Sustainable Development of Energy and Electricity Policy In Cambodia

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I. Cambodian Background

Geography and Demography

- Land Area: 181 035 sq.km

- Located at Southeast Asia bordered with Lao MDR in the north, Thailand in the west and Vietnam in the east and south.

- Two seasons: Dry season (Jan-May) and Raining Season(June-Nov)

- Population(est. 2014): 15.45 Million. (growth rate: 1.63%)

- Total GDP: 11.66 MUSD And GDP/capita: 830 USD (NIS 2010)

80% of Population live at Rural area

63% are Working Age

53% are Labour Force

City and Urban household

Rural Household

City or Urban Household

Rural Household

Passenger Transportation

Freight Transportation








II. Current energy policy and measures of Cambodia

Current energy policy and measure

- To ensure a reliable and secured electricity supply at reasonable prices, which facilitates the investments in Cambodia and developments of the national economy.

- In year 2020: 100% of villages has electrical supply by different kind of electricity source.

- In year 2030: 70% of household has connect to the grid.

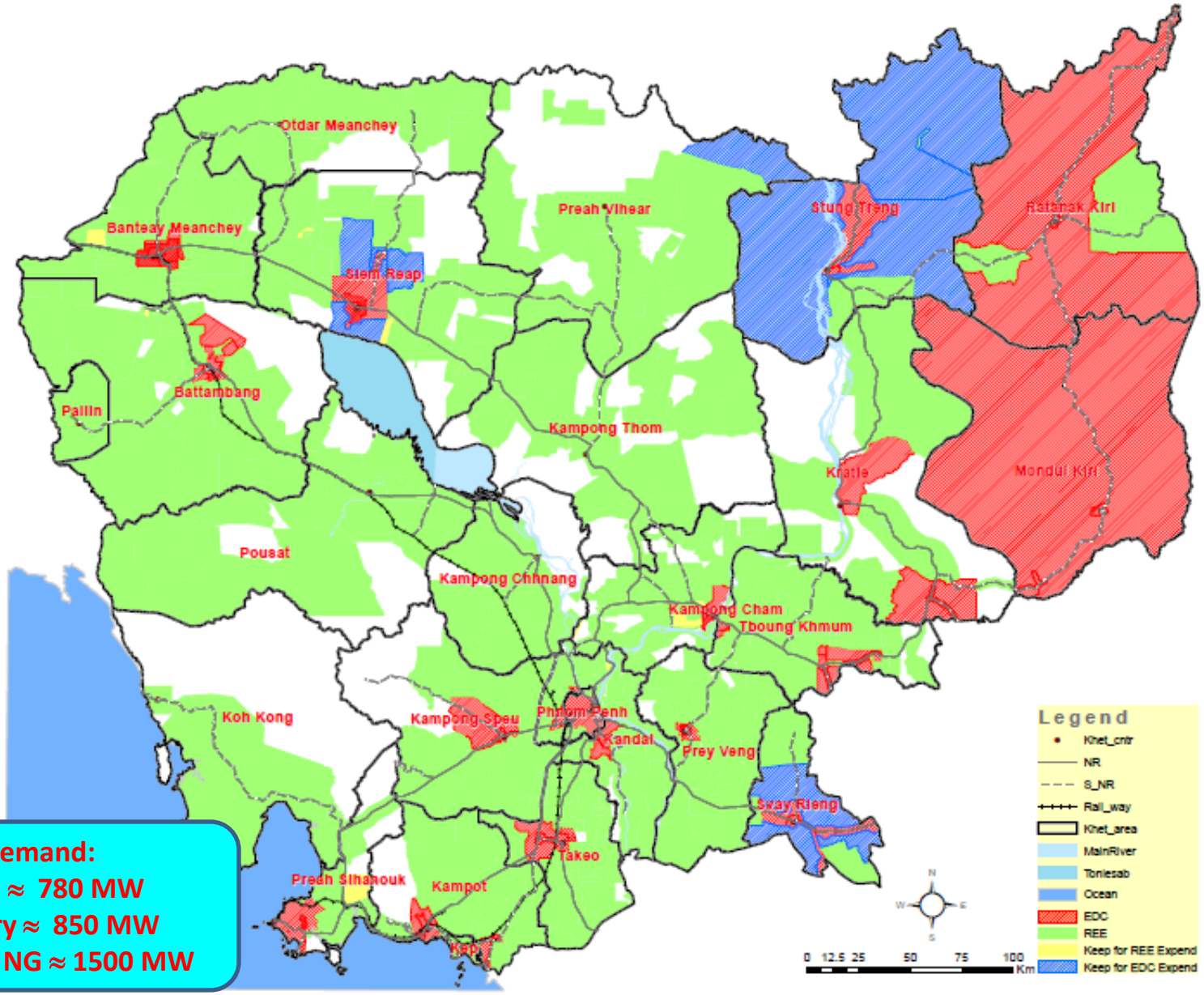
- Reduce electrical tariff

+Measure:

- Seek the fund to support project of power system extension.

III. Cambodian Energy demand and supply

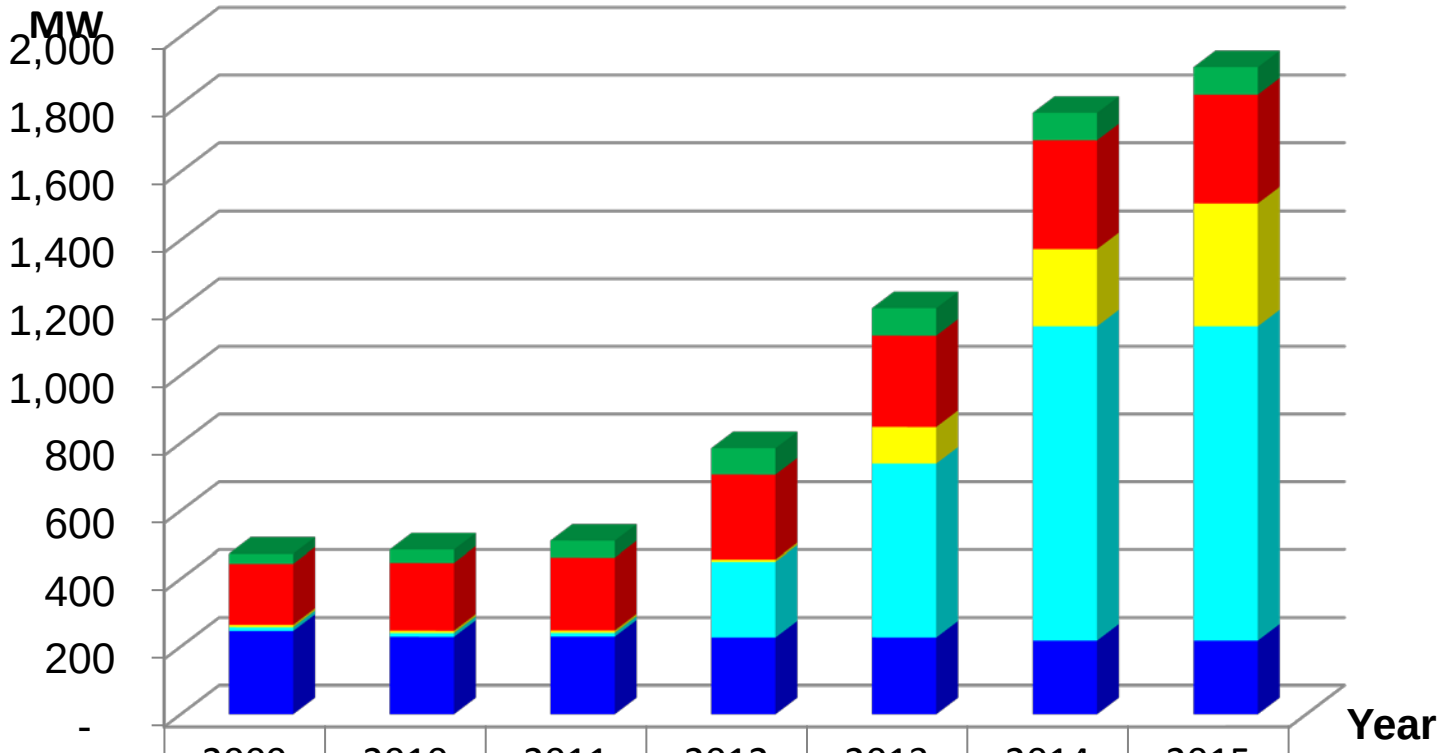
Electricity Coverage Area



Demand:
in NG ≈ 780 MW
Country ≈ 850 MW
Supply in NG ≈ 1500 MW

Available Generation Capacity in 2015

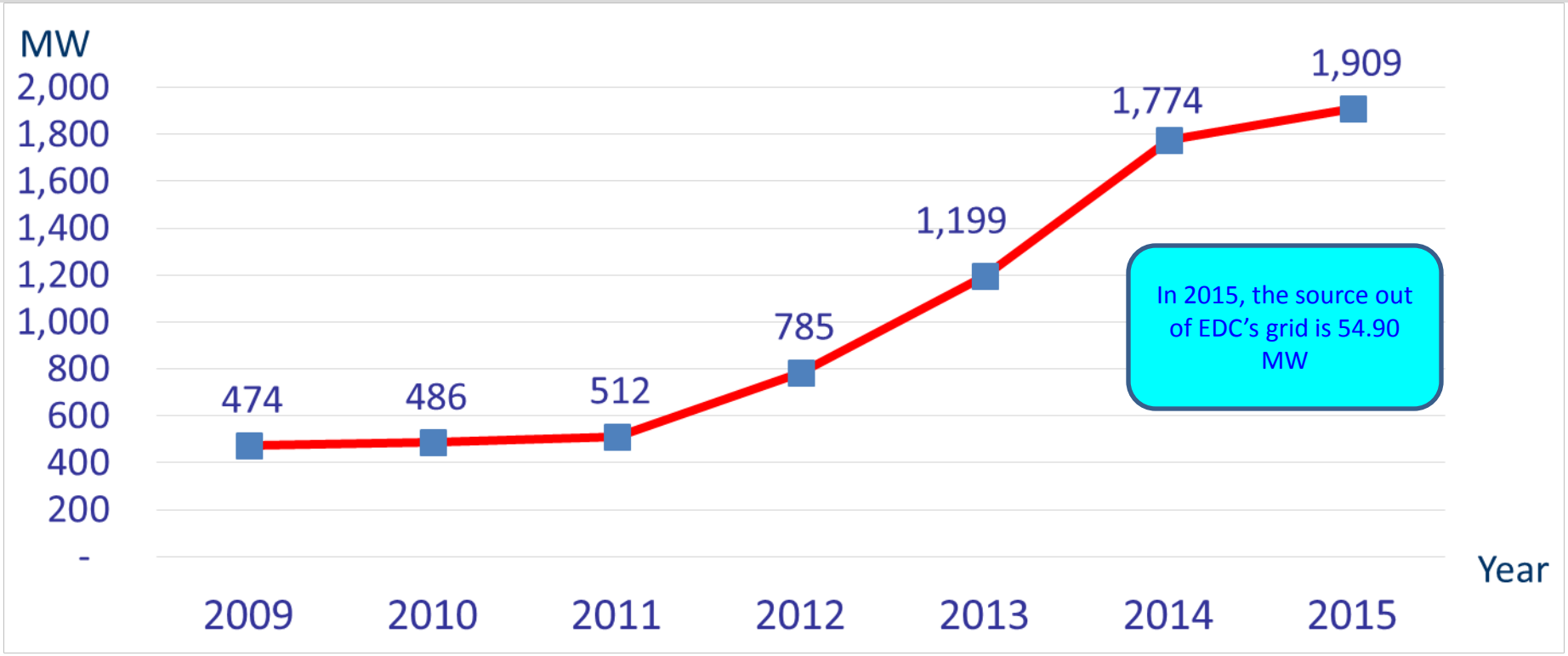
In 2015, the source out of EDC's grid is 54.90 MW



	2009	2010	2011	2012	2013	2014	2015
Import Via Distribution line	29	39	49	78	81	81	81
Import Via High Voltage	180	200	215	250	270	320	320
Coal	7	7	7	7	108	228	363
Hydro	11	11	11	223	512	927	927
Fuel Oil	246	229	230	227	227	218	218

Note: the hydro power can generate only 50% of their capacity during dry season

Available Generation Capacity in 2015



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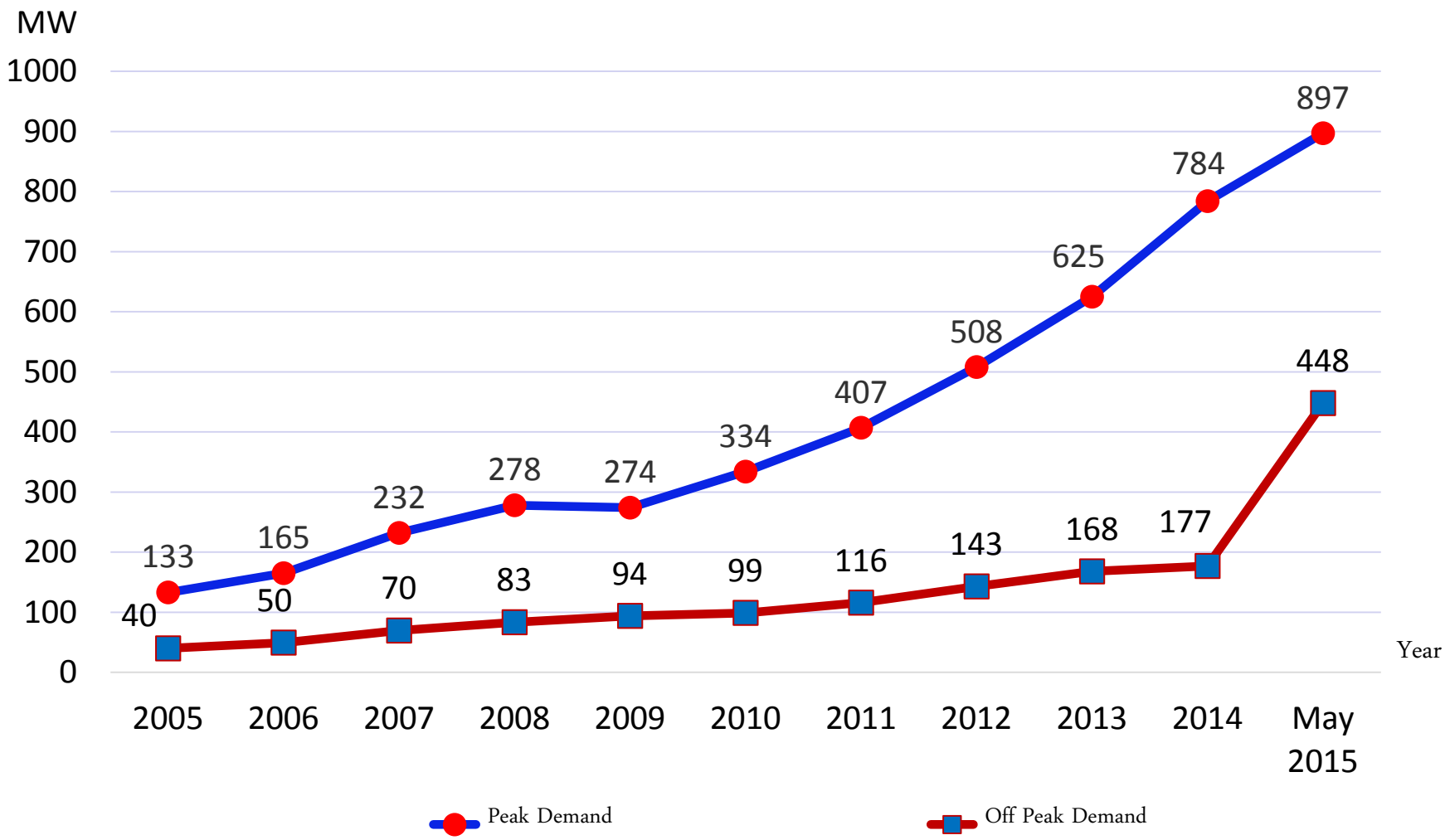
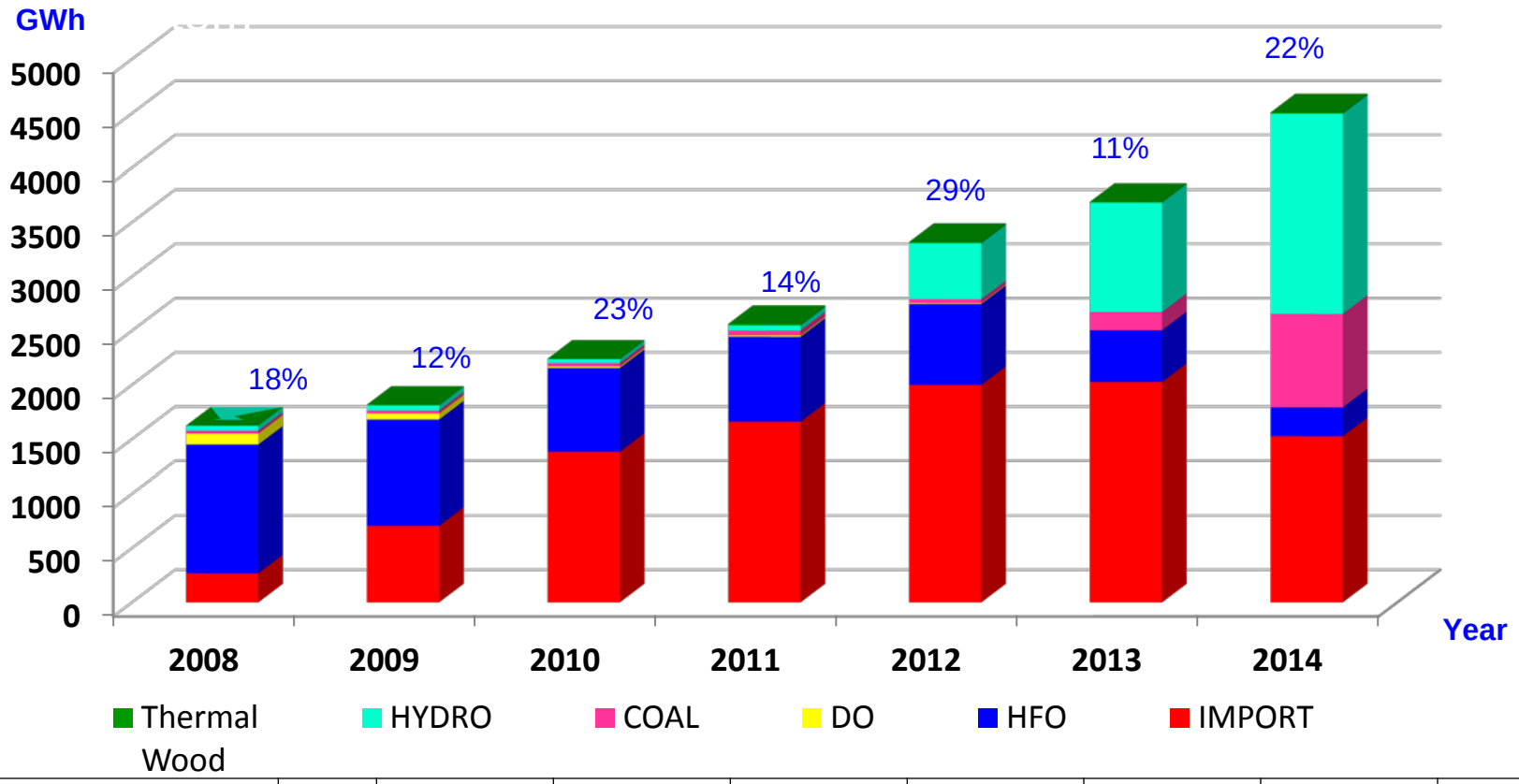
Peak Demand in National Grid from 2005 - 2015

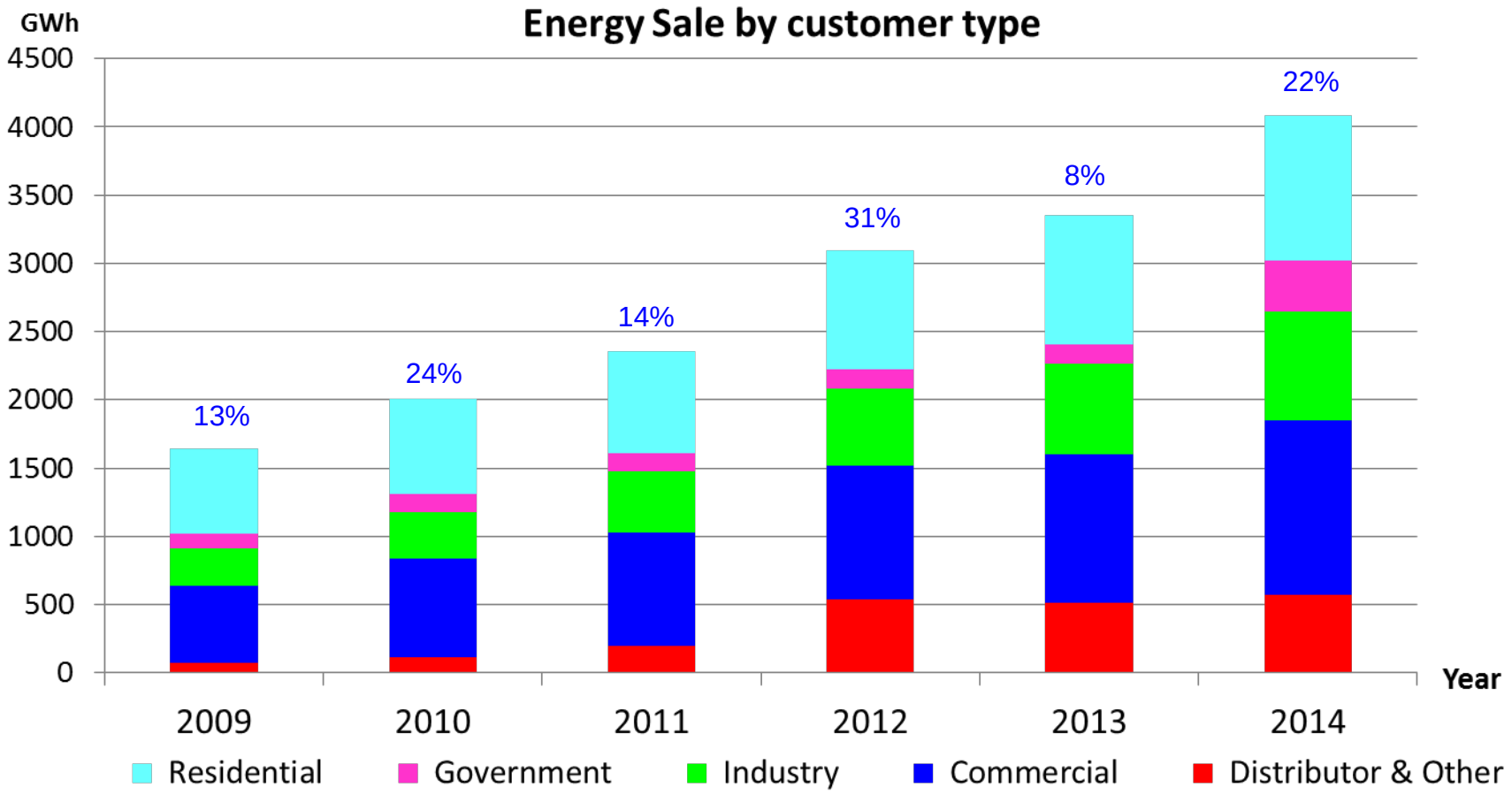


Energy Generation by Type in EDC Systems



Year	Unit	2008	2009	2010	2011	2012	2013	2014
Energy Generation	GWh	1,625	1,818	2,242	2,564	3,319	3,689	4,509
Growth Rate	%	18%	12%	23%	14%	29%	11%	22%

Energy Consumption and Customer

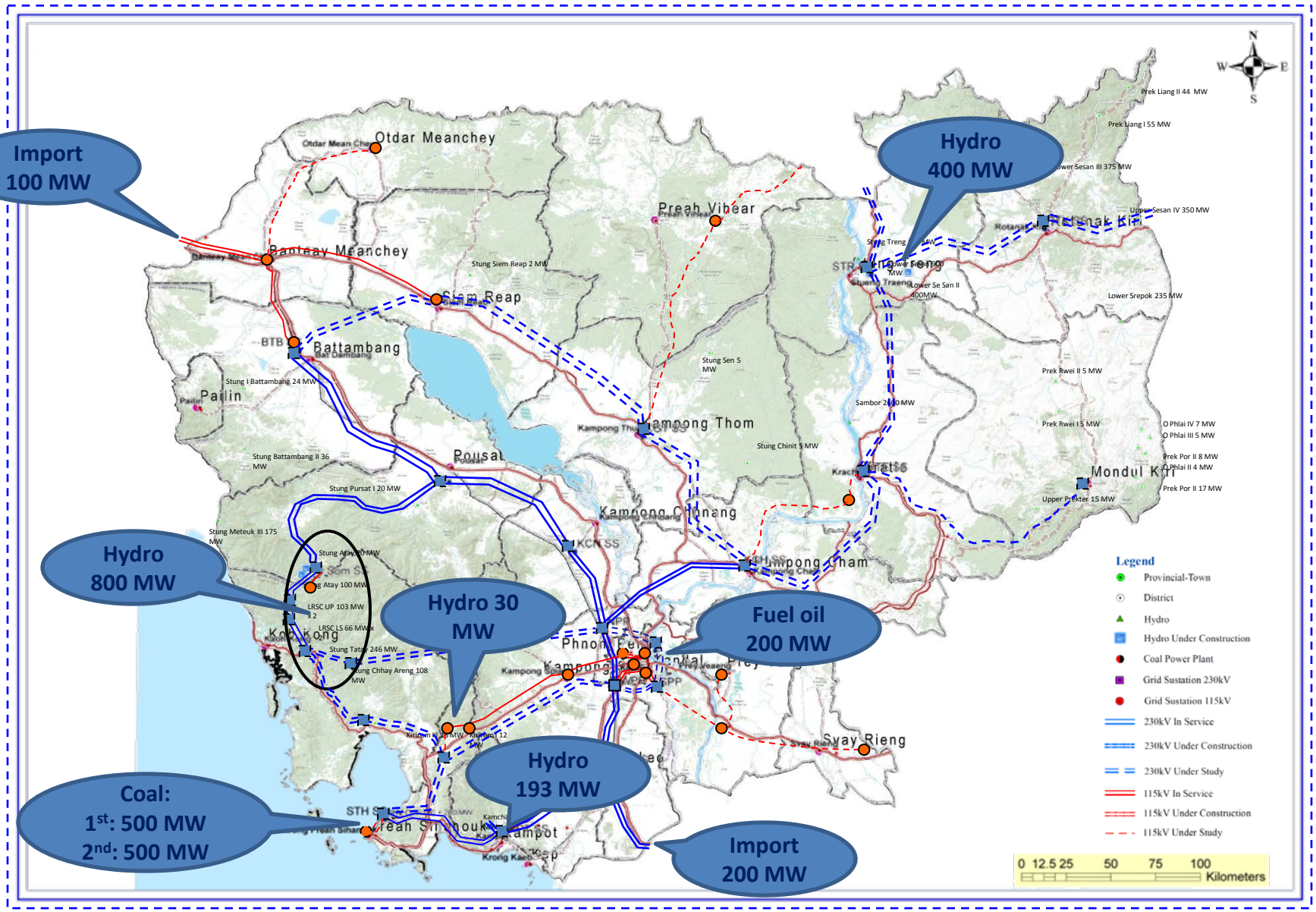


Note: Other is include Distributor (REE)

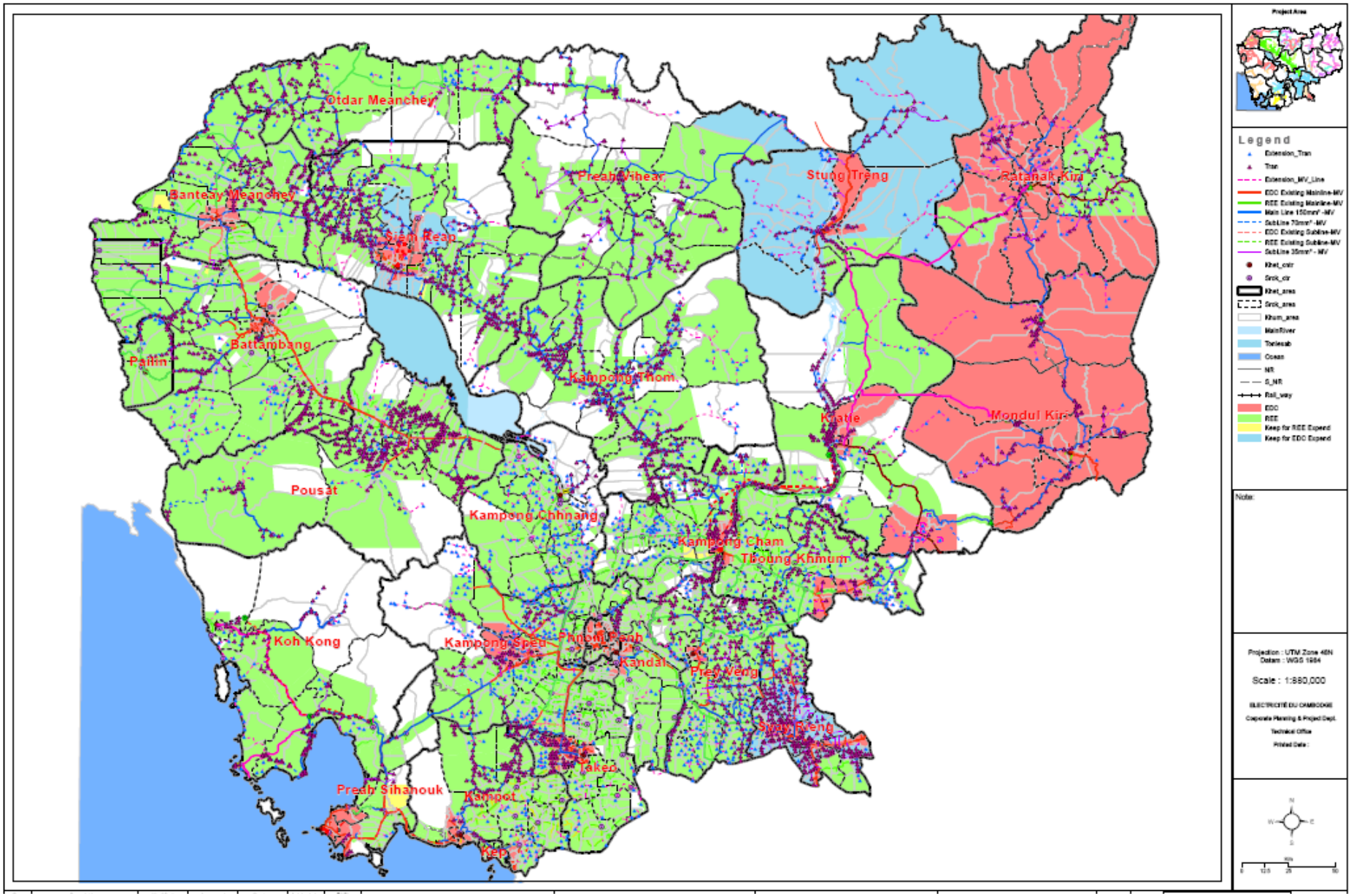
Type	Unit	2009	2010	2011	2012	2013	2014
Energy Sale	GWh. (%)	1,641.56 (13.06%)	2,059.41 (25.45%)	2,353.50 (14.28%)	3,091.11 (31.34%)	3,352 (8.44%)	4,081.21 (21.75%)
Customer Number	Conn. (%)	340,396 (7.89%)	375,997 (10.46%)	418,066 (11.19%)	460,984 (10.27%)	502,859 (9.11%)	541,141 (7.59%)

IV. Outlook of Energy demand and supply projection

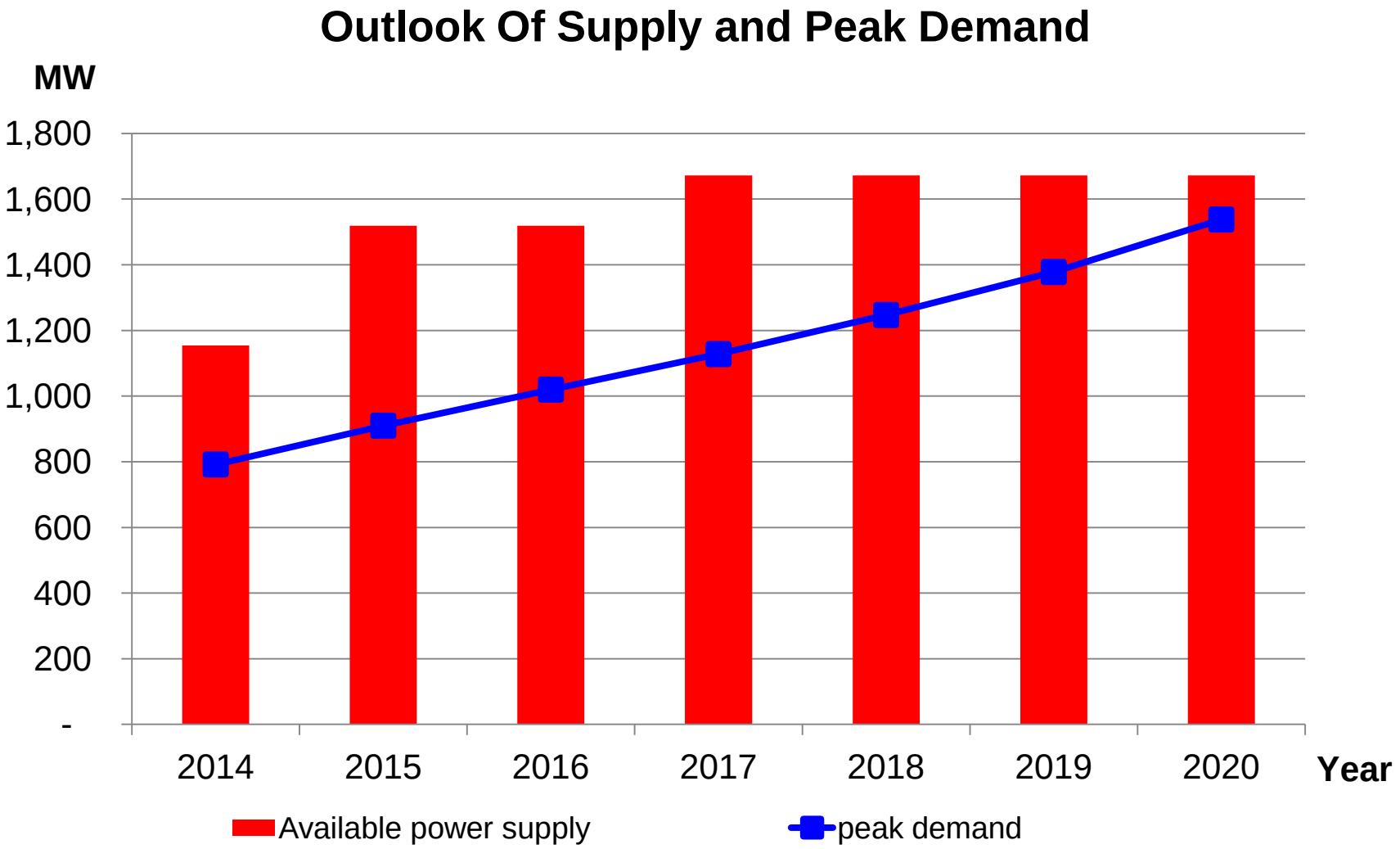
Actual Power Transmission and Plan



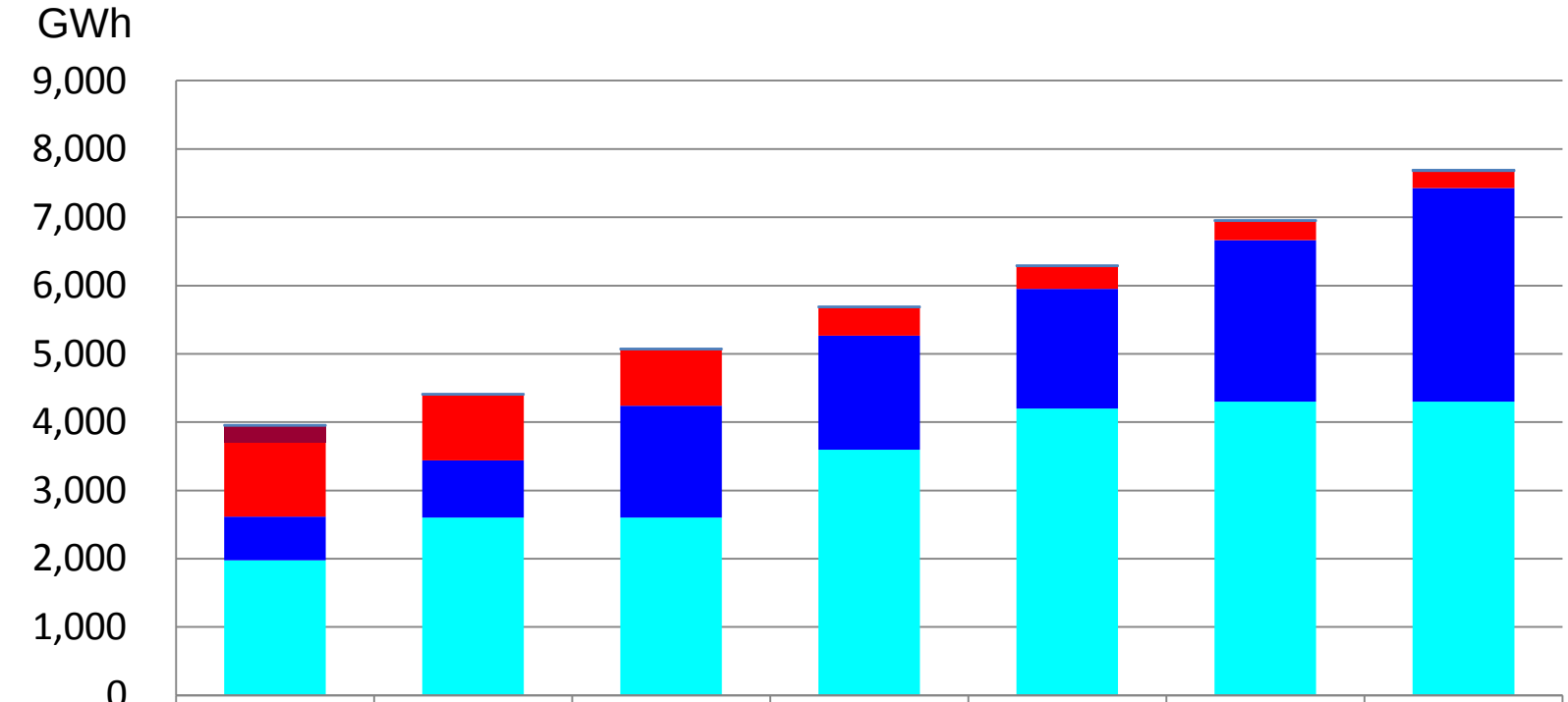
Rural Electrification Developing Map



Outlook Of Supply and Peak Demand 2014-20



Energy Generation by Type 2014-20



	2014	2015	2016	2017	2018	2019	2020
Others	15	15	15	15	15	15	15
HFO	250	0	0	0	0	0	0
Import	1079	963	824	414	330	280	250
Coal	640	835	1635	1669	1753	2367	3130
Hydro	1978	2605	2605	3599	4199	4299	4299

V. Main Issue of Energy Policy

Main Issue of Energy Policy

- Energy is the essential input for socio-economic development of a country. Nearly every aspects of development – from reducing poverty and raising living standards to improving health care, and industrial and agriculture productivity – require reliable access to modern energy sources.
- Main energy issues:
  - **Import dependency**
  - **Lateness or suspension of some power plant constructions.**
  - **Seek the fund to support project of power system extension.**

VI. Purpose and ongoing work

Purpose and ongoing work

The main purpose of this training program are:

- To get and exchange some knowledge from Japan and other trainee countries on energy policy
- To analyze the current energy situation and estimate future energy needs
- To assess the indigenous energy resource potential and explore possibilities for energy resource development

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-Thank You- ありがとう

Contact：report@tky.ieej.or.jp