



**APERC Workshop, Da Nang, Vietnam**  
**18 November 2013**

***6. PRLCE in the Philippines***

**Elvira Torres-Gelindon**  
**Senior Researcher, APERC**



Asia-Pacific  
Economic Cooperation



# OUTLINE OF PRESENTATION

**1**

• **Background**

**2**

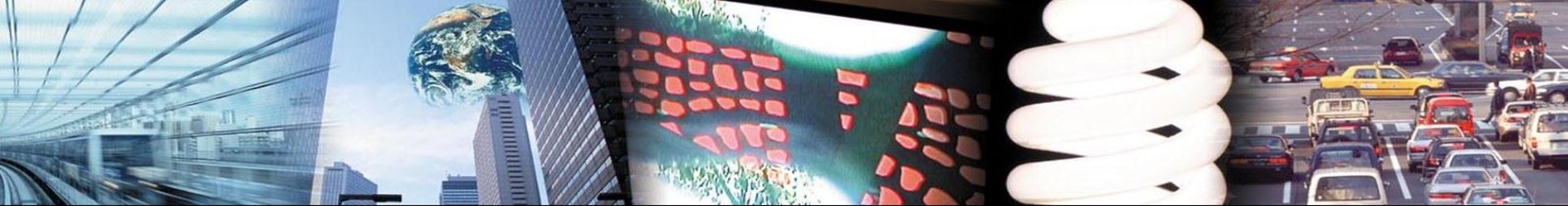
• **Areas Covered**

**3**

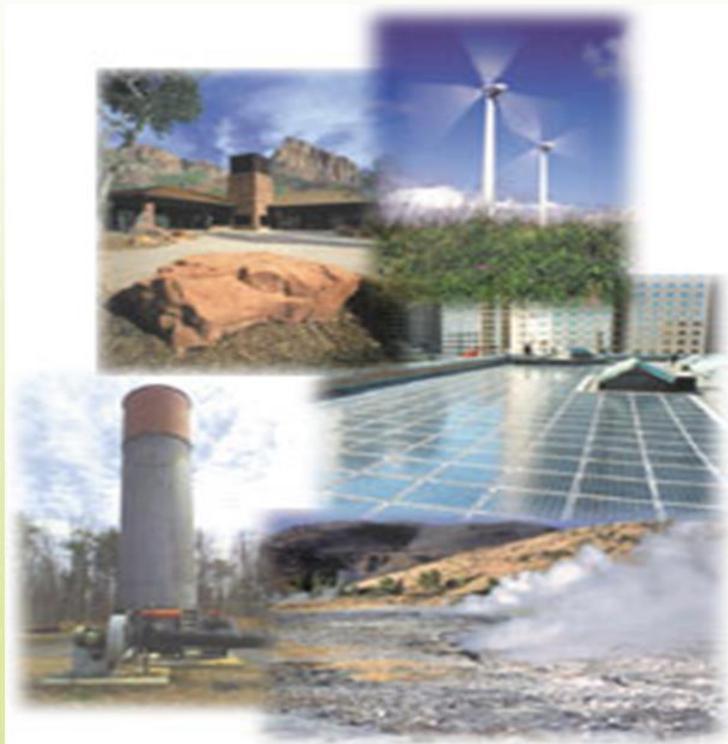
• **Recommendations**

**4**

• **Expert Review Team**



# RE SOURCES

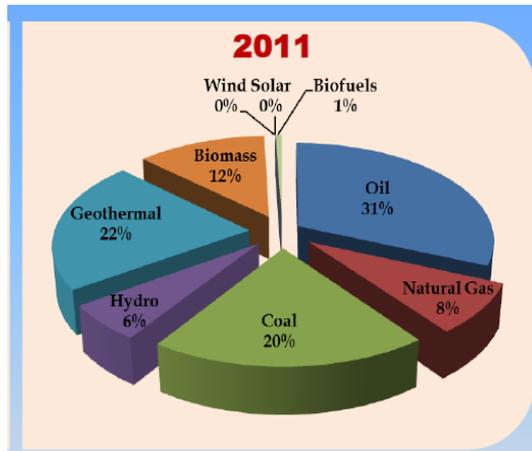


- ▣ **B**i omas / **B**iofuels
- ▣ **G**eothermal
- ▣ **S**olar Power
- ▣ **H**ydropower
- ▣ **O**cean
- ▣ **W**ind Power

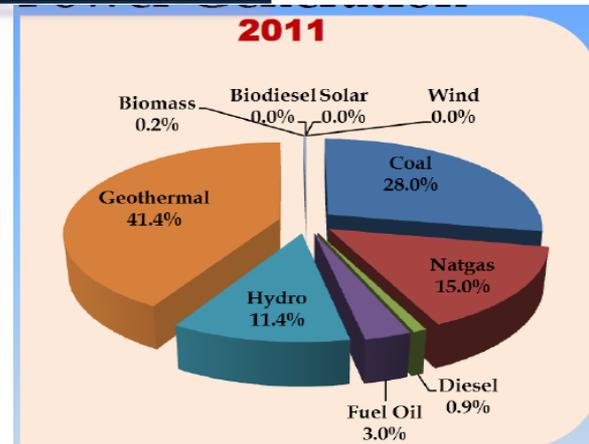


# ENERGY MIX

## Primary Energy Mix



## Fuel Input Mix for Power Generation



	2011
Total Energy (MTOE)	39.40
Self-sufficiency	60.0
Shares (%)	
Renewable Energy (RE)	40.7

	2011
Total Energy (MTOE)	20.63
Self-sufficiency	68.11
Shares (%)	
Renewable Energy (RE)	53.07



# RENEWABLE ENERGY DEVELOPMENT

**Passage of Republic  
Act 9513 or  
Renewable Act of  
2008**

*-Accelerates the  
economy's RE  
development*

National Renewable  
Energy Program (NREP)

National Renewable  
Energy Board (NREB)

Renewable Energy  
Management Bureau (REMB)



# NATIONAL RENEWABLE ENERGY PROGRAM (NREP)

*Institutionalize a comprehensive approach to accelerate the applications of renewable energy technologies in a sustainable manner*

## Development Framework

Sectoral Sub-Programs

Policy and Program Support

## Setoral Targets

1. Increase geothermal capacity by 75.0 percent;
2. Increase hydropower capacity by 160 percent;
3. Deliver additional 277MW biomass power capacities;
4. Attain wind power grid parity with the commissioning of 2,345 MW additional capacities;
5. Mainstream an additional 284 MW solar power capacities and pursue the achievement of the 1,528 MW aspirational target;
6. Develop the first ocean energy facility for the country.

*The 2010 RE Capacity level tripled by 2030*



# AREAS COVERED IN THE REVIEW

**P**

Institutional Context

Renewable Energy Goals, Targets and Strategy

**R**

Regulation and Infrastructure

**L**

Bio-Fuels and Biomass Energy

**C**

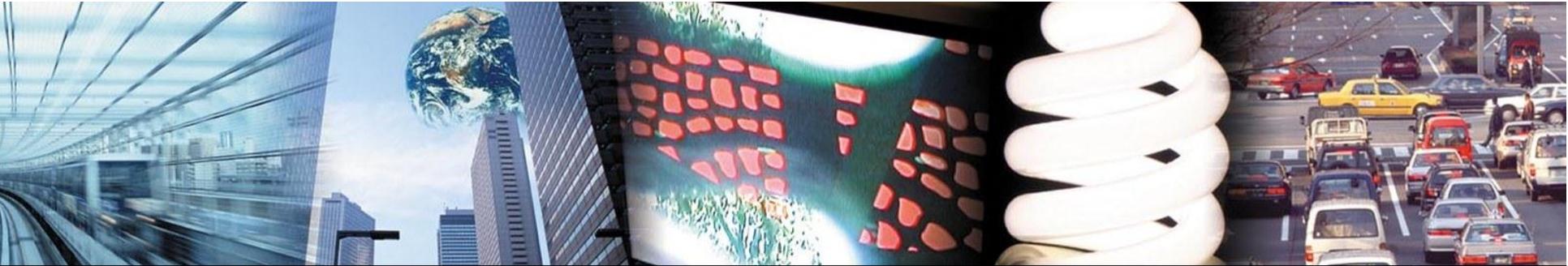
Geothermal, Solar and Wind

**E**

Hydropower Energy

Power Supply System (Smart Grid, FiT, Private Participation

Green House Gas Management



# THE RECOMMENDATIONS



# INSTITUTIONAL CONTEXT

## 3 Recommendations

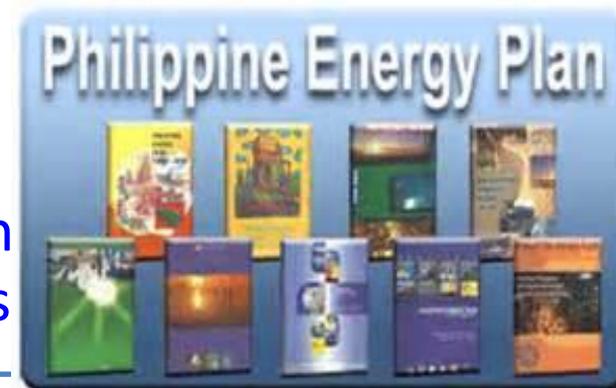
- Regulatory procedures for RE development should be less time-consuming;
- Reinforce the policy formulation function of REMB for RE, in collaboration with EPPB, to increase feedback from policy implementation to policy formulation at the implementation of RE development proceeds;
- Reconsider the composition of NREB to make governmental and private members in equal number, thus giving the independent chairperson a casting vote, which will give more voice to the private sector and enhance the neutrality of NREB.



# RENEWABLE ENERGY GOALS, TARGETS and STRATEGY

## 5 Recommendations

- The NREP; the National Biofuels Program; the NEECP and other energy related plans and programs should be harmonized and the updated copies be posted in a single website location. The plans should each quote the aims of the relevant legislation that they are seeking to fulfill;
- Implement broad scope multi-regional techno-economic modeling of the Philippines energy and agricultural economies to provide more certainty on future targets and investment strategies

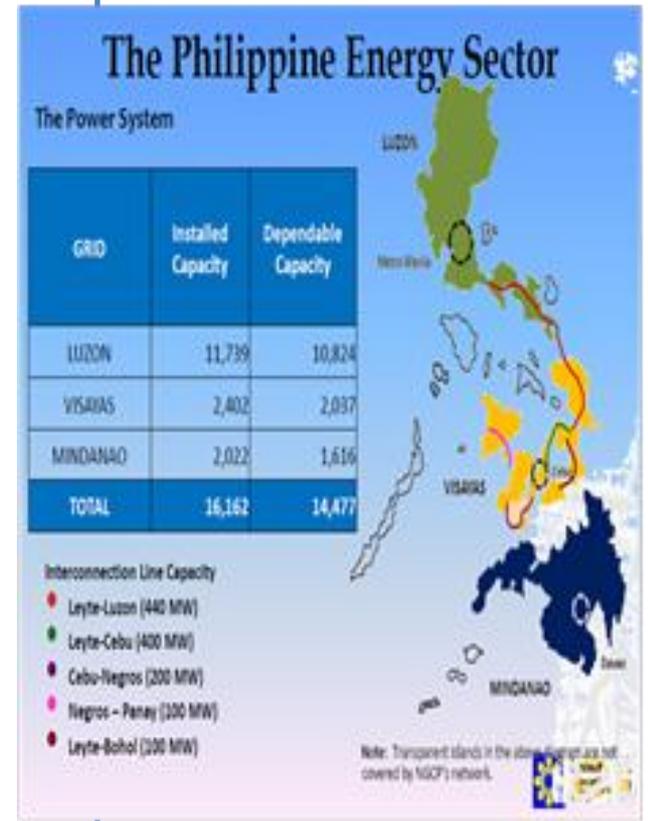




# REGULATION AND INFRASTRUCTURE

## 6 Recommendations

- Necessary for a Ministerial level action which will establish a Ministerial decision (action plans) to address the issue on tedious processing of document which will also consequently achieve the government's goal of good governance;
- Need to review RE Law to give more attention to off-grid RE issues; The DOE, RE developers and NGCP should continue its coordination and dialogues to address transmission/grid issues;



# SUB-SECTORAL RECOMMENDATIONS

## Bio-Fuels and Biomass Energy (5)



More R&D should be undertaken to support the domestic uptake of biofuels

## Geothermal, Solar and Wind (9)



Set the target for the development of solar and wind for off-grid areas and roof-top solar PV, as well as start creating official statistics for solar and wind;

## Hydropower Energy (5)



Promotion of multi-scale hydro power supply system's especially in the remote areas;



# POWER SUPPLY SYSTEM (7)

## Feed-in-Tariff

RE Source/ Technology	Rates (per Kwh)
Solar	₱ 9.68 (USD 0.242)
Wind	₱ 8.53 (USD 0.213)
Biomass	₱ 6.63 (USD 0.166)
Run-of-the-river Hydro	₱ 5.90 (USD 0.147)

*FiT for Ocean Thermal projects is for further study and data gathering, while the Hydropower Reservoir and Geothermal supplies were not subjected to the FIT due to market competitiveness.*

Develop FiT for sub-categories of RE technologies depending on technology maturity, regional application and socio-economic conditions (e.g. solar PV for household, solar farm, commercial rooftop utilization, etc.);

# GREEN HOUSE GAS MANAGEMENT (5)

Accelerate the registration procedures for applications for FIT qualification and also the joint use of FIT and RPS for RE promotion should be optimized and clarified.

**CDM**

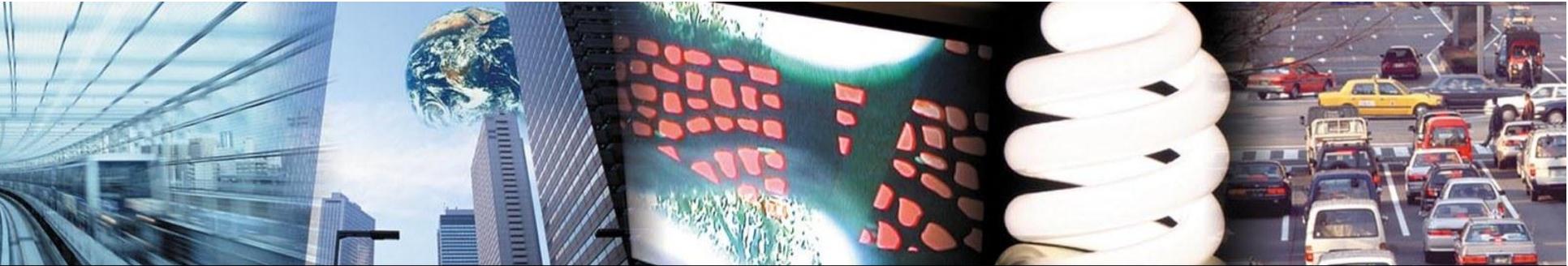
Clean Development Mechanism

**RPS**

Renewable Portfolio Standards



Energy Reform Agenda (ERA)



# THE 45 RECOMMENDATIONS



# THE REVIEW TEAM

- Mr. Takato **OJIMI**  
*(Review Team Chair)*

APERC



- Dr. Li **KUISHAN**  
*(Hydropower Energy)*

China



- Mr. Masaomi **KOYAMA**  
*(Geothermal, Solar and Wind)*

IRENA



- Dr. Akihiro **WATABE**  
*(Green House Gas Management)*

Japan



- Dr. Kazutomo **IRIE**  
*(Institutional Context)*

APERC



- Mr. Haniff **NGADI** *(Power Supply System)*

Malaysia



- Dr. Jonathan **LEAVER**  
*(Renewable Energy Goals and Strategy)*

New Zealand



- Dr. Chatchawan **CHAICHANA**  
*(Bio-fuels and Biomass Energy)*

Thailand



- Ms. Elvira Torres-**GELINDON**  
*(Regulation and Infrastructure)*

APERC





# PHOTOS





Thank you for your  
kind attention

<http://aperc.ieej.or.jp>