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Asia

Assessing demand and opportunities

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The Republic of the Union of Myanmar



DEVELOPMENT OF ELECTRIC POWER IN MYANMAR



Presented by H.E U Maw Thar Htwe, Deputy Minister

May 21st , 2015

Ministry of Electric power

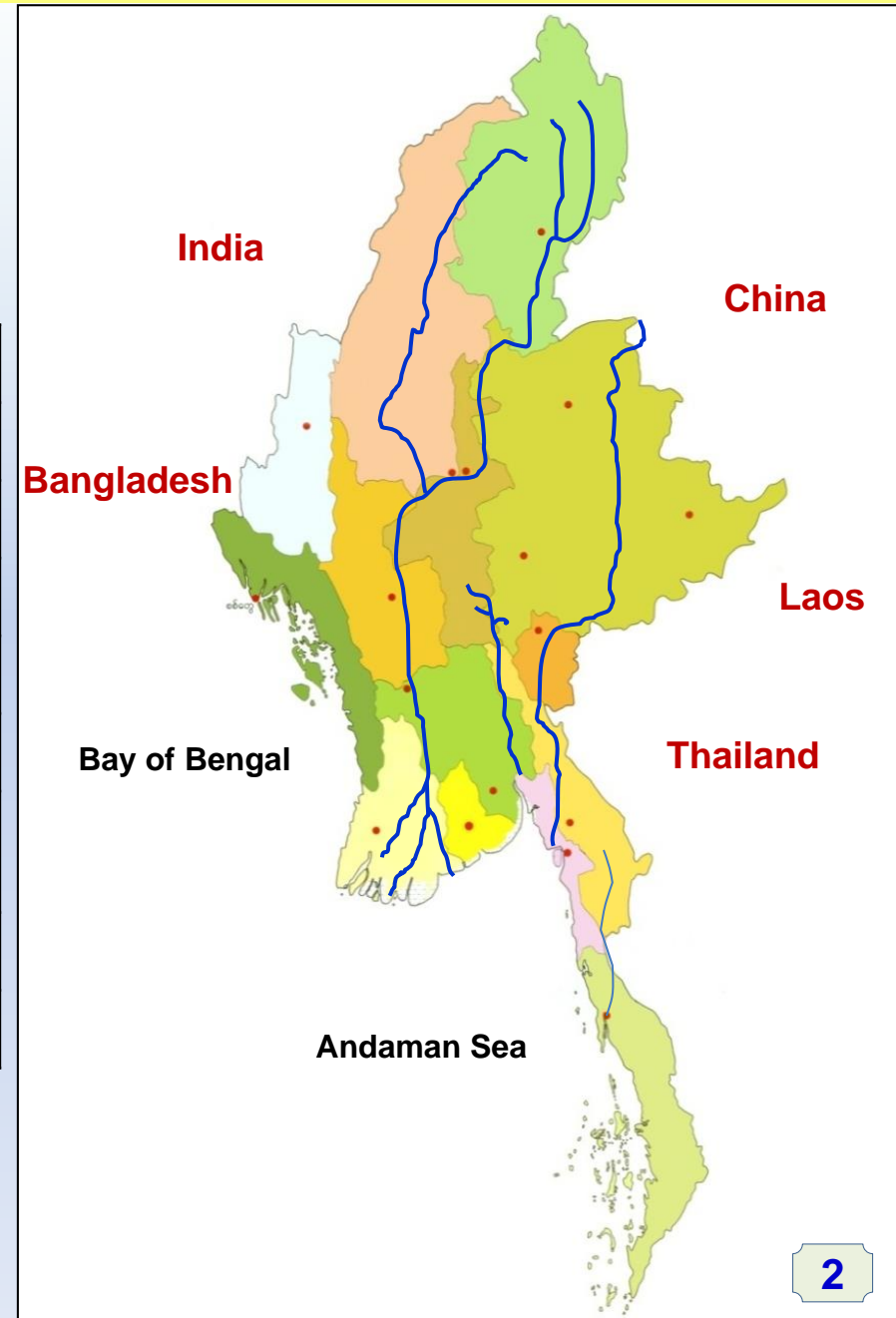
Beijing, China

Potential Resources in Myanmar

➤ Population – over 51 millions

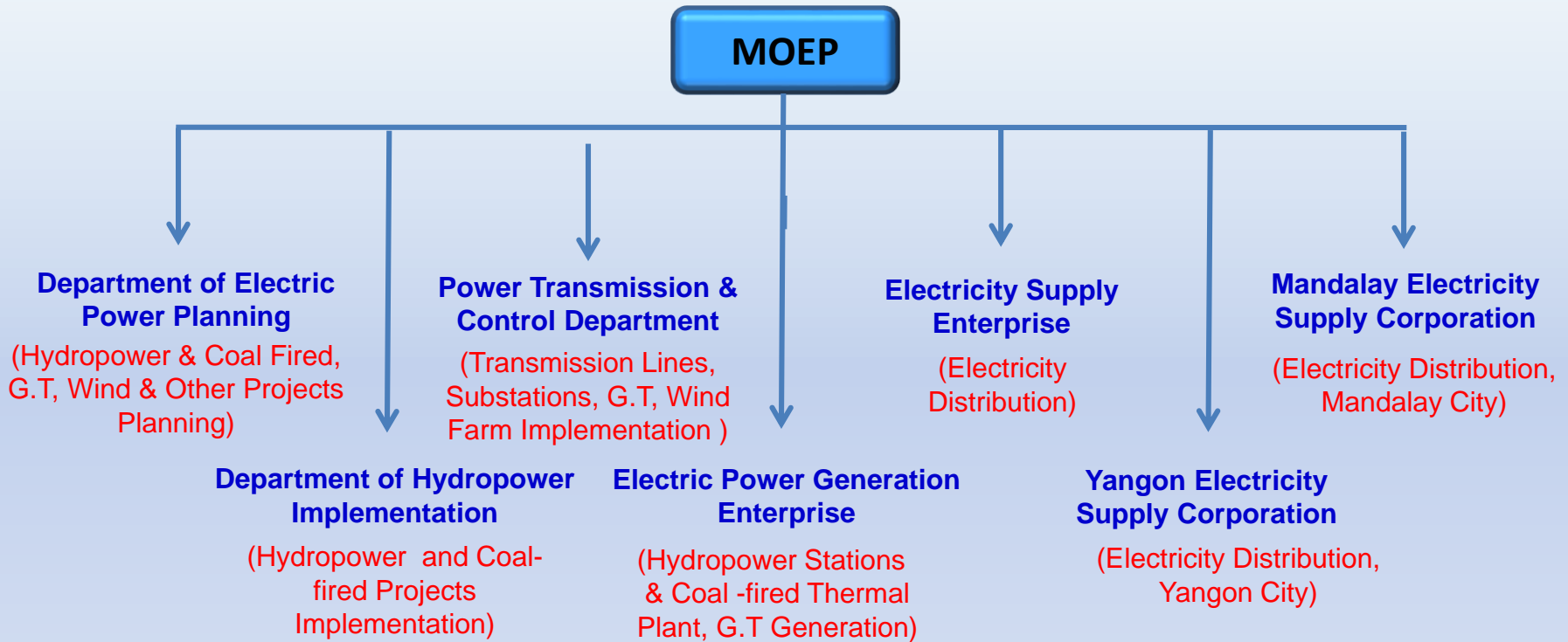
(Average growth rate-1.75% per annum)

Resource		Reserve
Hydropower		>100 GW (Estimate)
Crude Oil	Onshore	102 MMbbl (Proven)
	Offshore	43 MMbbl (Proven)
Natural Gas	Onshore	5.6 TCF (Proven)
	Offshore	11 TCF (Proven)
Coal		540 million tons (Estimate)
Wind		365 TWh/year
Solar		52,000 TWh/year



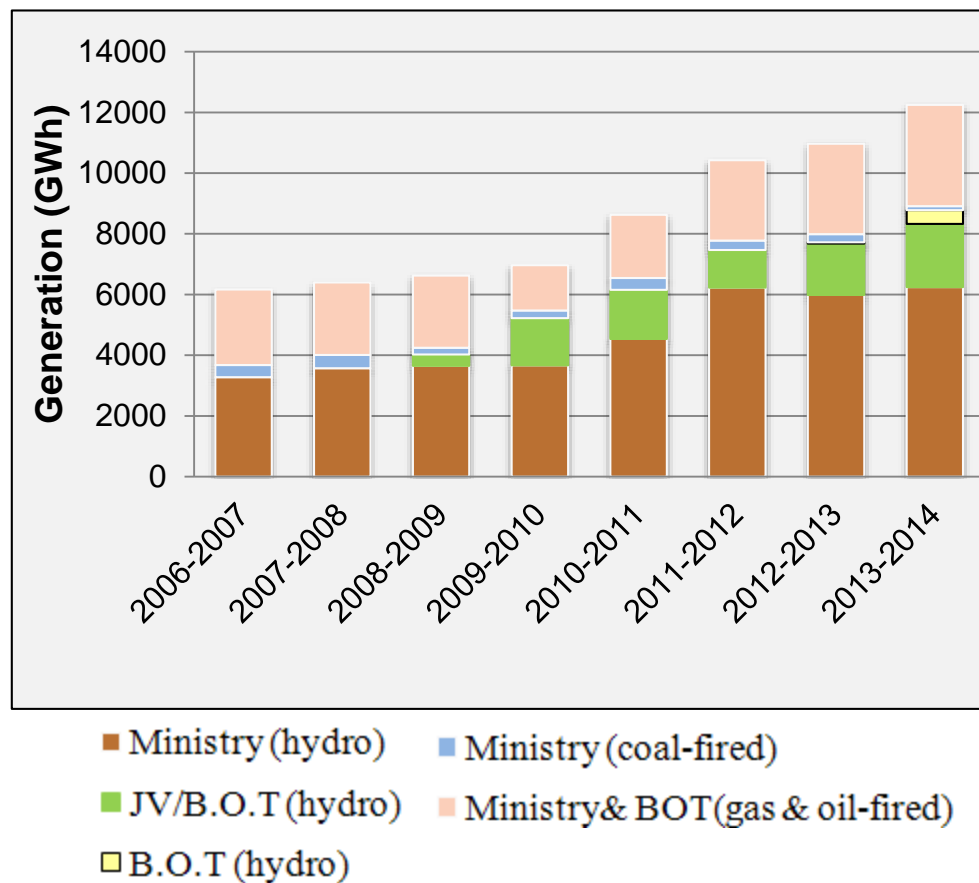
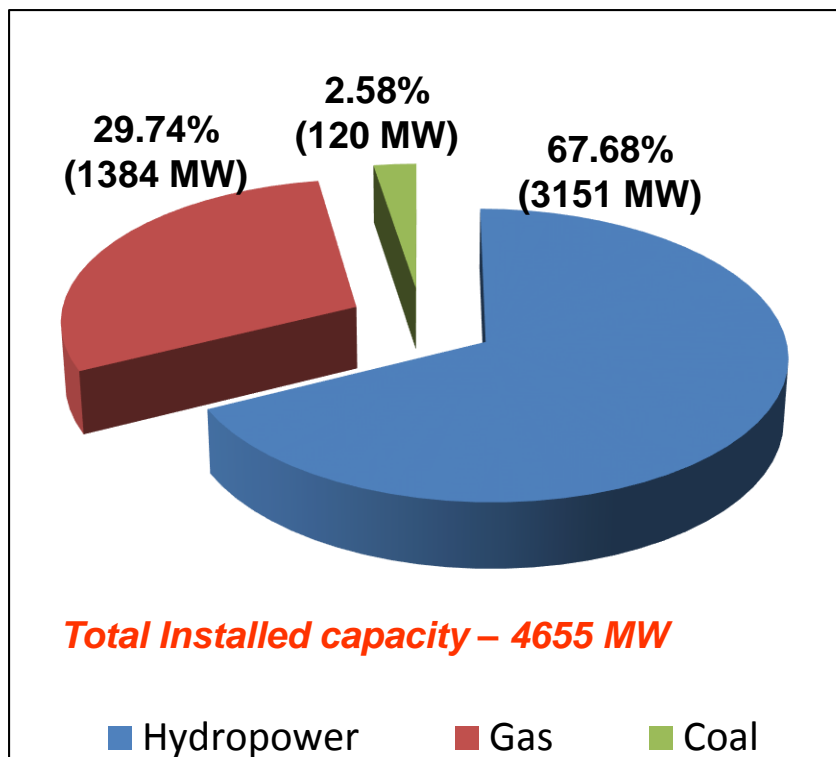
(Source: Ministry of Energy 2013, ADB 2012 and JEPIC 2012)

Ministry of Electric Power (MOEP)



Grid-Connected Generation (102.6 GWh)

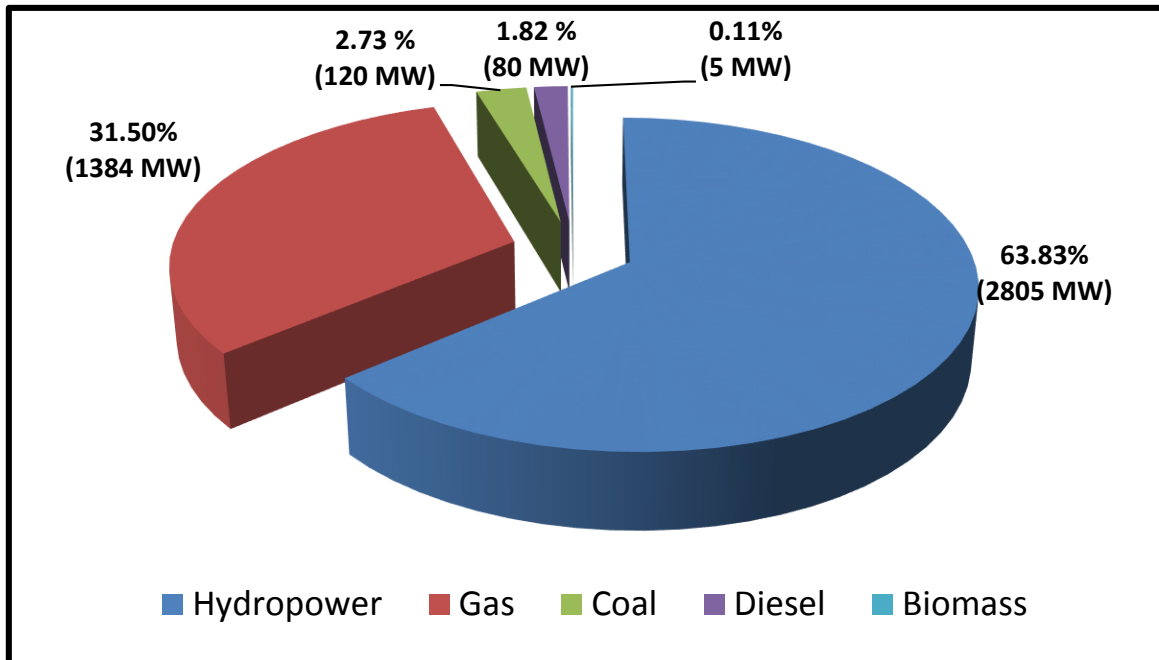
Existing (Installed Capacity)



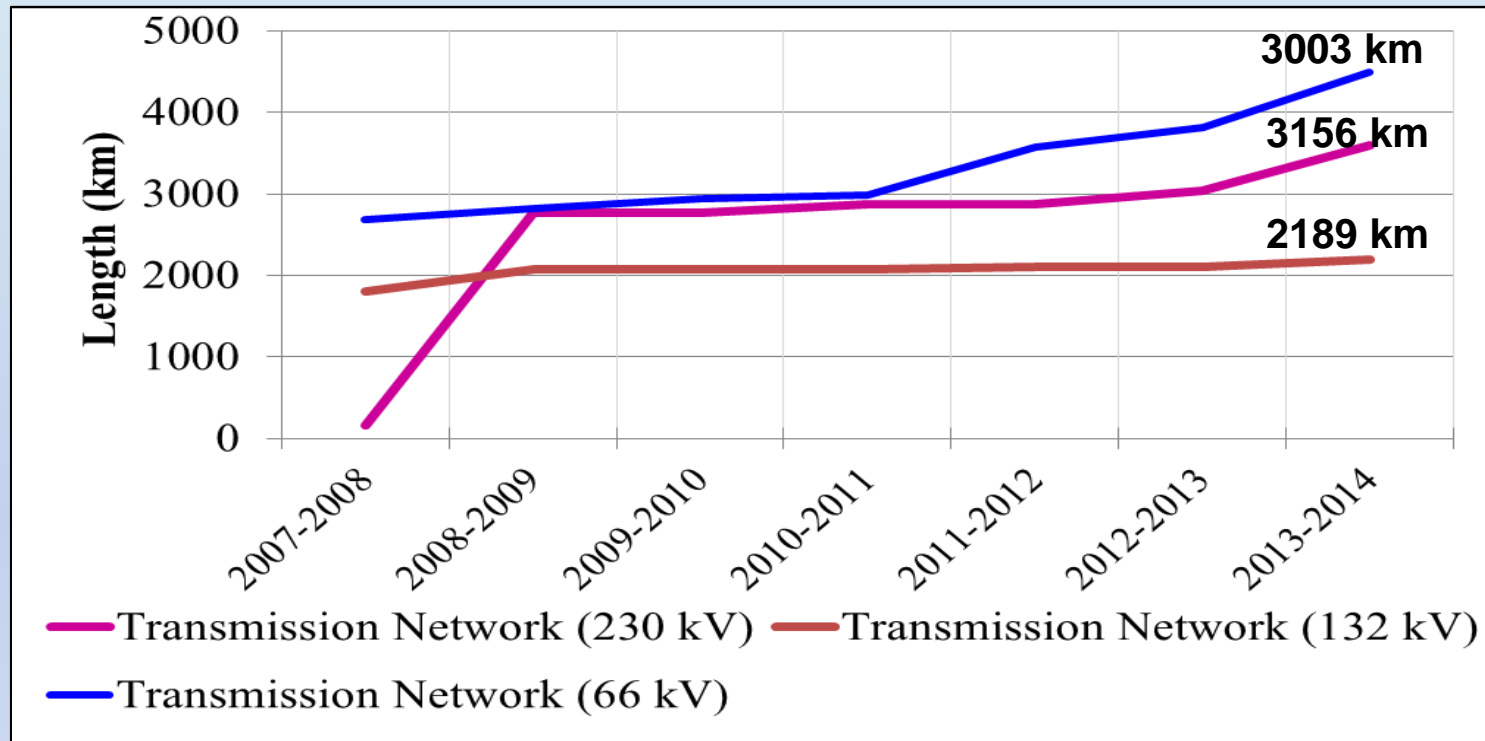
- ❖ Hydropower controls 67.68% of grid-connected electricity.
- ❖ Due to system base load instability, insufficient power supply occurs in summer.

Overall Generation Mix (March, 2015)

Particulars	Grid-connected (MW)	Isolated (MW)	Total (MW)	(%)
Total Generation Mix	4275.4	119.283	4394.683	100.00
Hydropower	2771	34.174	2805.174	63.83
Gas	1384.4	-	1384.4	31.50
Coal	120	-	120	2.73
Diesel	-	80.109	80.109	1.82
Bio Mass	-	5	5	0.11



Transmission, Distribution and Substations (August 2014)



Voltage (kV)	Length (km)	Substations	Capacity (MVA)
230	3156	32	4105
132	2189	21	1248
66	3003	188	2421
Total	8348	241	7774

Power Supply Strategies

(1) Sole investment of Ministry

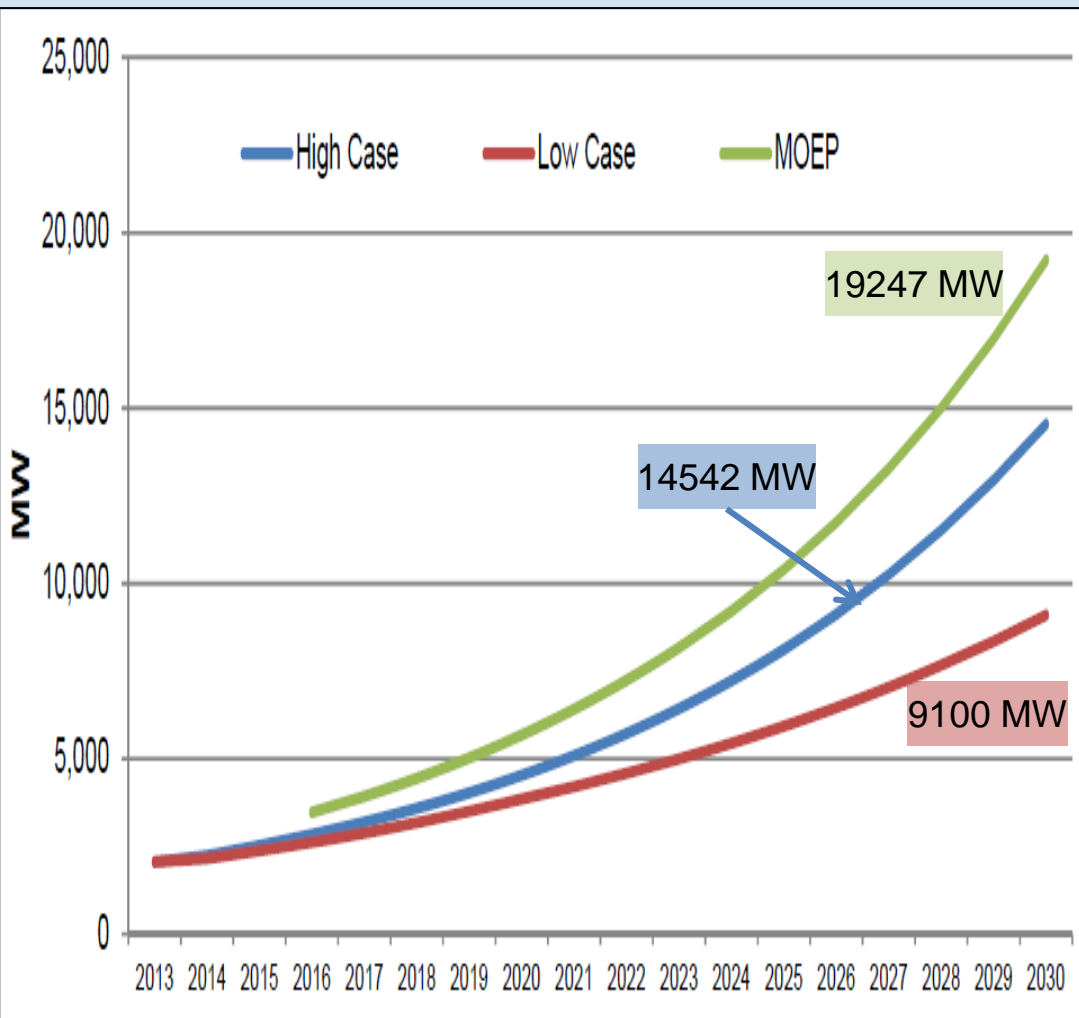
(2) Build, Own and transfer (B.O.T) by local entrepreneur

(3) Joint Venture/Build, Own and Transfer (JV/B.O.T) by foreign investor

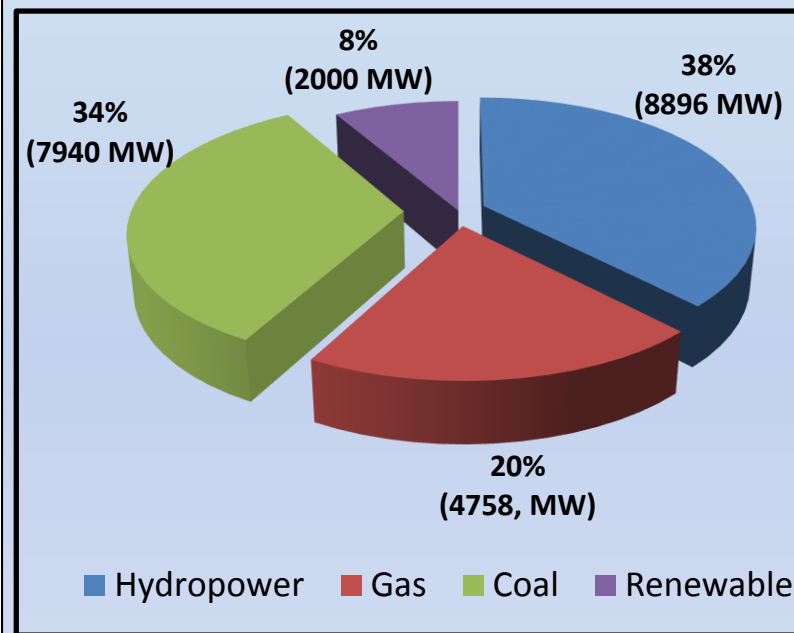
Resources	Development Stage	Projects	Installed (MW)
Hydropower	Existing Power Plant	25	3151
	Implementation	6	1522.4
	JVA	4	12700
	MOA	19	16970
	MOU	12	8583
	Planning/Proposal	4	783.1
	Sub-total	70	43709.5
Steam/Gas-fired	Existing Power Plant	14	714.9
	Implementation	12	1255.35
	JVA	-	-
	MOA	2	703
	MOU	4	1899
	Planning/Proposal	1	106
	Sub-total	33	4678.25
Coal-fired	Existing Power Plant	2	128
	Implementation	-	-
	JVA	-	-
	MOA	-	-
	MOU	12	10090
	Planning/Proposal	10	8710
	Sub-total	24	18928
Others	(Wind) MOU	25	4032
	(Solar) MOU	4	530
	(Geothermal) MOU	5	200
	Sub-total	34	4762
Total		161	72077.75

Demand Forecast and Supply Plan

Maximum Demand Forecast by JICA



Generation in 2030-2031 (23594 MW)



Electric Power Sector Policies

- *To employ gas turbine power generation in short term plan and hydro power generation in long term plan for energy sufficiency*
- *To generate and distribute more electricity for economic development*
- *To conduct ESIA for power generation and transmission*
- *To reduce losses and conserve electricity*
- *To promote electricity production from new and renewable energy sources*

Legal and Logistic Preparations

❖ National Energy Policy

The Policy had been accomplished with the assistance of ADB.

❖ Electricity Law

On 27 October 2014, Electricity Law was legislated by the Union Parliament. By-laws are also ongoing.

❖ National Electricity Master Plan

National Electricity Master Plan (final report) was submitted in Dec. 2014 by JICA .

❖ National Electrification Plan

To electrify the whole country in 2030-31, Myanmar National Electrification Plan was submitted in June 2014 by WB.

Conclusion

- Electricity distribution in Myanmar for the year of 2015 can be merely supplied up to (34)% out of the State's demands.
- MOEP has been taking due pain to fulfill the State's power demands by cooperation with International Institutions. The Master Plan for supplying electricity to the whole country in the year of 2030-2031 which is our main target, has been already conducted.
- There are abundant of hydropower resources(fresh water) in Myanmar that is there might be (7.7%) of Asia. Hydropower business in Myanmar can be more extended than the present conditions. MOEP exerts all its efforts to implement hydropower projects with the standards of the least impact on environmental and social issues.
- In additions, several high-voltage transmission lines must be extended, as a matter of fact.
- Accordingly, I would like to invite to come and join in power sector in Myanmar so that any person who shall have the right enjoying electricity in comparison between global status.

Thank you all!