond repair. Because the damaged cable was not rated as submarine cable it can no longer be repaired. TPL experienced a fault last year where the termination burnt out due to current leakage as a result of weak insulation. This is a critical 2016 project.

### **Risks with one submarine cable only**

- If there is a fault on the cable (Vaini feeder or Eastern Feeder), TPL normally back-feeds from the Western side feeder. This Western side Feeder is not sufficient to back-feed approximately 30% of the 4,000 customers on the Eastern side. We are also unable to back-feed Tonga Airport from the Western Feeder because of its large load. As a result TPL can lose significant revenue until we are able to replace the one and only remaining submarine cable. The estimated total revenue loss is approx. \$5,210 per day. The risk of not having N-1 is of course significant.
- When TPL back-feeds the far end customers in the eastern side from the western feeder, power quality issue are created; losses and voltage fluctuations increase, frequency decreases leading to a likely event tripping of the Popua power station and losing power to the entire island.
- Having one cable is always risky as the cable is under water and it can be accidentally or maliciously damaged by a third party; or by an act of God (e.g. earthquake).
- The option of laying the second cable after the existing one ends its life is not considered viable and does not make economic sense if you consider the additional costs of barge hire, mobilisation and terminal installation works.

It is important to note this is a Board approved project and one the company is adamant needs to proceed. The incremental tariff impact (.25 of 1 seniti) is an *insignificant* cost when weighed against the risk of a single cable failure and the inability to service future renewables and substantial numbers of customers. *If required, TPL will commission a supporting engineering paper from SKM or equivalent.*

### **10.1.4. Generation CAPEX Tongatapu**

Again TPL stands by its current budget and plant type for TBU replacement but is always prepared to view other options going forward and before expenditure is committed. TPL is currently discussing options with various suppliers and notes that whilst the MAK machines

are more efficient and more robust in fuel quality, there would be a significant set up cost to reconfigure the generator housing areas. At business case time, TPL will review the machine make options but again we do not currently anticipate material savings once additional CAPEX costs for set up costs are accounted for. This may change as we get closer to implementing the replacement strategy and both CAT and MAK options are reviewed. We strongly believe the spend allocation should remain as submitted with the company's December 2014 Proposal.

#### 10.1.5. Generation Eua

As the ICR correctly points out this is not material to the start price (.05 of 1 seniti) and TPL proposes that the funds remain in 2019. If funding needs to be brought forward this will be discussed as part of the annual planning discussions with the EC and if the spend is not required the impact to consumers is virtually nil. This spend is dependent on the outcome of the bio mass project and a possible donor funded solar facility.

#### 10.1.6. Other CAPEX

The ICR makes several observations in relation to other CAPEX. Unfortunately the materiality of many of the discussion points is not highlighted and as such TPL's response is as follows:

##### **Motor Vehicles:**

Period 1 estimated 7 year spend \$3.1m, Period 2 Five Year Spend \$1.6m. At marginally half the spend of Period 1, or 29% less after normalising the Periods to 5 years, Period 2 shows the benefits of the modernisation program which has occurred over the last five years. Period 2 spend follows the company current replacement program of between 3-5 years for cars and light commercials and up to 10 years for major trucks.

##### **Office Computers and Equipment:**

Period 1 estimated 7 year spend \$1.3m, Period 2 Five Year Spend \$.6m. At marginally under half the spend of Period 1 (33% less than Period 1 normalised), Period 2 shows a sensible allowance with the major spend occurring in the 2019 year, where planned billing software and other upgrades have been provided for. Please refer to Appendix 3 where an additional \$1m spend for an ERP system is proposed.

##### **Land and Building**

Specified projects including new fences, building repairs etc. Agree with the ICR there is nothing problematic in this asset class.

**Furniture and Fixtures:**

Period 1 estimated 7 year spend \$.22m, Period 2 Five Year Spend \$.23m. Not material.

In conclusion there has been a reduction in the significant areas of “Other” CAPEX when compared to the expected result for Period 1, even after acknowledging the different period (7 years as opposed to 5). The expected 7 year spend is \$8.38m or prorated for a five year equivalent of \$6m. The Proposed Period 2 spend (5 years) is \$4.02m.

## 11. OPEX

**Instruction 11 Pages 42 – 44.**

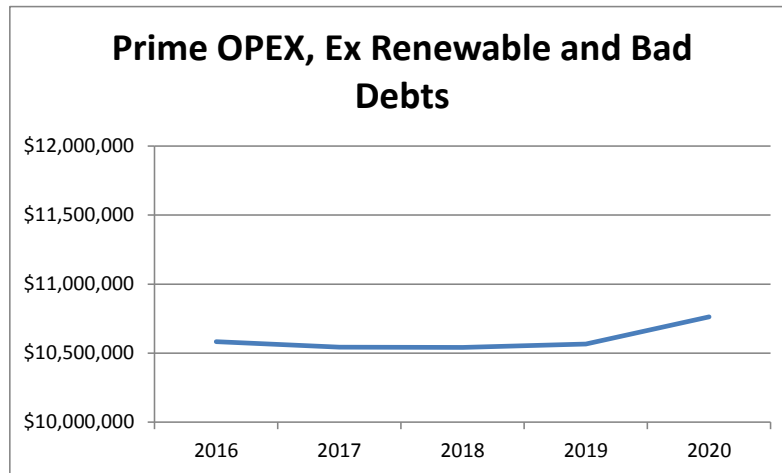
Ensuring an efficient level of OPEX for the five year period 2016-2020 is a critical part of the reset process. In our Proposal, TPL demonstrated that the two major field operational divisions (Generation and Distribution) were decreasing based on historical averages whilst Corporate and Retail costs were rising slightly, when measuring Period 2 in full against Period 1. However a more appropriate methodology is to measure 2012-2015 as an average per annum cost against the average projected yearly spend 2016-2020. By using the last 4 years we can ensure the modelling captures generation overhauls being expensed, the capitalisation of some distribution overheads, the reshaping of corporate to enable renewable projects to proceed and costs to adequately monitor risk across the business. This can be represented as (referred to as Prime costs):

<b>Nominal (Inflation Included) Cost Comparissons:</b>					
	<b>Generation</b>	<b>Distribution</b>	<b>Retail</b>	<b>Corporate</b>	<b>Total</b>
2012-2015 Average p.a.	\$3.28	\$2.67	\$1.11	\$4.06	
2016-2020 Average p.a.	\$2.63	\$2.63	\$1.21	\$4.14	
Difference:	<b>\$0.66</b>	<b>\$0.04</b>	<b>-\$0.10</b>	<b>-\$0.07</b>	<b>\$0.52</b>

This table highlights how the projected overall Prime spend is in fact some \$500,000 per annum lower than the average per annum spend for the last 4 years. The majority of this is from generation and the areas of increase (corporate and retail) are not materially significant. We do note however that TPL has committed \$2m (nominal) of OPEX for the full five year period (average of \$400,000 per annum) to support existing and planned renewable projects. This reflects current practice where TPL is covering insurance costs for renewable sites, land lease payments and other onsite maintenance.

Currently these costs are not being recovered in the tariff and represent a real and genuine cost to TPL that should be recovered via the non-fuel tariff. Also, bad debts, originally budgeted at \$1.9m in the Proposal, have been adjusted downwards to \$600,000 (real) over

five years. The positive impact of this is discussed in sections 3, 12.1 and 16. The following graph shows the consistent nature of planned prime spend, with a slight increase in 2020 due to generator maintenance.



Additionally the Commission informally expressed concerns in relation to capitalised overheads from Distribution OPEX to Distribution CAPEX. The Commission had incorrectly been informed that TPL was counting the costs twice. We have double checked the models and they show a reduction in OPEX and an addition to CAPEX – i.e. no double counting. This is the current accounting practice which has to date been approved by the Company’s auditors KPMG. When reviewing TPL’s costs it is important to provide an external perspective and we note the PWC and PPA reports referenced in the December Proposal. In Particular PWC state from the executive summary:

*Benchmarking:*

Benchmarking of TPL against other Pacific Island countries and their power companies was undertaken to provide a high level overview of TPL’s overall performance. These ‘peer’ group countries/providers were selected using a number of metrics similar to The Kingdom of Tonga and TPL including GDP per capita, population size, access to electricity and generation source. The benchmarks indicated that TPL, for its size and generation mix, is one of the more efficient power providers within the peer group. TPL’s tariff structure provides one of the lower costs to consumers while having a large number of residential, i.e. higher cost to serve, customers. Its commercial tariff is one of the lowest across the group analysed. Only those organisations with a significantly higher level of renewable generation or artificially distorted pricing offered lower average rates. It would appear that TPL is able to keep its prices comparatively low due to its efficient use of diesel (low fuel cost per kW sold) and tight control of

on-fuel operating costs. TPL also has one of the highest ratios of customers to staff, again a measure of overall efficiency<sup>8</sup>.”

This efficiency is achieved with one of the lower average consumption statistics for annual consumer demand.

In summary, overall Prime OPEX projections for 2016-2020 are reduced from recent historical averages, are consistent throughout the modelled period and represent a genuine incentive to perform. TPL considers OPEX expenditure for core activities and renewable expenditures should stand as per the December Proposal. Bad debts should be adjusted to levels described above.

## 12. Proposed Tariff

### Instruction 12, Pages 45-48

In this section the ICR again makes the generic statement that the tariff is too high but in the main focuses on depreciation charges. TPL notes the comments in relation to individual depreciation rates for material distribution and generation CAPEX and will endeavour to apply this methodology from 1 July 2015. However we note that there is no ability to do this for the opening RAV, as it was agreed as a “*lump sum*” asset starting point with no component allocation. Period 1 Assets (2009-2015) are proposed to be depreciated over 25 years on an average basis (4% p.a.), which has a positive benefit to consumers of .25 of 1 seniti.

For period 2 assets (2015-2020) in the interim we consider that the average rate applied for the distribution and generation asset classes are materially correct and do not have to be changed for the purposes of the reset. Our modelling shows that if the lives of Period 2 generation and distribution assets were increased by 10% (therefore decreasing depreciation) the impact on tariff would only be .15 of 1 seniti. However, as mentioned above, TPL will endeavour to apply more specific depreciation rates from 1 July 2015 for Period 2 material CAPEX items.

## 13. Service, Metering and Reporting Standards; Penalties.

### Instruction 13, Pages 49-52

TPL wishes to meet with the Commission during May to refine the service, metering and reporting standards. We suggest a half day meeting based on the marked up ECC proposed by TPL and the Commissions views detailed in draft documents released January 2015. To

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<sup>8</sup> Page 3, Tonga Power Performance Review, March 2014.



assist this, the company's (without prejudice) initial views on the issues raised in the ICR are as follows:

Item	Discussion	TPL
<b>Connections/Reconnections – reconnect rural customer within 2 working days of payment</b>	Proposed penalty increase from \$20-30	Need to understand rationale.
<b>Customer service and billing standards</b>	Proposed 50 days to deliver a bill as opposed current to 60 days	In principal no issue
<b>Voltage stability</b>	The ICR recommends several changes	To be discussed during May
<b>Penalties for breaching reporting standards</b>	The ICR recommends several changes	To be discussed during May – TPL does not agree to the concept of a \$2,000 penalty if monthly report missed.
<b>Reporting Dates</b>	Proposed dates seem sensible	To be discussed during May
<b>Monthly Reports</b>	Material new information requests	TPL needs to understand the reasoning for this – will simply add more cost.
<b>Annual Information</b>	Dates differ by a month	Need to discuss with the Commission – some information may still be in draft

As mentioned above the best way to resolve these issues is to meet and work through TPL's Proposal, the Commission's proposal and agree a negotiated outcome. The agenda will need to cover off service, reporting and metering standards, their application and penalties (if applicable).

**Specific Service Standard:**

Additionally TPL has introduced a proposed best endeavours System Average Interruption Duration Index (SAIDI) reliability clause into the service standards.. TPL still has a significant amount of renewals and system “smart” CAPEX to undertake in the next five years and

consequently has not contemplated these measures attracting penalty until Reset Period 3 (July 2020). However using SAIDI measures sets a clear expectation that TPL should be moving towards using this measure to improve the customer's experience on the network.

## 14. Regulatory Asset value (RAV)

### Instruction 14, Page 53.

The Originally Proposed RAV Position was:

5 Year Total	Description	Period Two Nominal	2016	2017	2018	2019	2020
	Opening total RAV Book Value		\$61,335,999	\$67,654,607	\$74,889,258	\$76,898,839	\$77,504,280
\$12,329,338	Generation Capital Expenditure		\$2,049,285	\$4,906,962	\$1,280,956	\$318,409	\$3,773,726
\$24,228,003	Distribution Capital Expenditure		\$5,345,413	\$4,820,928	\$5,132,943	\$4,454,526	\$4,474,194
\$3,060,225	Smart Grid		\$2,030,000	\$1,030,225	\$0	\$0	\$0
\$584,099	Office Computers & Equipment		\$64,006	\$65,028	\$68,178	\$325,029	\$61,858
\$233,700	Furniture & Fixtures		\$44,234	\$43,908	\$50,883	\$48,610	\$46,065
\$417,858	Tools & Equipment		\$86,580	\$78,709	\$90,251	\$82,029	\$80,289
\$1,562,705	Vehicles		\$239,540	\$572,805	\$130,710	\$344,943	\$274,707
\$0	Other		\$0	\$0	\$0	\$0	\$0
\$1,217,740	Land & Building		\$426,300	\$257,556	\$78,426	\$159,205	\$296,253
\$1,568,865	Renewables		\$304,500	\$309,068	\$313,704	\$318,409	\$323,185
-\$3,750,000	Disposals and Retirements Estimates		-\$750,000	-\$750,000	-\$750,000	-\$750,000	-\$750,000
-\$6,846,222	Depreciation on Opening RAV		-\$1,369,244	-\$1,369,244	-\$1,369,244	-\$1,369,244	-\$1,369,244
-\$8,159,466	Depreciation Period One assets		-\$1,631,893	-\$1,631,893	-\$1,631,893	-\$1,631,893	-\$1,631,893
-\$6,812,170	Depreciation Period Two Assets		-\$520,112	-\$1,099,399	-\$1,385,332	-\$1,694,581	-\$2,112,746
<b>\$19,634,674</b>	<b>Closing Estimated RAV</b>		<b>\$67,654,607</b>	<b>\$74,889,258</b>	<b>\$76,898,839</b>	<b>\$77,504,280</b>	<b>\$80,970,673</b>

The 2020 revised RAV position is:

5 Year Total	Description	Period Two Nominal	2016	2017	2018	2019	2020
	Opening total RAV Book Value		\$56,964,309	\$64,269,784	\$72,472,222	\$75,935,650	\$76,426,420
\$12,329,338	Generation Capital Expenditure		\$2,049,285	\$4,906,962	\$1,280,956	\$318,409	\$3,773,726
\$27,341,858	Distribution Capital Expenditure		\$5,345,413	\$6,366,265	\$6,701,460	\$4,454,526	\$4,474,194
\$2,545,113	Smart Grid		\$2,030,000	\$515,113	\$0	\$0	\$0
\$1,599,099	Office Computers & Equipment		\$1,079,006	\$65,028	\$68,178	\$325,029	\$61,858
\$233,700	Furniture & Fixtures		\$44,234	\$43,908	\$50,883	\$48,610	\$46,065
\$417,858	Tools & Equipment		\$86,580	\$78,709	\$90,251	\$82,029	\$80,289
\$1,562,705	Vehicles		\$239,540	\$572,805	\$130,710	\$344,943	\$274,707
\$0	Other		\$0	\$0	\$0	\$0	\$0
\$1,217,740	Land & Building		\$426,300	\$257,556	\$78,426	\$159,205	\$296,253
\$1,568,865	Renewables		\$304,500	\$309,068	\$313,704	\$318,409	\$323,185
-\$3,750,000	Disposals and Retirements Estimates		-\$750,000	-\$750,000	-\$750,000	-\$750,000	-\$750,000
-\$6,846,222	Depreciation on Opening RAV		-\$1,369,244	-\$1,369,244	-\$1,369,244	-\$1,369,244	-\$1,369,244
-\$7,285,128	Depreciation Period One assets		-\$1,457,026	-\$1,457,026	-\$1,457,026	-\$1,457,026	-\$1,457,026
-\$8,121,091	Depreciation Period Two Assets		-\$723,112	-\$1,336,705	-\$1,674,870	-\$1,984,120	-\$2,402,284
<b>\$22,813,833</b>	<b>Closing Estimated RAV</b>		<b>\$64,269,784</b>	<b>\$72,472,222</b>	<b>\$75,935,650</b>	<b>\$76,426,420</b>	<b>\$79,778,142</b>

The Opening RAV is reduced from \$61.3m to \$56.9m due to the following adjusted spend profile in 2015:

## Draft TPL Response to Independent Consultants Report, Tariff Reset 2

2015 RAV - Figures are for 2015 Spend Only			
	Original RAV 2015	Modified RAV 2015	Comments:
Opening Balance	\$42,701,514	\$42,701,514	
Generation Capital Expenditure	\$12,038,289	\$11,538,289	Revised Final Cost Estimate
Distribution Capital Expenditure	\$5,248,935	\$4,548,935	Revised expected outcome
Smart Grid	\$4,000,000	\$500,000	Project Scaled back, transferred to IT and Distribution
Office Computers & Equipment	\$482,187	\$482,187	
Furniture & Fixtures	\$118,290	\$118,290	
Tools & Equipment	\$14,000	\$14,000	
Vehicles	\$105,000	\$105,000	
Other Auxiliary Equipment	\$0	\$0	
Land & Building	\$1,057,700	\$1,057,700	
Renewables	\$565,417	\$565,417	
Disposals and Retirements	-\$1,000,000	-\$1,000,000	
Depreciation on Opening RAV	-\$1,369,244	-\$1,369,244	
Depreciation Period One Assets	-\$2,626,089	-\$2,297,779	
<b>Closing Estimated RAV</b>	<b>\$61,335,999</b>	<b>\$56,964,309</b>	

In Summary the RAV CAPEX spend movements for Reset Period 2 can be expressed as (\$m):

Category	Original CAPEX Request	Modified CAPEX Request
<b>Distribution</b>	\$24.2	\$27.3
<b>Smart Metres</b>	\$3.0	\$2.5
<b>Information Systems</b>	\$ .58	\$1.59
<b>Other</b>	\$17.42	\$17.42
<b>Total</b>	<b>\$45.20</b>	<b>\$48.9</b>

These movements are more than offset by the readjusted 2015 expected spend and subsequently lower opening RAV for Period 2 carried forward from Period 1 (\$61.3m v \$56.6m). The tariff impacts are a decrease of .61 of one seniti<sup>9</sup>. Again the spend movements are discussed in Appendix 2 and 3.

<sup>9</sup> With an additional .39 seniti due to the reduction of bad debts.

## 15. Catch All Provisions

### Instruction 17 – Pages 59-62.

Issue raised	TPL Comments
Corporate Travel	Not Material
Regulatory and Non Regulatory Revenue	TPL believes it has followed the requirements of the ECC and there is no issue.
Fuel Model	TPL agrees with the recommendations to refine the transparency of the fuel model.
Extraordinary Review Mechanism	TPL had originally suggested an “overs and unders account” which measured actual returns against allowable returns. The purpose was to potentially reward consumers if the company did better than 8.5% with a special discount. This did not gain traction with the EC but remains an issue TPL wishes to engage on.
Project Level Review	In principle TPL agrees with the recommendation – at the annual capital plan stage the EC should see the rationale behind the yearly plan and how it differs from the overall five year master plan.

## 16. Overall Summary:

The prime purpose of this reset process is to determine the opening non-fuel tariff applicable from 1 July 2015. TPL has used best endeavours to ensure the starting price encourages an efficient operation delivering value to consumers whilst also providing sustainability to the business and its owners. We believe we have done that in the initial Proposal through:

- Smoothing depreciation of period 1 Assets
- Assuming a “bullish” start point to 2016 kWh’s sold
- Using an average of opening and closing RAV when calculating the allowable return.

These initiatives combined reduced the theoretical opening tariff to 46.25 seniti as opposed to 47.70 a savings of 1.45 seniti. Additionally our recommendations in this report reduce the proposed starting non-fuel tariff of 46.25 by a further 1.0<sup>10</sup> seniti to 45.25. This would mean the shareholder return on equity would be 9.2% by 2020 and TPL should still earn its 8.5% post tax return on RAV. The current non fuel tariff is 43.77 seniti. 45.25 represents a 3.3% increase on today’s price.

Overall (assuming assumptions eventuate) we believe 45.25 creates the right incentives to be efficient in spend, creates an opportunity to provide direct and indirect support to renewable projects and satisfies lenders and owners requirements. Most importantly it

<sup>10</sup> .61 seniti due to capital and RAV realignment and .39 seniti related to bad debt reduction.

allows TPL to build on the platform<sup>11</sup> of providing an ever improving safe and reliable electricity service to its customers.

## 17. Other Issues

- TPL wishes to meet with the Commission during May to refine the service, metering and reporting standards. We suggest a half day meeting based on the marked up ECC proposed by TPL and the Commissions views detailed in various draft documents released January 2015.
- Additionally we wish to use this period to discuss any remaining issues in relation to inputs to the building blocks that set the opening non-fuel tariff. This may include discussions with TPL engineering staff in relation to the AECOM report referred to in section 10.1.2
- Shape of the contract and how changes (including new fuel formulas, revised allowable return, new reset period etc.) will be incorporated into a revised ECC prior to 30 June 2015. These contract changes are required to facilitate many of the agreed changes.

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<sup>11</sup> Ranked as one of the top Pacific performers.

## 18. Appendix 1 Tariff Starting Point

### Tariff Start Point:

The starting tariff is calculated by assuming a five year profile of revenue from electricity sales against a profile of operational and other costs to run the business for five years. These revenues and costs are discounted back to today's dollars where the total of the revenues over five years equals the total of the costs over five years. The discount rate is the allowable return and in this instance is 8.5% post tax. With a **45.25** seniti start tariff for the non-fuel component of the electricity tariff, the five year discounted totals are as follows:

Variable	5 Year sum discounted to today's value	Comments
<b>Revenue</b>	\$92,173,600	Generated from the start price of 45.25 seniti per unit of power sold* plus annual inflation – no other increases permitted unless an extraordinary event.
<b>Operational Costs</b>	(\$40,888,315)	Includes all maintenance, insurance costs, billing costs, bad debts etc
<b>Depreciation</b>	(\$16,099,399)	Depreciation on TPL assets only – excludes donor funded assets.
<b>Return On Assets</b>	(\$35,185,885)	** See Below
<b>Balance</b>	\$0	

\*The other part of the tariff is the fuel portion, which is adjusted every three months.

\*\*The Return on assets figure plus depreciation is used to fund capital expenditure, tax, debt repayment, interest and dividends to owners.

## 19. Appendix 2 – Current Spend Justifications.

Extract from March Board Paper on modifying Smart Metering and Prepayment Project:

### **Revised Scope**

The key changes for this the 5-year deployment option with respect to the Project that was originally approved by the Board includes:

- (i) Project start May 2015
- (ii) Itron SAAS service operational September 2015
- (iii) Agility Advanced Meter and Prepayment modules operational September 2015
- (iv) Deployment commences September 2015
- (v) 3,000 prepayment customers being the most vulnerable to disconnection and the commercial and industrial customers (except CT metered customers that would not be remotely disconnected) assumed for the first year of the deployment
- (vi) Installation of meters at key points in the Network to monitor voltage and other power quality parameters

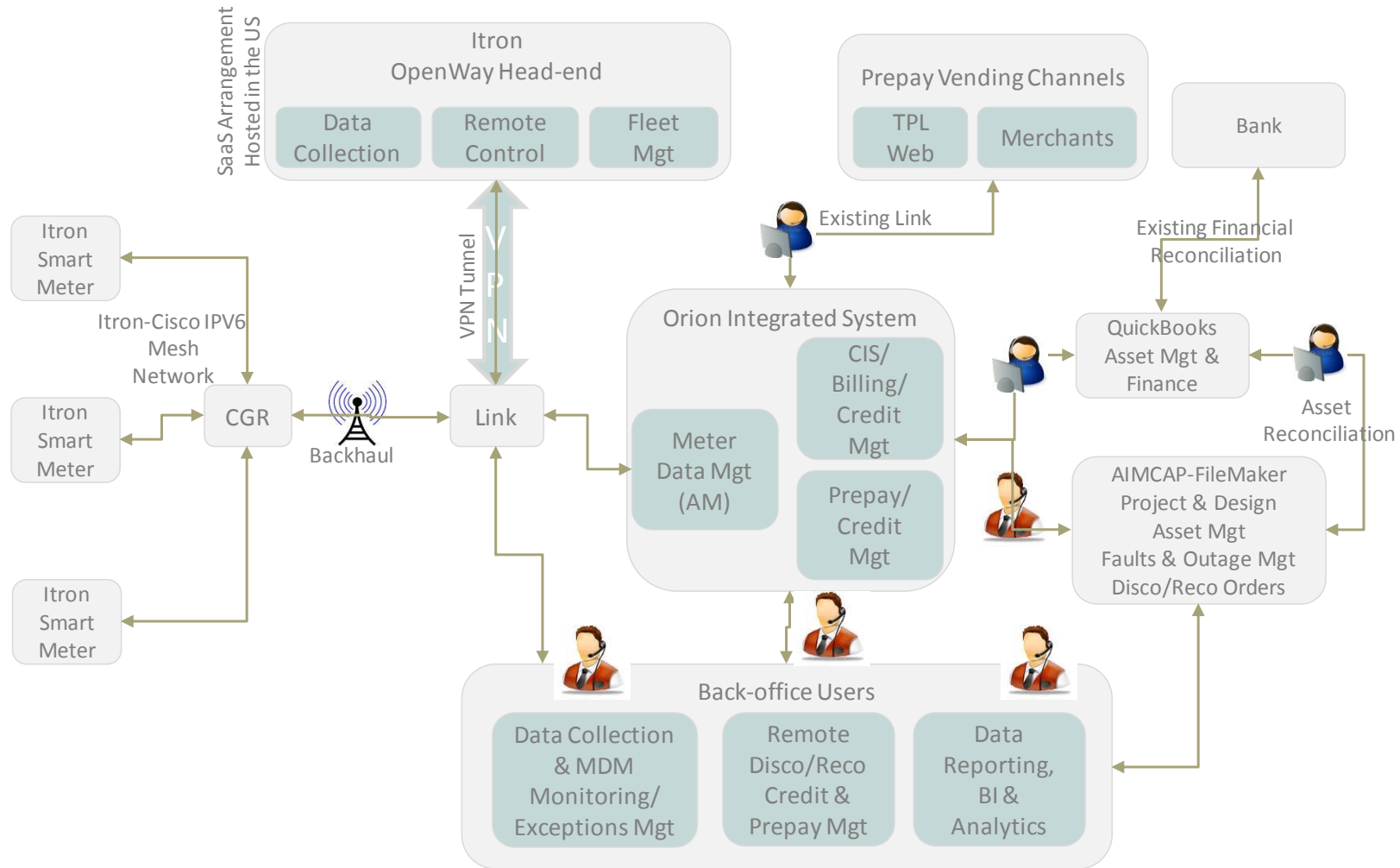
### **Benefits of Smart Metering and Prepayment**

The benefit streams as evaluated previously remain unchanged but are realised in later years as the meters are progressively deployed.

### **Architecture of Smart Metering and Prepayment and Existing Systems**

The architecture of the proposed systems and the interconnection to existing Tonga Power systems is unchanged and is shown in the following diagram.

# TPL AMI Systems Integration Architecture





## Capital and Operational Costs

Smart Metering Capital Costs	Initial Deployment (TOP)	Whole Project (TOP)
Cost of Meters & mesh kit (Itron)	1,158,297	3,918,678
Field Installation (TPL)	37,165	161,585
Field Implementation (Itron)	225,012	225,012
Project Management (Itron)	679,784	679,784
Mesh Node Backhaul Network (TPL)	88,400	88,400
Headend Cost (Itron)	1,194,007	1,194,007
MDM & Headend Interfaces (Agility)	71,905	71,905
Prepayment System (Agility)	245,205	245,205
Deployment Management (TPL)	7,098	30,860
Asset Management System (Agility PC sum)	0	100,000
Other miscellaneous costs (TPL)	39,750	53,000
MFAT grant (NZ807,950)	-1,179,607	-1,179,607
Project Management (TPL)	214,000	535,000
Contingency @10%	109,538	219,075
<b>Total</b>	<b>2,890,554</b>	<b>6,342,905</b>

### Capital Outlay

Approximately 60% of the total capital cost is in the smart meters. A 5-year deployment programme significantly defers the capital expenditure. The Itron Head-end and Agility Advanced Meter and Prepayment modules can be implemented over a relatively short 5 month period and at commissioning end the bulk of payments are due to both vendors.

To implement the smart metering system for 3,000 prepay customers, network metering and the large commercial and industrial customers by the end of the June 2016 financial year, Tonga Power would need to spend 4.1m. However the MFAT grant can offset this capital amount by 1.1m leaving a net capital expenditure of 3.0m for Tonga Power to fund.

Tonga Power has the discretion as to when the remainder of the Residential customers have smart meters deployed. Once the base systems are deployed, the meters can be deployed as capital is available.

## Implementation

A staged approach to the implementation is planned to ensure the Project is rolled out in a measured way thereby minimising risk at each hold point. The following stages are envisaged.

- (i) Itron design approval
- (ii) Agility design approval
- (iii) Wi-Fi backhaul acceptance test
- (iv) Factory Acceptance Test approval
- (v) Site Acceptance test approval involving a set of test meters deployed in the field
- (vi) Initial deployment of Network monitoring smart meters
- (vii) Initial deployment of Residential pre-payment meters (single phase)
- (viii) Initial deployment of commercial and industrial (C&I) meters (three phase)
- (ix) When the initial deployments are successfully complete, the remainder of the 3,000 prepayment and C&I meters will be deployed.

## Economic Analysis

### Base Case

Using a classical discounted cash flow analysis the economics of the 5-year deployment smart metering project are presented in the table below.

Venture IRR (pre-tax)	12.7%
Venture NPV (pre-tax)	TOP2.05m
Equity IRR (post tax)	20.0%
Equity NPV (post tax)	TOP2.01m

Previously the Project was planned to be completed over a two year period. This resulted in a pre-tax return of 17.6% as the returns more closely matched the capital outlay. Nevertheless the 5-year Project deployment still provides Tonga Power a good return.

## 20. Appendix 3 – CAPEX Reallocation

TPL has outlined a revision to the original Proposal where the 2015 RAV is updated with more realistic CAPEX numbers, the metering project is reduced to \$3m over 3 years and the resultant \$4m is reallocated to other projects. We have allocated this as \$1m to a new Enterprise Resource Planning tool (spend 2015-16) and distribution spend of \$3m spread over the 2017-18 years.

### 20.1. New ERP System

#### Board Extract, April 2015:

##### Purpose:

To seek Board approval to upgrade the TPL management information system to an Enterprise Resource Planning (ERP) system, to improve quality and efficiency of business processes. It eliminates the need to synchronize changes and reconciliations among the existing standalone systems, minimise work duplications and avoid the risk of manual adjustments of system-generated reports. This would enable real-time information available to management anywhere, anytime to make proper decisions. Proposed budget for the information system upgrade is TOP1.0 million re-allocated from the smart metering project.

##### Background

##### Problem with the existing systems

Tonga Power Limited operates the following systems and alongside is their respective descriptions.

System	Description
Orion Billing System	Customer power Billing
AIMCAP	Network Asset Management
Reckon Accounts	Financials
IMS Payroll	Payroll
Proficy Cimplicity SCADA System	Generation SCADA system
Map Maker	GIS System
Exchange 2010	Emails
DNN	Online Payment module/Website

##### Enterprise Resource Planning (ERP) system

The existing systems do not incorporate best practice and it is critical that the upgrade adopt an Enterprise Resource Planning (ERP) system if it is to eliminate these inefficiencies in the existing MIS. The fundamental advantage of ERP is the integration of business processes which saves time and expense. Given the size of the company, the level of complications in the information processing, it is considered prudent and in the best interest of the company to upgrade its management systems. ERP systems connect to transaction data in a variety of ways and are typically configured by systems integrators, who bring unique knowledge on process, equipment and solutions.

## **Implementation**

MIS upgrade is a priority project and target completion date is 31 December 2015. For the company to operate efficiently and decision making process to be more effective, management should put priority to this project. ERP's scope usually implies significant changes to staff work processes and practices. Generally, three types of services are available to help implement such changes—consulting, customization, and support. Implementation time depends on business size, number of modules, customization, the scope of process changes, and the readiness of TPL to take ownership of the project. A more detailed implementation process and timeline will be submitted to the Board once more information becomes available.

### **Process preparation**

ERP implementation should not be difficult given the company's MIS is centralized at head office in Nuku'alofa. Data migration to the new system should be all done at the same time for all business units without the need to customizing the system to meet specific needs.

### **Project Manager/Specialist Recruitment**

Given the scope of the project and the requirements of the process preparation it requires a full-time specialist to manage the project implementation to achieve the timeline. Poor understanding of the required process changes prior to starting implementation is the main reason for project failure and recruitment of a specialist to work full time in managing the project is required in this case. It would involve a considerable amount of process changes to the system, business processes, infrastructure, training, and motivation of staff and the project manager should ensure that all activities are coordinated effectively to ensure the target completion date is achieved and benefits are realised.

### **Budget**

The CEO is seeking approval to re-allocate \$1M of savings from the smart metering project to fund this initiative and hence it does not affect our reset Proposal nor TPL's financial position. A separate paper has been submitted to the Board for approval to address the re-allocation of funding from the smart metering project. The amount of \$1M includes costs associated with the recruitment of an independent specialist from May through to December 2015 to project manage integration and delivery.

**The Board Resolved to proceed, subject to the upcoming Reset.**

## 20.2. Major Distribution Areas

There are numerous areas where the reallocation of metering CAPEX can be utilised. The draft AECOM World Bank funded “Upgrade of Grids and Preparing the Utility for Operations with Renewable Energy Plants - Stage 2<sup>12</sup>” report highlights a number of areas where TPL will need to either fund or seek funding to enable the grid to integrate renewables as part of the TERM objectives. Additionally there are grid update projects pending on Eua, Ha’apai and Vava’u funded by the ADB that will require CAPEX support. Finally property subdivisions and other developments (Government sponsored) are growing and TPL will need to fund these extensions, net of any customer contributions. These three areas are expanded on in sections 20.2.1 to 20.2.3.

### 20.2.1. AECOM World Bank Study

This report is being funded by the World Bank to highlight the field requirements and costs to enable the TPL network to deliver on the Governments renewables strategy. This report is in final draft but will be available by early-mid May. The draft report highlights significant amounts of CAPEX will be required to upgrade the network. This includes the fourth feeder and submarine cable and many other significant investment requirements. TPL will need to be a contributor to many of these costs and again this is contained in the AECOM draft report. We are unable to release this report to the Commission until the report is completed but it paints a compelling picture as to TPL’s likely additional investment contribution/co-ordination to facilitate the Governments strategy.

### 20.2.2. Outer Islands

#### **OIEEP and HCIRP - Outer Island Energy Efficiency Project and Ha’apai Cyclone Ian Recovery Project.**

These projects are based on the same principles as TVNUP on Tongatapu. TPL is currently funding significant portions of HCIRP and will continue to do so over the next two years. To date TPL has committed over \$800,000 to HCIRP. OIEEP as a program is commencing on Eua within the next 12 months, followed by Vava’u. For OIEEP a guiding rule of thumb is that for every \$5m US invested by donors Tonga is expected to contribute \$300,000 US, which typically falls on TPL as the agent of the Government. Conservative estimates are for some \$1.5m TOP over the next five years to fund these programs and it should be clearly noted these amounts were not included in the original Proposal.

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<sup>12</sup> As previously mentioned this report is in final draft and will be available from mid-May.

### 20.2.3. Subdivisions and Other Developments

The Proposed budgets do not allow for many potential network extensions and TPL is aware of several areas where development CAPEX will likely be required. These include:

#### **Pacific Games:**

Regardless of the fourth feeder, the Games footprint is highly likely to require significant TPL investment to facilitate. This would require HV cable, poles, transformers and other assets which are currently not budgeted by TPL. We are endeavouring to get closer to the organising committee to understand their requirements. Much of this infrastructure will remain permanent and will be a cost to TPL and this will not be optional.

#### **Water Board Project:**

##### **Rehabilitation and Extension of Matakieua and Tongamai Projects.**

This ADB funded project is unlikely to see Government fund the electricity reticulation. Discussions with the project team have indicated a firm expectation that there will be no charge for the electricity reticulation. This could cost upwards of \$500,000 with the customer being the Government who are likely to see TPL as the provider of funding of this project.

#### **Sub Division Patangata**

The existing land allotment is now being converted to a subdivision by the Government. TPL has provided Government with a quote to carry out the works but TPL expectation is that the company will be required to carry these out with minimal if any contribution from Government. The extension will be approximately 600m of High Voltage and is likely to proceed within the next 12 months. This project is conservatively estimated at \$400,000.

#### **Fuamota Resort**

This project could be upwards of \$1.5m and documentation is commercially sensitive but TPL has seen preliminary designs and note load expectations could be upwards of 2MW. This innovation is being heavily supported by the Ministry of Tourism and we understand the land issues have now been resolved. A considerable amount of backbone upgrade will be required for this investment, which TPL is anticipating having to fund at a greater level than would be typical as the customer has indicated a strong desire for a Government incentive. The developer's objective is to have this project completed well before the Pacific Games.

We have drawings and other information that we would welcome the opportunity to discuss with you in relation to these projects.

In summary the additional network CAPEX substituted from the metering program is critical to assist in funding an array of pending projects. We appreciate some may have to be funded from borrowings but an allowance of \$3m over two financial years is a sensible estimate for what should be covered by tariff. **We say additional as it must be treated as such.** These projects cannot be viewed as a substitution to remain within a distribution spend cap at original proposed levels (\$24m). We have requested this cap be lifted from \$24m to \$27m from the savings banked in 2015 from the metering project. The final shape of this spend will vary and will still create the required tensions in CAPEX planning at \$27m. As mentioned in the body of the report, best endeavours will be used to try and secure donor funding but our requirement to add \$3m of spend over 2017-2018 is real and likely to be proven to be conservative.