Clean Technology Fund (CTF) Investment Plan for Colombia
Joint IDB, IBRD, and IFC Mission to Colombia, November 30 - December 4, 2009

Summary

On February 27, 2009, the Department of National Planning (DNP) on behalf of the Government of Colombia (GoC) invited a joint mission of Multilateral Development Banks (MDBs) – namely, the Inter-American Development Bank (IDB), the International Bank for Reconstruction and Development (IBRD), and the International Finance Corporation (IFC). A scoping mission took place in Bogota between April 21 and 23 2009. The mission team conducted meetings with a wide-range of Government representatives from DNP, the Ministry of Finance and Public Credit (MHCP), the Ministry of Environment, Housing and Territorial Development (MAVDT), the Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM), the Ministry of Transport (MT), the Ministry of Energy and Mining (MEM), the Mining and Energy Planning Unit (UPME), and the Energy and Gas Regulatory Commission (CREG) as well as some state-owned and private sector companies involved in renewable energy development.

The mission identified the Government's priorities for CTF investments as including: (i) scaling-up investment in energy efficiency, (ii) demonstrating the opportunities and benefits of investment in renewable energy, and (iii) promoting integrated public transport systems.

It was agreed that an Investment Plan would be developed on the basis of around $300m CTF concessional finance, with proposals coming in two phases. Phase I would be developed with $150m of CTF finance, with phase II being taken forward to the extent resources become available.

Colombia is ODA-eligible and has active lending programs supported by both the IDB and World Bank groups, with active projects in the energy and infrastructure sectors, including transportation, and a climate change policy-based loan. The MDB teams have jointly assessed the potential for investments consistent with their country assistance strategy and CTF criteria:

- significant GHG emission reductions,
- demonstration potential,
- sustainable development impact, and
- implementation potential.

Potential for GHG Reductions

Colombia is the 5th largest emitter of GHGs in Latin America and the Caribbean and the 33rd largest emitter globally. Colombia's annual emissions in 2004 were 180 Mt CO_2e, 4.25 t CO_2e per capita, or 1.9 kg CO_2e per dollar of GDP. Emissions from fossil fuel combustion (66 Mt CO_2e, or 31% of total emissions) are relatively low, due to the large role of large-scale hydropower in the electricity mix. However, rainfall patterns are changing as a result of climate change, and are making hydropower a less reliable source of energy. As a result, the GoC expects fossil fuel based generation, particularly natural gas and locally available coal, to become more prominent within the energy supply mix in the future. Transport emissions, accountable for 39% of fossil fuel combustion emissions, are also increasing rapidly as a result of urbanization and motorization. Together these sectors are driving upwards fossil fuel-related emissions on an upwards trend.

Colombia's GHG emissions

Sector		Emissions (Mt CO_2e)	
Industrial processes		9	5.1%
Agriculture and LULUCF		95	52.5%
Waste		10	5.7%
Fugitive emissions		9	5.1%
Biomass combustion		1	0.3%
Fossil fuel combustion	Energy industries	15	8.5%
	Manufacturing industries and construction	13	7.3%
	Transport	22	12.1%
	Other sectors	6	3.4%

According to the findings of several studies commissioned by UPME and other institutions, there are substantial emission reduction potentials in the following sectors:

(i) Opportunities in end-use energy efficiency include demand reduction programs in the residential, commercial and industrial sectors. A recent study by UPME identifies top priorities as: refrigeration units for low and medium income families, efficient lighting for low and medium income families, high efficiency refrigeration for SMEs, and energy efficiency in public buildings, with combined annual savings of 7,800 GWh or 3.3 Mt CO_2e.

(ii) Colombia's immense renewable energy resources suggest potential programs in wind, geothermal, and small-scale hydropower, as well as considerable cogeneration potential from biomass. Investments in energy efficiency and renewable energy could avoid a significant proportion of the anticipated new fossil fuel power generation capacity

(iii) The transport sector has the potential to reduce its carbon footprint through integrated transport strategies, that include: (a) promoting more efficient and cleaner public transport in urban areas, including further investment in bus rapid transit (BRT), promoting non-motorized transport modes, adopting low-carbon bus technologies (e.g., hybrid) for public transit, optimizing and rationalizing transit routes and services, and promoting comprehensive Travel Demand Management (TDM) strategies, including efficient and sustainable land use planning (e.g., Smart Growth) (b) fuel switching and energy efficiency standards for new vehicles, including commercial and private vehicles, and (c) promoting low-carbon strategies and investments for efficient freight transport and logistics. Transportation related investments could generate an additional annual reduction of 5 Mt CO_2e.

Demonstration potential

A potential CTF program on low-carbon energy end-use and electricity generation technologies could have significant demonstration and transformational outcomes through building the understanding and confidence of public and private sector decision-makers on the social, economic as well as environmental benefits of low-carbon development.

Following the success of Colombia's activities in public transport systems, there is now scope for scaling-up investment to promote more efficient and cleaner urban transport, particularly in medium-sized cities and cities that are considering major transformations in their transit systems. Coupled with the rolling out of low-carbon bus technology programs, an integrated urban transport program has the potential to bring down the costs of alternatives, provide incentives for manufacturers while creating a sunk cost in investment models for low carbon transport, and stimulate the transformation of the urban transport sector in Colombia. This would represent a major scaling-up of current efforts towards a truly sustainable transportation system, which would have a strong demonstration potential throughout LAC and internationally.

Development impact

Energy efficiency technologies can reduce the cost of energy consumption to consumers, whilst also deferring the capital requirements for investment in new fossil fuel generation capacity. Harnessing Colombia's abundant renewable energy resources throughout the country would produce rural development dividends, in terms of both job creation and energy access for isolated communities. The adoption of energy efficiency and renewable energy technologies offers local and regional environmental benefits in terms of improved air quality, reduced water pollution and reduced deforestation. Improvements to public transportation systems, including the adoption of low-carbon bus technologies such as hybrid buses, can also bring social benefits to urban communities, in terms of reduced congestion, improved health, and other development co-benefits. All of these investments would enhance energy security by reducing dependency on fuel imports, exposure to fuel price volatility, and energy expenditures.

Implementation Readiness

Colombia ratified the UNFCCC in 1995 and the Kyoto Protocol in 2001. As a non-Annex I Party, Colombia is not mandated to limit or reduce its GHG emissions under the Kyoto Protocol. Notwithstanding this, the country has firmly adopted the UNFCCC principle of "common but differentiated responsibilities" and pledged to reduce its GHG emissions voluntarily.

Over the past 6 years the GoC has developed a number of policies for tackling climate change. Recognizing the multi-sectoral dimension of the climate change challenge, Colombia established a Climate Change Office in 2002, which has since become the Climate Change Mitigation Group (2005), to promote activities for the mitigation of GHG emissions. The Inter-sectoral Technical Committee on Climate Change Mitigation – (CTIMCC) is in charge of developing projects, and setting climate change-related fiscal incentives and policies.

DNP is leading the formulation of the National Climate Change Policy, to be reflected in a policy document of the National Council for Economic and Social Policy (CONPES) that would include specific mandates for formulating and coordinating climate change strategies for different sectors. The CONPES document will designate several working groups on mitigation, adaptation and vulnerability, create an inter-sectoral commission to overview implementation of the action plan associated with the policy, and set up a Consultative Council on Climate Change. Through the CONPES document, the GoC will further elaborate elements of a National Strategy on Climate Change by identifying priority actions and associated reductions in GHG emissions, and specific measures and associated emission reduction potentials for each of the key sectors and sub-sectors. It is currently expected that this document will be approved by November 2010.

MDB Recommendation

The joint assessment of the MDBs is that (i) the GoC is committed to voluntary GHG reduction initiatives, (ii) there is a broad spectrum of opportunities for investment in transformational projects and programs, and (iii) the CTF can play a critical role in supporting public and private sector investments in low-carbon technologies, services and systems.

Based on current information, notably on implementation readiness, the MDBs suggest as priorities for phase I the lines of action on energy efficiency and integrated transport systems, with provision of technical assistance for design of a policy and regulatory framework for removing barriers to renewable energy. Once some of the regulatory barriers for renewable energy are overcome, a phase II of CTF investments could include this line of action, as well as potentially further investments in energy efficiency and transport.

The joint MDB mission will develop the draft investment plan with the relevant actors within the GoC, including the Department of Finance, the Department of Mines and Energy, the Department of Transportation and Communications, the Department of Environment and Natural Resources (the CDM Designated National Authority), and the National Renewable Energy Board. The joint mission will also actively engage stakeholders from the private sector, as well as bilateral agencies and other development partners.

The joint mission is proposed for the week of November 30th 2009, with the objectives of: (i) developing and agreeing on an investment strategy for the CTF funds that is consistent with the GoC's priorities as articulated in its key strategy documents; and (ii) developing and agreeing on the anticipated programs and projects that could be carried out by the MDBs utilizing CTF resources. The resulting Investment Plan will incorporate both public and private sector activities. As suggested by the Trust Fund Committee and to the extent necessary, a complementary mission will be scheduled.

The proposed budget for the country investment plan missions is US$216,000 which is broken down as follows:

- IDB: US$ 108,500
- IBRD: US$ 74,000
- IFC: US$ 33,500

The CTF focal point with the GoC is Gianpiero Renzoni of the Department of National Planning. Contacts within the MDBs are:

- IDB: Amal-Lee Amin and Carla Tully
- IBRD: David Sislen
- IFC: Lisa DaSilva and Noleen Dube

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Terms of Reference for
Joint MBD mission to Support Country Preparation of CTF Investment Plan

Pre-mission activities, ongoing or completed

- February 27, 2009: Initial request by GoC
- April 21-23, 2009: Scoping mission
- November 5, 2009: Videoconference between the MDBs and GoC

Mission objectives, outputs, dates, and composition

- December 2nd – 4th 2009: To finalize the Investment Plan and agree on priority CTF programs for investment in Phase I, and possible Phase II investments.

Specific mission details

Objectives	Outputs	Dates	Compositions
1.Discussions on the opportunities of scaling-up low-carbon activities with: a) GoC; b) Private and public sector representatives; c) Development partners	Meetings/negotiations/ clarification of GoC's mitigation priorities	Dec. 2-4	MDB mission team, GoC representatives
2.Review of the activities that meet CTF criteria; drafting CTF Investment Plan	Draft Investment Plan	Dec. 2-4	MDB mission team, GoC representatives
3. Writing mission report	Mission aide-mémoire	Dec. 4	MDB mission team

Post mission activities (summary of tasks and timing)

- Finalization of Investment Plan – December 7 - 21, 2009.
- Submission of Investment Plan to the Trust Fund Committee – January, 2010.

Country institutions involved

- Department of National Planning (DNP)
- Ministry of Finance and Public Credit (MHCP)
- Ministry of Environment, Housing and Territorial Development (MAVDT)
- Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM)
- Ministry of Transport (MT)
- Ministry of Energy and Mining (MEM)
- Mining and Energy Planning Unit (UPME)
- Energy and Gas Regulatory Commission (CREG)

Status of coordination with UN Agencies and other development partners

- Informal discussion with bilateral agencies. Meeting to be arranged during the joint mission.

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CTF Joint Mission Composition and Assignments

MDB	Mission member	Assignment	Expected contribution to mission outputs
IDB	Juan Pablo Bonilla – Unit chief	Mission chief	Lead the mission and finalization of the Investment Plan; coordinate and review IDB sections
	Carla Tully – Investment officer	To coordinate private sector investments	Private sector components for CTF-IDB financing
	Felipe Targa – Infrastructure specialist	To lead on sustainable transport discussions	Design of CTF-IDB sustainable transport programs
	Roberto Esmeral – Consultant	In-country renewable energy specialist, to lead on electricity generation discussions	Design of CTF-IDB electricity generation programs
	Javier Cuervo – Project economist	In-country energy specialist	Contribute to design of CTF-IDB energy sector programs
	Claudio Alatorre – Consultant	Energy efficiency expert, to lead on energy end-use discussions	Design of CTF-IDB energy end-use programs
	Martina Stamm - KfW secondee	Renewable energy financing expert.	Coordinate public sector components for CTF-IDB financing.
IBRD	David Sislen	To support mission	Coordinate and review IBRD sections
	Mauricio Cuellar	To support mission	
	Alexandra Planas	To support mission	
	Jocelyn Albert	To support mission	
IFC	Enrique Canas	Country Manager	Support and guidance on private sector investments in Colombia
	Eugenia Vargas	Investment Officer	Provide inputs into IP and program design on financial markets opportunities and investments
	Tibor Kludovacz	Program Officer	Provide inputs into IP on energy efficiency opportunities and investments
	Susana Pelaez	Investment Analyst	Providing input into IP on infrastructure investment opportunities
	Kumiko Yoshinari	Principal Adviser	Provide input into IP and program design

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CTF Investment Plan Budget (US$)

MDB	Item / stage	Team members	Total number of staff weeks	Average staff week rate of team	Total staff week costs	Mission travel & subsistence costs	TOTAL
IDB	Pre-Mission	3	8	4,000	32,000	9,000	41,000
	Mission	6	4	4,000	16,000	7,500	23,500
	Post-Mission	6	10	4,000	40,000		40,000
	Central Unit costs	1	1	4,000	4,000		4,000
	Sub-total		**23**		**92,000**	**16,500**	**108,500**
IBRD	Pre-Mission	4	3	5,000	15,000		15,000
	Mission	4	3	5,000	15,000	4,000	19,000
	Post-Mission	4	8	5,000	40,000		40,000
	Central Unit costs		0	0	0		
	Sub-total		**14**		**70,000**	**4,000**	**74,000**
IFC	Pre-Mission	1	1	5,700	5,700		5,700
	Mission	2	1	5,700	5,700	5,000	10,700
	Post-Mission	2	2	5,700	11,400		11,400
	Central Unit costs	1	1	5,700	5,700		5,700
	Sub-total		**5**		**28,500**	**5,000**	**33,500**
Grand Total			**42**		**190,500**	**25,500**	**216,000**