Climate Investment Funds

CTF/TFC.9/CRP.1
May 3, 2012

Meeting of the CTF Trust Fund Committee
Washington, D.C.
May 3, 2012

SUMMARY OF THE CLEAN TECHNOLOGY FUND INVESTMENT PLAN FOR CHILE (SUBMITTED BY THE TRUST FUND COMMITTEE OBSERVER FROM WORLD RESOURCES INSTITUTE)

SUMMARY OF CLEAN TECHNOLOGY FUND INVESTMENT PLAN FOR CHILE	
Overview	
Baseline and objectives	The Chile Investment Plan highlights how CTF co-financing can be used to increase the sustainability of the energy industry, which currently contributes 75% of countrywide GHG emissions and helps push Chile's per-capita emissions from fuel combustion, as well as the carbon intensity of its economy, above the Latin American regional average. The high carbon intensity also demonstrates avenues for savings through energy efficiency. The combined installed capacity of the four main power grids in the country is 16,516 MW, of which 62% is made up by fossil fuels, 36% by hydroelectricity, and 1% for both biomass and wind. In addition, reliance on imported fossil fuels – making up over 50% of total imports – exposes the country to price volatility. Expected economic growth of 4% until 2030 will necessitate a conservative annual extra generation estimate of 800 MW per year and under a BAU scenario most of this will be coal-fired energy. Chile's submission to the Copenhagen Accord Appendix II calls for nationally appropriate mitigation actions leading to a 20% deviation below a BAU scenario by 2020, using 2007 as a baseline. Supplementing the government's climate strategy is the Mitigation Action Plans and Scenarios (MAPS) initiative, launched in 2012 to devise a climate-compatible development plan for the country. From the commitment, the 2012 National Energy Strategy (ENE) lays out six pillars to double renewable energy's contribution to the energy matrix within a decade.
Priorities of Clean Technology Investment Plans	**Concentrated Solar Power Project (CSPP)** - **$100 million CTF loan** channeled by the IDB, $100 million IFC loan, $40 million from bilateral sources, $14 million grant from Government of Chile, $1 million IDB grant, $1 million GEF financing, and private sector to mobilize $130 million for total project cost of **$486 million** The project seeks to channel a CTF loan through the government in the form of preferential interest rate debt for the winner of a competitive tender for a 50MW CSP power plant. The plant would be built in the Northern Interconnected System (SING) grid, which consists of almost 100% fossil fuels and supplies 90% of its electricity to the mining industries in the region. CTF financing for the first grid-connected CSP project in Latin America will help local financiers understand risk-return imbalances and cost barriers in order to benchmark for future similar projects. This project is accorded highest priority out of the three submitted by Chile to the CTF Trust Fund Committee. *It is unclear whether this project represents the best use of CTF funding for reducing GHG emissions as well as from a technology and market transformation perspective. It is important to ensure that this is not a one-off subsidy. Further information on the broader development and environmental impacts (e.g. water use for CSP plants in a desert region) of the project would be helpful to fully account for externalities in the cost-benefit analysis.* **Large-Scale Photo-Voltaic Program (LSPVP)** – **$50 million CTF loans and grants** channeled by IDB and IFC, $50 million IDB loan, $50 million IFC loan, $0.6 million GEF financing, private sector to mobilize $150 million for total project cost of **$300.6 million** This project focuses on connecting medium- to large-scale solar PV installations to the grid by channeling CTF funding directly to projects via loans or guarantees, through either one of the MDBs. The MDBs will negotiate with the project developer the minimum needed embedded

	subsidy to overcome higher costs of the technology. Only two solar projects are currently in place in Chile and this project also aims to reduce barriers and risk perception for local banks. The project will complement existing IDB and GEF projects on solar energy. *There is a need for clarity on the size of projects that will be considered and interactions with renewable energy law 20.257, which will enforce an RPS of 10% by 2024.* **Renewable Energy Self-Supply and Energy Efficiency (RESSEE)** - **$49 million CTF loans and grants**, $20 million grant and tax incentive from Government of Chile, $50 million IDB loan, $2.8 million GEF financing, $50 million IFC loan, private sector mobilize $250 million for total project cost of **$421.8 million** This project also builds upon IDB and IFC's existing partnerships and programs and scales them up by using CTF funds to coordinate actors in energy efficiency and self-supply initiatives. CTF support is expected to be provided in the form of technical assistance and concessionary finance, such as loans and guarantees, to local financial institutions. The local institutions would develop appropriate lending programs for private companies to invest in RESSEE projects. Similar to the other projects, this component would mitigate risk perceptions and leverage significant private financial flows. *Further clarity is needed on the criteria for selecting local financial institutions and how benefits from EE programs could also accrue to households and the ultimate implementers of projects. Also, clarity on RE and EE technologies to be targeted will be helpul.* **Preparation Grant for RESSEE** - $1 million CTF grant The preparation grant component would support knowledge and preparatory activities for RESSEE project to lay groundwork for further assistance. Funded activities would include market development studies, capacity development, demonstration project development, and funding strategies. These assignments will be managed by the Ministry of Energy.
Public Financing	$101 million in CTF funding – CSPP and Preparation Grant for RESSEE channeled through Government of Chile, with modalities explained above.
Private Financing	$99 million CTF co-financing – LSPVP and RESSEE will see CTF funds channeled through MDBs directly to private developers or financial institutions. All the projects are expected to be complemented by contributions from private developers or institutions.
Detailed Analysis of Electricity Sector Interventions	
Energy Planning	The CTF Investment Plan projects directly flow from the National Energy Strategy (ENE) of 2012 and its six pillars for achieving a doubling of renewable resources use. The ENE built upon the 2008 Energy Policy Report published by the National Energy Commission. CTF intervention would target two ENE action plans: Technology-specific strategies (paragraph 2e in section 3.4.4), and PAEE20 (see paragraph 1a in section 3.4.4).
Energy Efficiency (EE) Policy Regs.	Energy efficiency one of the six ENE pillars, whose goal is to reduce, by 2020, 12% of projected energy demand. The country set up the Chilean Agency of Energy Efficiency (AChEE) as a private, nonprofit organization to facilitate this goal. *It is unclear how the CTF interventions would interact with AChEE, especially RESSEE.*
Renewable Energy Policy +	Several recent 'market pull' policies and conditions for renewable energy development adopted in recent years – Law 19,940 (2004) eases market access regulations for RE facilities, Law

Regulations	20,257 (2008) enforces an RPS of 5% that will gradually increase to 10% by 2024, Laws 19,940 and 20,018 amend the 2009 Electricity Act to guarantee small-scale RE producers access to spot markets and other incentives, and Law 20,365 (2010) creates a tax benefit for solar thermal collectors. Power generators who don't meet quota under Law 20,257 face a penalty by the Bureau for Electricity and Fuels.
Pricing	As the provision of power and energy services in Chile is 100% privatized, prices for electricity are set by the market. There is no regulatory support for RE pricing (preferential tariffs, auctions, etc.).
Executive capacity	Section 7 outlines implementation potential, highlighting Chile's strong framework of private investments in the electricity sector and public-private partnerships as a secondary option. A deregulated market is described as being among the country's key strengths in the execution of electricity projects.
Regulatory Capacity	According to IP, there is a lack of clarity regarding norms and practices for interconnection of solar power to the grid but this is not addressed in the projects. Contractual issues with respect to power purchase agreements have been highlighted as potential risks to offtake of the electricity generated. *Clarifying the rules around interconnection, offtake and dispatch for such projects would be helpful since NCRE only guarantees grid connection for small RE projects.*
Transparency	*There is very little information in the project plans on the identities of intended beneficiary private developers under the LSPVP project and financial institutions under the RESSEE project.*
Public + consumers	A public consultation process is outlined in Section 11. Stakeholders involved in drafting the IP included representatives from the national government, private sector representatives, development agencies, and only one civil society representative.
Utility capacity	While the grid systems are discussed in detail, further clarity is needed on the privatized, unbundled system that resulted from the 1982 Electricity Act and how the proposed interventions would interact with the utility in terms of their capacity to uptake the power produced.
Local Technology Development	There is some discussion on how interventions can catalyze local solar and ancillary industries – the Monitoring and Evaluation Framework in Section 9 sets a target of 70% local supply of CSP plants by 2030 although this is not discussed elsewhere in the plan and no modalities for how this can be achieved are set out. Also, technology development situated within the context of different grid-parity scenarios laying out the case for how investments today can set the country up for scale up when grid-parity is reached.
GHG Management	Project / Program outputs and outcomes sets target for direct GHG emissions avoided as 123,300 t CO_2 eq/yr by 2016 from the CSP project, still tbd for the RESSEE and no mention of GHG management for LSPVP project

Submitted by Clifford Polycarp, World Resources Institute (WRI) as the developed country CSO observer on the Clean Technology Fund Trust Fund Committee (with inputs from Milap Patel and Lutz Weischer, WRI)