



CLEAN ENERGY CONFERENCE

FINANCING FOR CLEAN ENERGY PROJECTS

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Financing Requirements

- **Over the period up to 2030, power sector investments for developing countries are estimated at over \$250 billion per year.**
- **Huge financing gaps exist just to meet the business-as-usual scenario.**
- **Incremental costs for a lower carbon scenario are 10 to 15% for developing countries, i.e. \$20-40 billion per year.**



Investment Needs

- **Investments are required to cover both current and new technologies in the following areas:**
- **Renewable energy technologies, particularly hydropower**
 - **Energy efficiency**
 - **High efficiency thermal power**
 - **Carbon capture and storage**
 - **Nuclear power**



Financing Constraints

- **Low availability of equity and debt capital due to:**
 - **higher investment costs resulting in lower financial viability;**
 - **long lead times and untested technologies;**
 - **uncertainty regarding future regulatory frameworks resulting in weak carbon markets;**
 - **low current carbon prices for CDM projects; and**
 - **implicit project/country risks are not mitigated.**



Existing Financing Sources

- **Private sector and commercial banks**
- **MDBs**
 - **Guarantees**
 - **Concessional lending**
 - **Limited carbon finance**
 - **GEF**



Role of the World Bank Group and other MDBs

- **Support the scale-up of private investment through**
 - **Policy dialogue to improve regulatory and market environment**
 - **Risk mitigation and financing**
 - **Support for clean energy technology innovations**
 - **Incremental low carbon financing**



Incremental Low Carbon Financing

- **GEF – on the order of \$200-300 million per year**
- **Carbon Finance - \$2 billion currently under management at WB**
- **New Carbon Funds (next slide)**
- **Large scale vehicle under discussion with donor community**



New Carbon Funds

- **New Global Partnership Carbon Fund for post-2012 continuity**
- **Multilateral Carbon Credit Fund**
- **EIB Funds**
- **Forest Carbon Partnership facility**
- **British Fund**
- **US Clean Energy Technology Fund**
- **OPEC Fund**



Carbon Partnership Facility

- **Main objectives are to:**
 - **Scale up mitigation efforts;**
 - **Support long-term investments for transition to low-carbon economy;**
 - **Integrate into public and private investment decisions;**
 - **Shift away from project-by-project to systematic programs of investments in a strategic way;**
 - **Establish a long-term regulatory framework that provides certainty of a carbon price signal; and**
 - **Provide incentives for development of low-carbon technology.**



CPF (Cont'd)

➤ **Targets:**

- **CPF operational April/May 2008**
 - **Capitalize at \$1bn/year over FY09-FY13**
 - **Each \$1bn would support 10-20 major programs***
 - **Pilot program development in FY08**
 - **Scale up in operations from FY09 onwards, with roughly 1-4 programs/Region/year***
- * assuming 5m tons/program and \$10-\$20/ton of emission reduction**



Turkey's Electricity Sector

- Undergoing extensive reforms and restructuring; national energy strategy being updated; distribution and parts of generation to be privatized in phases
- Large investment needs to mitigate supply security risks
- Private sector expected to be main source of financing for generation and distribution
- Current peak demand is about 30,000 MW, with demand growing at over 8% per annum
- 9th Development Plan: minimum environmental damage while meeting energy demand
- Main additions to generation capacity will be thermal (coal and gas), hydro and other renewables, and nuclear



WBG Assistance to Energy Sector

- **Strong partnership to support development of an efficient and sustainable energy sector**
- **Policy dialogue and analytical work**
- **Financing of projects in electricity generation, transmission and distribution, in renewable energy and in the gas sector**
- **Significant advisory work and financial assistance in new Country Partnership Strategy (2008-2011)**
- **IFC and MIGA also active in sector**