

ENERGY PROGRAMS AND POLICIES

MAY 2006



Secretary Raphael P.M. Lotilla
Department of Energy



PRESENTATION OUTLINE

ENERGY SECTOR FRAMEWORK

ENERGY DEMAND AND SUPPLY OUTLOOK

ENERGY INDEPENDENCE PACKAGE

POWER SECTOR REFORMS

OTHER ENERGY PROGRAMS

SECTORAL INVESTMENT REQUIREMENTS

ENERGY SECTOR FRAMEWORK

FIVE-POINT REFORM PACKAGE

ECONOMIC
GROWTH AND
JOB CREATION

ANTI-CORRUPTION
THROUGH GOOD
GOVERNMENT

ENERGY
INDEPENDENCE

SOCIAL JUSTICE
AND BASIC NEEDS

EDUCATION AND
YOUTH
OPPORTUNITY

ENERGY SECTOR AGENDA

ENERGY INDEPENDENCE AND SAVINGS

- Increase reserves of indigenous fossil fuels
- Aggressively develop renewable energy potential such as biomass, solar, wind, and ocean resources
- Increase use of alternative fuels
- Strengthen and enhance energy efficiency and conservation program
- Form strategic alliances with other countries

POWER SECTOR REFORMS

- Create a transparent privatization process
- Create an investment climate attractive to investors

ENERGY SECTOR GOALS

60% SELF-SUFFICIENCY LEVEL BY 2010

- Increase in oil and gas reserves by 20% in ten years
- Reduce coal imports by 20% in ten years
- Increase renewable energy-based capacity by 100% in ten years
- 100% of Metro Manila buses running on CNG by 2010
- 5% CME blend with diesel fuel for vehicles in 2010
- **5% ethanol blend with gasoline fuel for vehicles by 2007 to reach 10% in 2010**
- **Convert retired and operating oil-based power plants to natural gas by 2010**
- Forge energy agreements with existing and new energy partners
- **19.8 MMBFOE (25.7 MTOE) average annual energy savings in ten years through the National Energy Efficiency and Conservation Program**
 - 17.7 MMBFOE (2.9 MTOE) to come from energy efficiency and conservation program
 - 2.1 MMBFOE (2.6 MTOE) to come from alternative fuels for transport program

FAIR AND REASONABLE ENERGY PRICES IN

A COMPETITIVE ENVIRONMENT

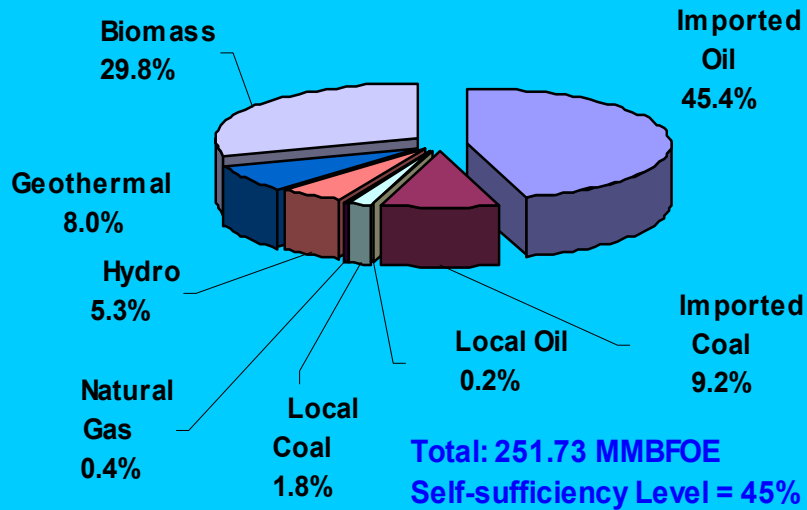
- **Privatize 70% of installed capacity of NPC's generating assets in Luzon and Visayas by 2007**
- Privatize TransCo
- Continuously implement transmission system upgrade and expansion program
- Implement WESM in Luzon and Visayas by 2006
- 100% barangay electrification by 2008
- **Opening of 14 "First Wave" NPC-SPUG areas to power sector participants**
- Single-digit national average systems loss of distribution utilities by 2010



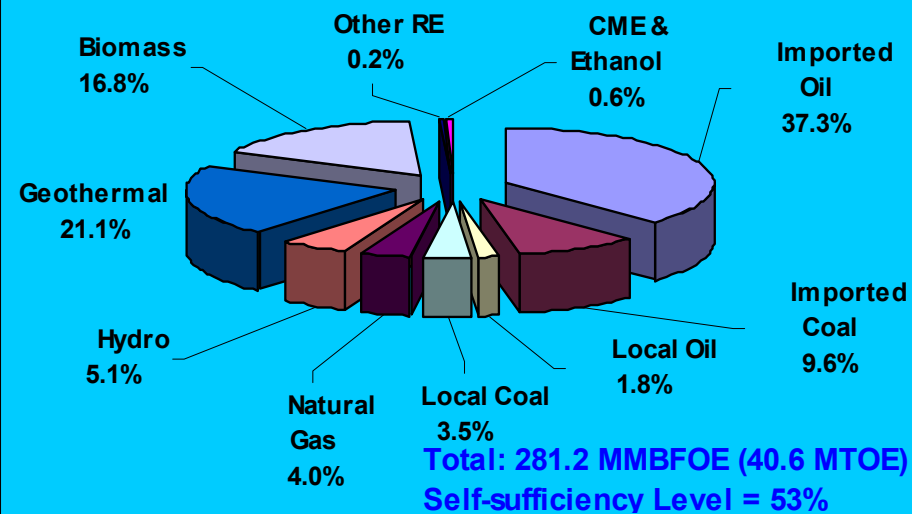
PRIMARY ENERGY SUPPLY MIX

Where we are now..

2000



2005

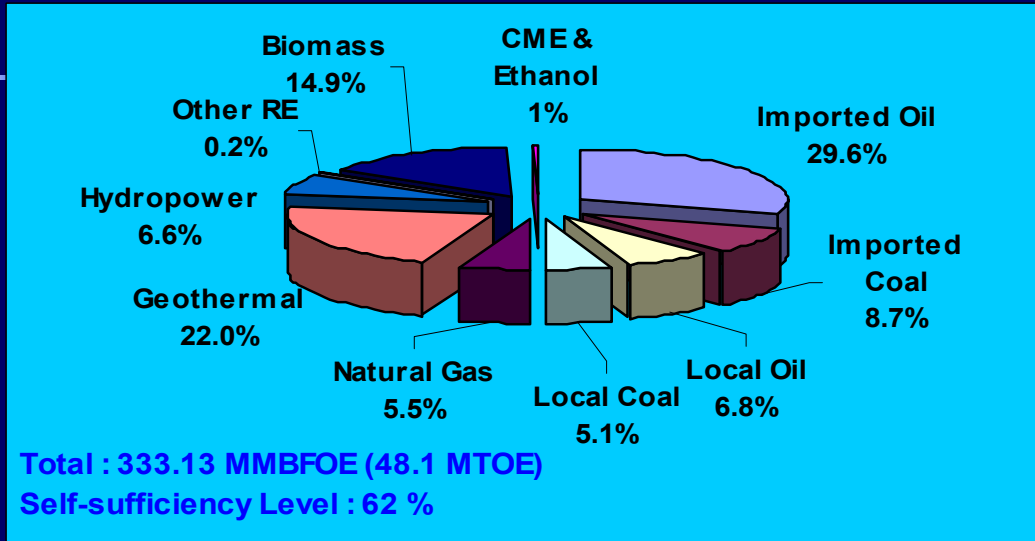




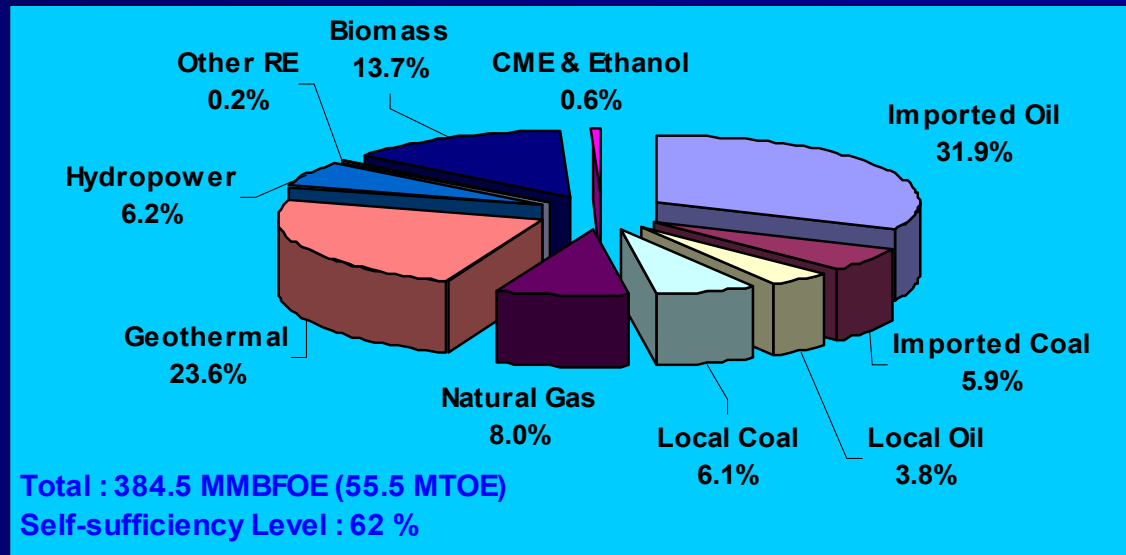
PRIMARY ENERGY SUPPLY MIX

Where we are heading..

2010



2014



ENERGY INDEPENDENCE

INCREASE RESERVES OF INDIGENOUS FOSSIL FUELS

AGGRESSIVELY DEVELOP RENEWABLE ENERGY

POTENTIAL

INCREASE USE OF ALTERNATIVE FUELS

STRENGTHEN AND ENHANCE ENERGY EFFICIENCY

AND CONSERVATION PROGRAM





INDIGENOUS FOSSIL FUELS

OIL AND GAS

- ✓ *Increase the country's oil and gas reserves by about 20% in 10 years*

COAL

- ✓ *To promote the use of indigenous coal, the energy sector aims to reduce coal imports by 20% in 10 years.*

RENEWABLE ENERGY



✓ *Increase RE-based capacity by 100% in the next ten years*

Resource	Existing Capacity (MW)	Target Additional Capacity by 2013 (MW)	Action Plan
Geothermal	1,932	1,200	<ul style="list-style-type: none"> ✓ Continuously offer prospective sites thru PECR ✓ Optimize existing geothermal fields ✓ Establish guidelines on small-scale and non-power application of geothermal
Hydropower	2,518	2,950	<ul style="list-style-type: none"> ✓ Develop micro-hydropower sites ✓ Establish One-stop shop for market service center
Wind	25.2	417	<ul style="list-style-type: none"> ✓ Conduct Investment Promotion Round in 2006 ✓ Provide incentives in the form of development assistance and tax incentives
Solar	1.4	250	
Biomass	0		
Ocean	0		

ALTERNATIVE FUELS



Natural Gas



**Coco-methyl Ester (CME)
or *Coco-Biodiesel***



Ethanol



Others (autogas, fuel cell, EV)



ALTERNATIVE FUELS

- ✓ *The enhanced implementation of alternative fuels for transport program is targeted to yield an average annual savings of 2.1 MMBFOE (0.3 MTOE) within the planning period.*

BIOFUELS

- ✓ *1 to 5% CME blend with diesel fuel for vehicles in 2010*
- ✓ *5% ethanol blend with gasoline fuel for vehicles by 2007 to reach 10% in 2010*
- ✓ *Viability study in jatropha curcas potential as an alternative fuel*

CNG

- ✓ *100% of Metro Manila buses running on CNG by 2010*

AUTOGAS

- ✓ *Development of standards for LPG on transport*



ENERGY EFFICIENCY AND CONSERVATION PROGRAM

- ✓ *The continuous implementation of the energy efficiency and conservation program will generate energy savings of up to 159.3 MMBFOE (23 MTOE) across the planning period*

TWO-PRONGED PROGRAM

- **Fuel Efficiency and Conservation**
 - Road Transport Patrol
 - Fuel Economy Run
 - Voluntary Agreements
 - Government Enercon Program
 - Energy Audit
 - Infomercials / Publications / Collaterals
- **Electricity Efficiency and Conservation**
 - Power Patrol
 - Partnership for Energy Responsive Companies
 - Partnership for Energy Responsive Ecozones
 - Energy Standards & Labeling of Appliances/ Equipment
 - Government Enercon Program
 - Energy Audit
 - Energy Use Standards for Buildings
 - Heat Rate Improvement in Power Plants
 - Systems Loss Reduction

POWER MARKET REFORMS

POWER DEVELOPMENT PLAN

MEASURES TO COUNTER IMPACT OF

ELECTRICITY PRICE INCREASE

EPIRA DEVELOPMENTS

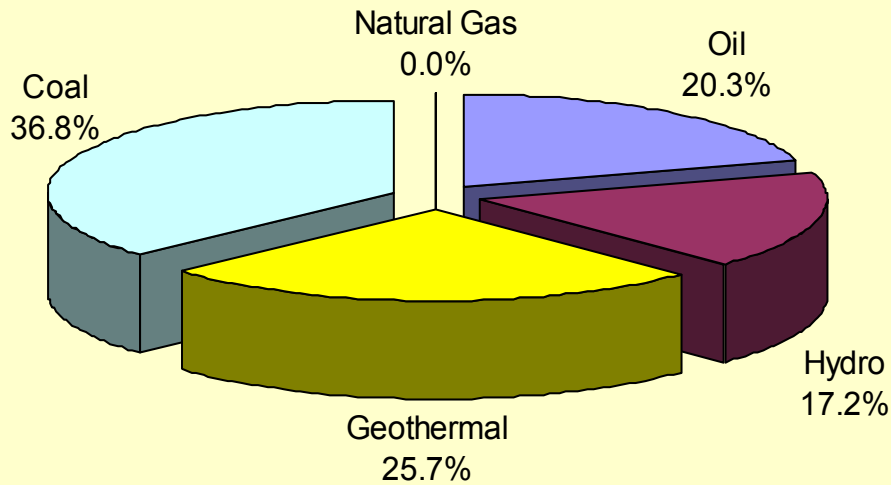
EXPANDED RURAL ELECTRIFICATION



POWER GENERATION MIX

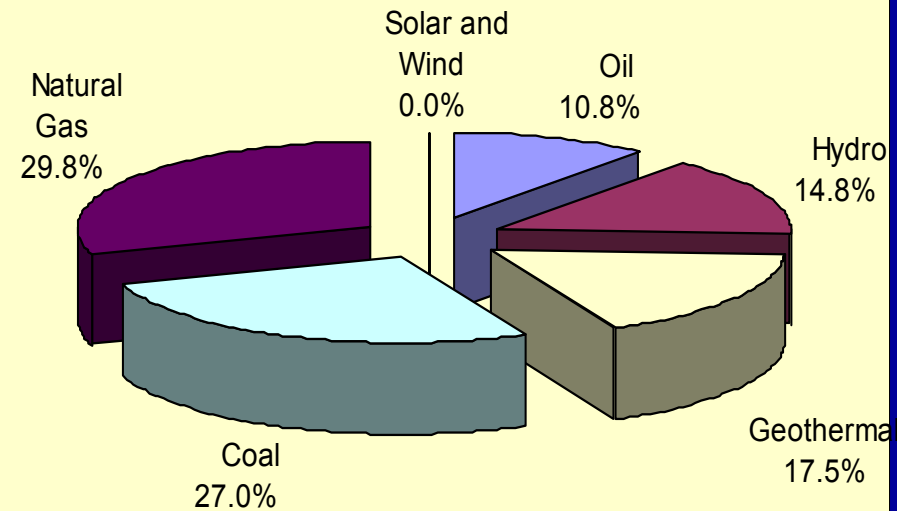
Philippines

2000



45,290 Gwh

2005



56,530 Gwh



PROJECTED SYSTEM PEAK DEMAND GROWTH

Grid	Ave. Annual Growth Rate	Critical Period
Luzon	4.0%	2010
Visayas	6.0%	2008
Mindanao	6.0%	2006
Philippines	4.1%	

PDP 2006 Update

- Projections based on the estimated power supply requirements of the distribution utilities and directly-connected customers of NPC
- Critical period may happen later than indicated if the consumers will respond to the government's efforts of promoting demand-side management such as time-of use rates, not only in the generation level but in the distribution level



MEASURES TO COUNTER IMPACT OF ELECTRICITY PRICE INCREASE

- ✓ *Energy Conservation and Demand Side Management*
- ✓ *NPC Internal Efficiency Measures*
- ✓ *Economic Dispatch*
- ✓ *Time-of-Use Pricing*
- ✓ *Implementation of WESM and working towards open access*
 - ✓ Provides economic price signals
 - ✓ Power of choice
 - ✓ Market-based competition
 - ✓ Retail competition



EPIRA DEVELOPMENTS

Ongoing Initiatives

- ✓ *Preparatory Works for the Commercial Operation of WESM in 2006*
- ✓ *Privatization of NPC Generation Assets*
- ✓ *Privatization of TransCo Concession*
- ✓ *Preparatory Works for the Implementation of Retail Competition and Open Access*
- ✓ *Administration of Universal Charge for Missionary Electrification and Environmental Charge*
- ✓ *Loan Condonation of EC Loans*



EXPANDED RURAL ELECTRIFICATION

- ✓ *Targets 100 percent barangay electrification by 2008*
- ✓ *Continue to energize sitios or small villages down to the household level to achieve the target 90% household electrification level by year 2017*



EXPANDED RURAL ELECTRIFICATION

Situationer

LUZON
19,869
----- = 97.04%
20,476

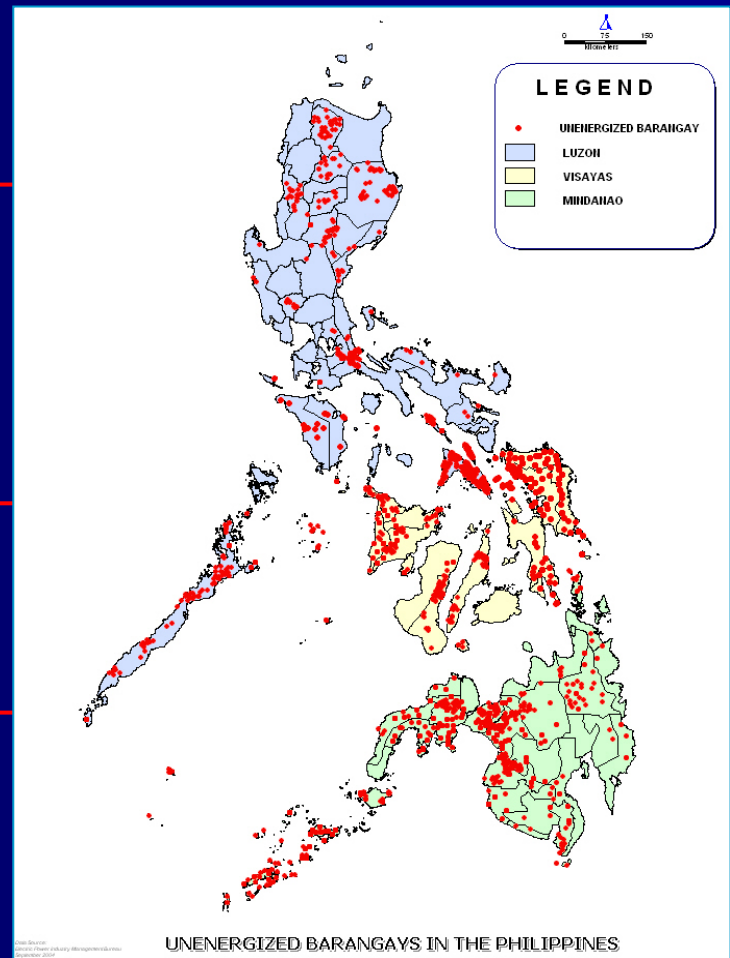
603
Unelectrified Barangays

VISAYAS
10,864
----- = 94.94%
11,443

533
Unelectrified Barangays

MINDANAO
8,568
----- = 85.46%
10,026

1,428
Unelectrified Barangays



PHILIPPINES
39,381
----- = 93.89%
41,945

41,945
Potential Barangays
Based on 2000 NCSO

2,564
Unelectrified Barangays

(As of December 31, 2005)

OTHER ENERGY PROGRAMS

*DEREGULATION OF DOWNSTREAM OIL
INDUSTRY*

DOWNSTREAM NATURAL GAS INDUSTRY



**Philippine Energy Plan
2006 Update**





DEREGULATION OF THE DOWNSTREAM OIL INDUSTRY (RA 8479)

Objectives

- ✓ *To create an environment that will promote competition in downstream oil industry*
- ✓ *To create a level playing field*
- ✓ *To promote consumer welfare through more choices and better products and more reasonable prices in oil and oil-derived products*

Gains As of September 30, 2005

- ✓ *Number of players engaged in the different downstream oil industry activities increased from 361 in 2004 to a total of 488*
- ✓ *Total investment of new players stood at Php 28.35B as of September 30, 2005 from P25.0B in 2004.*
- ✓ *Sustained market share of new players registered at 14.8 % since 2003.*



DOWNSTREAM NATURAL GAS INDUSTRY

- ✓ *Increase the share of natural gas in the energy and power generation mix*
- ✓ *Availability of a natural gas infrastructure network*
- ✓ *Passage of the Natural Gas Bill*



SECTORAL INVESTMENT REQUIREMENTS

Sector	Total	Gov't	Private
	(In Billion Pesos)		
Fossil Fuel	580.01		580.01
Oil and Gas	445.61		445.61
Coal	134.4		134.40
Renewable Energy Resources	251.12	85.14	165.96
Geothermal	87.39	49.02	38.37
Hydropower	104.76	36.13	68.63
Biomass	12.36		12.36
Wind	46.61		46.61
Alternative Transport Fuels	64.55		64.55
Energy Efficiency and Conservation	227.55	10.68	216.87
Power and Transmission Development	257.63-261.95	27.95	229.68-234.00
Main Grid	227.92-232.24		227.92-232.24
Small Island Grid*	25.24	25.24	0.0
Expanded Rural Electrification	4.47	2.71	1.76
Downstream	332.32		332.32
Oil and Gas	28.40		28.40
Natural Gas	303.92		303.92
GRAND TOTAL	1,713.2 - 1,717.5	123.77	1,589.4 - 1,593.7
* Indicative			
* Based on Missionary Electrification Development Program 2005-2009			



CONCLUSION

The Department of Energy, in partnership with its 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.

THANK YOU.

**Philippine Energy Plan
2006 Update**

