

# 1<sup>st</sup> Workshop for APEC Initiatives for Enhancing Quality of Electric Power Infrastructure Development

*Tokyo, Japan*

*25 – 26 August 2015*

## PHILIPPINES

PHL Department of Energy



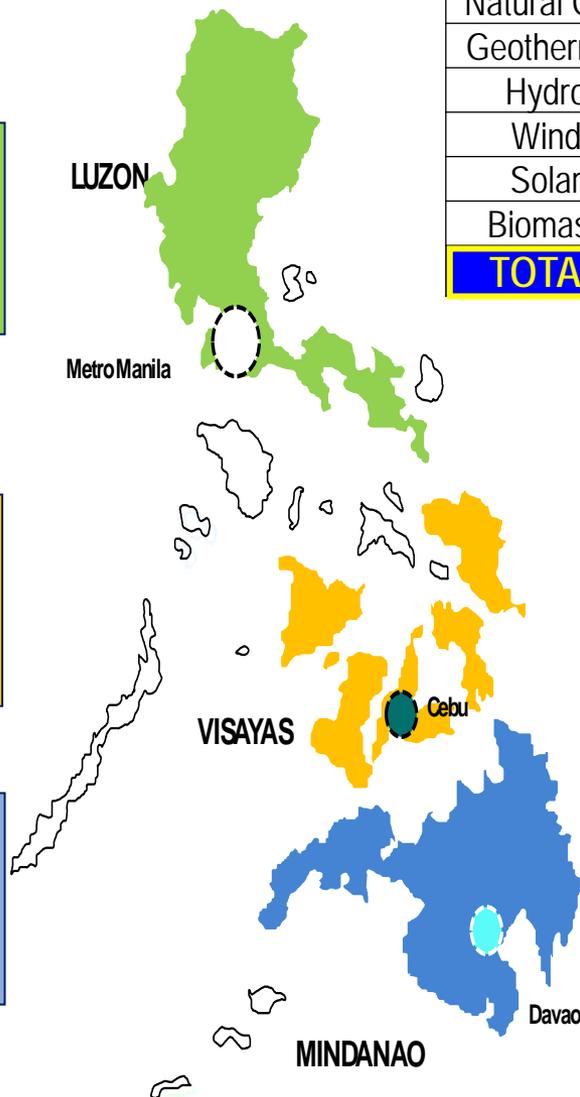
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## At a Glance...

Capacities (13,524 MW) are concentrated in the North ( $\approx 44\%$ ) and South Luzon ( $\approx 53\%$ ), while load center is in Metro Manila (MERALCO @  $>70\%$ )

Capacities (2,692MW) are concentrated in Cebu (Coal  $\approx 24\%$ ) and Leyte-Samar (Geothermal  $\approx 27\%$ ) Sub-Grid; Cebu is 50% of demand

Highly dependent on water levels of Agus and Pulangi rivers ( $\approx 44\%$ ), while most of the capacities (2,237 MW) are located in the north (59%).



FUEL TYPE	Capacity (MW)		Percent Share (%)	
	Installed	Dependable	Installed	Dependable
Coal	5,843	5,354	31.67	33.72
Oil Based	3,608	2,790	19.55	17.57
Natural Gas	2,862	2,760	15.51	17.38
Geothermal	1,918	1,607	10.39	10.12
Hydro	3,556	2,993	19.27	18.85
Wind	373	189	2.02	1.19
Solar	110	75	0.60	0.47
Biomass	183	110	0.99	0.69
<b>TOTAL</b>	<b>18,453</b>	<b>15,878</b>		

GRID	To-date Peak Demand (MW)
	2015
Luzon	8,928
Visayas	1,617
Mindanao	1,435

**Note: Transparent islands in the above diagram are not covered by NGCP's network.**

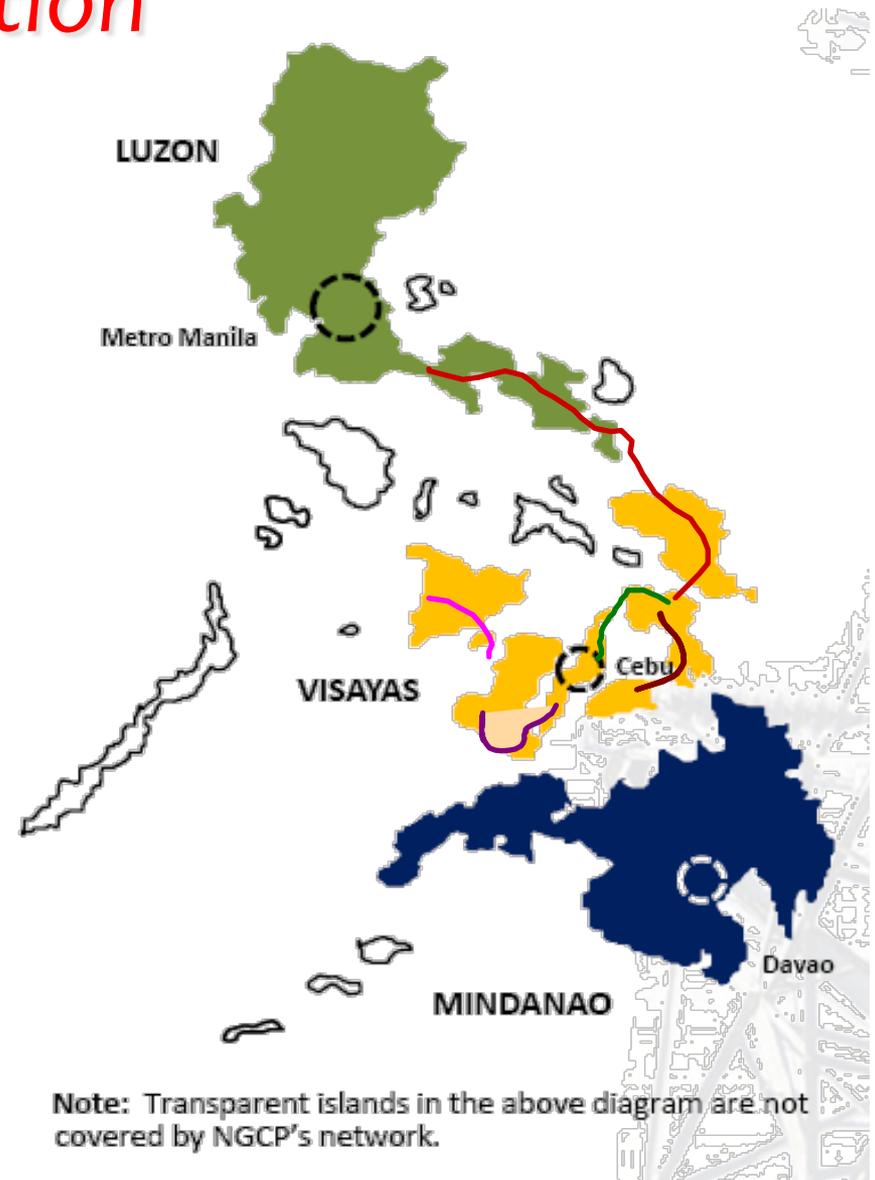
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## Island Grids Interconnection

### Interconnection Line Capacity

- Leyte-Luzon (440 MW)
- Leyte-Cebu (400 MW)
- Cebu-Negros (200 MW)
- Negros – Panay (100 MW)
- Leyte-Bohol (100 MW)

**Mindanao is not yet connected with Luzon and Visayas**



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## Current Challenges and Actions Needed

### Climate Change Mitigation

- To promote the use of clean technology

### Economic Growth and Development

- To meet future demand for electricity at affordable/reasonable rates

### Energy Supply Security

- To diversify sources of fuel and technologies
- To conserve and manage current and future demand

### Power Grid Development

- To integrate Renewable Energy sources
- To foster competition in the generation and supply sectors through provision of stable, reliable and robust transmission and distribution systems

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