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# Country Presentation Energy Policy (A) Course : Japan 2012

Inia Saula Republic of Fiji

## General Information - Fiji



#### General Information- Energy Profile

National Energy Profile

Basic Country Facts	
Sizes (km2)	18, 333 sq.km
Population Distribution: (2007 census)	837, 271
Gross Domestic Product (GDP) 2011	US\$ 2, 349.97 Million
Energy Expenditure as a percentage of GDP	15.88%
Human Development Index 2011:	0.688
% Population Access to Electricity	86%
% Population Access to Modern Fuels	70%
Energy Sources	
	Biomass; Hydro ; Wind ; Solar & Fossil Fuels
Energy Production (bbl or kWh for 2011):	855 Million kWh
Per Capita Energy Consumption (kWh for 2011):	1, 159 kWh
Top 3 energy consuming sectors	
	1. Transport 2. Manufacturing 3. Domestic

# **Energy Situation**

- Fiji heavily dependent on imported fuel
- Vulnerable to fluctuation of world crude oil prices
- From 2008, 2009 2010 & 2011 mineral fuel imports over FD\$1 Billion
- 2010 Country Electricity approx. 52% renewable energy & 48% fossil fuel

# Energy Policy - 2006 - 2011

- i) Energy Planning covers four broad areas of institutional strengthening of the Department of Energy, development and review of appropriate frameworks, coordination and consultation within the energy sector and with other sectors, and management of energy information.
- ii) Energy Security ensures stable and adequate energy supplies to the country through diversifying our energy base and developing indigenous renewable energy resources and other alternative fuels; and encouraging energy conservation and efficiency in energy production, conversion and use.
- iii) Power Sector focuses on ensuring that the entire population has access to electricity through the extension of FEA grid network, stand-alone systems by the Department of Energy, and extensions from government stations. The involvement of the private sector in the provision of electricity will be continually encouraged.
- iv) Renewable Energy The focus of this strategic area is to ensure increased use of affordable and appropriate renewable energy technologies through quantifying the local renewable energy resources available, providing incentives for the importation and use of renewable technologies, and adapting renewable energy based standards for local use.

### Past Energy Demand and Supply

#### Summary of Petroleum Consumption (1979 to 2009)

Petroleum Product Type	1979	1999	2004	2007	200	
Motor Spirit	59,764,706	114,329,412	53,464,706	78,753,000	44,600,	
Aviation fuels	24,393,939	142,136,364	48,642,424	291,327,000	82,500,	
Kerosene	20,218,579	12,603,825	36,639,344	667,000	71,300,	
Diesel	142,487,047	145,512,953	298,533,679	437,887,000	188,900	
Residual Fuel Oil	11,500,000	21,804,762	797,619	9,739,800	na	
LPG	4,745,098	22,298,039	25,341,176	25,428,528	na	
Total (in litres)	263,109,369	458,685,355	463,418,949	843,802,328	387,300	
*Includes all other petroleum consumption (kerosene, residual fuel oil, LPG)						

# Past Energy Demand & Supply

#### PRIMARY ENERGY PRODUCTION



Indigenous Production Imports

#### Outlook of Energy Demand and Supply

Year ending	2007	2008	2009	2010	2011	2012	2013
Total Generation GWh	785	793	802	812	827	845	866
Made up of:							2.5%
Monasavu/Wainiqeu (FEA)	481	463	390	402	402	402	402
Wainikasou/Nagado (IPP)	28	32	32	38	38	38	38
FSC Labasa (IPP)	7	4	7	7	15	15	15
Butoni (FEA)	3	5	7	6	6	6	6
FSC Lautoka (IPP)	12	10	15	15	15	15	15
Tropik Drasa (IPP)	0	11	1.2	51	72	72	72
Geothermal/biomass (IPP)	0	0	0	0	0	8	8
Nadarivatu (FEA)	0	0	0	0	40	100	100
Wainisavulevu (FEA)	0	0	0	0	0	7	7
IVITI biomass (IPP)	0	0	0	0	0	20	70
Vuda Bio Mass (IPP)	0	0	0	0	0	50	50
Total non-diesel	504	FOF	450	E40	500	700	700
generation	531	525	452	519	588	733	783
Thermal generation							
(FEA)	254	268	350	293	239	112	83
Thermal generation (% of total generation)	32.4%	33.8%	43.6%	36.1%	28.9%	13.3%	9.6%
Source: FEA							

#### Load Demand Forecast (MWh)

Load Demand Forecast (MWh 2010 - 2025)				
Type of Generation	2010	) 2015	2020	2025
Hydro				
1 Monasavu (80MW)	400,000	) 400,000	400,000	400,000
2 Wainiqeu (0.80MW)	Variable	Variable	Variable	Variable
3 Wainikasou (6.5MW)	18,000	) 18,000	18,000	18,000
4 Nagado (3MW)	19,000	) 19,000	19,000	19,000
5 Nadarivatu (40MW)	(	) 101,000	) 101,000	101,000
6 Wailoa Down Stream(10MW)	(	40,000	40,000	40,000
7 Wainisavulevu Weir Raising	(	) 6,000	6,000	6,000
Thermal				
1 Diesel VLIS	103,000	) 104,000	110,000	125,000
2 Diesel Others	Variable	Variable	Variable	Variable
3 HFO	260,000	300,000	340,000	370,000
WIND AND SOLAR				
1 Wind Farm	1,000	) 1,000	1,000	1,000
2 Solar Panel	8	3 15	25	35
INDEPENDENT POWER PRODUCERS				
1 Biomass – Bagasse	32,000	52,000	60,000	60,000
2 Biomass - Wood	24,000	) 86,400	120,000	140,000
Source: Energy Security Report 2010				

# Major Barriers in Formulation & Implementation of Energy Policies

No.	Barriers	Remarks
1.	Political Will	No political will to push for energy agenda in cabinet
2.	Value Energy	Most heads of ministries/departments and senior sup staffs do not value energy
3.	Technical Experts	We do not have technical and legal experts to formule energy policies for us. We usually depend on regin organizations and overseas consultants to do the for us.
4.	Funding	Minimal funds is allocated for this work and we dep on World Bank/UNDP
5.	Support Activities	We have good strategies in our energy policy, but support activities, implementers, whom, when monitoring is not clear.
6.	Brain Drain	Most people that attended training in energy policy and joined regional organizations or migrated Australia or New Zealand
7.	Short Term Review	Our energy policy should have been reviewed eve years, especially to evaluate our performance in mee short term targets. In addition we can then re-strate our approach for other activities.
8.	Availability of Data	Very difficult to get valid data for energy plan purpose. In Fiji, oil companies are reluctant to share consumption data and this affected the publicatio Energy statistics booklet.
9.	Integrated Approach	There is a need for a continuous consultation integrated approach to meet some of targets activities in the Energy Policy
10.	Legislation	We do not have an Energy Act/Renewable Energy etc to provide the legal support for the implementatic the policies.

# THE END

#### **Any Question?**

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