

Clean Technology Fund Investment Plan for the Philippines

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Outline

- **Background**
- **Clean Technology Fund (CTF) Country Investment Plan (CIP) for the Philippines**
- **Concluding Remarks**

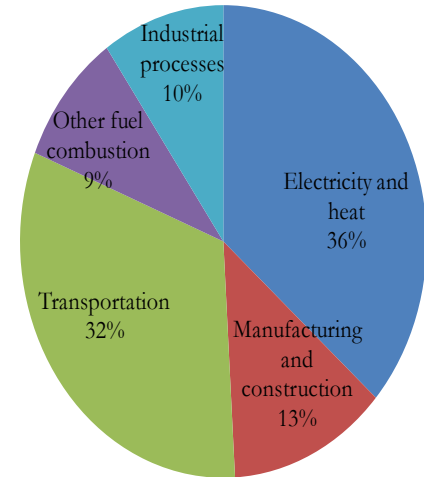
Background

- Philippines is an archipelagic country well-endowed in natural resources with a population of 89 million.
- A leading country in the world in terms of renewable energy (RE) use (43% of total primary energy supply).
- One of the lowest per capita electricity consumption in the East Asia region.
- Vehicle ownership growing at 6 percent over past two decades.
- Rapid urbanization rate. Estimated 30 million new urban dwellers by 2030.
- Excluding land use change, the power (36%) and transport (32%) sectors account for the bulk of GHG emissions.

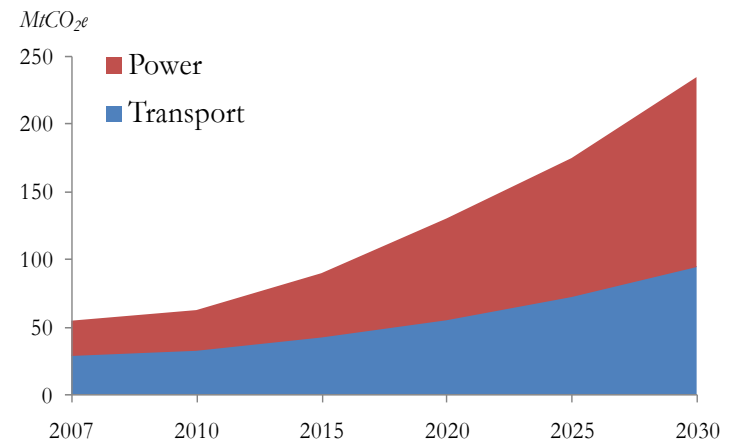
Background

- GHG emissions from the power sector will go up by over 400% from 26 MtCO₂e in 2007 to 140 MtCO₂e by 2030.
- GHG emissions from transport sector will increase by over 200% from 29 MtCO₂e in 2007 to 95 MtCO₂e by 2030.
- Increase coal use will drive growth in power sector GHG emissions while congestion and increase fuel use due to motorization will drive transport sector GHG emissions

GHG Emissions by Source, 2005



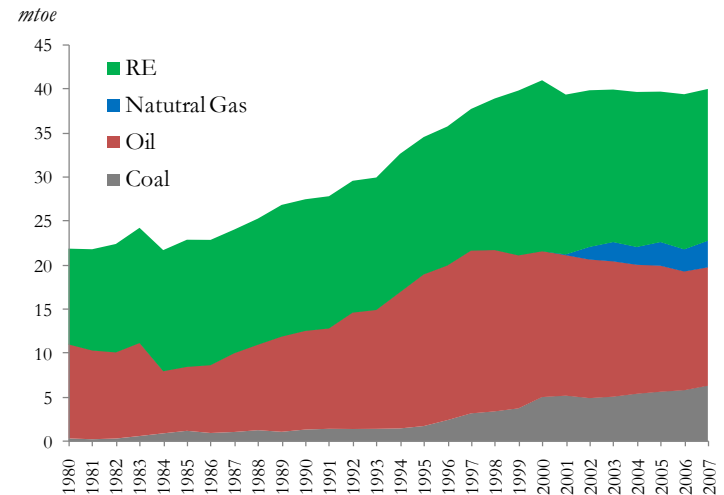
Baseline GHG Emissions Estimates for the Power and Transport Sectors



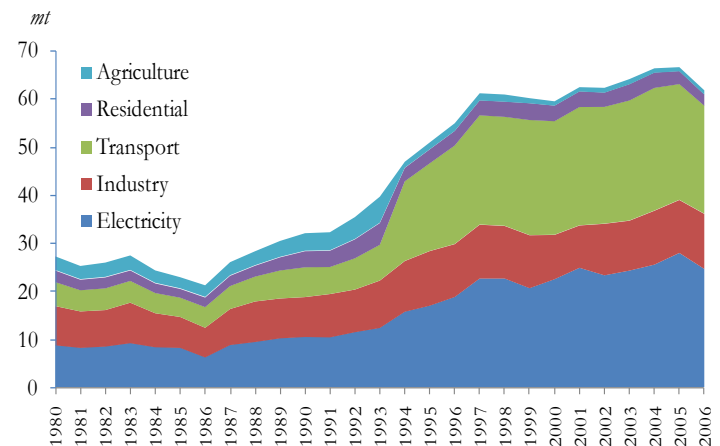
Background

- Lower-cost coal is a threat to our RE-dominated primary energy supply mix given tightening electricity supply/demand situation. Need to maintain economic growth in an environmentally sustainable manner.
- CTF co-financing needed to support government efforts to transform energy sector through scaled –up distributed generation with RE resources and energy efficiency through demand side management. Need to keep electricity prices competitive while balancing environmental concerns.
- Rapid urbanization and increased congestion requires cost -effective public transport interventions.

Total Primary Energy Supply, 1980-2007



CO₂ Emissions from Fossil Fuels, 1980-2006



Philippine CTF Country Investment Plan

- Is a “business plan” developed by the government in agreement with the Asian Development Bank (ADB) and the World Bank Group.
- Builds on the Medium-Term Philippine Development Plan (2004-2010), Philippine Energy Plan (2008-2030), National Environmentally Sustainable Transport Strategy and other relevant sector plans.
- Consistent with ADB, IBRD and IFC programs for the Philippines.
- Endorsed by the NEDA Committee on Infrastructure.
- Identifies priority sectors for GHG Emission Reduction.
- Supportive of poverty alleviation efforts of government.

Philippine CTF Country Investment Plan

Supported by enabling legal and policy environment

- 2001 Electric Power Industry Reform Act (EPIRA)
- 2006 Biofuels Act
- 2008 Renewables Energy Act
- 2009 National Environmentally Sustainable Transport Strategy (NESTS)
- 2009 Climate Change Act

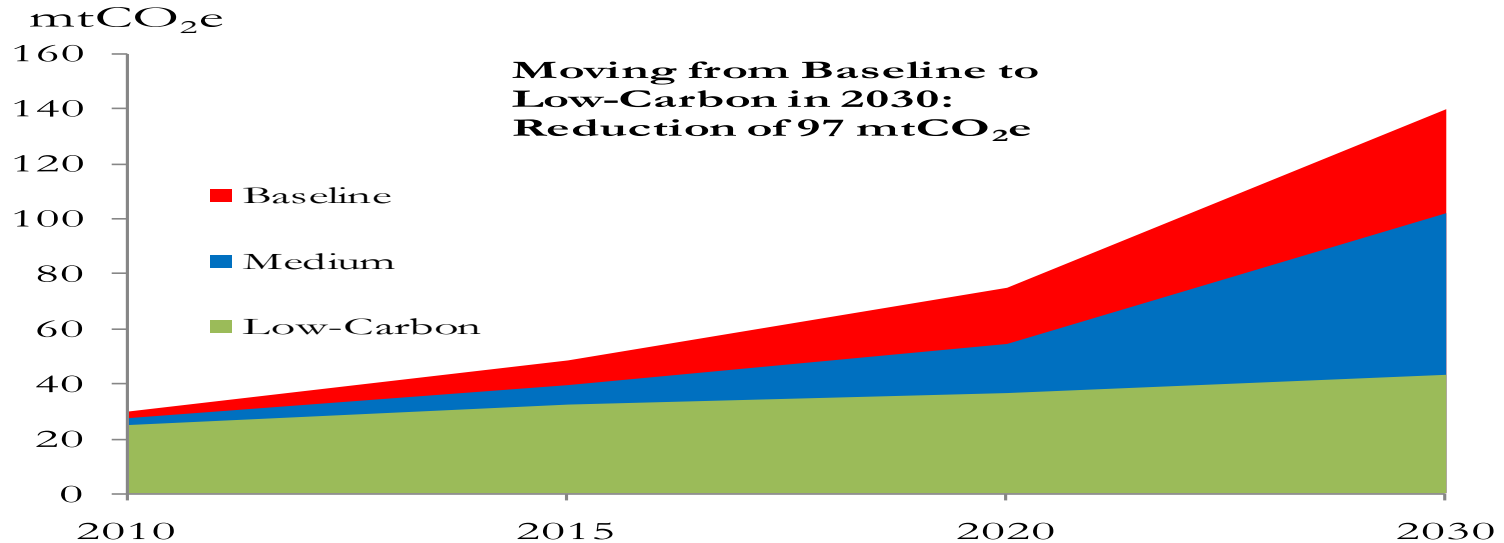
Philippine CTF Country Investment Plan

GHG emission reduction focuses on three broad areas:

- Supply and demand side efficiency, including grid optimization and initial investments in smart grid technology, as well as urban energy efficiency;
- Renewable energy, including biomass and solid wastes, geothermal, hydropower, solar, and wind; and,
- Transport systems, BRT, advanced vehicle technology, urban rail, motor vehicle inspection and emission systems, and wider use of biofuels.

Philippine CTF Country Investment Plan

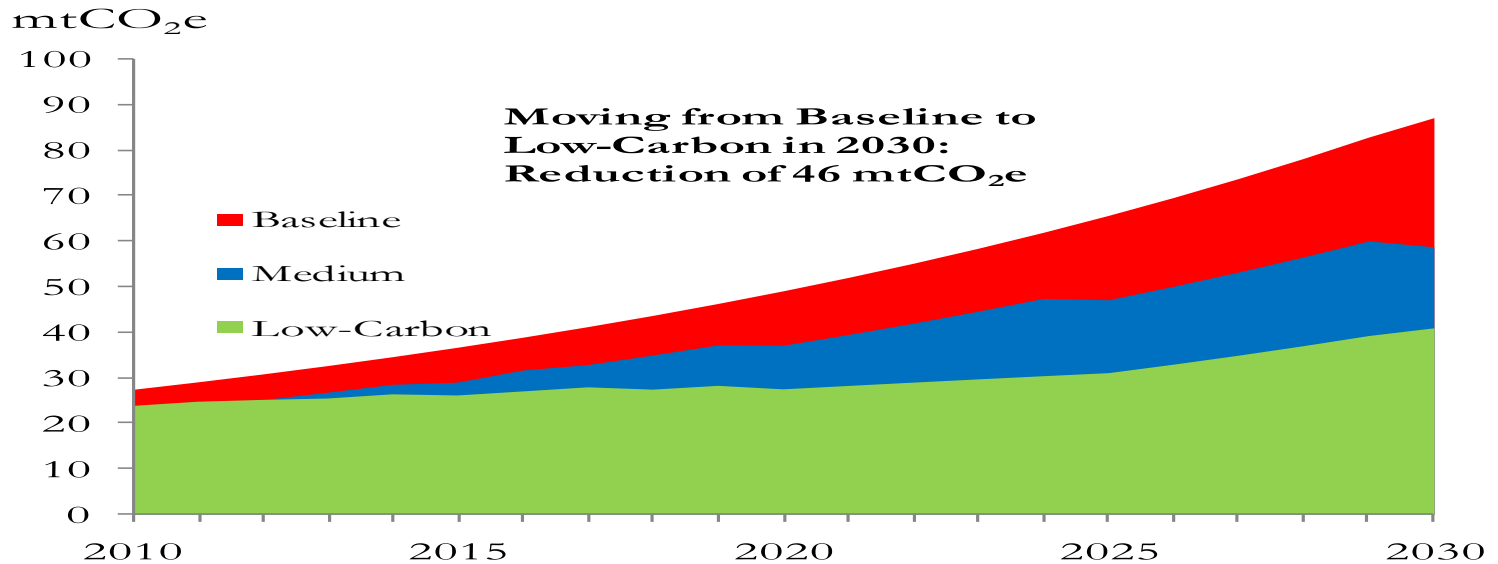
Pathway from Baseline to Low-Carbon for Power Sector



- **20GW of equivalent coal installed capacity avoided:**
 - 15% less demand through Energy Efficiency
 - Additional 11.6 GW RE Capacity: 1.1GW Geothermal; 4.5GW wind; 2GW biomass; 2GW solar; and 2GW hydro.

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Pathway from Baseline to Low-Carbon for Transport Sector

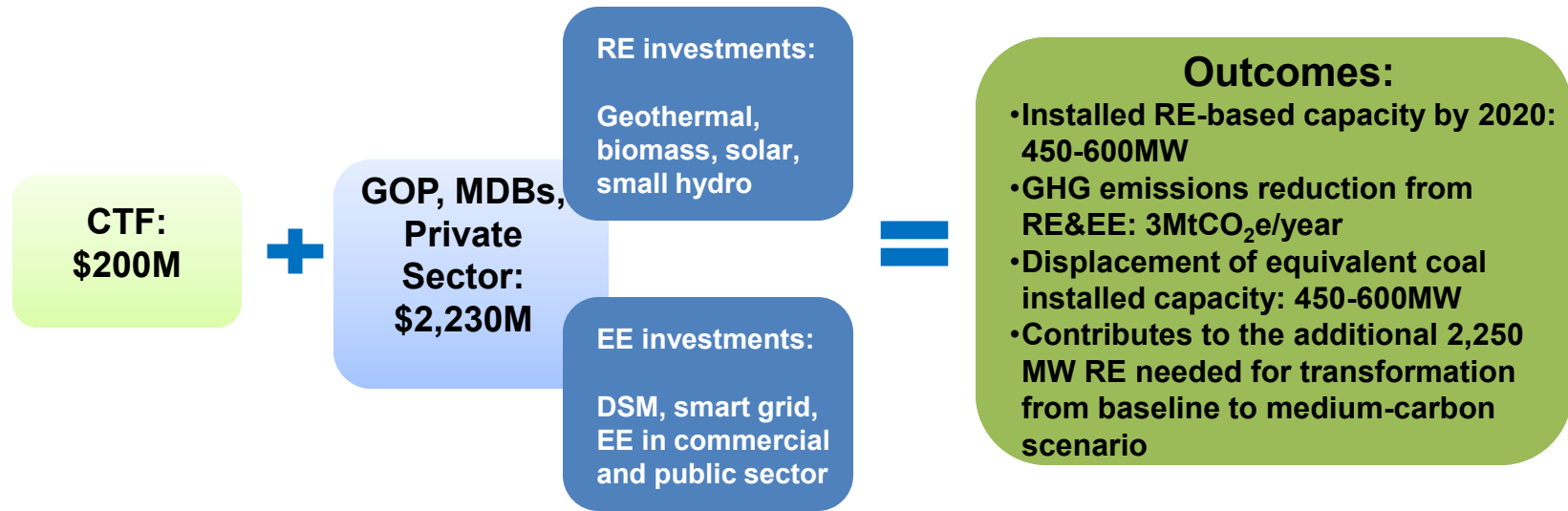


- 69% will come from fuel switching
- 16% from improvements in vehicle efficiency
- 14% from demand management

Philippine CTF Country Investment Plan

CTF support needed to start moving from baseline to medium-carbon scenario

In the power sector



In the transport sector



Philippine CTF Country Investment Plan

- Projects for CTF co-financing are: (a) Energy Efficiency (EE) and Renewable Energy (RE) Program; (b) Mainstreaming Solar Power; and (c) Urban Transport Program.
- Result of policy discussions and three joint missions since March 2009.
- Choice of programs reflects combination of government's priorities and sector implementation readiness, MDBs capacity and focus and priorities established by CTF.

EE and RE Program (IBRD; IFC)

Proposed Transformation

- Accelerate RE deployment by addressing long-term credit access in small and medium size projects.
- Institutional transformation of electric cooperatives and improvements in their operations by investing in DSM, smart grid, smart meters, and managerial capacity.
- Leads to GHG emissions reduction of 3MtCO₂e/yr and 20MtCO₂e/yr at full scale-up.

Implementation Readiness

- DBP has a track record in efficient implementation of RE and EE projects
- DBP experience shows commercial financing of RE can be a viable business line for financial intermediaries.

Solar Power (ADB)

Proposed Transformation

- Focus on a single well-proven technology solution that remains outside the reach of ordinary citizens.
- US\$125 million of CTF resources will be used to cover part of the additional cost of solar power generation through large scale implementation of the net metering program.
- Market transformation to cover 30,000 commercial, government offices and large residences.
- 100,000 tons of CO₂e/yr avoided, 2.5 MtCO₂e over the life of the project.

Implementation Readiness

- DOE has sufficient expertise to manage the project. Project management support will be provided.
- ADB has already initiated preparation to support the long-term investment program.

Urban Transport Program (IBRD)

Proposed Transformation

- Investments in 50km of BRT systems in 3 main corridors in Manila and Cebu City. Cebu City BRT to become the model for other BRT systems in the country.
- Strengthen capacity of DOTC and major cities for planning and implementing NESTS.
- Leads to GHG emissions reduction of 0.6-0.8MtCO₂e/yr and 2-3MtCO₂e/yr at full scale-up.

Implementation Readiness

- Strong ownership of the proposed investment interventions by the GOP and enabling environment to support implementation.
- Experience in LRT and bus projects implementation demonstrating capacity for project management.

Concluding Remarks

- Philippine Government is committed to GHG reduction and has the supporting legal and policy framework in place.
- CTF \$250 million co-financing is key to leveraging resources needed for GHG reduction and accelerating implementation of projects/programs.
- Transformational impact on energy and urban transport sectors is real.
- Seek the CTF Trust Fund Committee's favorable consideration of the CTF Country Investment Plan for the Philippines.

Maraming Salamat Po!