

# Pacific Power Association Workshop

## Renewables Our Future

Incorporating our Targets & Operations into the  
Performance Management System

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**Monday 30<sup>th</sup> July, 2018**

## ➤ Presentation Outline

- ▶ FEA to EFL
- ▶ Vision & Mission
- ▶ Where are we now with our Generation Mix?
- ▶ Demand Supply Statistics
- ▶ EFL Power Infrastructure Map
- ▶ Strategic Planning
- ▶ Our Operations
- ▶ Key Strategic Areas
- ▶ EFL's Performance Management Framework
- ▶ Strategic Objectives
- ▶ PMS – Financial Alignment
- ▶ Corporate Scorecard 2017
- ▶ A Virtual Tour
- ▶ Discussions



## ➤ Fiji Electricity Authority to Energy Fiji Limited

- ▶ 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 was Corporatized from a Commercial Statutory Authority to a limited liability Company on Monday 16th April, 2018 and now known as Energy Fiji Limited (EFL).
- ▶ EFL 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.
- ▶ EFL, now is a limited liability company with 95% ownership by the Fijian Government and 5% by residential domestic account holders
- ▶ Uniform tariff rates charged for electricity used by each consumer group, determined by the Fijian Competition & Consumer Commission (FCCC) in consultation with Government
- ▶ The EFL Board of Directors consists of 6 members (3 – private sector), Public sector representation – PS MoIT, Ministry of Economy Rep & CEO



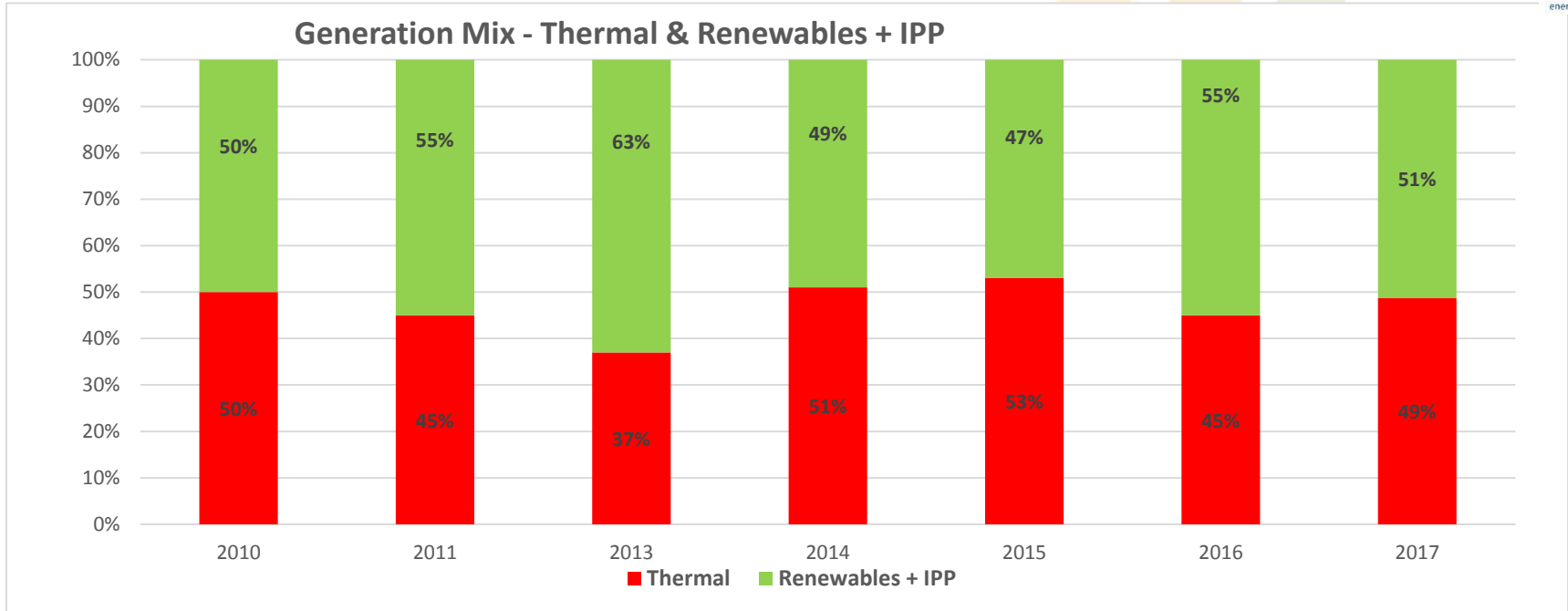
## Vision

**Energising 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”**

# ➤ Where Are We Now with our Generation Mix?



## ▶ Renewable Power Stations

- ▶ Monasavu Hydro Electric Scheme – 80MW with anticipated generation of 400GWh/annum
- ▶ Nadarivatu Hydro Electric Scheme – 40MW with anticipated generation 101GWh/annum
- ▶ Butoni Wind Farm – 9.9MW with anticipated generation of 5GWh/annum
- ▶ Wainikasou Hydro Electric Scheme – 6.4MW with anticipated generation 26GWh/annum
- ▶ Nagado Hydro Electric Scheme – 2.8MW with anticipated generation of 12GWh/annum
- ▶ Wainiqueu Hydro Electric Scheme – 0.8MW with anticipated generation of 2GWh/annum
- ▶ Somosomo Hydro Electric Scheme – 0.7MW with anticipated generation of 2GWh/annum<sup>5</sup>

## ➤ Demand Supply Statistics

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

Years	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	146.78	130.20	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
<b>Total</b>	<b>182.65</b>	<b>167.98</b>	<b>143.30</b>	<b>148.28</b>	<b>130.98</b>	<b>275.00</b>

- ▶ 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

**VISION**  
'Energising 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'

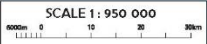
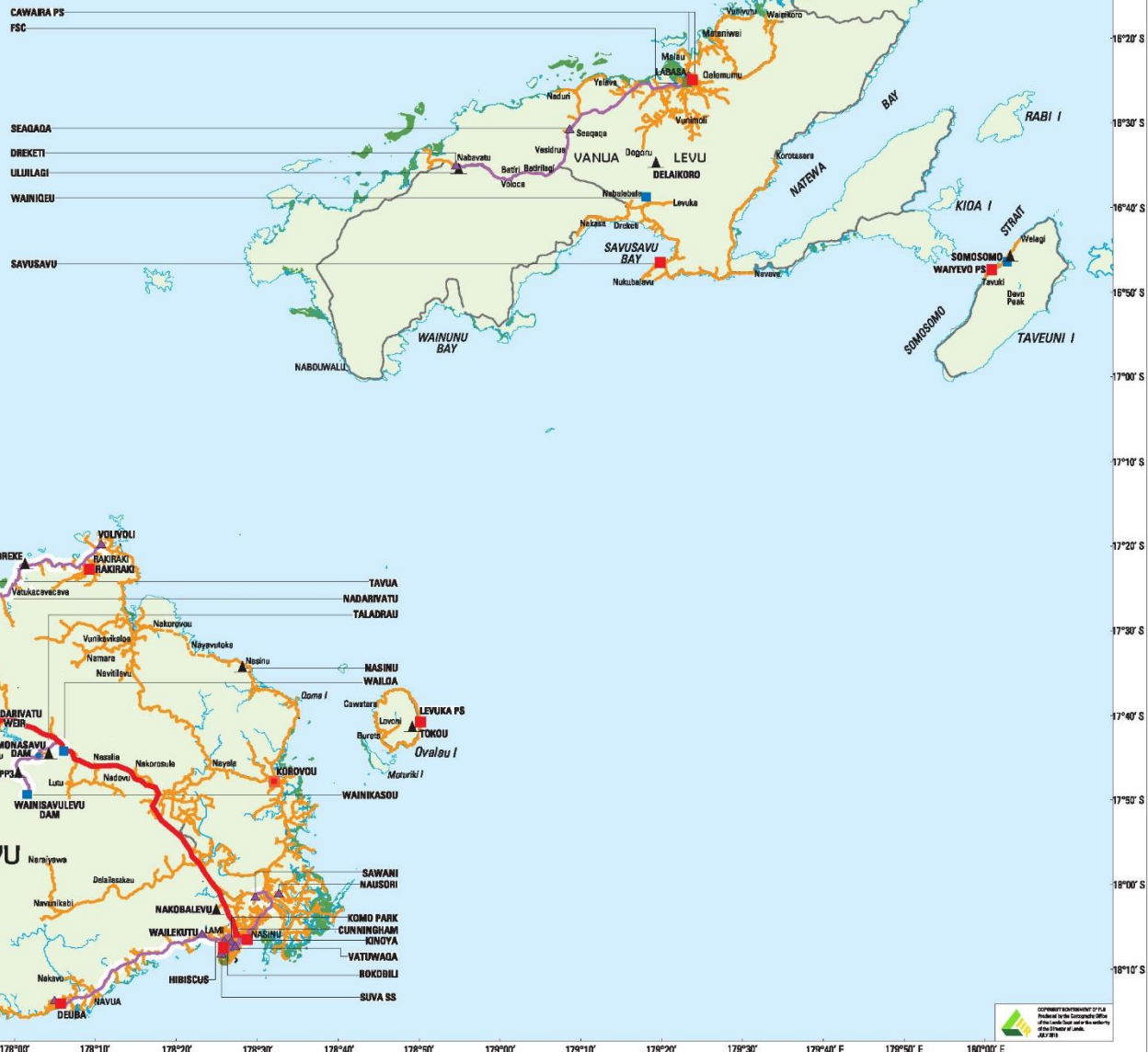
Power Lines	Total (km)	Overhead (km)	Underground (km)	Poles/Towers
Distribution - 415/240V	5080.81	4867.77	223.34	
Distribution - 11kV & 6.6kV	4424.76	3831.34	593.43	93,861
Sub-transmission - 33kV	534.86	454.61	80.25	5,052
Transmission - 132kV	147.200	147.200		383
<b>Total (km)</b>	<b>10,197.43</b>	<b>9,300.42</b>	<b>897.02</b>	<b>99,306</b>

**EFL POWER SYSTEM LEGEND**

- 132kV Line
- - - Proposed 132kV Line
- 33kV Line
- Proposed 33kV Line
- 11kV Line Coverage
- - - Proposed 11kV Line
- 6.6kV Line Coverage
- Diesel Power Station
- Hydro Power Station
- ▲ 132kV Substation
- ▲ 33kV Substation
- ▲ Biomass/ IPP Power Station
- ▲ FEA Repeater Station
- ⬆ Butoni Wind Farm



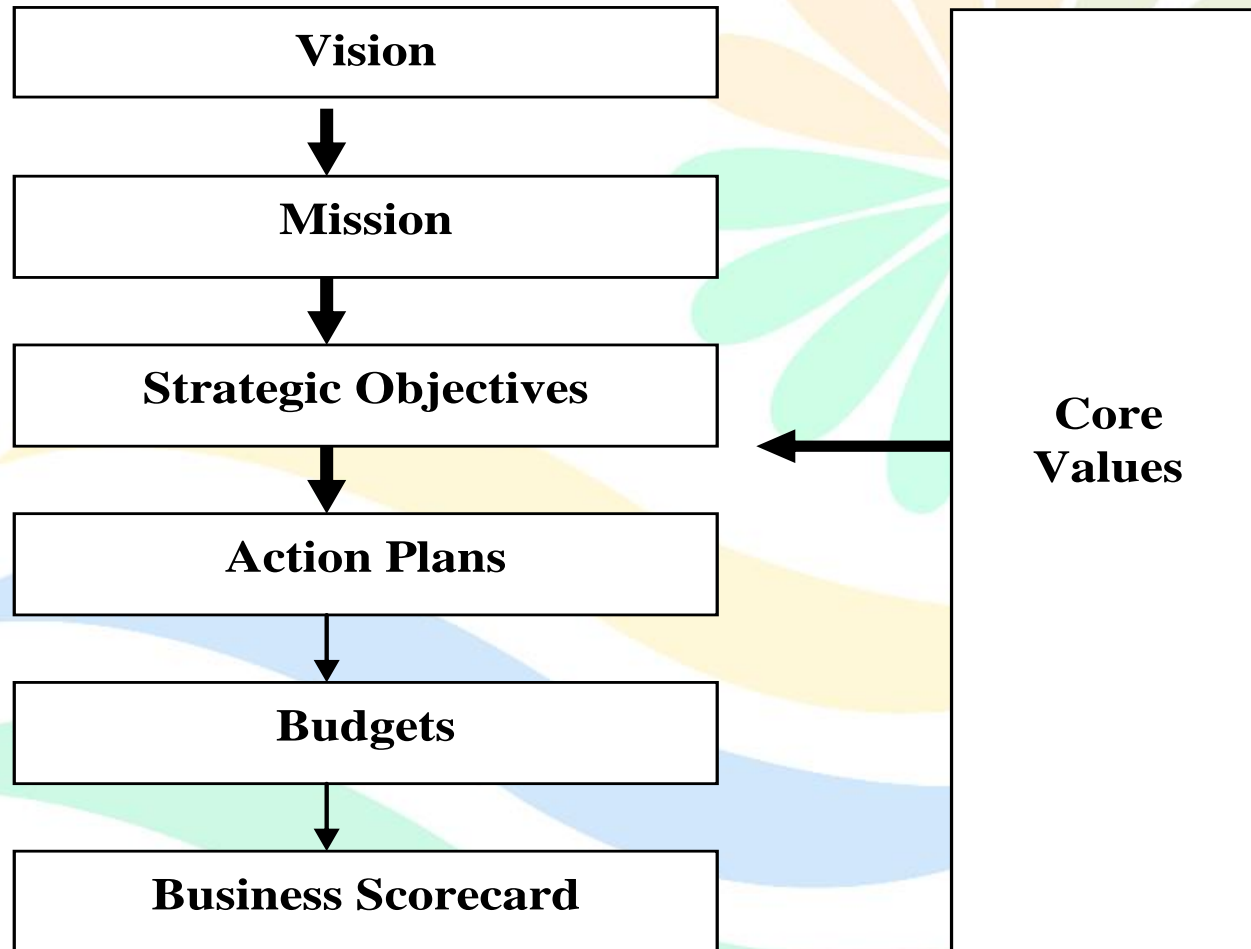
**FIJI ISLANDS  
POWER INFRASTRUCTURE**



# *Strategic Planning*

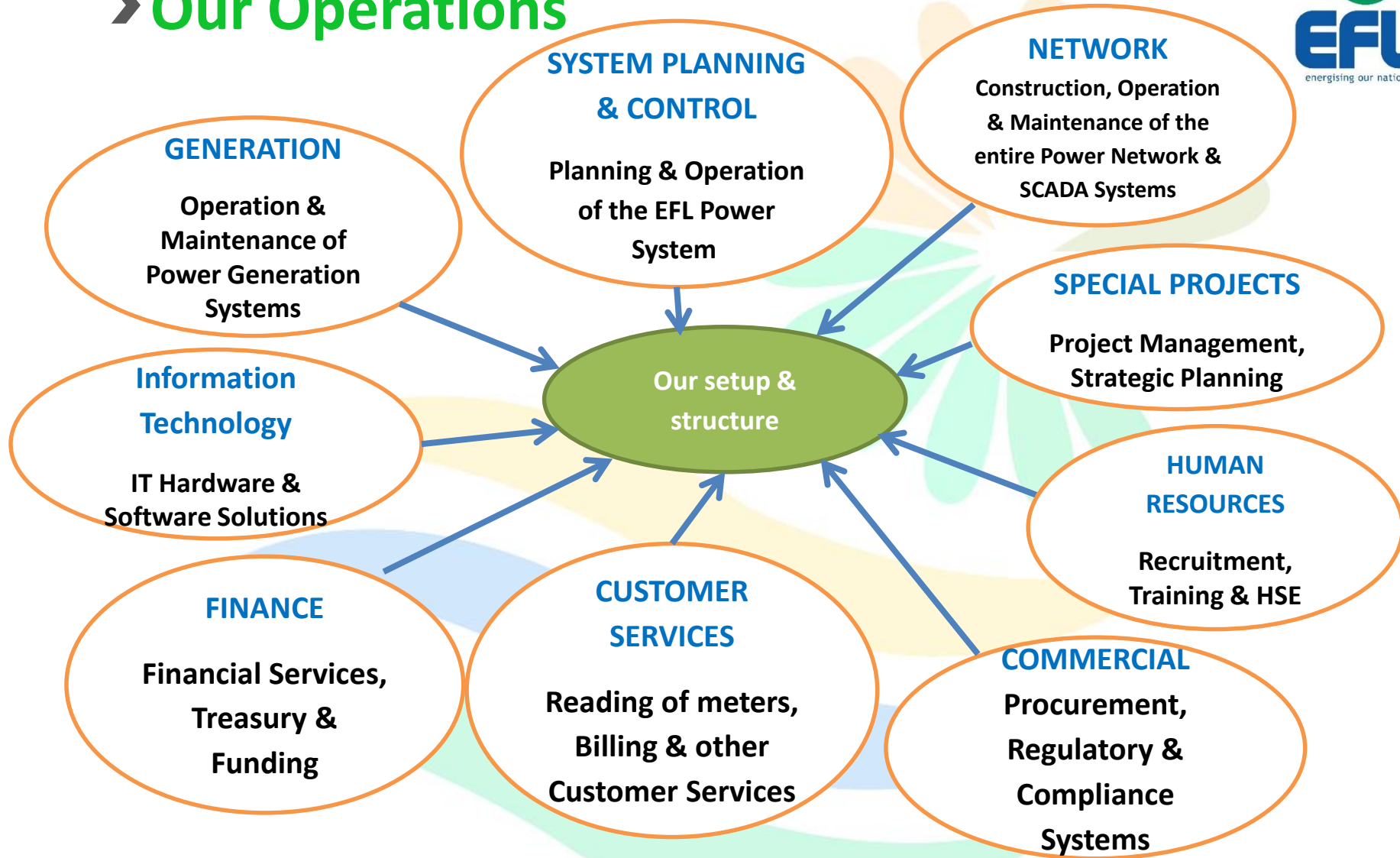


# ➤ Corporate Planning Framework



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

# ► Our Operations



The above operations are supported by Legal, Lands, Risk & Audit Departments and Executive Projects & Public Relations

## ➤ Key Strategic Areas

- ▶ Incorporating our Targets into the Performance Management System (Balance Scorecard)
- ▶ Incentive - \$\$\$

**CUSTOMERS &  
SUPPLY/DEMAND**

**OPERATIONS**

**INNOVATION &  
STAFFING**

**FINANCIALS, SCI &  
SHAREHOLDERS**

## ➤ EFL's Performance Management System (PMS)

- ▶ PMS is aligned to the EFL Strategic Objectives
- ▶ The Corporate Scorecard is based on the strategic objectives of the organization
- ▶ Strategic Business Unit (SBU)/Divisional Scorecards are developed from the Corporate Scorecard
- ▶ All staff are given a performance rating out of 100%
- ▶ EFL Annual Report is tabled in Parliament by June each year
- ▶ An Independent Audit is undertaken by external auditors to assess the Corporate Performance each year
- ▶ We need to recognize and reward every employee
- ▶ FEA (EFL) is a role model for other organizations in Fiji
- ▶ FEA was awarded with the Fiji Business Excellence Award – President Category (1<sup>st</sup> Prize) in 2012



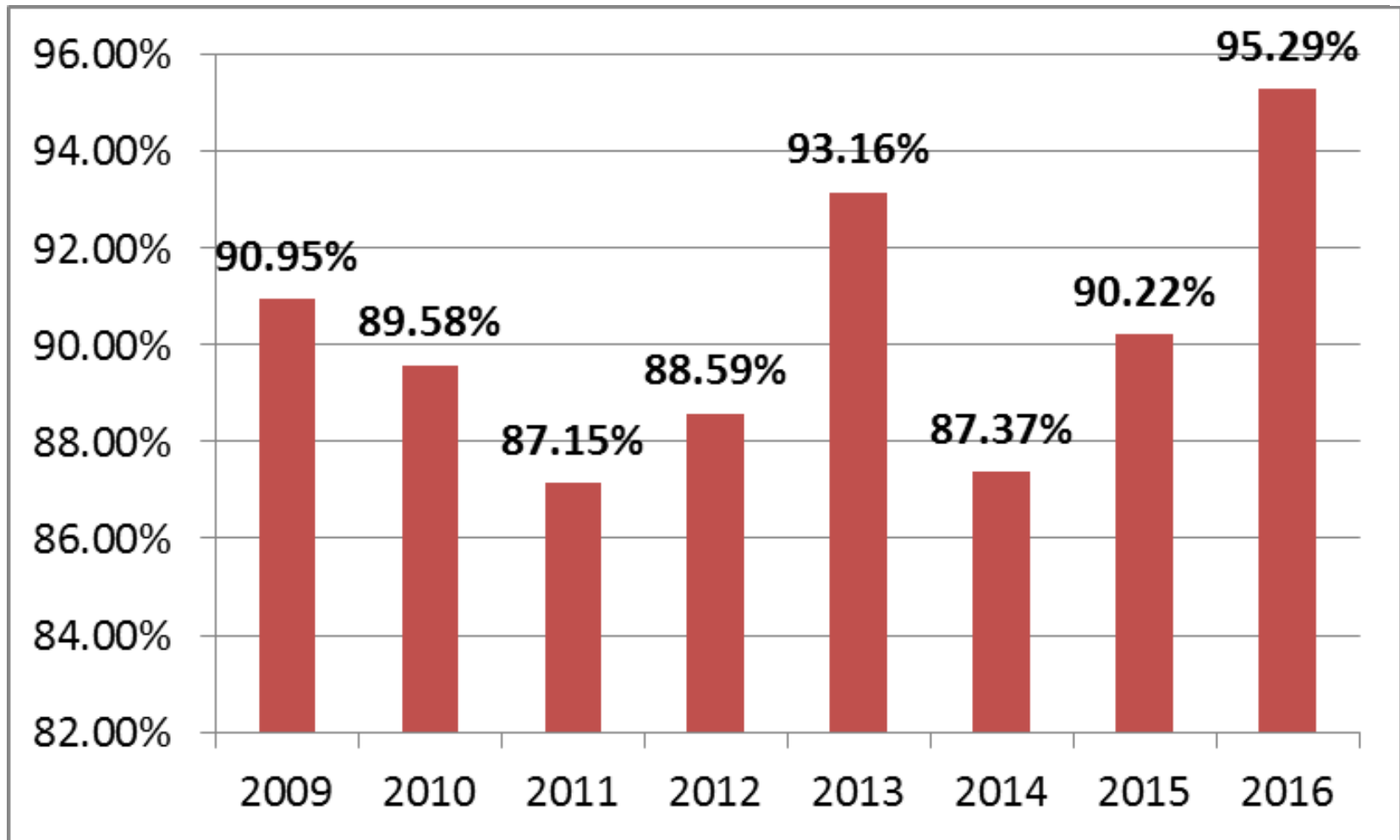
## ➤ Strategic Objectives

- ▶ 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
  - ▶ Fiji National Energy Policy 2013-2020 (Draft)
  - ▶ Target 100% electricity access by 2020 - Current Electricity Access – 90%
  - ▶ Renewable Energy to be 99% by 2030
- ▶ 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 EFL to Government.
- ▶ Develop and implement Enabling strategies for all EFL strategic business activities
  - ▶ ICT Strategy
  - ▶ Risk Management Strategy
  - ▶ Supply Chain Strategy
  - ▶ Land Management Strategy
  - ▶ Legal Strategy
  - ▶ Environmental Strategy

## ➤ PMS Framework – Financially Aligned

- ▶ The Authority's Performance Management System(PMS) framework is as follows:
  - ▶ CEO – 100% on Corporate Scorecard
  - ▶ Executive Management – 50% on Corporate Scorecard and 50% on SBU Scorecard
- ▶ All other employees
  - ▶ Corporate Key Performance Indicators – 33.33% (1/3)
  - ▶ Strategic Business Unit (SBU) KPIs - 33.33% (1/3)
  - ▶ Individual performance appraisal - 33.33% (1/3)
- ▶ The quantum of performance pay by different staff categories:
  - ▶ Permanent Tradesperson Category (FEWA and CETWUF) – 7% of annual base salary.
  - ▶ Staff Category (Award) – 7% of annual base salary
  - ▶ Staff Category (On Contract) – 10% of annual base salary
  - ▶ Senior Staff Category (All on contract) – 10% of annual base salary
  - ▶ Unit Leaders/EMG – 15% & 20% of the annual base salary respectively.
- ▶ This PMS system has been in place since 2009.

## ➤ EFL Corporate Performance – Balanced Scorecard



- ▶ Corporate Score for 2017 – TBC
- ▶ [Corporate Scorecard 2017](#)

## ➤ A Virtual Tour

### ▶ Strategic Sites

- ▶ Generation
- ▶ Network
- ▶ Communications





# Wanisavulevu Weir – Monasavu Hydroelectric Scheme



# Wanikasou – Monasavu Hydroelectric Scheme



# Monasavu Lake



# Wailoa Power Station - 4 X 20MW Pelton Turbine (1983)



# Wainique Mini Hydro Station – Savusavu (1992)

## 2 X 400KW Frances Turbine



# Nagado Power Station



fea  
NAGADO HYDRO POWER STATION





NO SMOKING



# Butoni Wind Farm 2007

## 36 X 275KW







Nadarivatu Weir



NADARIVATU POWER STATION – 2012  
2 X 20MW TURBINES

# Naibili Weir, Taveuni



# Somosomo Mini Hydro Power Station

## 2 X 350KW Pelton Turbine



# Kinoya 35MW Heavy Fuel Oil Power Station



## ➤ Network



**Vuda 132kV/33kV Zone Substation**

## ➤ Network



**Knolly Street 33kV/11kV Zone Substation**

## ➤ Network



**Nadarivatu Switchyard**



## ➤ Communications

- ▶ EFL power systems are remotely supervised, controlled and metered using SCADA (Supervisory Control and Data Acquisition)



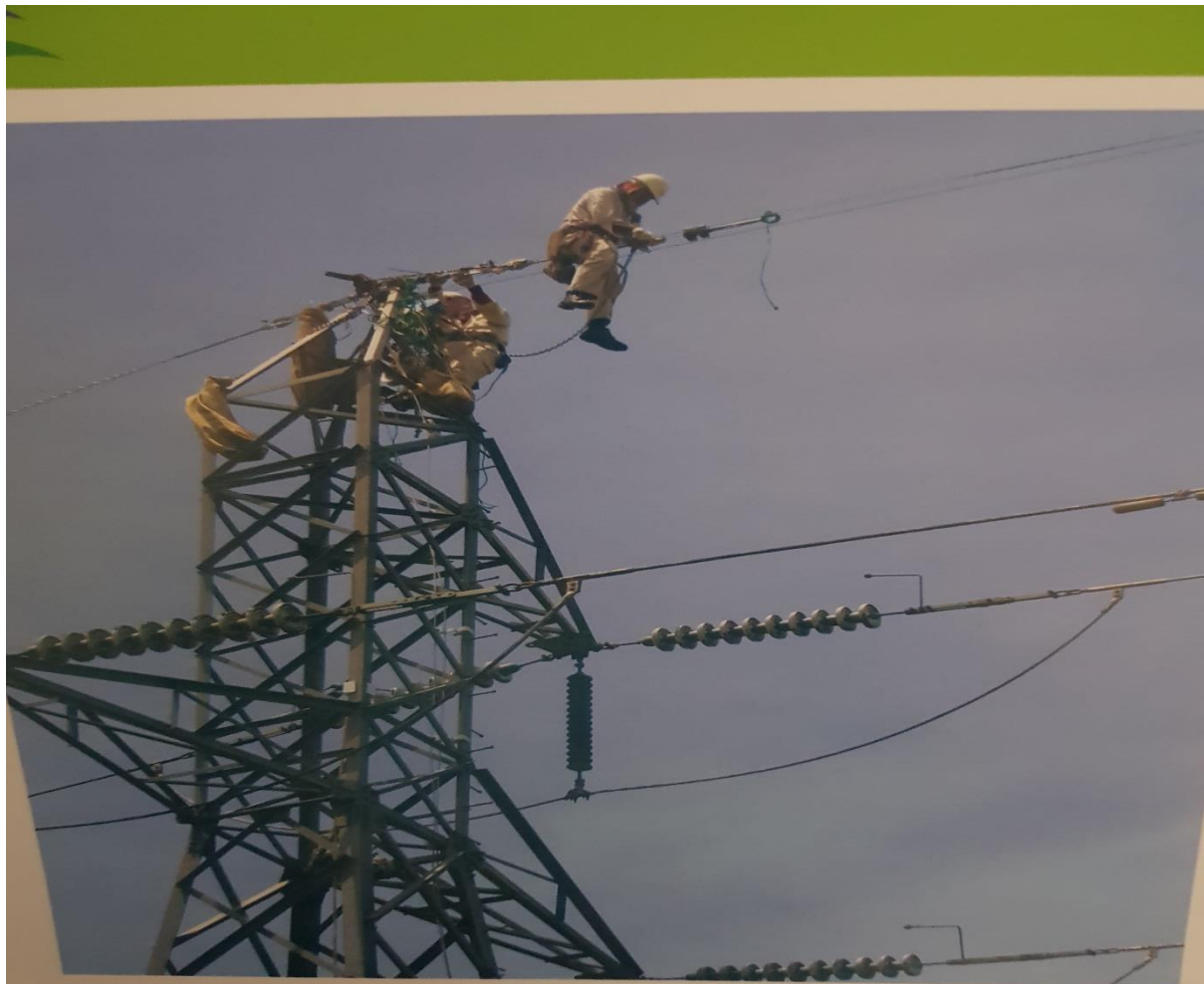
## ➤ Communications

- ▶ The signals from the various Power Station, Substations and Switching Stations get to our national Control Centre via these Repeater Stations



## ➤ Communications

- ▶ EFL installed 18-pair optic fibres on its transmission towers from Vuda to Cunningham via Wailoa, which form EFL's backbone communication link for the power system network. EFL has a back to back arrangement with Telecom Fiji for a lease of a pair of dark fibre.



## » Discussions

**Thank You**



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