PHILIPPINE
Power Development Plan

Philippine Energy Plan (PEP)
Luzon Public Consultation Series

Outline of Presentation

- Power Sector Reform Objectives
- Power Supply and Demand Situation Outlook
- Power Sector Reforms

Objectives of Power Sector Reforms

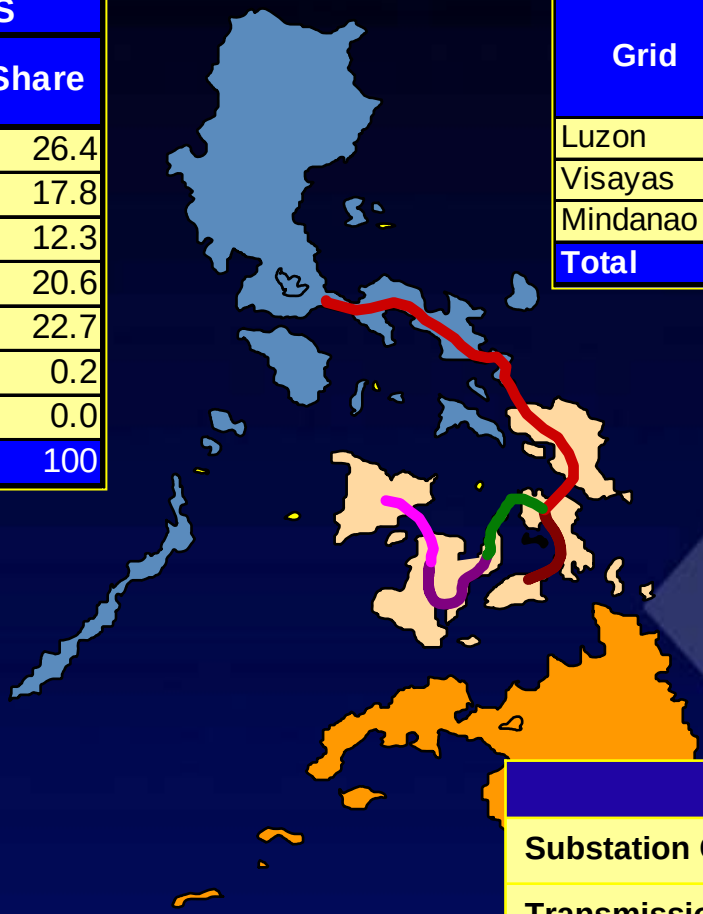
- Competition in the generation sector
- Efficiency in the Transmission and Distribution sectors
- Total Electrification

POWER SUPPLY AND DEMAND SITUATION OUTLOOK

Power Sector Situationer

2007 Power Generation and Transmission, PHILIPPINES

PLANT	PHILIPPINES	
	Installed,MW	% Share
Coal	4,213	26.4
Natural Gas	2,834	17.8
Geothermal	1,958	12.3
Hydro	3,289	20.6
Oil Based	3,616	22.7
Wind	25	0.2
Solar	1	0.0
TOTAL	**15,937**	100



Grid	Installed Capacity (MW)	Dep. Capacity (MW)	Peak Demand (MW)
Luzon	12,172	10,029	6,643
Visayas	1,832	1,475	1,102
Mindanao	1,933	1,682	1,241
Total	**15,937**	**13,186**	**8,987**

Note:

Actual 2007 Peak Demand per TransCo S.O.

Installed and Dependable Capacity based on NPC/Non-NPC submissions to DOE

Dependable Capacity based on 2007 Plant Operation of NPC/Non-NPC plant

Interconnection

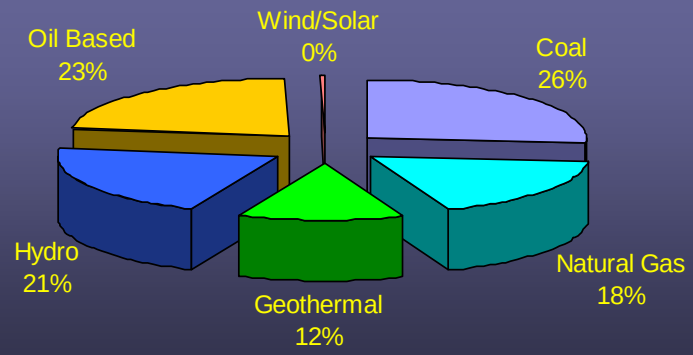
- **Leyte-Luzon (440 MW)**
- **Leyte-Cebu (400 MW)**
- **Cebu-Negros (100 MW)**
- **Negros – Panay (100 MW)**
- **Leyte-Bohol (100 MW)**

EXISTING FACILITIES	
Substation Capacity	**24,489 MVA**
Transmission Line Length	**20,236 circuit kilometers**

Power Sector Situationer

2007 Grid Capacity and Generation, PHILIPPINES

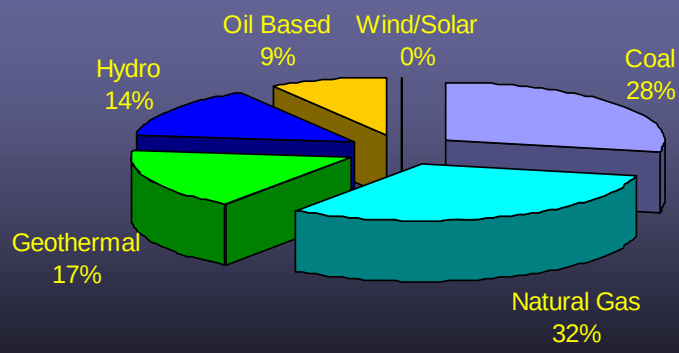
Installed Capacity



15,937 MW

Capacity Mix

Generation Mix

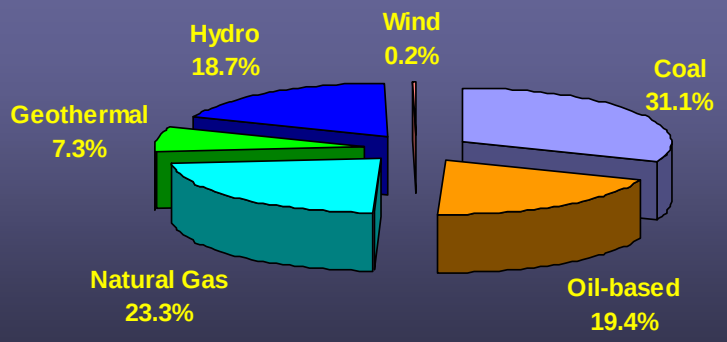


59,612 GWh

Power Sector Situationer

2007 Grid Capacity and Generation, LUZON

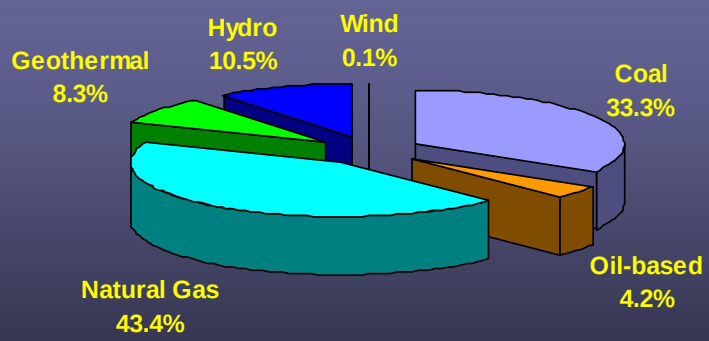
Installed Capacity



12,172 MW

Capacity Mix

Generation Mix



43,247 GWh

Note: Excluding SPUG generation

Luzon Supply Interdependence

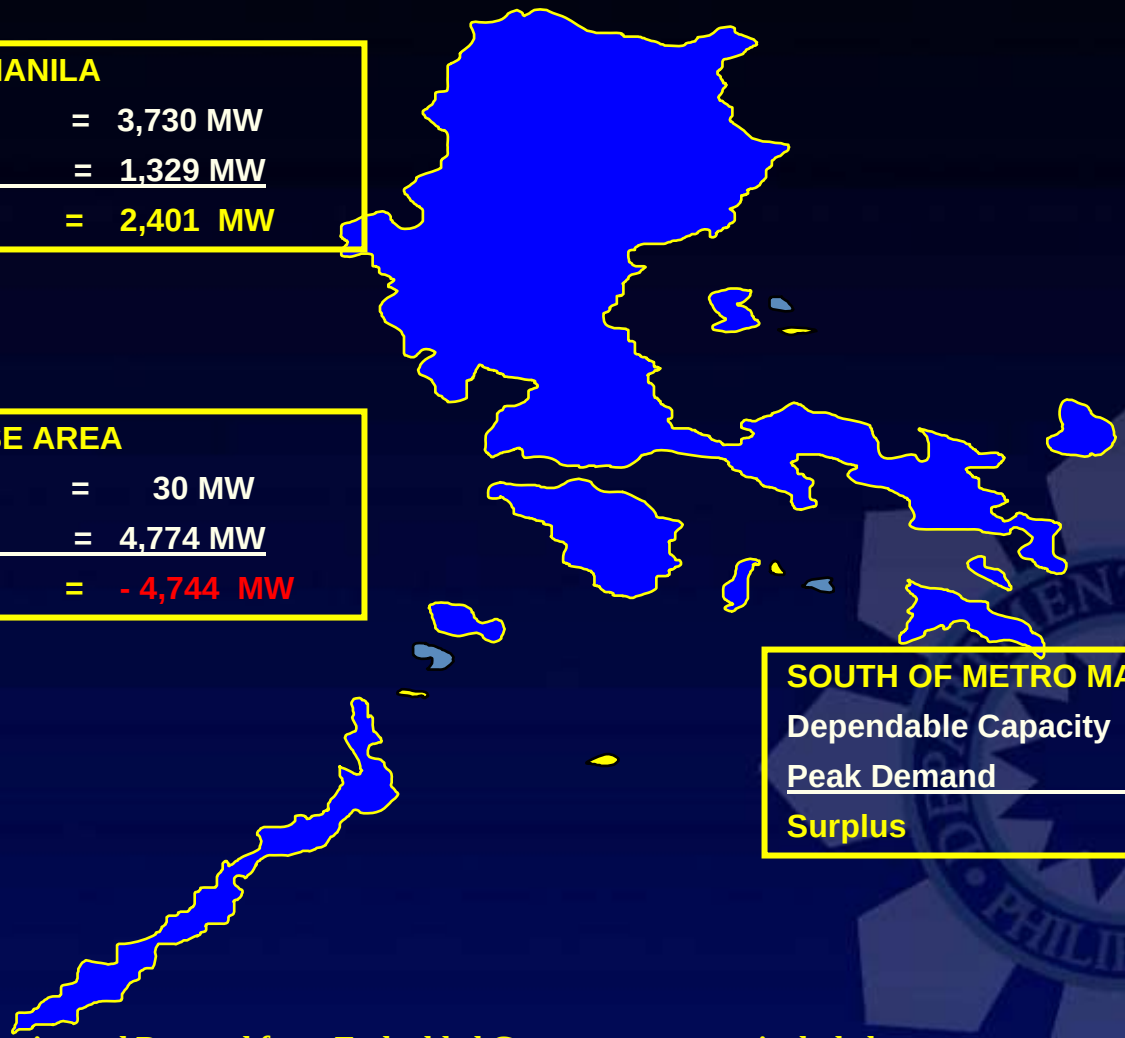
2007 Grid Capacity and Demand

NORTH OF METRO MANILA

Dependable Capacity	=	3,730 MW
Peak Demand	=	1,329 MW
Surplus	=	2,401 MW

MERALCO FRANCHISE AREA

Dependable Capacity	=	30 MW
Peak Demand	=	4,774 MW
Surplus	=	- 4,744 MW



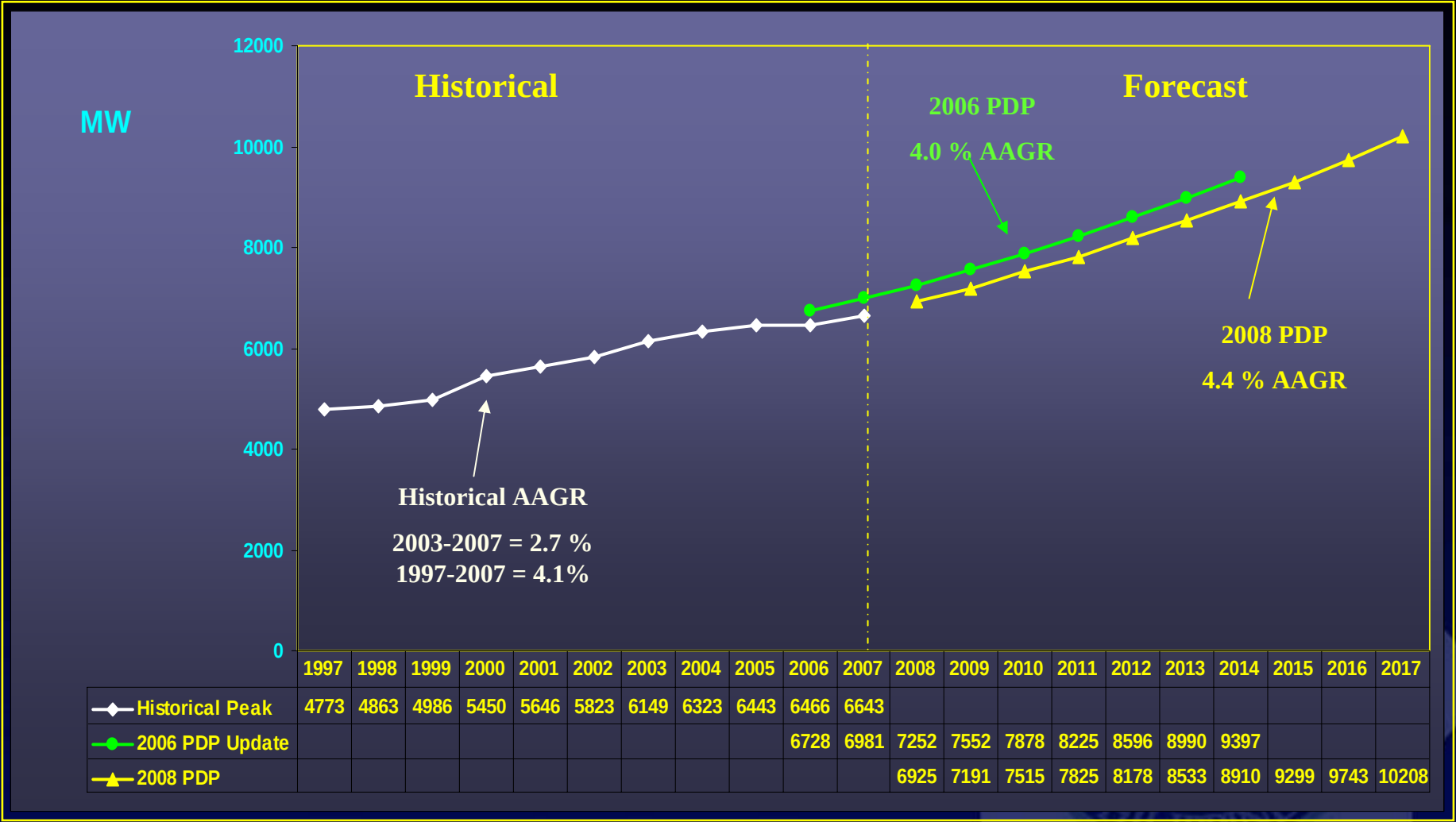
SOUTH OF METRO MANILA

Dependable Capacity	=	5,884 MW
Peak Demand	=	540 MW
Surplus	=	5,344 MW

Note: Dependable Capacity and Demand from Embedded Generators are not included
Excluding SPUG/Off-grid areas

Luzon Peak Demand Forecast

2008 - 2017 PDP



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Historical Peak	4773	4863	4986	5450	5646	5823	6149	6323	6443	6466	6643										
2006 PDP Update										6728	6981	7252	7552	7878	8225	8596	8990	9397			
2008 PDP												6925	7191	7515	7825	8178	8533	8910	9299	9743	10208

Note: Preliminary Demand Forecast for 2008 – 2017 Power Development Plan

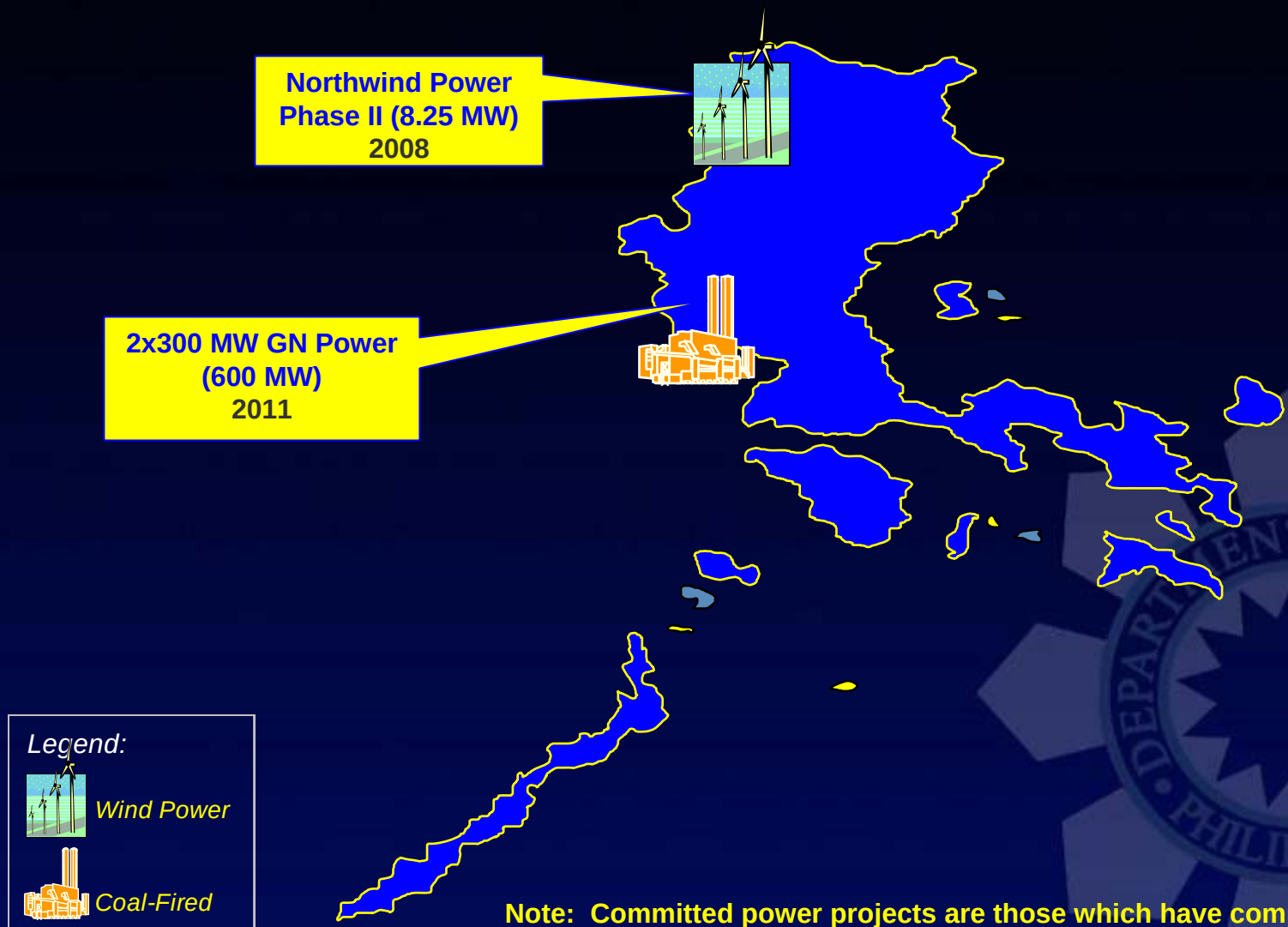
Luzon Power Plant Line-Up

PDP 2008 - 2017			
Year	Power Plant	Projected Capacity Addition (MW)	Commulative Capacity Addition (MW)
2008	Northwind Phase II	8	8
2009			8
2010	Peaking Plant	150	158
2011	GN Power	600	758
2012	Midrange Plant	300	1,058
2013	Peaking Plant	150	1,208
	Midrange Plant	300	1,508
2014	Peaking Plant	150	1,658
	Midrange Plant	300	1,958
2015	Peaking Plant	150	2,108
	Midrange Plant	300	2,408
2016	Midrange Plant	600	3,008
2017	Peaking Plant	300	3,308
	Midrange Plant	300	3,608
Committed Projects		608	
Capacity Addition Requirements		3,000	
Total Committed & Capacity Add.		**3,608**	

Note: Preliminary Capacity Addition for 2008 - 2017 Power Development Plan

Committed Power Projects

Luzon Grid



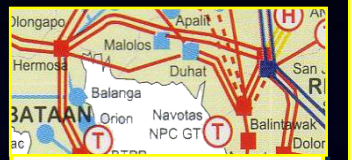
Note: Committed power projects are those which have complied with the necessary permits and clearances of various agencies and concerned local government and already have financial closing

Indicative Power Projects

Luzon Grid

Note: Indicative power projects are those which are at different stages of project developments prior to financial closing.

Luzon On-Going Transmission Projects

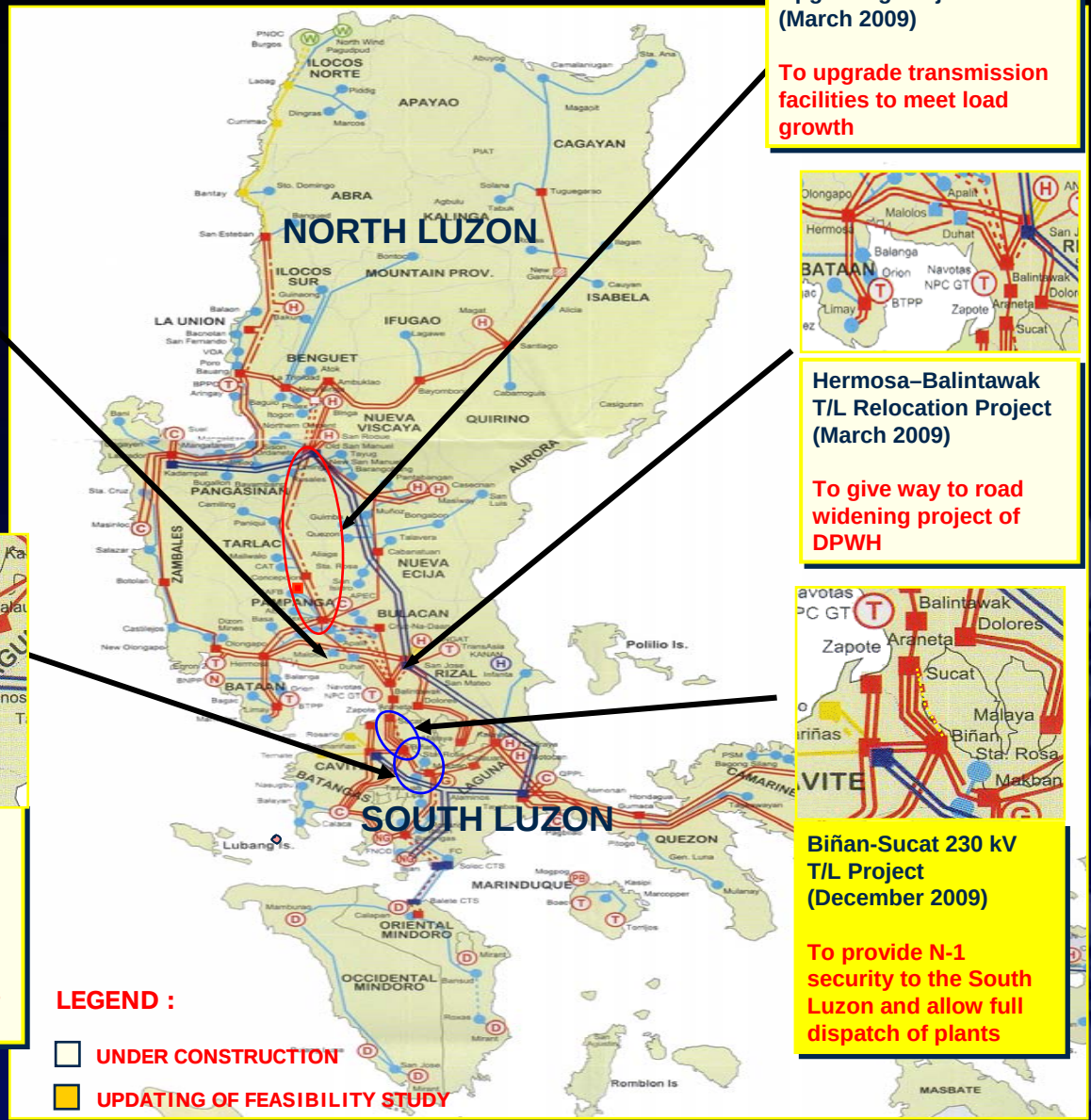


Tap Hermosa-Balintawak 230 kV T/L Project (July 2008) – to be implemented by Meralco

To transfer the cut-in of Duhat Substation to maintain N-1 provision

Batangas Transmission Reinforcement Project (Calamba Tower 50-Biñan T/L) (March 2009)

To augment transmission backbone in South Luzon



Luzon Transmission Line Upgrading Project-1 (March 2009)

To upgrade transmission facilities to meet load growth

Hermosa–Balintawak T/L Relocation Project (March 2009)

To give way to road widening project of DPWH

Biñan-Sucat 230 kV T/L Project (December 2009)

To provide N-1 security to the South Luzon and allow full dispatch of plants

Luzon Substation Expansion Project-1 (June 2010)

To provide additional transformer capacity to meet the growth

- Bauang S/S (new)
- Cabanatuan S/S
- Cruz-na-Daan S/S
- Daraga S/S
- Mexico S/S
- Naga S/S
- Biñan S/S
- Laoag S/S
- Currimao S/S

Transmission Projects for Implementation

Luzon Substation Expansion Project-3 (March 2013)

Binga-San Manuel 230 kV T/L Upgrading Project (May 2010)

Luzon Transmission Equipment Upgrade (June 2009)

Mariveles CFPP Associated & Complementary Project (December 2009)

Dasmariñas-Rosario 115 T/L Project (April 2009)

Luzon-Mindoro Interconnection Project (November 2013)

Luzon Power Circuit Breaker Replacement Project (November 2013)

Luzon Voltage Improvement Project-1 (September 2010)

Luzon Substation Expansion Project-2 (November 2011)

San Jose 500 kV Reconfiguration (November 2013)

San Jose-Balintawak Line 3 Upgrade (November 2013)

Luzon Voltage Improvement Project-2 (November 2013)

Eastern Albay 69 kV Line Project (August 2010)

LEGEND :

- PROJECTS FOR IMPLEMENTATION (With FS but w/o NEDA Board Approval)
- OTHER PROJECTS FOR IMPLEMENTATION (For FS Preparation)

POWER SECTOR REFORMS

Power Sector Reforms

- ***Development in Privatization***
  - **Genco Privatization**
    - Achieved 68.78% of generating capacity in Luzon and Visayas
    - Working towards 70% by end 2008
  - **Accelerated activities to appoint IPP Administrators**
    - Target tendering by November 2008
  - ***TransCo Privatization through Concessionaire***
    - Successfully bidded out last Dec. 12, 2007
- ***Private sector participation in SPUG areas***
- ***Expanded Rural Electrification Program***

THANK YOU

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Expanded Rural Electrification Program

Objectives

- Achieve 100% barangays electrification by 2009 and 90% household electrification by 2017
- Support the Government's efforts to alleviate poverty
- Increase and accelerate access to electricity services

Barangay Electrification Situationer

(As of 30 June 2008)

Region	Potential Barangays	Electrified Barangays	Unelectrified Barangays	Electrification Level (%)
CAR	1,176	1,127	49	95.83%
I	3,265	3,264	1	99.97%
II	2,311	2,231	80	96.54%
III	3,102	3,097	5	99.84%
IV-A	4,011	3,947	64	98.40%
IV-B	1,458	1,409	49	96.64%
V	3,471	3,320	151	95.65%
NCR	1,695	1,695	-	100.00%
SUB-TOTAL (LUZON)	*20,489*	*20,090*	399	98.05%
VI	4,051	4,024	27	99.33%
VII	3,003	3,002	1	99.97%
VIII	4,390	4,205	185	95.79%
SUB-TOTAL (VISAYAS)	*11,444*	*11,231*	213	98.14%
IX	1,904	1,799	105	94.49%
X	2,020	1,934	86	95.74%
XI	1,160	1,157	3	99.74%
XII	1,194	1,134	60	94.97%
ARMM	2,459	2,065	394	83.98%
CARAGA	1,310	1,288	22	98.32%
SUBTOTAL (MINDANAO)	*10,047*	*9,377*	670	93.33%
TOTAL (PHILIPPINES)	41,980	40,698	1,282	96.95%