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Options and Initiatives for Financing Carbon Capture & Storage Projects

PRESENTATION TO PROMOTE DISCUSSION

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Why Invest in Carbon Capture & Storage?

- Public Sector:
  - It is good for the environment!
  - It is good for the overall economy with the continued use of existing energy infrastructure
  - It enables continued use of abundant domestic resources (coal)

- Private Sector:
  - Public Relations / Goodwill
  - To continue operating or building fossil-fueled plants (where regulated)
  - To enhance corporate profitability……

Financing CCS Projects
Discussion topics for CSLF Task Force

- Existing Sources of Project Debt and Equity
- Challenging Characteristics of Carbon Sequestration Projects
- Required Risk Mitigation
- Creation of a Viable Business Model
- Emergence of New Financing Sources

Existing Sources for Funding Environmentally Beneficial Projects

- ***The Global Environment Facility (GEF):***
  - Independent multilateral development fund with contributions by over 30 countries worldwide
  - Concessional and grant funding to meet incremental costs of a project associated with providing new and improved environmental benefits
  - Over US$4.5 Billion in grants since 1991 and over $14.5 Billion in co-financings
  - Projects managed by World Bank, UNDP or UNEP with additional support from various other development banks

- ***Prototype Carbon Fund (PCF):***
  - Established by the World Bank as a “pilot activity” in 2000.
  - Framework stems from the Clean Development Mechanism (CDM) and Joint Implementation (JI) established under the Kyoto Protocol which were contemplated to combat global climate change and attract investment in developing countries and economies-in-transition.
  - Operates as a clearinghouse whereby the fund invests contributions made by companies and governments in projects designed to produce emissions reductions.
  - Contributors to the fund receive a pro rata share of the emissions reductions (credits) received by the fund subsequent to its investments.

Challenging Characteristics of CCS Projects

- Regulations not established…yet
- Uncertainty as to total required capital costs
- Uncertainty as to long-term operational performance
- Uncertainty as to property rights (land and CO2)

Potential Risk Mitigation Measures

- Contingency Fund to cover additional and unexpected capital costs;
- Extended warranties for plant performance;
- Business Interruption insurance (covering revenue loss and/or additional costs resulting from delays);
- Long-term maintenance agreement with technology suppliers;
- Indemnity agreement whereby a government (or government sponsored entity) provides insurance to investors against claims for unexpected release of CO2.

Creation of a Viable Business Model

- A profitable business operation must be developed making sequestration a viable business in its own right.
- The return on capital vs. risk must be structured to be attractive to investors with respect to other competing opportunities.
- A source of project capital must be identified or developed;
- Low-cost debt financing must be available to make projects economically feasible;

Create a profitable business operation

- ***Carbon Emission Credits & Trading***

  - For long-term sustainability, some “tangible” business model must be attainable;
  - Avoidance of stiff penalties for emissions may accomplish same goal;
  - Accurate and consistent measurement of credits is critical;
  - Credits should be given for investment in projects or in funds;
  - Credits must be “monetizeable”;
  - While some limited regional emissions trading exists, greater liquidity in the global marketplace is required.

Creating a Source for Project Capital

- ***Global Carbon Fund***
  - Seed capital and matching funds from Governments and/or MDB’s;
  - Long-term funding by private enterprises seeking carbon emission credits;
  - Operates in similar manner to Prototype Carbon Fund;
  - Fund invests in carbon sequestration projects and distributes credits to private enterprises investing in the fund;
  - Fund managed by cognizant international agency created or approved by the CLSF;
  - Projects managed by project sponsors.

Creating a Source for Project Capital

- ***Carbon Sequestration Trust Fund***
  - A fund that is built up over time by utilities through a tariff "surcharge" which fossil-fueled power generating plants would charge to its customers.
  - The revenue generated from the surcharge would be exempt from taxation and deposited into a managed trust account that would grow over a period of time.
  - The fund would ultimately be utilized to finance the construction of a new carbon sequestration addition to the fossil-fueled plant.
  - As a means of providing utilities further incentives to establish and utilize this type of fund, carbon or emission credits may be granted as funds are deposited into the trust (vs. when project is completed).

Source of low-cost debt financing or credit enhancements;

- ***Government and MDB Financing Instrument:***
- Funding from the likes of the World Bank, EBRD, JBIC, ADB, AfDB, IDB, and Export Credit Agencies.
- Loans to host-country executing agencies with attractive rates unattainable in the commercial market
- Host-country borrower in turn onlends to project sponsor at concessional rates.
- Similar to the Private Sector Energy Development Fund established in Pakistan

Conclusions

- Carbon capture and storage contributes to improving environmental quality and human life while simultaneously contributing to economic development.
- Once the risks are fully identified and allocated, insurance vehicles must be established which cover all remaining risks inherent in sequestration projects.
- Financing resources from developed countries and MDB’s coupled with incentives for the private sector to invest their own resources will serve as catalysts for developing new sequestration projects.
- Ultimately, a commercial model that provides the private sector with opportunities to profit from sequestration projects will provide for the long-term sustainability of carbon sequestration.

Where do we go from here?

- Mandate required to fully assess ability to tap existing multilateral funding sources;
- Mandate required to structure new funding sources with multilaterals and government support;
- Build private sector awareness of benefits and develop commercial opportunities to give incentives for future investment;
- Work towards a long-term goal of having CCS projects financed by the private sector in a manner whereby project finance can be utilized.