MULTILATERAL INVESTMENT FUND
PROJECT ABSTRACT

I. BASIC PROJECT DATA

Project title:	Promotion of clean energy market opportunities	
Project number:	CH-M1009	
Country:	Chile	
Beneficiaries:	Micro, small, and medium enterprises	
Project team:	Daniel Shepherd (MIF); Patricio Diaz Lucarelli (COF/CCH)	
Executing Agency:	University of Chile	
Financing plan:	MIF: Facility III-A:	US$1,000,000 (50%)
	Local Counterpart:	US$1,000,000 (50%)
	Total:	US$2,000,000
Tentative dates:	CRG – February 2006	
	Donors – March 2006	
MIF Classification:	ENVT	

II. BACKGROUND AND PROBLEM STATEMENT

A. Situation with the power sector

2.1 The current electricity generation in Chile is primarily sourced from natural gas (34%) and hydroelectric facilities (43%). Periodic and cyclical droughts affect the hydroelectric generation and thus impact the available supply of electricity and require that the country seek alternative sources as back up and to cover daily peak periods. Natural gas has been an effective source, though the recent cuts of close to 40% of contracted volumes coming from Argentina have affected the electricity supply in the country. These recent reductions in available natural gas are forcing the country to consider other forms of energy for power generation and to promote opportunities for energy efficiency. In May 2005, the Chilean Congress passed a reform to the Electricity Law (Law No 20.018), as a means to achieve these two objectives.[1]

B. Opportunities for alternative energy sources and energy efficiency

2.2 Diversification of energy supply mix, especially the use of renewable energy is of paramount importance to the country. Chile maintains significant opportunities in the areas of small-scale hydro, wind, biomass (wood and waste) and geothermal. Law No. 19.940 that was passed earlier this year established various support mechanisms for non-conventional renewable energy projects that are small-scale (i.e., less than 20 MW) that include such benefits as a guaranteed right of way for transmission and distribution with no fees. Nevertheless, it has been recognized that existing lack of experience in the country associated with these alternative energy sources is impeding their implementation.[2]

[1] The Chilean Congress is currently considering a bill intended to diversify the energy sources used in electricity generation, rather than rely so heavily on natural gas.
[2] Press release from CORFO, dated July 15, 2005.

2.3 Incorporation of energy efficiency techniques among private sector operations can have the benefits of improving productivity while reducing energy consumption, greenhouse gas emissions and health impacts from local air pollutants. Such improvements can be a useful strategy for companies to improve competitiveness, especially in light of the Free Trade Agreements that Chile maintains with the European Union and the United States, which incorporate environmental parameters. These same trade agreements also create a useful platform of cooperation between Chile and these other countries that can manifest itself in terms of useful joint ventures.

2.4 Chile has developed important internal capacities related to the implementation of cleaner production techniques among enterprises and lead the development of the Cleaner Production Voluntary Agreements (APL) among industry. These earlier efforts serve as an important platform for promotion and delivery of technical and management services to support cleaner production applications. Cleaner production, however, has suffered as it is often considered by industry to be an uncertain concept. Therefore, energy efficiency techniques and promotion tends to be a more readily acceptable activity in which to engage.

2.5 By using energy more efficiently vulnerability to energy price fluctuations is reduced, and also efficiency helps to avoid the capital-intensive undertaking of investing in supply as well as its deleterious environmental consequences. Energy saved by making equipment and systems more efficient represents an alternative energy resource that is often less costly than new energy supply, infrastructure and new power plants. Based on a report from the National Energy Commission (CNE), the potential for energy reduction across the economy are the following: industrial and agroindustrial (17.6%); mining (11.3%); services (5.8%) and transport (9.9%). The industrial and agroindustrial sectors, which are comprised primarily of small and medium enterprises, represent a significant, unexploited opportunity in terms of improved competitiveness.

2.6 A worthwhile market opportunity associated with energy efficiency are energy service companies (ESCOs) that operate in many countries throughout the world. Energy service companies, or ESCOs, are companies engaged in the development, installation, and financing of performance based efficiency improvements in facilities owned or operated by customers. Thus, in an ESCO project, the ESCO evaluates the potential energy efficiency savings, develops a plan, pays for the cost of the implementing the changes and is repaid based on the energy savings. The total amount paid to the ESCO is based on the performance of the project and represents a percentage of the actual energy cost savings generated by the project. An ESCO can provide a package of energy efficiency services to the customer, including project finance, engineering, project management, equipment maintenance, monitored and guaranteed energy savings. In Mexico, MIF has been successful helping to building up an ESCO market through its participation in the FLACES investment fund. This experience has assisted MIF to understand the key obstacles and constraints to developing an ESCO market.

2.7 Earlier this year, the Ministry of Economy launched its Country Energy Efficiency Program in order to promote energy efficiency as a means to encourage economic growth, but with a reduced impact on energy consumption. Part of this effort includes developing appropriate standards, labeling, raising awareness and improving local opportunities for energy efficiency across all sectors as well as residential applications. The National Production Development Corporation (CORFO), on the other hand, recently launched an

initiative to co-finance the preparatory costs ("feasibility fund") associated with preparing potential renewable energy investment projects.

2.8 The Kreditanstalt für Wiederaufbau (KfW) is currently working with CORFO and providing support for financing for new renewable energy investments as a means to reduce the risk and enhance the opportunities for renewable energy investments. The intent is to assist with the financing of the first 100-200 MW of installed capacity as a demonstration effect. KfW is also considering a specific financing facility for ESCOs. In addition, GTZ is providing support to the CNE focused on improving government policies and regulations that are impeding non-conventional renewable energy.

C. Market-based instruments

2.9 Market-based instruments including fiscal or other incentives for the development and deployment of technologies, tradable certificates and trading of credits for reductions of emissions of greenhouse gases and pollutants represent an important additional source of revenue for financing the transition to cleaner energy.[3] In 1992, the city of Santiago, Chile, launched an emission trading scheme as a market-based solution to its critical air pollution problems. The "compensation system" was structured to allow existing firms to comply with the required goals by trading excess reductions, rewarding those that went beyond their requirements, while allowing others the least-cost alternative to reducing overall emissions. The system had difficulties and has undergone revamping. The reformulated Environmental Prevention and Decontamination Plan (PPDA) was recently approved for Santiago, and emissions transactions has been incorporated as a key instrument for achieving the environmental goals set by the authority. The reformulated plan proposes to incorporate new sources and contaminants as well as indirect sources of emissions. The new sources must compensate 150% of their emissions in excess of existing sources.

2.10 At the international level there are numerous opportunities for selling emission reduction credits as a means for private sector companies to comply with agreements or as part of their corporate social responsibility efforts. In addition, this same interest from foreign companies is generating opportunities for joint projects in developing countries present a tremendous opportunity for countries such as a Chile that are able to seize the interest of possible investors and buyers. Such additional sources of revenue can help provide the additional economic impetus needed to support cleaner, lower emitting greenhouse gas (GHG) carbon technologies in the country.

D. Proposed project

2.11 Despite the opportunities presented by cleaner energy sources and energy efficiency, the private sector in the country has not yet taken advantage of this situation, mainly due to lack of experiences, know-how and awareness. This missed opportunity is especially acute among small and medium enterprises that would benefited by the increased opportunities for renewable energy power generation, use of energy efficiency measures and benefits from market-based incentives. Based on the opportunities and needs for SMEs, the principal target sectors for this initiative are: energy, manufacturing and construction

[3] The Gleaneagles Communiqué. 2005. Signed document of the meeting of the G8.

industry and agroindustry. These sectors were identified in a study commissioned by MIF with resources from the Spanish Trust Fund. This same study was used to provide the background framework and basic project approach described in this document.

2.12 This project is expected to be the first in a series of similar projects that MIF could support in promoting cleaner energy opportunities in the Region.

III. PROGRAM OBJECTIVE AND DESCRIPTION

A. Objectives

3.1 The overall objective of the project is to increase market opportunities for small and medium enterprises and improve their competitiveness. The purpose is to promote the use of renewable energy and energy efficiency by facilitating access to market-based incentives that support the use of low-carbon emitting technologies and opportunities.

3.2 To achieve this objective, the project will include the following components: (i) Promotion of the market opportunities for cleaner energy and energy efficiency; (ii) Development of the local capacity of service providers; (ii) Strengthen opportunities for market-based incentives; and (iv) Dissemination of results.

B. Components

Component I: Promotion of the market opportunities for cleaner energy and energy efficiency

3.3 This component seeks to raise awareness regarding the opportunities presented by cleaner technologies in terms of new markets and improving competitiveness. The following activities are expected: (i) organization of promotional technology fairs to encourage the development and incorporation of new technologies linked to cleaner energy and energy efficiency; (ii) promotional seminars to present the financial incentives associated with lower GHG emitting technologies; and (iii) seminars to present relevant experiences from other parts of the world.

Component II: Development of the local capacity

3.4 The objective of this component is to develop the local capacity related to the use of lower greenhouse gas emission technologies and energy efficiency techniques. For this, the following training courses are expected: (i) how to identify, design and manage specific renewable energy technology projects (special focus on wind and biomass); (ii) development of energy service business using new techniques (performance contracts, monitoring and verification of savings, etc.); (iii) marketing techniques, customer identification and classification, design and financial structure specific to the needs of potential ESCOs; and (iv) assistance in the development of business plans for potential ESCOs and renewable energy projects.

Component III: Strengthen opportunities for market-based incentives

3.6 This component aims to promote and strengthen the opportunities presented by existing market-based incentives that can be utilized for additional revenue. For this, the following

activities are contemplated: (i) development of tools and techniques for identifying and structuring emission reduction projects; training courses on how to structure projects that may benefit from additional incentives; (ii) methodology for structuring market prices appropriately on particular projects; (iii) assistance in bundling together smaller deals to reduce overall transaction costs; and (iv) technical assistance in the preparation of at least five specific projects to benefit from market-based incentives.

Component IV: Dissemination of results

3.7 This component aims to disseminate the lessons learned and experiences acquired during the implementation of this project. This will include: (i) demonstrating successful ESCO/Industry partnerships and energy efficiency/GHG reduction projects; (ii) development of case studies from the specific projects supported in Component III; (iii) final regional conference to disseminate the results.

IV. COST, FINANCING AND EXECUTION TIME

4.1 Total cost of the project is estimated on US$ 2,000,000. MIF will contribute US$ 1,000,000 (50%), through non reimbursable resources (Facility III-A), and the Executing Agency will be responsible for the balance of US$ 1,000,000. The project will be implemented over the course of 36 months.

V. EXECUTING AGENCY AND STRUCTURE

5.1 The executing agency of this initiative will be the University of Chile. Within the University, the project will be managed under the Management and Environmental Economy (PROGEA) of the Industrial Engineering Department. PROGEA has previous experience related to financial incentives for emission reductions as well as with project design and application for other economic instruments. The University, through its Technology Transfer Foundation, has past experience implementing a MIF project (ATN/ME-6631-RG).

VI. ENVIRONMENTAL AND SOCIAL IMPACTS (AND PROPOSED ACTIONS)

6.1 This program is expected to have positive social and environmental effects, since the approach is centered on promoting cleaner technologies and improved used of energy. Through the use of such low carbon technologies numerous local and global environmental and health benefits are expected.

VII. MAJOR ISSUES

7.1 The following aspects will be considered during the elaboration and analysis of the proposal: (i) the capacity of the executing agency; (ii) the sources and uses of the local counterpart resources; (iii) ensuring that this proposed project fits well within other ongoing efforts in the country; and (iv) the role and function of a possible Advisory Council to leverage resources and ensure coordination with other efforts.