



STANDING COMMITTEE ON ECONOMIC AFFAIRS

Report on Fiji Electricity Authority Annual Report 2016



PARLIAMENT OF THE REPUBLIC OF FIJI
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Chair's Foreword

The Committee applauds the Fiji Electricity Authority (FEA) for not only producing a profit of \$59.6 million dollars for the year 2016, but also for absorbing all costs related to restoration works post Tropical Cyclone Winston, without having to increase borrowings or increase tariff rates. Fiji currently enjoys the lowest power tariff rates in the region including those of Australia and New Zealand. Whilst this is commendable the Committee noted with interest that FEA's future Power Development Plan (PDP) will cost in the vicinity of \$2.4 billion dollars and that this will hinge greatly on the right electricity tariff. The Committee urges the Fijian Competition and Consumer Commission (FCCC), FEA and relevant stakeholders to engage in dialogue to ensure the best possible outcome for both FEA and the general public in the long run.

With regards to FEA's commitment to reduce its reliance on the use of fossil fuels by 2030 the Committee was pleased to hear that renewable energy projects are being looked into with earnest. The Committee has recommended that due diligence and great care must be undertaken when scrutinising these possibilities, so as not to repeat the failure of the Butoni Wind Farm that was commissioned back in 2007. There are many options available including solar, wind, wave, waste, geo thermal, etc., but choosing the right system, best suited to Fiji, is imperative.

And lastly, the Committee notes FEA's role in assisting Government to achieve its target to supply electricity to every household in Fiji by the year 2021. Both the Government and FEA have invested extensively in extending the national grid to access remote communities and settlements and the Committee commends both the Government and FEA for this worthy target.

I thank the Hon. Members involved in the production of this Report and also the Parliamentary Staff who assisted.

On behalf of the Standing Committee on Economic Affairs, I commend this Report to Parliament.



HON. LORNA EDEN
CHAIRPERSON

Introduction

This Report has been prepared after scrutinizing the Fiji Electricity Authority (FEA) Annual Report for 2016 which was prepared in accordance with section 25 of the Electricity Act 1966 as well as perusing the oral and written submissions made by relevant stakeholders. The principal activities of FEA are the generation, transmission, distribution and sale of electricity throughout Fiji as governed by the Electricity Act 1966.

The Committee noted the detailed report provided by FEA which made scrutinizing easier, especially with the achievements and hardships clearly outlined. The Committee was made aware of the challenges that FEA faced in the year 2016, mainly due to Tropical Cyclone Winston which left behind extensive damage nationwide. Not only did FEA overcome the challenge faced by it but it also managed to make a profit after tax worth \$59.6 million.

The recommendations have been made by the Committee based on the Hon. Members views after rigorous discussions and after consulting the relevant parties.

List of Recommendations

1. The Committee notes that despite the set back from Tropical Cyclone Winston FEA made a profit of \$59.6 million in 2016. It further notes that all costs relating to restoration works were sourced within FEA (without borrowing or increases in tariff). The Committee commends the Board for its prudent management practices.
2. The Committee noted that the Power Development Plan (PDP) is highly capital intensive and has a price tag of \$2.4 billion which will hinge greatly on the “right electricity tariff”¹. The Committee also notes that Fiji currently enjoys the lowest tariff rates in the South Pacific including Australia and New Zealand through its uniform tariff structure. The Committee appreciates the importance of both executing the PDP and maintaining Fiji’s position as enjoying the lowest tariff in the region. The Committee recommends that the FCCC and FEA engage in dialogue to achieve both goals i.e. to develop Fiji’s energy sector and for the people to continue to enjoy a reasonable tariff.
3. The Committee notes that the gradual improvement of the power generation mix (54.55% renewable vs. 45.45% fossil fuel for 2016 as compared to 45% renewable vs. 55% fossil fuel for 2015) was due primarily to favourable weather conditions i.e. improved rainfall. The Committee recommends (so that we do not always rely on favourable weather conditions) that we diligently pursue other sources of renewable energy that are in the plans.
4. The Committee notes that FEA will continue to assist the Government in achieving its target to supply electricity to every household in Fiji by the year 2021. In particular, both the Government and FEA have extensively invested in extending the national grid to access remote communities and settlements and the committee recommends that this initiative continues.
5. The Committee notes the important role the Independent Power Producers (IPPs) can play in taking on capital projects which would otherwise tie up the resources of FEA. The Committee recommends that the IPPs are given all the necessary support to enable them to undertake all the projects identified so far, such as the Qeleloa Solar Project, Waste to Energy Project at Naboro and “run-of-river” hydro projects in Namosi.
6. The Committee noted the failure of the Butoni Wind Farm project which was commissioned at a cost of \$30 million in 2007. The anticipated annual energy output from Butoni Wind Farm was 11.3 GWh however; the actual average annual generation is just 5.11 GWh. The Committee recommends that with the drive towards renewable energy, due diligence and great care must be taken when determining which system is best suited for Fiji.

¹ FEA 2016 Annual report pg. 8

Gender Analysis

Gender is a critical dimension to parliamentary scrutiny. Under Standing Order 110 (2) the Committee is required to ensure full consideration to the principle of gender equality so as to ensure all matters are considered with regard to the impact and benefit on both men and women equally.

The Committee also notes that there were more men prevalent amongst the executive management team of FEA.

Conclusion

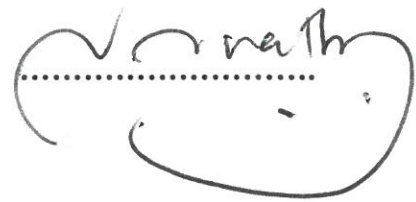
The Standing Committee on Economic Affairs has fulfilled its mandate approved by Parliament which was to examine the FEA 2016 Annual Report. The Committee after thorough deliberation has concluded that the above recommendations highlight key areas which if addressed could prove to be beneficial for our economy.

The Committee would urge that we stay true to the Sustainable Development Goal 7 that we have 'affordable and clean energy by 2030'.

Hon. Lorna Eden (Chair)


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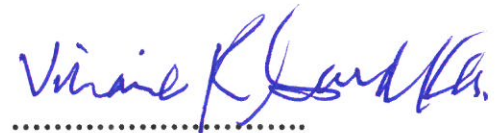
Hon. Vijay Nath (Deputy Chair)


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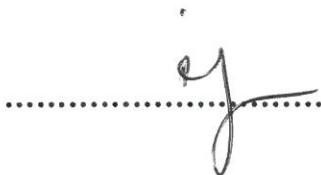
Hon. Brij Lal (Member)


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Hon. Viliame Gavoka (Member)


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Hon. Prem Singh (Member)


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THE PARLIAMENT OF THE REPUBLIC OF FIJI

INTRODUCTORY REMARKS TO STANDING COMMITTEE FOR ECONOMIC AFFAIRS ON DEPARTMENT OF ENERGY

*Parliament Chambers
Suva*

Wed, 10 Jan 2018

Salutations

- Chairman of the Standing Committee for Economic Affairs, Honourable Lorna Eden
- Members of the Committee

Introduction

To open our discussion today and before we move into the Question & Answer session, on behalf of the team, I wish to share a few remarks on significant works carried out by the Department of Energy (DOE) and also highlight targets to provide clean and affordable energy solutions to Fiji.

The DOE as you are aware focuses on policy and regulatory framework which includes the provision of electricity services to remote and rural areas; research and development of renewable energy sources such as geothermal, wind, hydro, biofuel and biomass; research into alternative fuels for the transport and industrial sectors and for land transport.

Recent achievements

Over the past years, the DOE have been contributing significantly to the electricity sector which includes Grid extension, House wiring, Solar Home System and other renewable projects.

In the 2017/18 National Budget, DOE's have been allocated \$42M for its Rural Electrification Projects an increase of over 50% from 2016/2017 allocation. Out of this allocation, \$32M has been allocated to the FEA Grid Extension Project. The increasing trend shows Government's commitment to achieve its targets of 100% of electricity access and energy security.

As you have noted that during the last couple of weeks our Hon. Prime Minister has been travelling to our rural areas to commission some of our grid extension projects. These include the Natauvoli Grid Extension in Naitasiri, Nasautoka Grid Extension in Wainibuka, Navuca and Sauva Grid Extension in Tailevu and one we just commission yesterday in Vunarewa Settlement Nadi. This is part of the many grid extension projects that we will be commissioning this year. Our target is to connect an additional 7500 households to the grid by the end of 2018.

Increasing water and electricity connection coverage

To ensure that all ordinary Fijians are connected to safe clean drinking water and sustainable energy supply, the Ministry of Economy (MOE in co-ordination with the Ministry of Infrastructure & Transport issued an advertisement on 23/12/17 for citizens that are currently not accessible to water and electricity connection to apply.

We will not let any Fijians left out. Our priority is to have all Fijians have access to sustainable power supply.

Conclusion

Madam Chair, that is all that I wish to share with the committee. Feel free to ask further question to the team should you need clarification.

Vinaka vakalevu, Thank you.

Questions for Dept. of Energy 2016 Annual report

1. *How realistic is the mission “we aim to provide clean and affordable energy solutions to Fiji with at least 90% of the energy requirements through renewable sources by 2025”.*

- The electricity generation mix for 2016 was 63.06% hydro; 45.46% Industrial Diesel Oil (IDO); 0.39% Wind and 1.11% Independent Power Producers (IPP) – Tropik Wood and FSC
- Total installed capacity for 2016 was 316MW (Hydro- 130MW; Biomass & Wind – 21MW; Diesel 164.9MW).
- The commissioning of the 12MW Nabou Biomass Plant in July 2017 will increase the share of renewable energy in the overall generation mix
- An Expression of Interest (EOI) was put out for the installation of 2MW-5MW solar hybrid in Qeleloa Nadi and two companies have been shortlisted for this project
- FEA is also in the process of signing a Power Purchase Agreement (PPA) with Hydro Fiji for the construction of a 30MW hydro project in Namosi
- The completion of the Monasavu Hydro Project Half-Life Repair and Maintenance work will optimize its generating output.
- Japan International Corporation Agency (JICA) have carried out feasibility study on hydro potential sites in Fiji and have identified three(3) new hydro potential sites in Wailevu, Cakaudrove with installed capacity of (14.4MW); Ba River (12MW) and Waivaka, Namosi (30MW). In addition, FEA have carried out hydro feasibility studies for the Wailoa Downstream and Qaliwana
- In order to achieve, the 90% target FEA will need to engage with more prospective investors to develop these renewable energy resources.

2. *On page 25 you are saying that the private sector should invest heavily as independent power producers. We know that Nabou Green Energy has started operating, how many more are in the pipeline?*

The other IPPs which are in the pipeline and have been stated in the report include;

- (i) Hydro Fiji Ltd – development of 30MW Namosi Hydro Project

- (ii) 2 Companies that were shortlisted by the FEA for the 2MW-5MW solar hybrid project

The signing of the PPA for electricity generation is solely between the investor and the FEA.

3. *Since the commissioning of the SomoSomo Hydro Power Projects, what is the coverage now throughout Taveuni, i.e. are we looking at electricity for the whole Island? If so, by when?*

The Somosomo Hydro Project has an installed capacity of 750kW (2 x 375kW). The current FEA network coverage is from Welagi to Wairiki. The plan for 2018 is to extend the grid to Loloi and Waiyevo Settlement and Nalele settlement which will add up to 40% of the network Coverage on the island. The remainder is intended to be completed within the next 4-5 years.

In addition to the above, the Ministry of Economy has engaged the Global Green Growth Institute to undertake the 100% Renewable Energy Feasibility Study for Taveuni and Ovalau. This will include the installation of 1.55MW on the island. The feasibility study had commenced at the end of last year and will be completed early this year.

4. *What level of input has the government provided in the Rural Electrification project?*

The government has invested a lot in terms of rural electrification projects. In 2016, the government had commitment \$13.1M for the construction of 34 rural electrification projects. Government had also made a commitment in 2016 to meet the full project cost of all rural electrification projects. In 2017/2018, government had committed \$42M on its rural electrification project out of which \$32M is for the grid extension projects. A total of 148 schemes will be installed this financial year.

5. *The 10 year Power Development Plan (PDP) for the period 2017 to 2026, we understand that the cost of implementing this is around \$2.4 Billion, what is the progress of this project and how will it be funded and what would be the effect on tariff rates?*

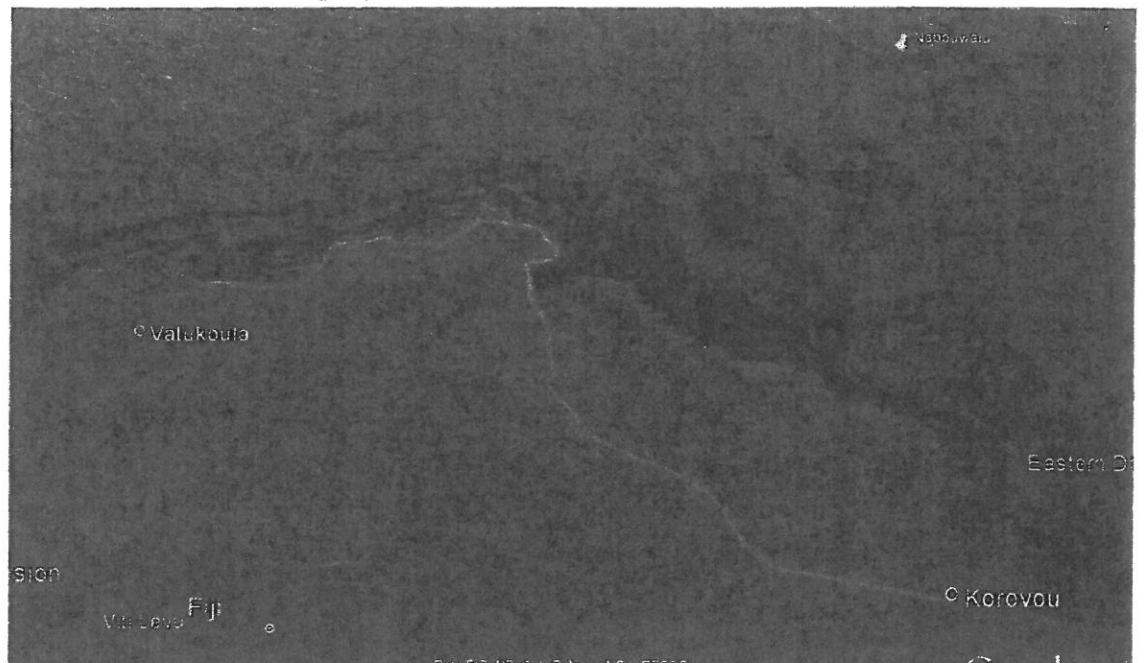
The PDP contains the load forecast for the ten year period, the power generation planning up to 2026 for Viti Levu, Vanua Levu, Taveuni and

Ovalau power systems together with the associated transmission and distribution network assets that need to be developed or augmented and the investment plan required to implement the PDP. In terms of the transmission and distribution networks most of it will be funded either by the FEA or external sources. However the private sector is expected to invest substantially in the power generation as Independent Power Producers.

The determination of any revised tariff rates will be determined by the (Fijian Competition and Consumer Commission (FCCC)) as and when it's required.

6. *What is the status of the project to electrify the Korovou – Rakiraki corridor?*

With the commissioning of the 33kV/11kV from Korovou- Tavua in 2016, government now starts to extend the grid to the communities and settlements in the area. The grid extension from Malabi – Waimecia in Rakiraki is currently underway. A total of more than 1300 households will benefit from this project.



The government had already commissioned the Malabi- Naqia Grid Extension (GE) Project at the end of December 2017. The GE & House wiring from Balekinaga – Waimecia is currently underway and should be completed in mid- February. We anticipate commissioning these projects in early March 2018.

7. *What could be some of the reasons which lead to a significant decrease in customers benefitting from the electricity subsidy scheme as we can note that there was a drop from 69,000 customers in 2015 to 11,000 customers in 2016.*



In 2015, there was no threshold set for the income and it was solely on the consumption. That is those that consumed 85kWh or less. However in 2016, government had approved the increase of threshold from 85kWh to 95kWh per month or less with an additional requirement of a combined household income to be \$30,000 per annum or below. Another reason why the number decreases in 2016 was that customers need to register with FEA before they can qualify for subsidy.

8. *We note that Butoni Wind Farm has produced minimal output. What are the lessons learnt from this project and what is the future of Butoni Wind Farm?*

- To conduct/perform better assessment, site selection and full feasibility study including resource monitoring.
- Demonstration/ Pilot project to trialled and tested before venturing into commercial applications.
- Review of the project and proposed to solar-wind hybrid system.


9. *Is Geo-thermal energy classified as renewable energy? The Committee is aware that while some countries classify it as renewable energy, Fiji does not-or has this changed?*

Geo-thermal in its natural state is not renewable energy but a mineral. Once we convert it to electricity generation then it becomes a renewable energy.


Government of Fiji


Standing Committee on Economic Affairs
FEA Annual Report 2016

**Insight into FEA &
Answers to Questions**




Hasmukh Patel
Chief Executive Officer
Fiji Electricity Authority
Thursday 11th January, 2018

➤ Presentation Outline

- ▶ FEA - An Overview
- ▶ Vision, Mission & Values
- ▶ Corporate Planning Framework
- ▶ Strategic Objectives
- ▶ Operations
- ▶ FEA Power Infrastructure
- ▶ Strategic Assets & Statistics
- ▶ Financials
- ▶ Electricity Tariff Rate
- ▶ Answers to provided Questions
- ▶ Discussions

➤ FEA – An Overview

- ▶ The FEA was established in 1966 under the Electricity Act with the basic function to provide and maintain a **power supply that is financially viable, economically sound and consistent with the required standards of safety, security and quality of power supply.**
- ▶ FEA is responsible for the generation, transmission and retail of electricity in the larger islands of – Viti Levu, Vanua Levu, Ovalau & Taveuni, which account for approximately 90% of the country's population.
- ▶ FEA is a Commercial Statutory Authority with 100% ownership by the Fijian Government
- ▶ Uniform tariff rates charged for electricity used by each consumer group, determined by the Fijian Competition & Consumer Commission (FCCC) in consultation with Government
- ▶ The FEA Board of Directors consists of 6 members (3 – private sector), Public sector representation – PS MoIT, PS Finance & CEO – ex-officio member



Vision

Energizing our Nation

Mission

“We aim to provide clean and affordable energy solutions to Fiji with at least 90% of the energy requirements through renewable sources by 2025”

Values

Customer Focus

Honesty

Courage to do what's right for FEA

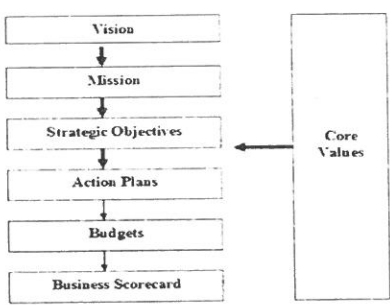
Team Work

Individual Accountability

Transparency

Innovativeness

➤ Corporate Planning Framework

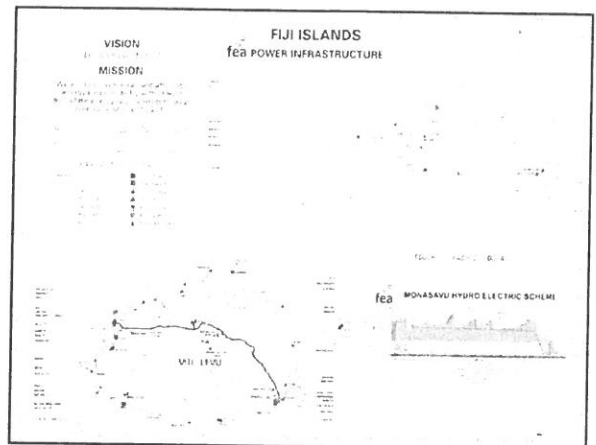
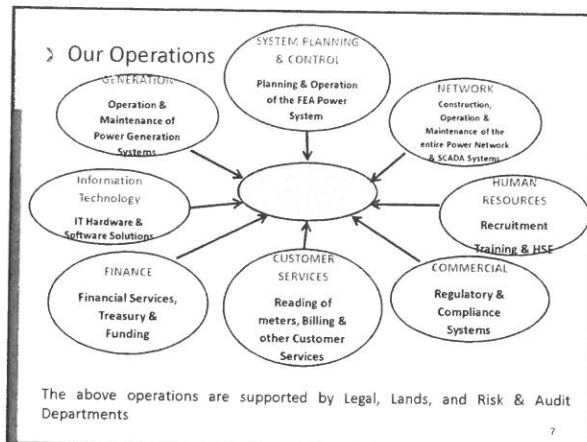


Core Values

▶ 3 Year Corporate Plan, Statement of Corporate Intent, Employment & Industrial Relations Plan & Strategic Human Resource Development Plan

➤ Strategic Objectives

- ▶ Improve customer focus and service
- ▶ Aim to achieve at least 10% Return on Shareholder Funds (ROSF)
- ▶ Provide 90% of energy through renewable sources by 2025
- ▶ People Strategy – Enhancing productivity through the implementation of Performance Management System (PMS), improving staff satisfaction and ensuring optimum human resource capacity and skills.
- ▶ Transfer of the Regulatory functions from FEA to Government.
- ▶ Develop and implement Enabling strategies for all FEA strategic business activities
 - ▶ ICT Strategy
 - ▶ Risk Management Strategy
 - ▶ Supply Chain Strategy
 - ▶ Land Management Strategy
 - ▶ Legal Strategy
 - ▶ Environmental Strategy



Generation, Network & Sales Statistics

- The total available generations capacity of 275MW.
- Transmission is provided by 147.2km of 132kV transmission lines and 534.86km of 33kV sub-transmission lines.
- Power distribution is by means of 9,515.37km of 11kV and 415V/240V distribution lines
- FEA has 182,439 customer accounts (December, 2017)

Sales Statistics

- 2015 - 826GWh with revenue of F\$311.98M
- 2016 - 841GWh with revenue of F\$317.83M
- Commercial and Industrial Customers contribute to 76% of FEA's total revenue

Demand Supply Statistics

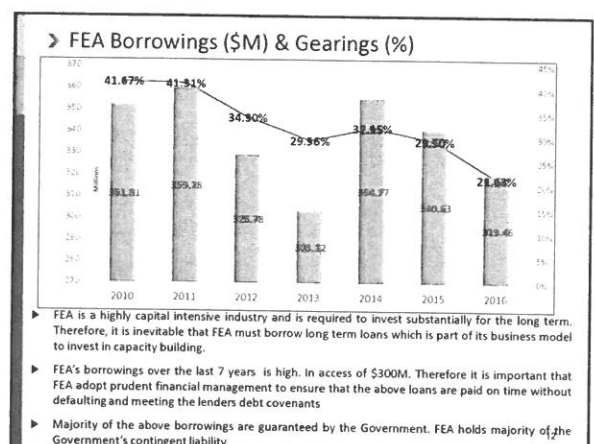
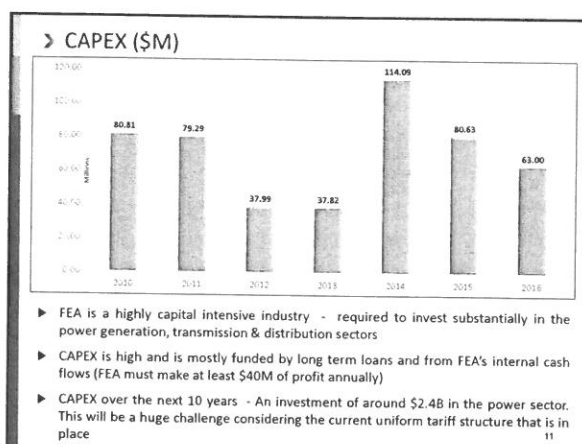
- Customer Growth - Last 7 years average growth rate is around 2.77%

Year	2010	2011	2012	2013	2014	2015	2016	2017
Customer Numbers	150,724	155,912	159,017	162,656	167,017	171,939	174,530	182,439
Annual Growth		3.44%	1.99%	2.29%	2.68%	2.95%	1.51%	4.53%

- 2016 Peak Demand, Installed & Available Capacity (Renewable & Thermal)

Island	Peak Demand (MW)	Installed Thermal (MW)	Available Thermal (MW)	Installed Renewable (MW)	Available Renewable (MW)	Total Available Generation Capacity (MW)
Viti Levu	170.64	145.38	121.90	146.76	133.20	252.10
Labasa	7.7	17.40	13.80	-	-	13.80
Savusavu	2.24	4.5	3.70	0.8	0.8	4.50
Ovalau	1.82	2.80	2.3	-	-	2.30
Taveuni	0.25	2.00	1.6	0.7	0.7	2.30
Total	182.65	167.98	143.30	148.28	130.98	275.00

- Fiji Sugar Corporation supplies during the crushing season only in Labasa & Lautoka
- Nabou Green Energy Limited started exporting to the grid from late July, 2017



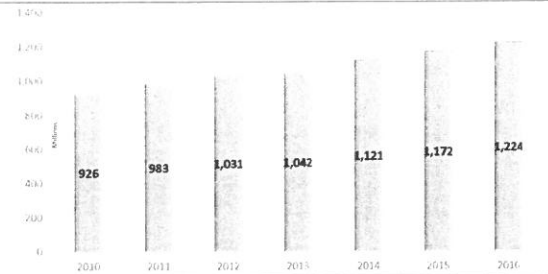
Debt Covenants

A) FNNF		Covenants	Formula	2010	2011	2013	2014	2015	2016
1	Interest Cover Ratio	EBITDA			N/A		✓	✓	✓
		Net Interest							
2	Tangible Net Worth	Total Assets			N/A		✓	✓	✓
		Total Liabilities							
B) ANZ Bank		Covenants	Formula	2010	2011	2013	2014	2015	2016
1	Debt to EBITDA	Debt		✓	✓	✓	✓	✓	✓
		EBITDA							
2	Gearing	Total Liabilities		✓	✓	✓	✓	✓	✓
		Total Equity							
3	Debt Service Cover Ratio	EBITDA		✓	✓	✓	✓	✓	✓
		Annual Debt							

- FEA has never defaulted in its loan repayments in the past
- FEA has never breached any of its debt covenants signed with lenders which could expose Government being the sovereign guarantor of FEA's borrowings

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FEA's Total Asset Values (\$M)



- FEA's Total Asset Value - \$1.2B (31st December, 2016)

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FEA's Performance Management System (PMS)

- PMS is aligned to the FEA Strategic Objectives
- The Corporate Scorecard is based on the strategic objectives of the organization
- Strategic Business Area (SBA)/Divisional Scorecards are developed from the Corporate Scorecard
- An Independent Audit is undertaken by external auditors to assess the Corporate Performance each year
- We need to recognize and reward every employee
- FEA was awarded with Quality Circle Model Organization Award in 2015

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Asset Replacement & Refurbishment

Monasavu Hydroelectric Scheme Half Life Refurbishment

- The total expenditure incurred to date for the Monasavu Hydroelectric Scheme Half-Life Refurbishment Program is F\$52.5M since 2012.
- The refurbishment work is internally funded from FEA's cash flows and will be completed over a period of 8 years until 2020. It is expected to cost another \$40M to complete this program.

Other Assets Replacements/Upgrades

- The Transmission & Distribution network ageing assets will be replaced at a cost of around \$155M over the next 5 years.
- FEA expects to fund this cost internally as well from FEA's cash flows provided good profitability is achieved annually.

Non Commercial Obligation (NCO) Cost

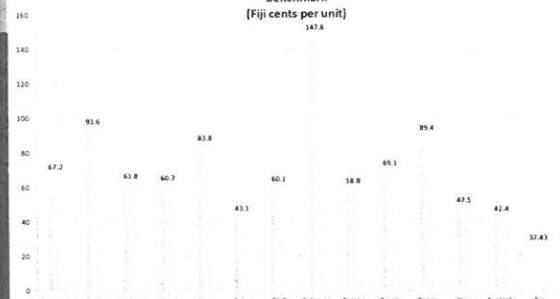
- The NCO cost borne by FEA each year for the last 4 years is outlined below and this cost is audited by PWC each year.

	2012	2013	2014	2015	2016
NCO costs	\$29M	\$31M	\$34M	\$26M	\$27M

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Electricity Tariff Rate

Electricity Tariff Rate Comparison Benchmark
(Fiji cents per unit)



Fiji has the lowest electricity tariff rate in the South Pacific including Australia & New Zealand.

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Questions for FEA Annual Report 2016

- Discussions with prospective Independent Power Producers to develop various Renewable Energy technologies. i.e. Biomass/Waste to Energy Projects, Solar Projects & Hydro Projects are ongoing.

[illegible]

- Discussions/negotiations ongoing with prospective IPPs towards signing Power Purchase Agreements in the near future.

- ▶ Technical issues have been discussed and agreed upon
- ▶ Commercial & Legal discussions are in its final stages before we sign the Power Purchase Agreement.

► The Government has a plan to ensure all residents of Fiji has access to electricity by the year 2021. Resultantly FEA will work with the Government to achieve this target and the program will include Taveuni.

Question 5 – Government Input - Rural Electrification

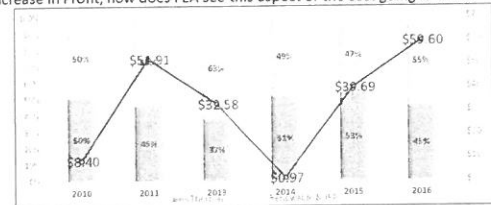
5. What level of input has the government provided in the Rural Electrification project?

- ▶ The government has invested heavily in the area of rural electrification projects
- ▶ In 2016 the Government had committed \$13.1M for the construction of 34 Rural Electrification Projects
- ▶ Government also made a commitment in 2016 to meet the full project costs of all Rural Electrification Projects
- ▶ In 2017-2018 National Budget, the Government has allocated an additional \$32M for the construction of 148 Rural Electrification Schemes

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Question 6 – Lower Fuel Cost & Future Fuel Pricing

6. The Committee notes that the lower fuel costs for 2016 contributed to the increase in Profit, how does FEA see this aspect of the cost going forward?



- ▶ FEA's profitability is largely driven by two uncontrollable factors - Annual rainfall it receives at its hydro dams and the global fuel prices
- ▶ Should FEA continue to receive good annual rainfall at its hydro dams and should the fuel price not rise substantially to levels that prevailed in 2014 then, we should be able to achieve reasonable profits.
- ▶ The FEA electricity tariff was last reviewed upwards in early 2011 and thereafter decreased by 5% from January, 2013. An appropriate tariff rate will contribute towards the financial sustainability of FEA.
- ▶ Despite the impact of TC Winston costing FEA an additional unbudgeted expenditure of \$30.1M, FEA achieved a record after tax profit of \$59.6M in 2016. Increased operational expenditure was not passed on to customers.

Question 7 – Power Development Plan

7. The 10 year Power Development Plan (PDP) for the period 2017 to 2026, we understand that the cost of implementing this is around \$2.4 Billion, what is the progress of this project and how will it be funded and what would be the effect on tariff rates?

TOTAL PDP GENERATION																
	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023	Actual 2024	Actual 2025
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Long generation capacity (MW)	400.16	402.79	403.1	403.7	404.47	405.11	405.76	406.41	407.06	407.71	408.36	409.01	409.66	410.31	410.96	411.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	390.16	392.79	393.1	393.7	394.47	395.11	395.76	396.41	397.06	397.71	398.36	399.01	399.66	400.31	400.96	401.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	380.16	382.79	383.1	383.7	384.47	385.11	385.76	386.41	387.06	387.71	388.36	389.01	389.66	390.31	390.96	391.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	370.16	372.79	373.1	373.7	374.47	375.11	375.76	376.41	377.06	377.71	378.36	379.01	379.66	380.31	380.96	381.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	360.16	362.79	363.1	363.7	364.47	365.11	365.76	366.41	367.06	367.71	368.36	369.01	369.66	370.31	370.96	371.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	350.16	352.79	353.1	353.7	354.47	355.11	355.76	356.41	357.06	357.71	358.36	359.01	359.66	360.31	360.96	361.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	340.16	342.79	343.1	343.7	344.47	345.11	345.76	346.41	347.06	347.71	348.36	349.01	349.66	350.31	350.96	351.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	330.16	332.79	333.1	333.7	334.47	335.11	335.76	336.41	337.06	337.71	338.36	339.01	339.66	340.31	340.96	341.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	320.16	322.79	323.1	323.7	324.47	325.11	325.76	326.41	327.06	327.71	328.36	329.01	329.66	330.31	330.96	331.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	310.16	312.79	313.1	313.7	314.47	315.11	315.76	316.41	317.06	317.71	318.36	319.01	319.66	320.31	320.96	321.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	300.16	302.79	303.1	303.7	304.47	305.11	305.76	306.41	307.06	307.71	308.36	309.01	309.66	310.31	310.96	311.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	290.16	292.79	293.1	293.7	294.47	295.11	295.76	296.41	297.06	297.71	298.36	299.01	299.66	300.31	300.96	301.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	280.16	282.79	283.1	283.7	284.47	285.11	285.76	286.41	287.06	287.71	288.36	289.01	289.66	290.31	290.96	291.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	270.16	272.79	273.1	273.7	274.47	275.11	275.76	276.41	277.06	277.71	278.36	279.01	279.66	280.31	280.96	281.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	260.16	262.79	263.1	263.7	264.47	265.11	265.76	266.41	267.06	267.71	268.36	269.01	269.66	270.31	270.96	271.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	250.16	252.79	253.1	253.7	254.47	255.11	255.76	256.41	257.06	257.71	258.36	259.01	259.66	260.31	260.96	261.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	240.16	242.79	243.1	243.7	244.47	245.11	245.76	246.41	247.06	247.71	248.36	249.01	249.66	250.31	250.96	251.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	230.16	232.79	233.1	233.7	234.47	235.11	235.76	236.41	237.06	237.71	238.36	239.01	239.66	240.31	240.96	241.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	220.16	222.79	223.1	223.7	224.47	225.11	225.76	226.41	227.06	227.71	228.36	229.01	229.66	230.31	230.96	231.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	210.16	212.79	213.1	213.7	214.47	215.11	215.76	216.41	217.06	217.71	218.36	219.01	219.66	220.31	220.96	221.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	200.16	202.79	203.1	203.7	204.47	205.11	205.76	206.41	207.06	207.71	208.36	209.01	209.66	210.31	210.96	211.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	190.16	192.79	193.1	193.7	194.47	195.11	195.76	196.41	197.06	197.71	198.36	199.01	199.66	200.31	200.96	201.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	180.16	182.79	183.1	183.7	184.47	185.11	185.76	186.41	187.06	187.71	188.36	189.01	189.66	190.31	190.96	191.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	170.16	172.79	173.1	173.7	174.47	175.11	175.76	176.41	177.06	177.71	178.36	179.01	179.66	180.31	180.96	181.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	160.16	162.79	163.1	163.7	164.47	165.11	165.76	166.41	167.06	167.71	168.36	169.01	169.66	170.31	170.96	171.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	150.16	152.79	153.1	153.7	154.47	155.11	155.76	156.41	157.06	157.71	158.36	159.01	159.66	160.31	160.96	161.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	140.16	142.79	143.1	143.7	144.47	145.11	145.76	146.41	147.06	147.71	148.36	149.01	149.66	150.31	150.96	151.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	130.16	132.79	133.1	133.7	134.47	135.11	135.76	136.41	137.06	137.71	138.36	139.01	139.66	140.31	140.96	141.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	120.16	122.79	123.1	123.7	124.47	125.11	125.76	126.41	127.06	127.71	128.36	129.01	129.66	130.31	130.96	131.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	110.16	112.79	113.1	113.7	114.47	115.11	115.76	116.41	117.06	117.71	118.36	119.01	119.66	120.31	120.96	121.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	100.16	102.79	103.1	103.7	104.47	105.11	105.76	106.41	107.06	107.71	108.36	109.01	109.66	110.31	110.96	111.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	90.16	92.79	93.1	93.7	94.47	95.11	95.76	96.41	97.06	97.71	98.36	99.01	99.66	100.31	100.96	101.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	80.16	82.79	83.1	83.7	84.47	85.11	85.76	86.41	87.06	87.71	88.36	89.01	89.66	90.31	90.96	91.61
Renewable PDP	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Non-renewable PDP	70.16	72.79	73.1	73.7	74.47	75.11	7									

➤ Question 11 – Energy Meters

11. We note that a total of 13,560 energy meters were tested by FEA and out of these, there were a variety of meters such as single phase meters, prepaid meters and three phase meters, can the Committee be given an overview of this different meters and how this impacts our consumers?

- ▶ Single phase meter- these are mostly used for domestic customers that have a load of maximum 80A and below.
- ▶ Pre-paid meters – these are single phase meters for domestic customers in deep rural areas who are expensive to administer
- ▶ Three phase meters - these meters are used mostly for commercial and industrial customers

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➤ Question 12 – Governments Electricity Subsidy

12. What could be some of the reasons which lead to a significant decrease in customers benefitting from the electricity subsidy scheme as we can note that there was a drop from 69,000 customers in 2015 to 11,000 customers in 2016.

Year	2015	2016
Customers Benefitting (Domestic + Schools)	69,000	11,000
Government Subsidy Provisions - Domestic Customers	Subsidy - Domestic Customers Subsidy applicable for consumption which is less than or equal to 85 units/month (Any Domestic Customer)	Subsidy - Domestic Customers Subsidy applicable for consumption which is less than or equal to 95 units/month (Subsidy Registered Domestic Customers) Household Income below \$30K Customers to register with FEA
Government Subsidy Provisions - Schools	Subsidy for Schools Subsidy applicable for consumption upto 200 units/month (Any School)	Subsidy for Schools Subsidy applicable for consumption up to 200 units/month (Any School)

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➤ Question 13 – Mandatory Loan Repayments

13. Could you explain the relationship with the mandatory loan repayments with Suva City Council? Please explain its origin.

- ▶ Suva City Council was generating and supplying electricity to Suva City at that time prior to the development of the Monasavu Hydroelectric Scheme. FEA was established, incorporated and constituted under the provisions of the Electricity Act of 1966 and began operating from 1st August of that year. The Government then decided for SCC to transfer its electricity business to the Fiji Electricity Authority. This transfer/sale was done at a price of \$6,157,254 in 1978 at a fixed interest rate of 3% for a term of 87 years via a loan arrangement.
- ▶ The loan repayment is mandatory as it has to be repaid over a fixed period of 87 years.

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➤ Question 14 – Butoni Wind Farm

14. We note that Butoni Wind Farm has produced minimal output. What are the lessons learnt from this project and what is the future of Butoni Wind Farm?

- ▶ Lessons learnt:
 - ▶ Proper feasibility study needs to be carried out to determine the right location and the type of wind farm technology that needs to be installed at the site prior to implementation
 - ▶ Locals needs to be well trained on the operations and maintenance of the wind farm;
 - ▶ Spare parts should be sourced from more than one supplier/manufacturer
 - ▶ A ranking exercise comparing the economic evaluation of the Butoni Wind Farm with other potential renewable energy projects needs to be carried out to justify the project that needs to be prioritized and developed first in terms of the NPV of the project and energy generated
- ▶ Butoni probably is not the right location and FEA is exploring the possibility of relocating the wind farm to another feasible location. We are working closely with the Department of Energy who have installed wind masts around the country to determine a feasible site.

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➤ Clarifications & Discussion

Thank You
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Dhanyavaad

Team FEA
Fiji Electricity Authority

