



The Government of the
Philippine Republic



Department of Energy



-  **ALTERNATIVE FUELS & ENERGY TECHNOLOGIES**
-  **ENERGY EFFICIENCY & CONSERVATION**
-  **RENEWABLE ENERGY**

**PUBLIC CONSULTATION FOR THE PHILIPPINE ENERGY PLAN (PEP)
2008-2030**

Tacloban City
Monday, 21 July 2008

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
- POWER MARKET REFORMS

ENERGY SECTOR GOALS

- 60% SELF-SUFFICIENCY LEVEL BY 2010
- FAIR AND REASONABLE ENERGY PRICES IN A COMPETITIVE ENVIRONMENT

Energy Sector Framework (continuation)

Moving Towards Energy Independence

- Accelerate the exploration and development of indigenous oil and gas resources
- **Aggressively develop renewable energy potentials**
- **Increase the use of alternative fuels**
- **Enhance energy efficiency and conservation programs**
- Form strategic alliance with other countries

ALTERNATIVE FUELS AND ENERGY TECHNOLOGY



ALTERNATIVE FUELS AND ENERGY TECHNOLOGIES

To achieve energy security and fuel diversification while meeting environmental challenges



Ethanol



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



Jatropha Curcas or
"Tuba-tuba"



Natural Gas

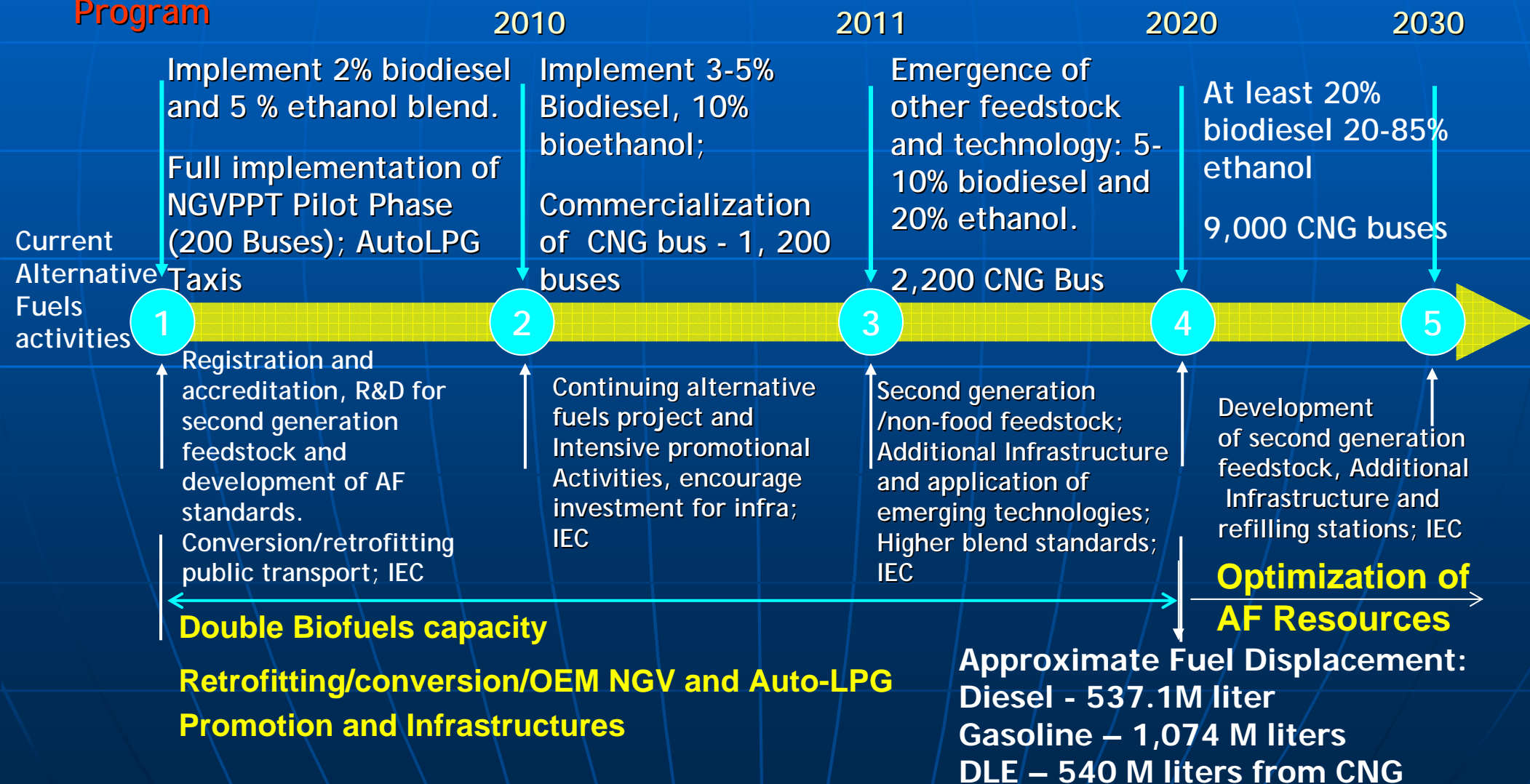


(AutoLPG, fuel cell, hydrogen,
EV, Solar car, hybrid)

ALTERNATIVE FUELS: (2008 – 2030)

Moving Towards Self Sufficiency and Clean Air

Accelerate the
implementation of the
Alternative Fuels
Program



ENERGY EFFICIENCY AND CONSERVATION

National Energy Efficiency and Conservation Program (NEECP)

- A. Government Energy Management Program (GEMP)**
- B. Standards and Labeling for Household Appliances**
- C. Fuel Economy Run**
- D. Energy Management Services / Energy Audit**
- E. Voluntary Agreement Program**
- F. Recognition Award**
- G. Information, Education and Communication Campaign**

Energy Efficiency and Conservation

Action Plans & Targets (2008-2030)

GOAL : To attain energy savings equivalent to 5% of annual final demand 2008-2010

- **Policy study and development of legal framework**
 - **Advocate the passage of Enercon Bill into Law**
 - **Conduct policy studies and development on:**
 - *Calibrated phase-out of inefficient technologies*
 - *Employment of energy manager and energy auditor in the industrial and commercial establishments*
 - *Creation of a comprehensive and innovative financial facilities*
 - *National Strategy for Systems Loss Reduction from power generation, transmission and distribution sectors*
- **Implement NEECP sub-components:**
 - Information, Education and Communication Campaign (IEC)
 - Government Energy Management Program
 - Energy Management Services
 - *Conduct energy audit in the industrial and commercial sectors*
 - *Establish standards for measuring energy efficiency and baseline data for energy benchmark*
 - *Reinstate Demand-Side Management among distribution utilities*

Energy Efficiency and Conservation Action Plans & Targets (2008-2030)

GOAL : To attain energy savings equivalent to 5% of annual final demand

2008-2010

- *Monitor retrofitting program for land transport*
- *Promote Aviation Fuel Efficiency Enhancement Program*
- *Promote major retrofit program for commercial and industrial sectors*
- *Implement and monitor the implementation of the revised Energy Efficiency Guidelines for new buildings*
- *Implement CFL Replacement Program through DUs led rapid and massive switch on the use of CFL lamps on its customers*
- Recognition Awards
 - Fuel Economy Run
- Standards and Labeling for appliances and equipment
 - *Expand the labeling program to include fans and blowers, lamps and ballasts*
- Partnership/Voluntary Agreements
 - *Enlist cooperation from all sectors*
 - *Enhance partnerships with ESCO and other energy service providers including vendors/suppliers of energy efficiency technologies*
 - *Voluntary Agreements with the LGUs for the rationalization of operation of tricycles*

Energy Efficiency and Conservation Action Plans & Targets (2008-2030)

GOAL : To attain energy savings equivalent to 5% of annual final demand

2010-2015

- Policy study and development of legal framework
 - Energy Efficiency Guidelines for residential buildings
 - Energy Management Services
 - *Public transport reform for mass transit*
- Establish accreditation for energy manager, energy auditor and energy service company
- Supply-Side Energy Management
 - Manage power plant energy efficiency performance improvement audit
 - Manage Systems Loss Reduction in the transmission and distribution utilities

Energy Efficiency and Conservation Action Plans & Targets (2008-2030)

GOAL : To attain energy savings equivalent to 5% of annual final demand

2015-2030

- **Demand side Management**
 - Massive phasing out of incandescent bulbs and promote use of CFLs
- Promote and monitor energy management standard based on ISO framework on the industrial and commercial establishments partnership with DTI-BPS
- Establish energy consumption benchmark for industries and buildings
- Administer operation of the Philippine Energy Efficiency and Conservation Center

■ **Cumulative Target Potential Energy Savings (2008-2030)**
= 332.09 MMBFOE (47.95 Million TOE)
= 7,866 MWe (342 MW per year) deferred power capacity
= 54.30 million MT CO₂ avoidance

RENEWABLE ENERGY

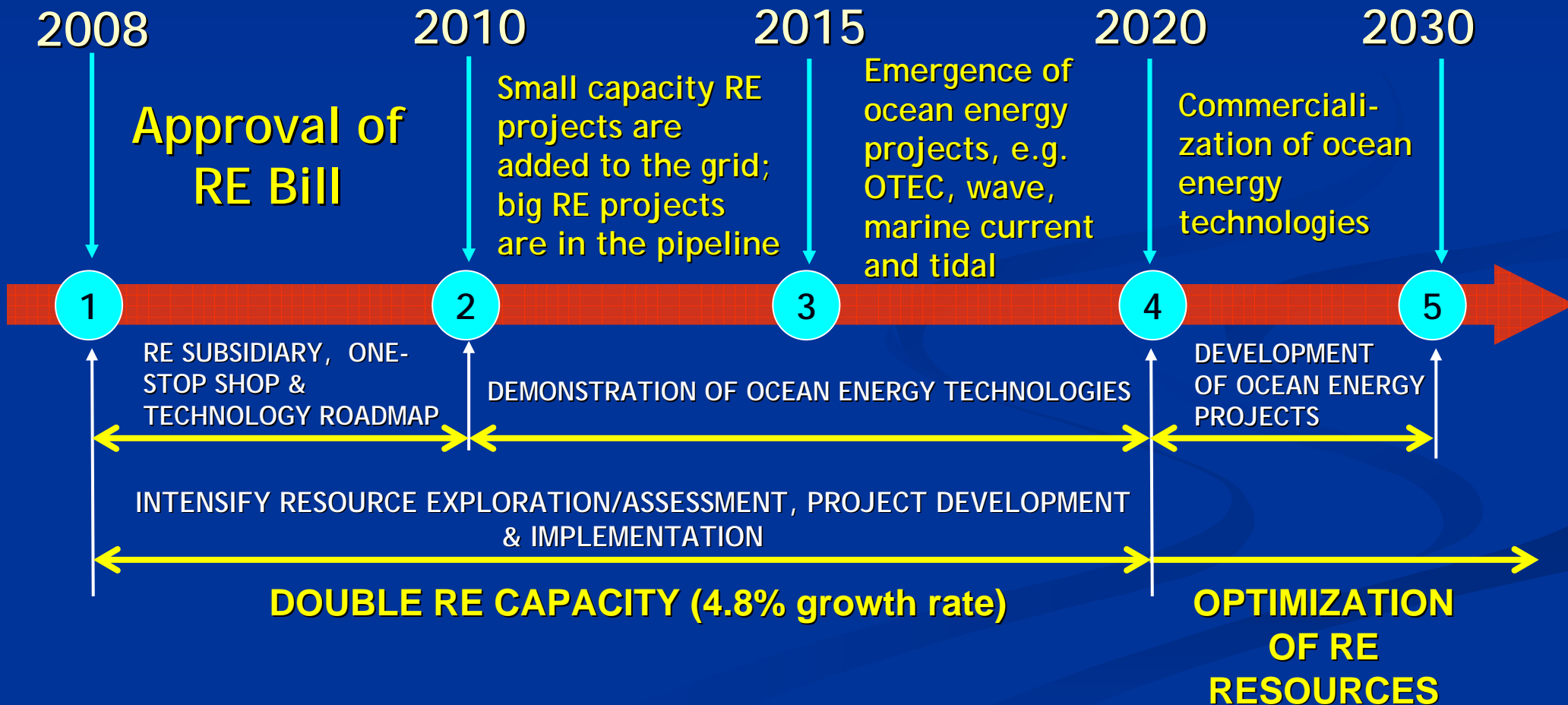


SUMMARY OF RESOURCE POTENTIAL

- ❖ Geothermal Resource – 790 MW
- ❖ Hydropower - 10,500 MW
- ❖ Micro-hydro – at least 500 KW
- ❖ Wind resources – 76,600 MW
- ❖ Solar Energy – an annual average of 5.0 kWh/m²/day
- ❖ Ocean energy - 170,000 MW
- ❖ Bagasse - 235 MW
- ❖ Ricehull - 1,256 MW

RE ROADMAP (2008 – 2030)

Moving Towards Accelerated RE Development



End of Presentation