



The World Bank



ESMAP 2010 Knowledge Exchange Forum

Session 1: ESMAP Renewable Energy Market Transformation Initiative (REMTI)

The Philippines Renewable Market Development

Transport, Energy, Urban Sustainable Development (EASIN)

Washington DC

March 25, 2010

Outline

1. **The Philippine Power Sector**
2. **Government Energy Strategy and Renewables**
3. **ESMAP Support for the Philippine Renewable Energy Market Development**

Section 1. The Philippine Power Sector

Three regions with three distinct characteristics

Luzon

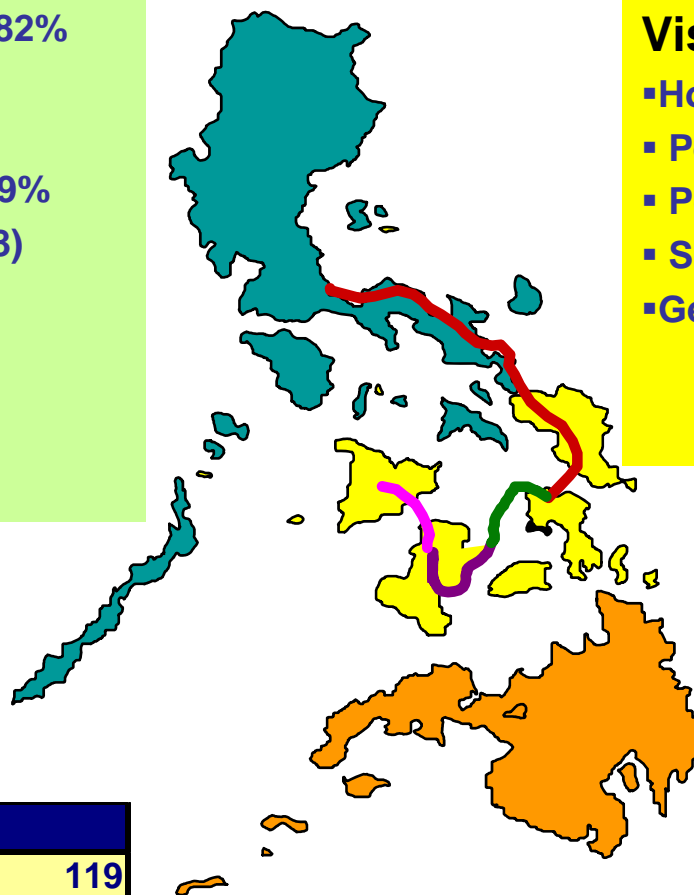
- Household electrification: 82%
- Per capita GDP: P14,670
- Poverty rate: 30.2%
- Share of PH economy: 65.9%
- Generation mix (GWh, 2008)
 - Hydro 12%
 - Geothermal 8%
 - Gas 44%
 - Coal 31%
 - Oil 4%
 - Wind 0.1%

Visayas

- Household electrification: 72%
- Per capita GDP: P11,281
- Poverty rate: 41.8%
- Share of PH economy: 16.5%
- Generation mix (GWh, 2008)
 - Geothermal 72%
 - Coal 9%
 - Oil 19%

Mindanao

- Household electrification: 59%
- Per capita GDP: P10,383
- Poverty rate: 49.9%
- Share of PH economy: 17.6%
- Generation mix (GWh, 2008)
 - Hydro 55%
 - Geothermal 10%
 - Coal 19%
 - Oil 16%

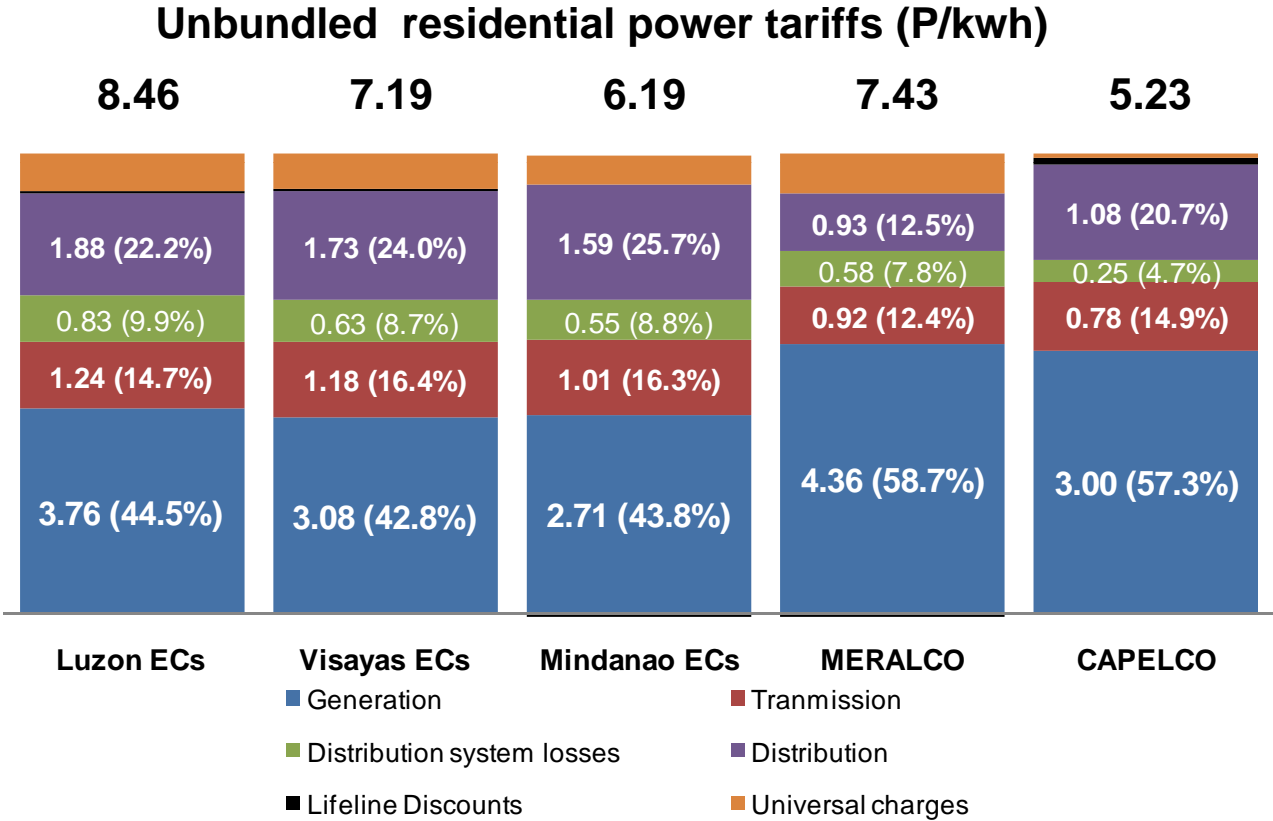


Distribution Utilities

Electric Cooperatives	119
Private Dist. Utilities	18
LGUs	2

Generation cost drives tariffs

- Generation costs represent around 43.8% of regulated electricity tariffs of Electric Cooperatives (ECs)
- In private distribution utilities (DUs), generation costs also represent the biggest share, e.g. CAPELCO in Mindanao and MERALCO in Luzon, generation costs make up 57 to 59% of the tariff



Note: Luzon, Visayas and Mindanao average (June 2008); MERALCO (December 2007), CAPELCO (December 2007)

Section 2. Government Energy Strategy and Renewables

Energy Development Plan: Framework and Funding

▪ Philippine Energy Plan

- ❑ Attaining 60% **energy self-sufficiency** beyond 2010,
 - Utilization of indigenous energy resources
 - Increase development of RE resources
 - Increase use of biofuels
 - Enhance energy efficiency and conservation
- ❑ Promoting a **competitive energy sector**
 - Power sector reform (EPIRA)

▪ Renewable Energy Act of 2008

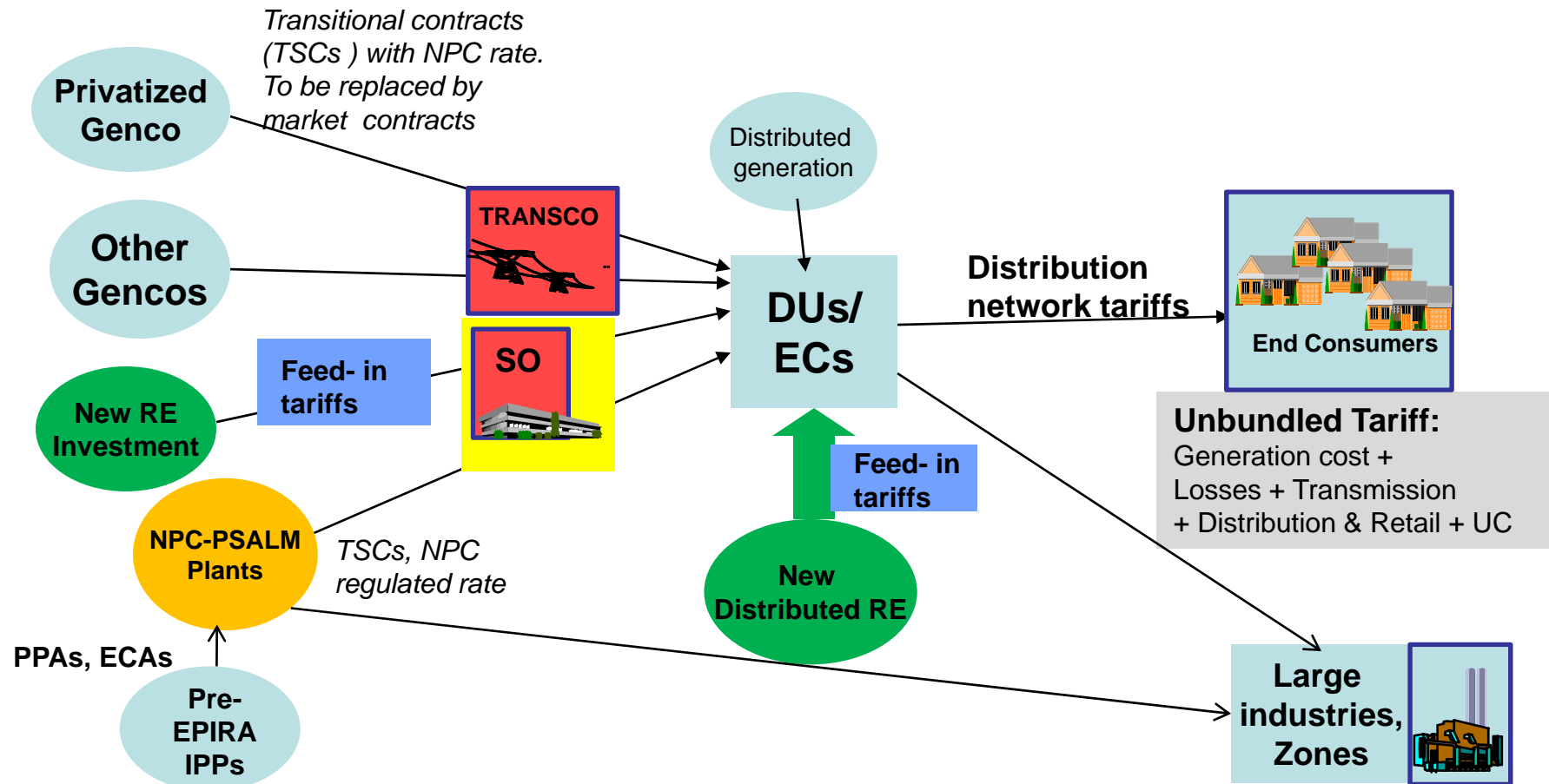
- ❑ Sets the legal and policy framework for new renewable
- ❑ Support mechanisms and new institutions, including the National Renewable Energy Board (NREB) and Renewable Energy Management Bureau (REMB)
- ❑ Priority connection and dispatch for new renewable generation
- ❑ Tax holidays and exemptions

▪ Clean Technology Fund (CTF) \$250 million allocation

- ❑ Concessional cofinancing, targets renewables, energy efficiency and implementation of environmentally sustainable transport strategy

Developing Renewables: Restructured Power Sector and Privatization

- **Power Sector Reform (EPIRA):** unbundling of electricity activities, privatization, independent regulator, phase out cross subsidies, universal charges (UC)
- Each DU/EC has different power purchase costs transferred to end consumers tariffs
- **Investments in RE will rely strongly on the private sector.**
- New renewable energy, will be paid **feed in tariffs (FIT)**, except for geothermal



Section 3. ESMAF Support for the Philippines Renewable Market Development

Philippines REMTI Support: Rationale and Objectives

Rationale

Sustain and increase the Development of Renewable Energy Resources in the Philippine Power Sector

- Support the country institutions in the implementation of the Renewable Act on critical policy and regulatory areas (regulations, grid integration, targets)
- Benefit from relevant international experiences and emerging new practices

Objectives

- Transform the Government goals and policies into an efficient and sustainable development of the renewable market
- Support the development of effective good practice regulations tailored to Philippines power sector structure and market reform, and at the same time manage system reliable supply and the impact on tariffs
- Capacity Building, Dissemination and Knowledge Sharing

Multi year support:

- On-going activities for this fiscal year (FY10, finalizing June, 2010)
- Building on results and findings in FY10, activities for next fiscal year are being tailored to scale up impact and transformation

Design of REMTI Program for the Philippines (FY10)

Assessment of the Renewable Market

Philippine Context

Adapting power sector reform, regulations and operational practices to scaling up renewables agenda

Mainstreaming of Renewable Energy

Elements

- Capacity Building
- Incentives Mechanisms
- Transmission expansion planning/Connection and integration of RE

Impact Assessment

Scenario Building

- Cost evaluation of scenarios of RE development
- Modeling consumer tariff impacts

Design of REMTI Program for the Philippines (FY10)

- **Successful Mainstreaming of Renewable Energy**
 - **Capacity Building:**
 - Expert meetings with working groups
 - Knowledge sharing on international experiences and emerging thinking on renewable scale-up, stakeholders workshops
 - **Incentives mechanisms: Feed in tariffs (FIT)**
 - International consultants support to ERC on rules to set FITs, transfer to end consumers tariffs, collection from DUs/ECs and payment to renewable developers
 - **Transmission expansion planning/Connection and integration of renewable generation**
 - International experiences, new practices
 - Assessment of connection costs
 - Working in coordination with Transmission Company

- **Measuring the Impact of Increased Renewable Penetration**
 - **Scenarios of RE development**
 - Application of RETScreen tool to evaluate cost of renewable technologies
 - **Consumer Impacts**
 - Modeling and assessing tariff impact