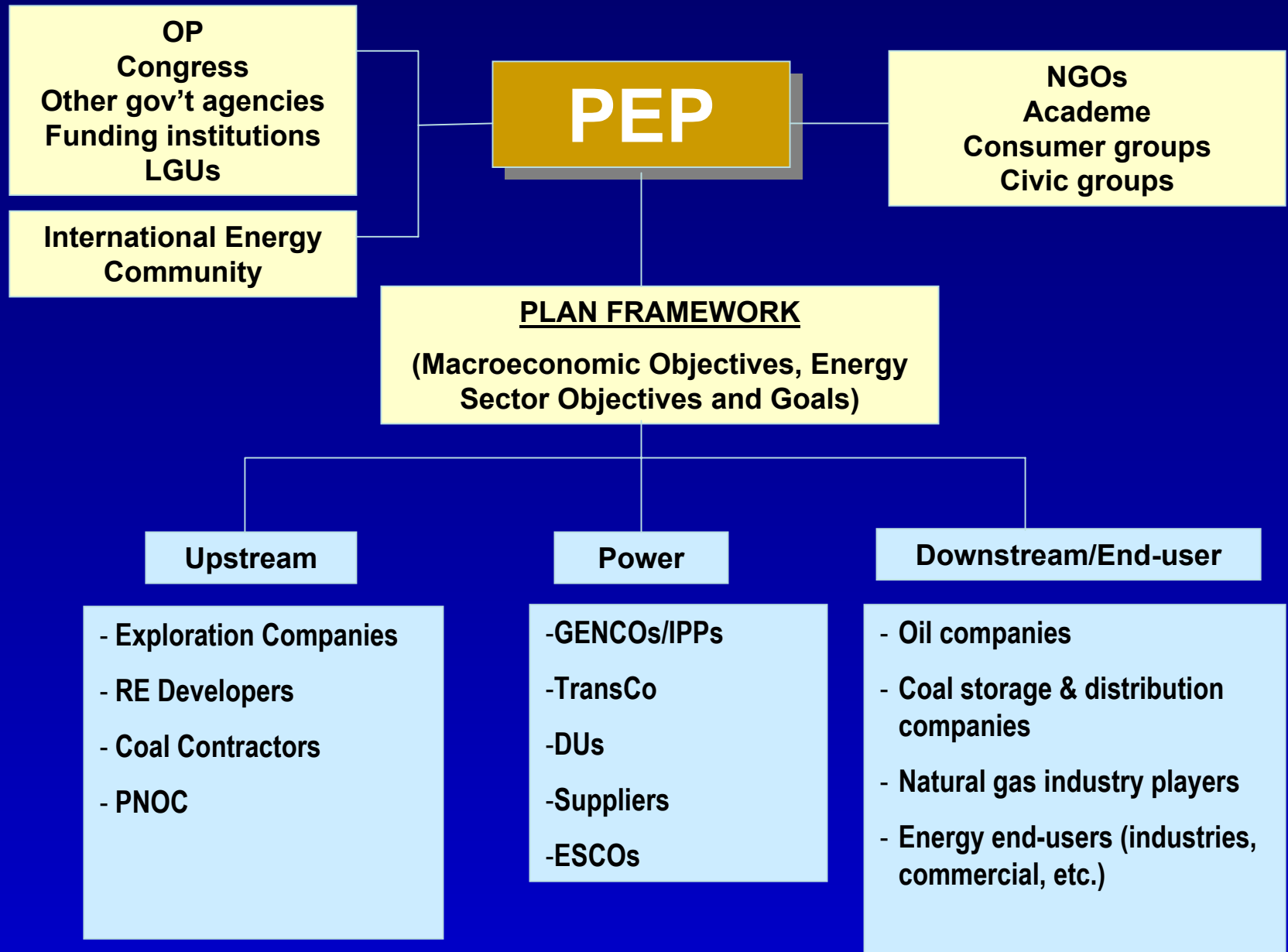
A sunset scene over a body of water. In the background, several wind turbines are visible on the horizon. In the foreground, two people are wading in the shallow water. The sky is a mix of orange and blue, and the water reflects the sunset. The text 'PHILIPPINE ENERGY PLAN' is overlaid on the left side of the image.

# PHILIPPINE ENERGY PLAN

**2004 – 2013**

# ENERGY PLAN FRAMEWORK



# PHILIPPINE ENERGY PLAN

**2004 – 2013**

*Diversified approaches towards a more responsive  
energy sector*



## Three critical innovations in the 2004 Plan Update:

- ✓ Anchored on reformulated DOE Mission and Vision Statements
- ✓ Regionalized energy planning to address specific issues of the three main island groups-Luzon, Visayas and Mindanao
- ✓ Sectoralized demand analysis (residential, commercial, industrial, transport and agriculture)



# MISSION STATEMENT

**We at the Department of Energy, in partnership with our stakeholders, shall improve the quality of life of the Filipino, by formulating and implementing policies and programs to ensure sustainable, stable, secure, sufficient, accessible and reasonably priced energy.**

**In pursuit of this mission, we commit to render efficient service with utmost integrity and professionalism.**





# DOE VISION STATEMENT

**Within the next decade and by encouraging greater private sector participation:**

- ✓ **Achieved total and reliable energization and energy self-sufficiency**
- ✓ **Developed our indigenous and renewable energy resources**
- ✓ **Actively promoted sustainable and efficient use of energy as well as the utilization of cleaner energy and technologies**
- ✓ **Developed alternative fuels for commercial applications**
- ✓ **Successfully implemented reforms in the energy sector which have brought about a competitive environment, consumer satisfaction and empowerment**



# ENERGY SECTOR OBJECTIVES FOR 2004-2013

- ✓ Ensure sufficient, stable, secure, accessible and reasonably-priced energy supply
- ✓ Pursue cleaner and efficient energy utilization and clean energy technologies applications
- ✓ Cultivate strong partnerships and collaboration with key partners and stakeholders
- ✓ Empower and balance various interests of the energy publics



# ENERGY SECTOR TARGETS FOR 2004-2013

- ✓ Average 50% self-sufficiency level in the next ten years to reach 55% by 2013
- ✓ Wider access to reliable supply of electricity (100% barangay electrification by 2006 and 90% of households by 2017) and petroleum products (50% increase in outlets outside Metro Manila)
- ✓ Setting of policy directions that will establish the conditions for fair business practices in the energy sector
- ✓ Emission avoidance of 32,000 Gg CO<sub>2</sub> by 2013






# ENERGY SECTOR TARGETS FOR 2004-2013

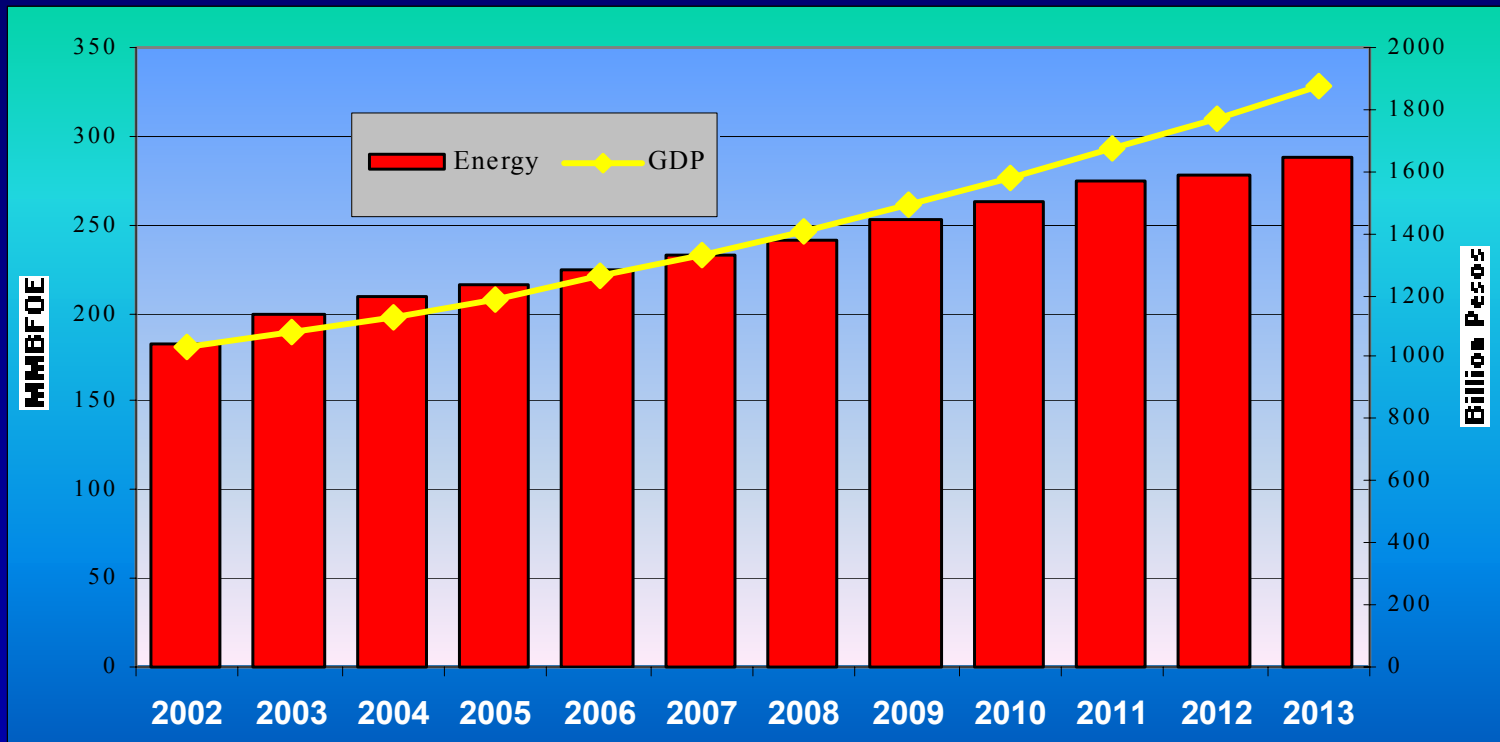
- ✓ Generate energy savings of 82.56 MMBFOE from energy efficiency programs
- ✓ Increase/encourage private investments in the following sub-sectors: upstream and downstream activities, power and clean fuels/technologies
- ✓ Increase public and private sector participation in policy formulation and implementation
- ✓ Enhance awareness and involvement of the general public on energy related issues and concerns and safeguard consumer interest



The background is a colorful, abstract painting. It depicts a group of people in a field, rendered in a style reminiscent of Vincent van Gogh's 'Olympia' or similar Impressionist works. The figures are wearing bright, saturated clothing in shades of blue, purple, yellow, and red. They are gathered in a green field, with some figures appearing to be in motion or interacting. The overall composition is dynamic and energetic. Overlaid on this painting is the text 'ENERGY SUPPLY - DEMAND OUTLOOK' in a bold, white, sans-serif font. The text is arranged in three lines: 'ENERGY' on the top line, 'SUPPLY - DEMAND' on the middle line, and 'OUTLOOK' on the bottom line. The text is centered horizontally and has a slight shadow effect, making it stand out against the busy background.

# **ENERGY SUPPLY - DEMAND OUTLOOK**

# ENERGY DEMAND AND GDP

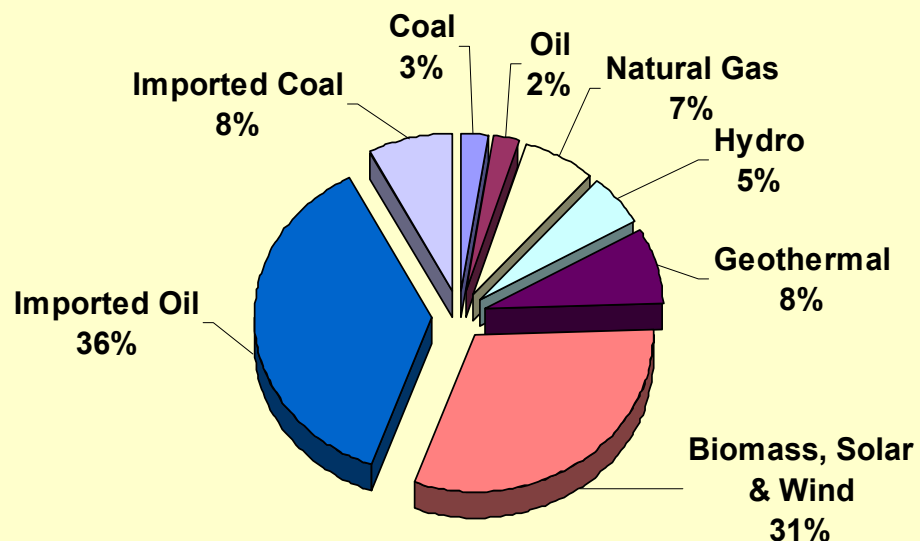


GROWTH (%)							
Years	GDP	Final Energy Demand					
		Total	Oil	Gas	Coal	Electricity	NRE
2003-2013	5.7	3.7	2.9	796.1	2.4	7.6	2.1
2008-2013	6.0	3.5	4.0	2.9	2.2	7.1	1.7
2003-2008	5.2	3.9	1.8	1,589.3	2.5	8.1	2.5



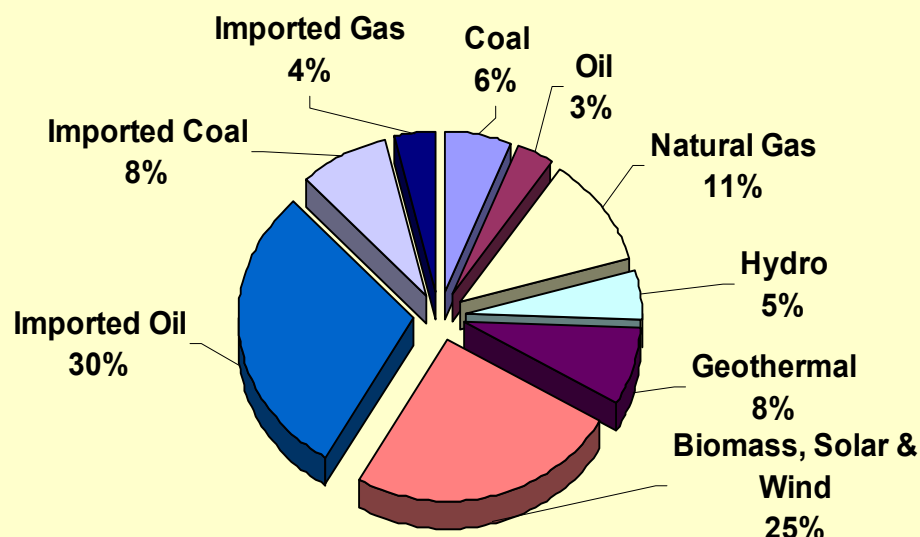
# PRIMARY ENERGY SUPPLY

**2004**



Total Indigenous	152.04
Total Imported	121.94
Energy Self-Sufficiency (%)	55.5

**2013**



Total Indigenous	233.33
Total Imported	167.58
Energy Self-Sufficiency (%)	58.2



# FINAL ENERGY DEMAND BY SECTOR

## in MMBFOE

	2003	2004	2008	2013
Residential	74.35	77.41	87.80	99.97
Commercial	15.95	17.04	20.64	29.09
Industrial	48.99	51.57	57.08	65.22
Transportation	57.02	60.17	72.42	88.73
Agriculture	2.92	3.07	3.63	4.36
<b>Total Demand</b>	<b>199.24</b>	<b>209.26</b>	<b>241.57</b>	<b>287.37</b>

	Ave. Annual Growth Rate (%)		
	2003-2008	2008-2013	2003-2013
Residential	3.4	2.6	3.0
Commercial	5.3	7.1	6.2
Industrial	3.1	2.7	2.9
Transportation	4.9	4.1	4.5
Agriculture	4.4	3.7	4.1
<b>Total Demand</b>	<b>3.9</b>	<b>3.5</b>	<b>3.7</b>



# ENERGY RESOURCE POTENTIAL

## by Region

REGION	OIL (MMB)	CONDENSATE (MMB)	GAS (TCF)	GEOHERMAL (MW)	COAL (MMMT)	HYDRO (MW)
Luzon	5.38 - 5.42	59 - 98	3.00 - 8.35	2,325	455	6,052
Visayas	1.10		2.00	1,670	747	493
Mindanao			0.03	542	115	2,519
Total Philippines	6.48 - 6.52	59 - 98	5.034 - 10.38	4,537	1,317	9,064





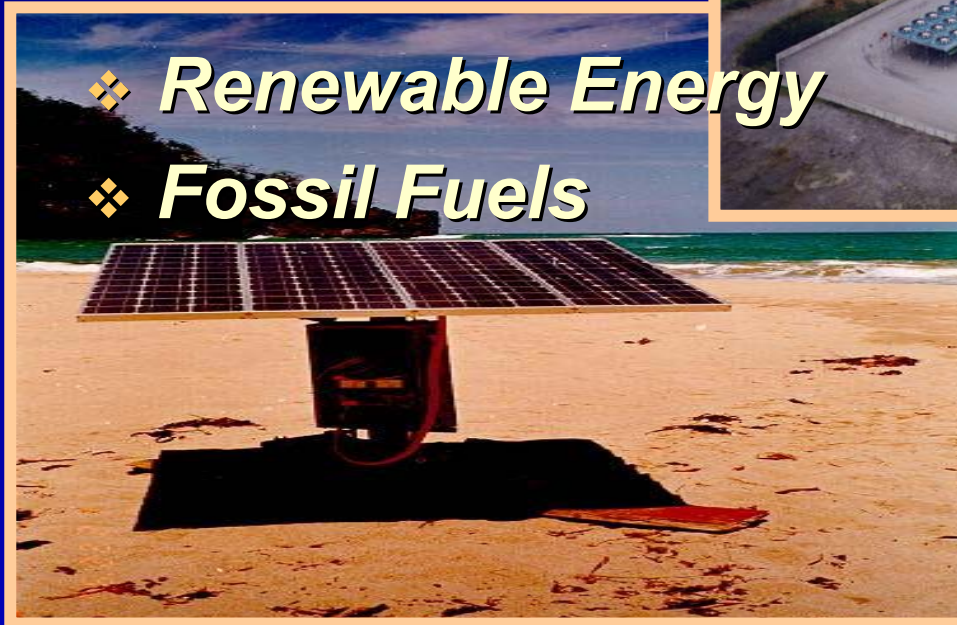
# SECTORAL PLANS

- ❖ *Energy Resource Development*
- ❖ *Downstream Development*
- ❖ *Power Development*



# ENERGY RESOURCE DEVELOPMENT

- ❖ *Renewable Energy*
- ❖ *Fossil Fuels*





## **PLANS AND PROGRAMS**

- ✓ To increase renewable energy-based capacity 100% by 2013
- ✓ To become the largest geothermal energy producer in the world (1<sup>st</sup> geothermal bid round)
- ✓ To be the leading wind energy producer in Southeast Asia
- ✓ To double hydro capacity by 2013
- ✓ To install 130-250 MW of biomass, solar and ocean capacity
- ✓ To become the solar manufacturing export hub of the ASEAN region
- ✓ To increase the non-power (including CME) contribution of renewable energy to the energy mix by 10 MMBFOE within the next decade



## PLANS AND PROGRAMS

- ✓ Enhance petroleum exploration and development through the conduct of Petroleum Contracting Rounds



- Public bid system on prospective basins identified in PhilPRA
- PCR-1 to offer 46 contract areas in Palawan and Sulu Sea basins

- ✓ Enhance the petroleum prospectivity of sedimentary basins



## **PLANS AND PROGRAMS**

- ✓ **Promote mine-mouth coal power plants**
- ✓ **Promote clean coal technology**
- ✓ **Increase domestic coal consumption of existing power plants**



# DOWNSTREAM DEVELOPMENT



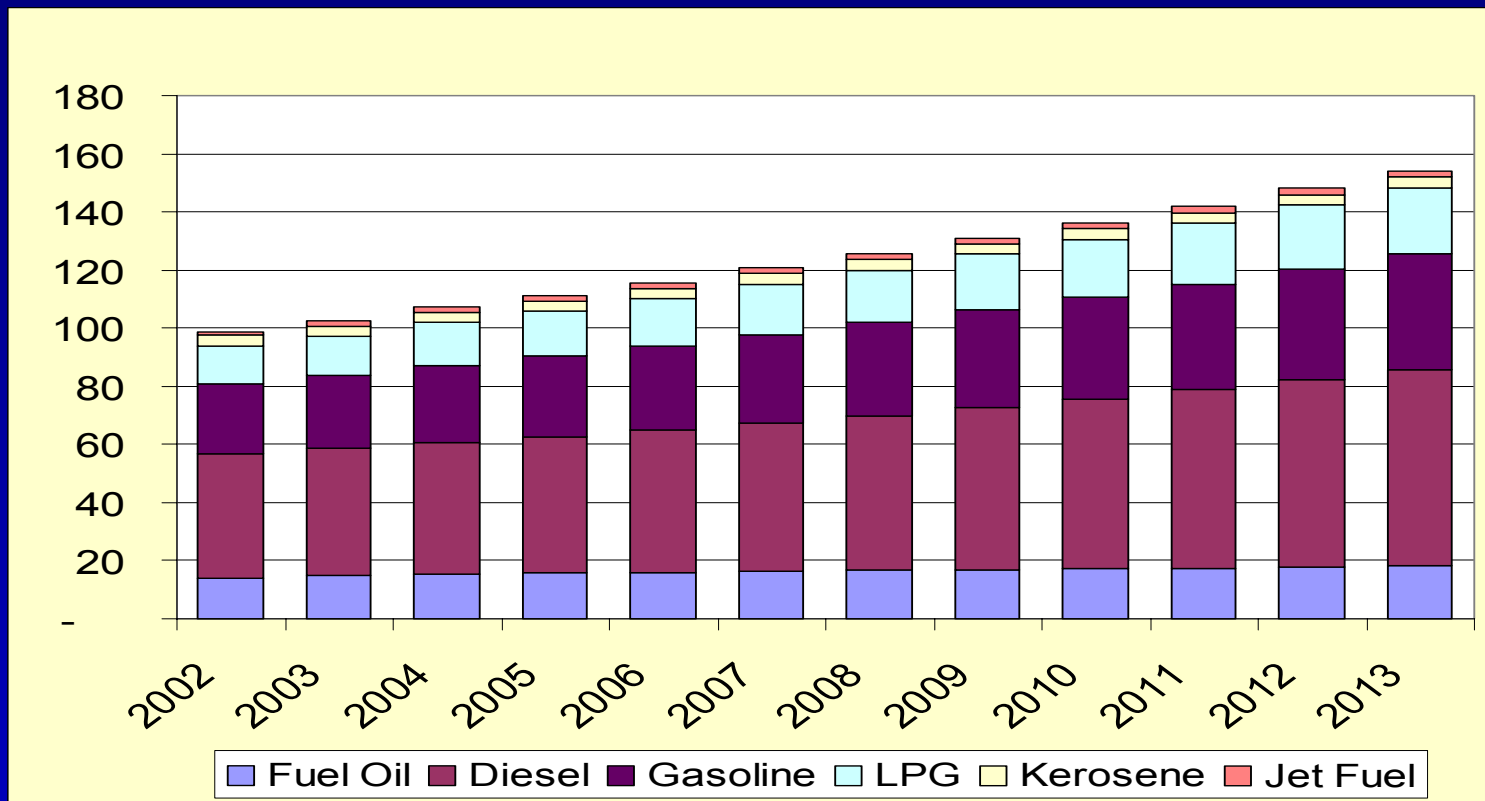
❖ *Oil*

❖ *Natural Gas*





## PETROLEUM PRODUCTS DEMAND in MMB



# PETROLEUM PRODUCTS DEMAND

in percent

Growth Rates	2004-2008	2008-2013	2004-2013
LPG	5.5	4.5	5.0
Diesel	4.2	5.1	4.7
Gasoline	4.6	4.1	4.5
Fuel Oil	1.9	1.6	1.8
Kerosene	1.6	1.5	1.5
Jet Fuel	3.0	3.0	3.0



## **PLANS AND PROGRAMS**

- ✓ **Encourage private sector participation in the downstream oil industry activities**
- ✓ **Provision of fair and reasonable oil prices**
- ✓ **Policy advocacy activities**
- ✓ **Promote oil supply security programs**
- ✓ **Strengthen institutional linkages**



# DOWNSTREAM – Natural Gas

## PLANS AND PROGRAMS

- ✓ Establish domestic infrastructure network
- ✓ Expand the use of natural gas
  - ✓ CNG as an alternate fuel for transport
  - ✓ District cooling for industrial use
  - ✓ Commercial applications

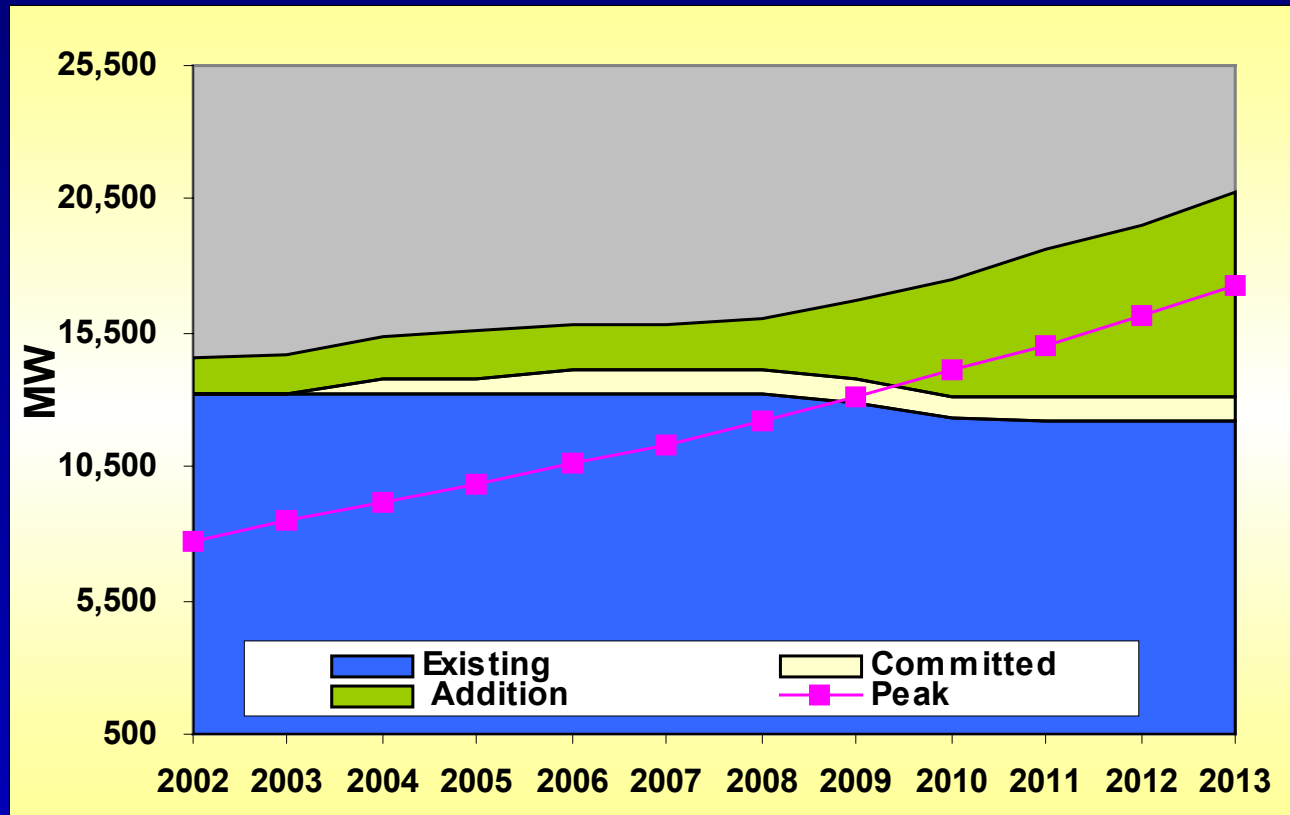


# **POWER DEVELOPMENT PLAN**



# POWER DEVELOPMENT PLAN

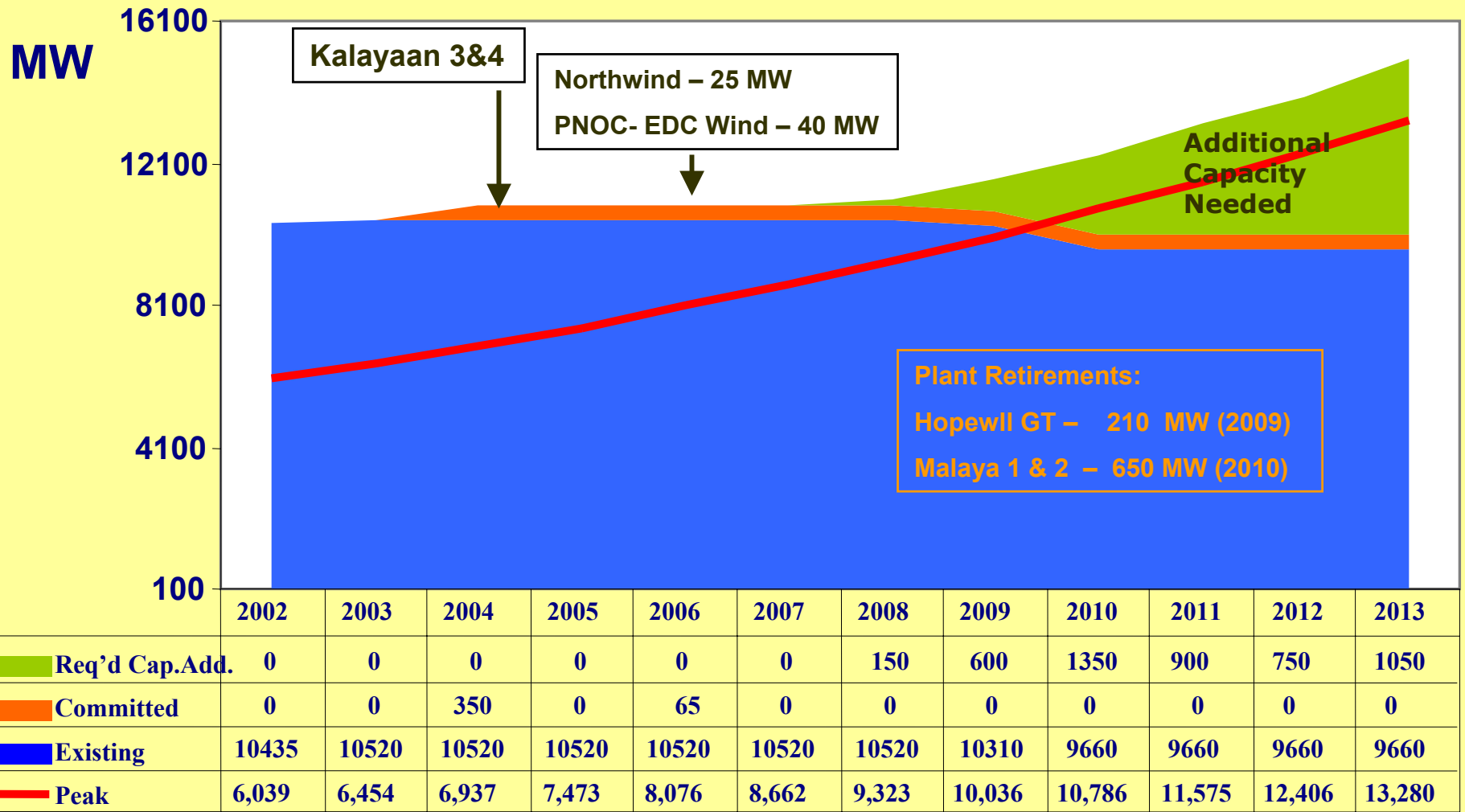
## SUPPLY-DEMAND PROFILE, Philippines





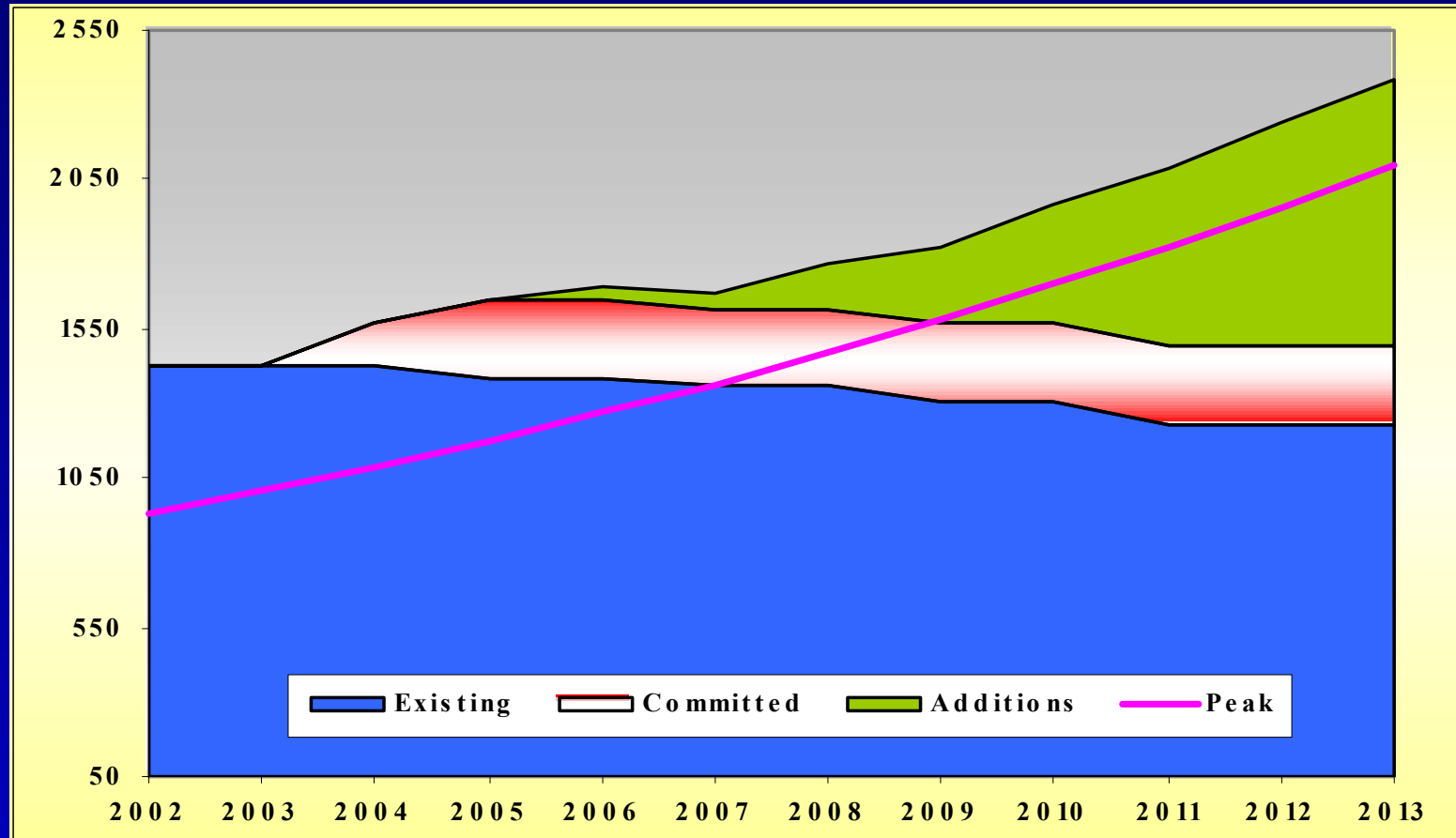
# POWER DEVELOPMENT PLAN

## SUPPLY-DEMAND PROFILE, Luzon



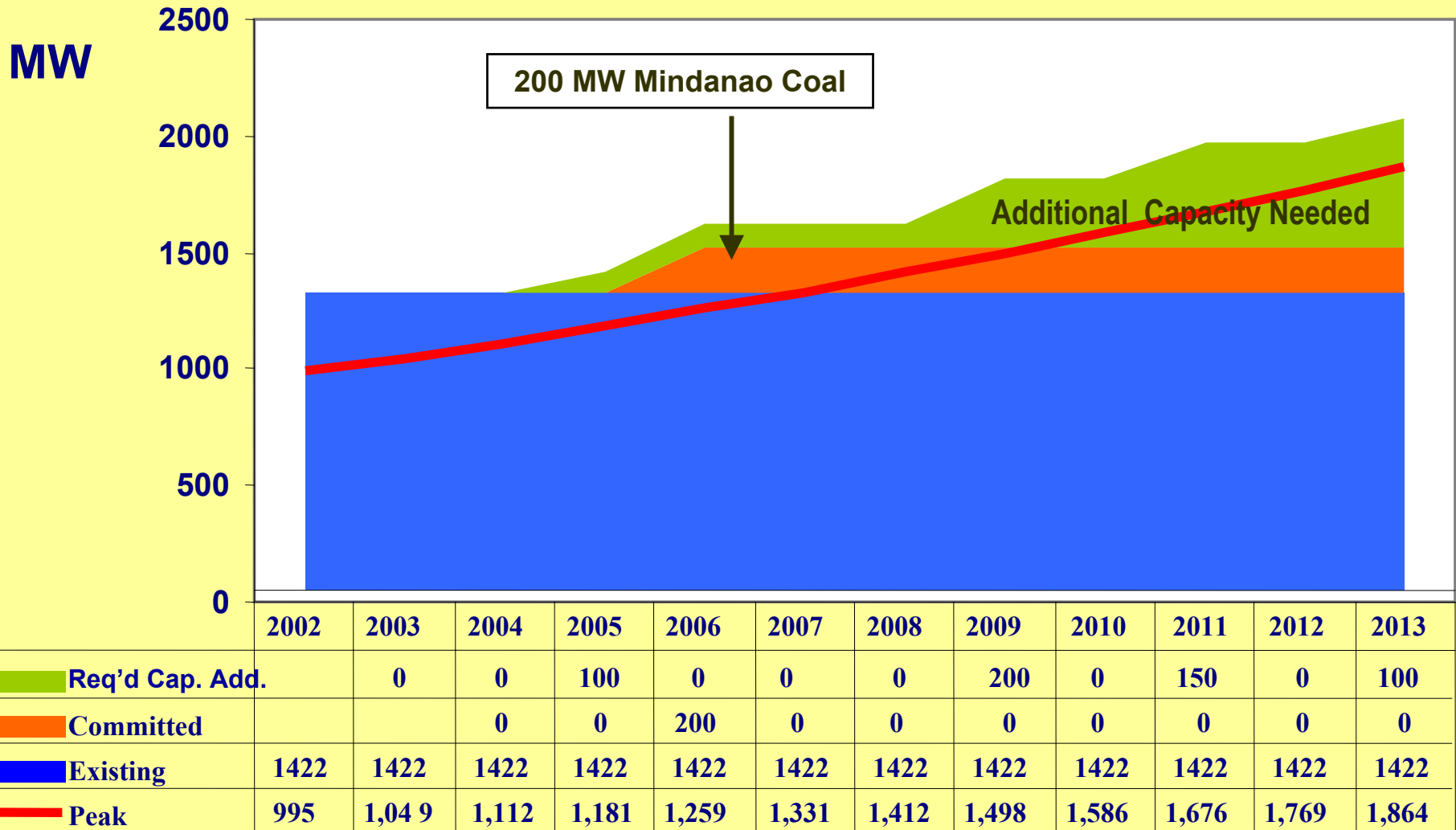
# POWER DEVELOPMENT PLAN

## SUPPLY-DEMAND PROFILE, Visayas



# POWER DEVELOPMENT PLAN

## SUPPLY-DEMAND PROFILE, Mindanao



# ***RURAL ELECTRIFICATION***

## **PLANS AND PROGRAMS**

<b>Year</b>	<b>Barangay</b>	<b>RE System Installed</b>	<b>Expansion</b>		<b>Rehab (ckt. kms.)</b>
			<b>Distribution Lines (ckt. kms.)</b>	<b>Substations (MVA)</b>	
2003	2,515	5,942	13,632.66	539	1,652.17
2004	1,188	2,247	7,197.69	1,270	1,231.99
2005	638	2,417	4,532.45	235	943.53
2006	936	1,287	5,598.89	205	938.71
2007	-	4	488.49	200	726.09
2008	-	-	362.07	150	609.48
2009	-	-	363.73	60	528.42
2010	-	-	334.72	90	569.62
2011	-	-	312.42	75	538.41
2012	-	-	336.45	120	659.00
2013	-	-	336.45	120	659.00
<b>TOTAL</b>	<b>2,762</b>	<b>5,955</b>	<b>19,863.36</b>	<b>2,525</b>	<b>7,404</b>

# INVESTMENT OPPORTUNITIES in Billion Php

Sector	Amount
Energy Sector Development	295.28
Geothermal	56.53
Hydropower	96.00
Other Renewable Energy	24.20
Oil and Gas	89.16
Coal	29.39
Downstream	378.00
Oil and Gas	48.00
Natural Gas	330.00
Power Development	637.14
Main Grid	633.85
Small Island Grids	3.29
Socially Responsive Programs	106.01
Expanded Rural Electrification	39.01
Energy Efficiency	67.00
<b>Total</b>	<b>1,416.43</b>



# CONCLUSION

The PEP will serve as the blueprint of all key players in the energy sector for the next ten years.

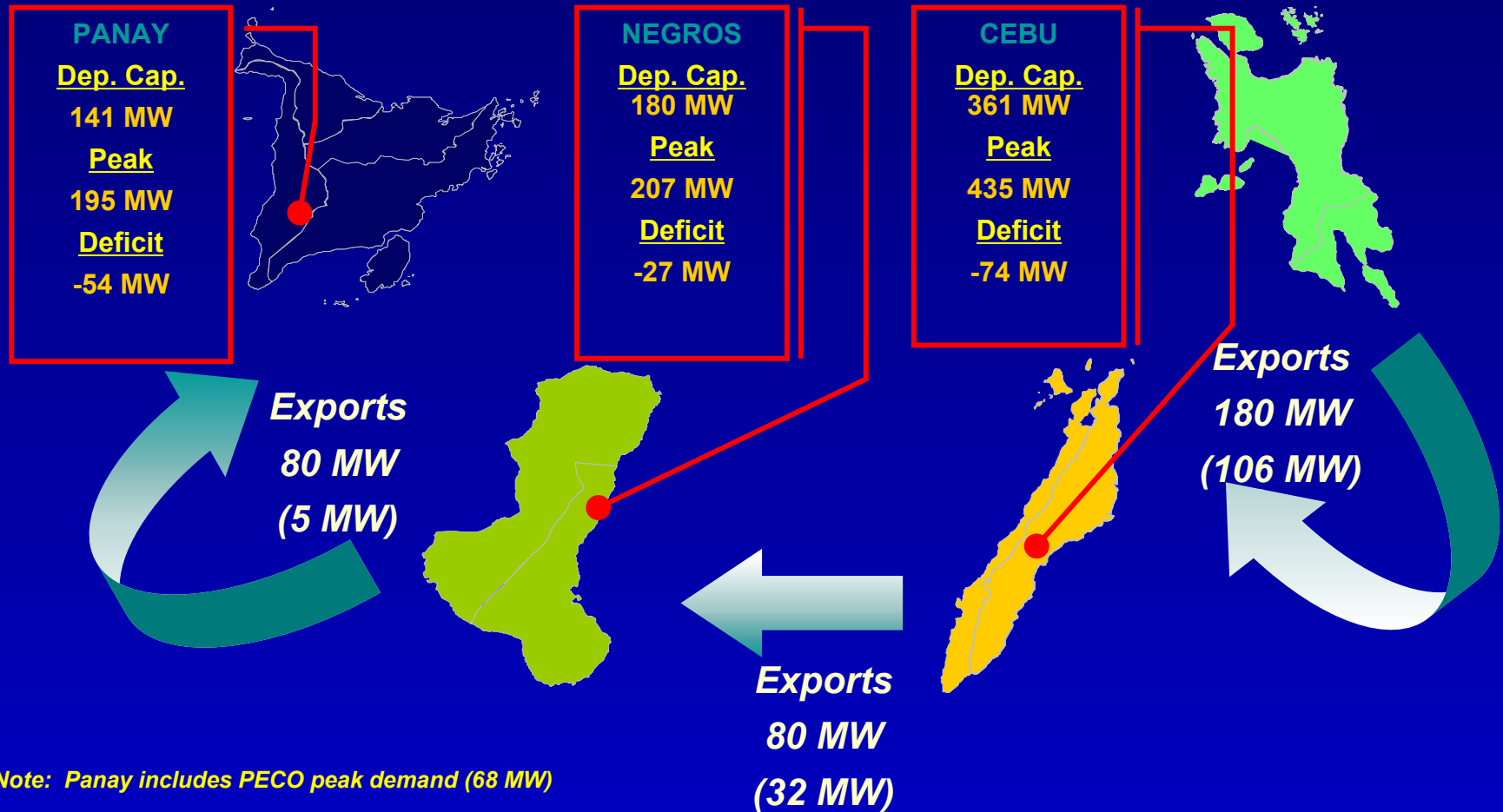
- ✓ **55% self-sufficiency by 2013**
  - ✓ Renewed interest for the exploration of hydrocarbon resources
  - ✓ Largest geothermal energy producer in the world
  - ✓ Solar manufacturing hub in ASEAN
  - ✓ Biggest wind farm in Southeast Asia
- ✓ **Development of the downstream natural gas infrastructures**
- ✓ **100% electrification of barangays (villages) by 2006**
- ✓ **Privatization of the power sector**
- ✓ **Promotion of alternative clean fuels and efficient energy utilization**
- ✓ **Effective implementation of the deregulation of the downstream oil industry**
- ✓ **International cooperation**





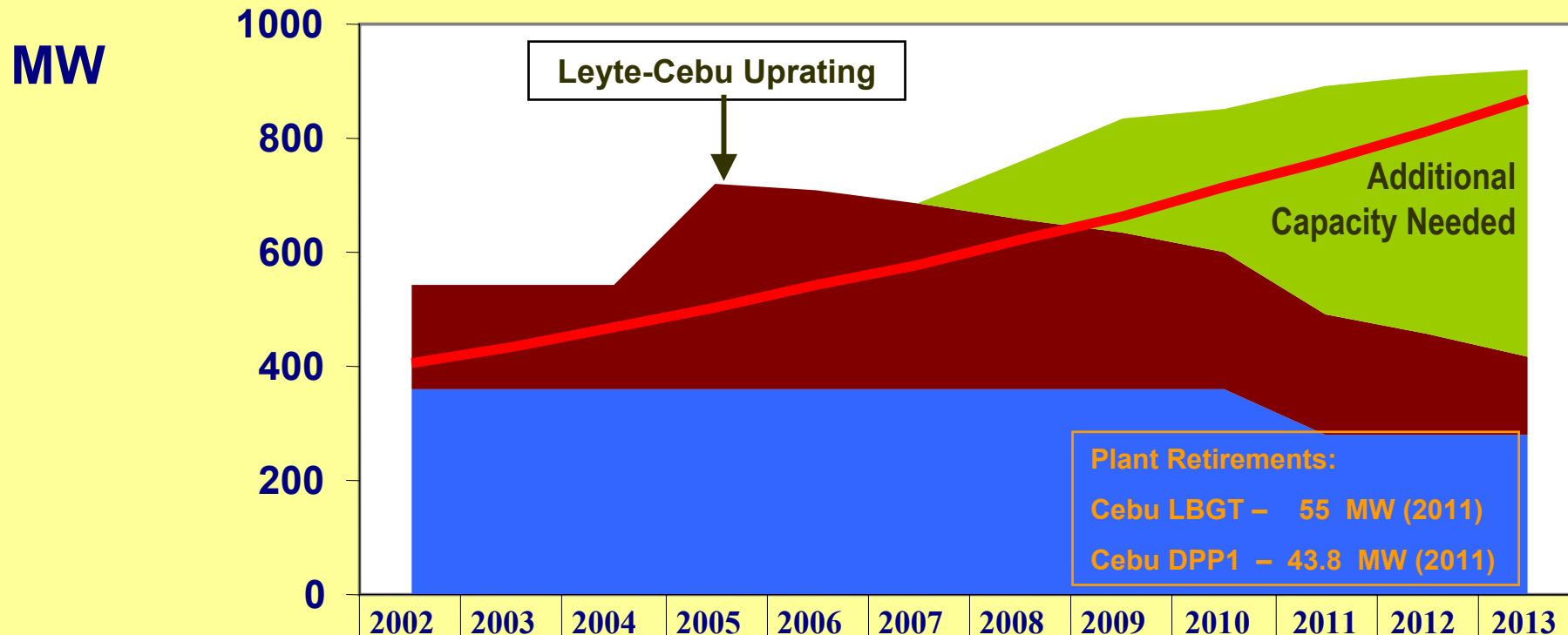
# POWER DEVELOPMENT PLAN

## CNP SUPPLY INTERDEPENDENCE



# POWER DEVELOPMENT PLAN

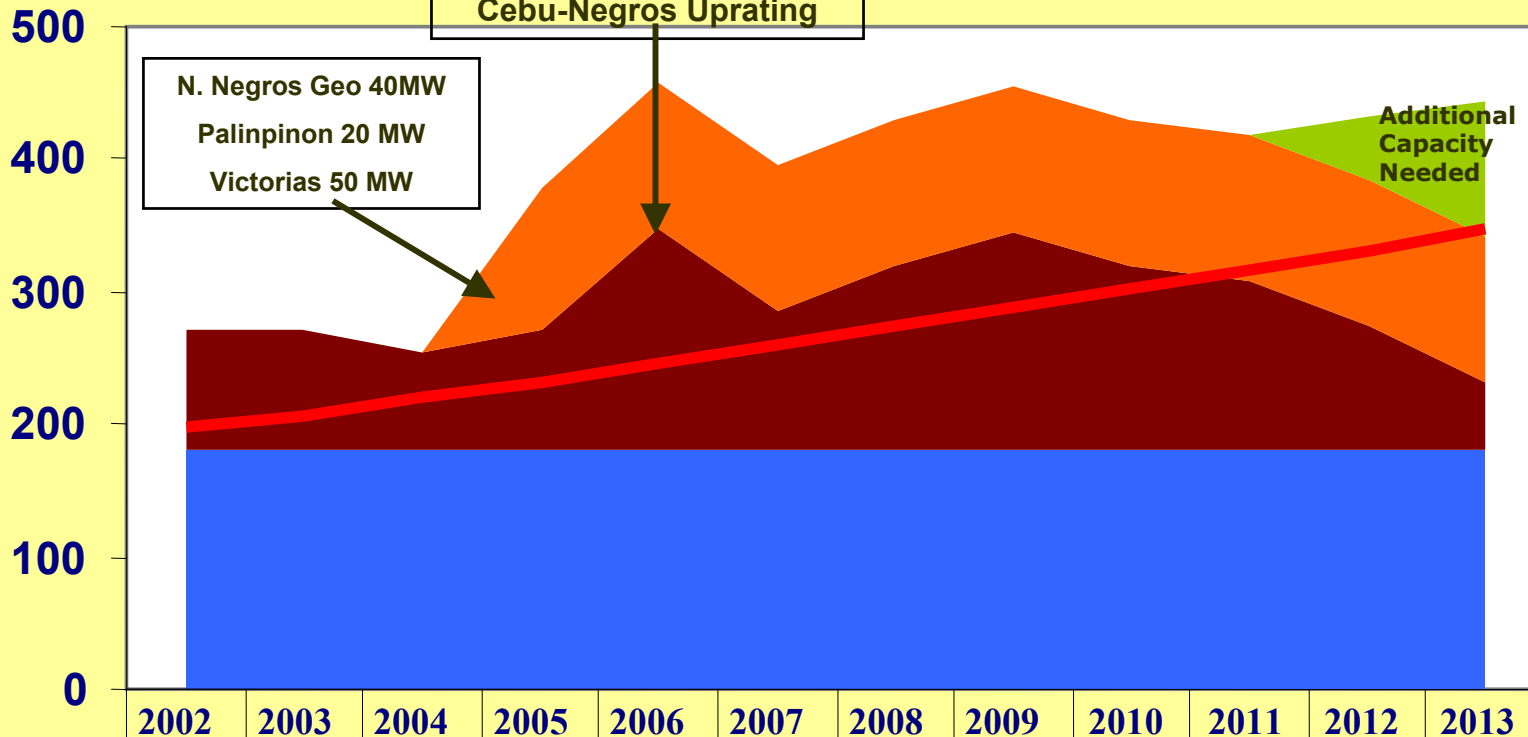
## SUPPLY-DEMAND PROFILE, Cebu



# POWER DEVELOPMENT PLAN

## SUPPLY-DEMAND PROFILE, Negros

**MW**

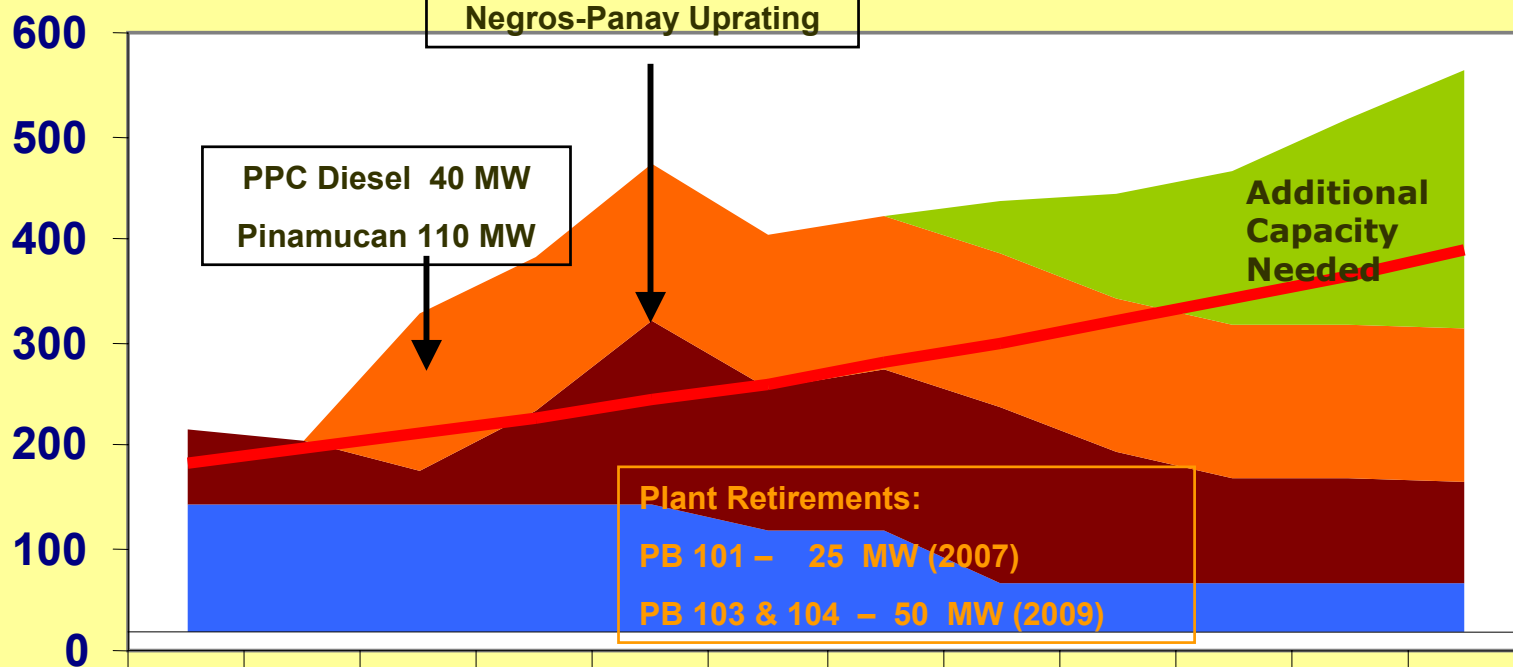


DEPARTMENT OF ENERGY

# POWER DEVELOPMENT PLAN

## SUPPLY-DEMAND PROFILE, Panay

MW



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
--	------	------	------	------	------	------	------	------	------	------	------	------

Req'd. Cap. Add.	0	0	0	0	0	0	0	50	100	150	200	250
Committed	0	0	150	150	150	150	150	150	150	150	150	150
Negros-Panay Int.	73	62	34	90	180	138	156	169	127	101	101	96
Existing	141	141	141	141	141	116	116	66	66	66	66	66
Peak	183	195	210	225	243	260	279	299	320	342	365	389



DEPARTMENT OF ENERGY



# MINDANAO SUPPLY INTERDEPENDENCE

## NORTH MINDANAO

Dependable Capacity = 1061 MW

Peak Demand = 391 MW

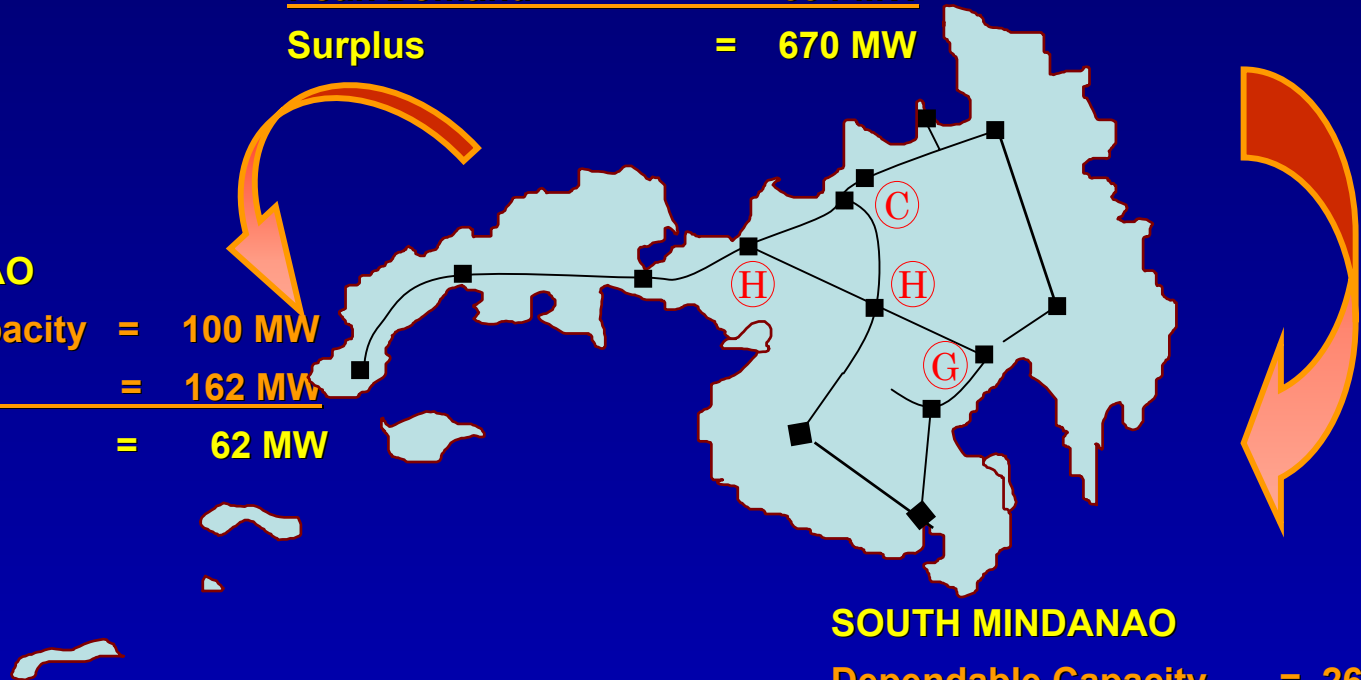
Surplus = 670 MW

## WEST MINDANAO

Dependable Capacity = 100 MW

Peak Demand = 162 MW

Import = 62 MW



## SOUTH MINDANAO

Dependable Capacity = 262 MW

Peak Demand = 495 MW

Import = 233 MW

### *Mindanao Total*

Dep. Capacity = 1,423 MW

Peak Demand = 1,048 MW

Surplus = 375 MW

T/L length = 5,627 ckt kms

