### Formal Report 338/09



Innovative Financial
Mechanism to
Implement Energy
Efficiency Projects
in Mexico



#### **Energy Sector Management Assistance Program (ESMAP)**

#### **Purpose**

The Energy Sector Management Assistance Program is a global technical assistance partnership administered by the World Bank and sponsored by bilateral official donors since 1983. ESMAP's mission is to promote the role of energy in poverty reduction and economic growth in an environmentally responsible manner. Its work applies to low-income, emerging, and transition economies and contributes to the achievement of internationally agreed development goals. ESMAP interventions are knowledge products including free technical assistance, specific studies, advisory services, pilot projects, knowledge generation and dissemination, trainings, workshops and seminars, conferences and roundtables, and publications.

ESMAP's work focuses on four key thematic programs: energy security, renewable energy, energy-poverty, and market efficiency and governance.

#### **Governance and Operations**

ESMAP is governed by a Consultative Group (the ESMAP CG) composed of representatives of the World Bank, other donors, and development experts from regions that benefit from ESMAP assistance. The ESMAP CG is chaired by a World Bank Vice President and advised by a Technical Advisory Group (TAG) of independent energy experts that reviews the Program's strategic agenda, work plan, and achievements. ESMAP relies on a cadre of engineers, energy planners, and economists from the World Bank, and from the energy and development community at large, to conduct its activities.

#### **Funding**

ESMAP is a knowledge partnership supported by the World Bank and official donors from Australia, Austria, Denmark, France, Germany, Iceland, the Netherlands, Norway, Sweden, the United Kingdom, and the U.N. Foundation. ESMAP has also enjoyed the support of private donors as well as in-kind support from a number of partners in the energy and development community.

#### **Further Information**

For further information, a copy of the ESMAP annual report, or copies of project reports, please visit the ESMAP Web site, www.esmap.org. ESMAP can also be reached by email at esmap@worldbank.org or by mail at:

ESMAP c/o Energy, Transport and Water Department The World Bank Group 1818 H Street, NW Washington, D.C. 20433, USA

Tel.: 202-458-2321; Fax: 202-522-3018

### Formal Report 338/09

Innovative Financial Mechanism to Implement Energy Efficiency Projects in Mexico

Copyright © 2009
The International Bank for Reconstruction
and Development/THE WORLD BANK GROUP
1818 H Street, NW
Washington, DC 20433, USA

All rights reserved Manufactured in the United States of America First printing June 2009

ESMAP Reports are published to communicate the results of ESMAP's work to the development community with the least possible delay. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, or its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility whatsoever for any consequence of their use. The Boundaries, colors, denominations, other information shown on any map in this volume do not imply on the part of the World Bank Group any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. Requests for permission to reproduce portions of it should be sent to the ESMAP Manager at the address shown in the copyright notice above. ESMAP encourages dissemination of its work and will normally give permission promptly and, when the reproduction is for noncommercial purposes, without asking a fee.

## Contents

Units of Measure	vii
Abbreviations and Acronyms	ix
Preface	xi
Acknowledgments	xiii
Executive Summary	xv
Introduction	1
Structure, Benefits and Ownership of Special Purpose Entities	3
2. Energy Sector Overview in Mexico  Projected Energy Supply and Demand Outlook in Mexico  Electricity Market Demand and Supply  Legal and Regulatory Environment  General Regulatory Framework  Energy Efficiency Regulatory Framework  Electricity Tariff-setting Policies	
3. Market Potential for Energy Efficiency Investments  Comparative Electricity Prices  Comparative Costs of Capital  Policy and Institutional Context  National Energy Efficiency Commission  National Program for Budget Austerity  Trust for Electrical Energy Efficiency  Japan Bank for International Cooperation/NAFIN  Current ESCOs' Activity in Mexico	
4. Current Financial Conditions, Availability of Financing and Barriers to Implementation of Energy Efficiency Projects  Market Barriers  Commercial Lending  Equity Investment Environment in Mexico  Utility Programs  Supplier Credit	

5. I	Innovative Financial Structures – Pilot Projects	
	Public Sector SPE Pilot Project	37
	Private Sector SPE Pilot Project	39
	Project requirements	41
6. (	Current Status of Pilot Projects and Next Steps	43
	Public Sector SPE	
	Resolution of outstanding legal issues	43
	NADB approval of a loan agreement	44
	Legal structure for the SPE financing arrangement	44
	Preparation of local projects	44
	Private Sector SPE	44
	Outstanding legal issues	
	NADB approval of loan agreement	
	Legal Structure of SPE Financial Arrangement	
	Preparation of local projects	44
7. L	Lessons Learned	47
Ann	nex 1: SPE By-laws	49
	ST CHAPTER	
	Name, Domicile, Purpose, Duration and Nationality	
SEC.	COND CHAPTER	
SEC	Association Capital and Association Interests	
THIE	RD CHAPTER	
	Administration	
FOl	URTH CHAPTER	
	Inspection	
FIFT	TH CHAPTER	
	Associates' Meetings	58
SIXT	TH CHAPTER	60
	Financial Information	60
SEV	'ENTH CHAPTER	61
	Profits and Losses	61
EIG	HTH CHAPTER	
	Liquidation of the Association	
	Articles of Formation	62
Ann	nex 2: Trust Agreement	69
	Translation	69
	Recitals	69
Ann	nex 3: NADB Term Sheet	81
	Proposed Loan Terms and Conditions	
	Loan Terms	
	Loan Conditions	
	Covenants	
	Events of Default and Remedies	

Annex 4: Assets Pledge Agreement Between SPE and Creditors	89
Asset Pledge Agreement Without Transfer of Possession	89
Recitals	89
Clauses	91
Annex 5: Assignment Agreement Between ESCO and SPE	99
Recitals	
Statements	100
Clauses	
Annex 6: Assignment Agreement Between SPE and Trustee	105
Recitals	105
Statements	106
Clauses	106
Annex 7: Current Official Mexican Standards for Energy Efficiency	111
Annex 8: Electricity Rates Under CRE's "Public Services" Category	113
List of Formal Reports	115

## **Figures**

SPE – Finance Structure/Flow of Funds	5
SPE Legal Documents and Agreements	6
SIMEPRODE Financing Structure	11
Mexico Oil Demand (1980-2010)	14
Mexico Energy Demand (1980-2010)	14
Consumption of Combustible Fuels for Electricity Generation in Mexico, 1998-2003	15
Electricity Prices by User-type	17
Flow of Funds of JBIC/NAFIN Program	26
Mexico: Commercial Bank Lending Rate	31
SIMEPRODE Financing Structure	38
SPE Finance Structure/Flow of Funds	40
SPE Legal Documents and Agreements	40
	SPE Legal Documents and Agreements  SIMEPRODE Financing Structure  Mexico Oil Demand (1980-2010)  Mexico Energy Demand (1980-2010)  Consumption of Combustible Fuels for Electricity Generation in Mexico, 1998-2003  Electricity Prices by User-type  Flow of Funds of JBIC/NAFIN Program  Mexico: Commercial Bank Lending Rate  SIMEPRODE Financing Structure  SPE Finance Structure/Flow of Funds

## **Tables**

Table 3.1:	Electricity Prices for Households (Mex\$ per kWh)	. 19
Table 3.2:	Electricity Prices for Industry (Mex\$ per kWh)	. 21
Table 3.3:	Short-term Interest Rate (percent, per annum)	. 22
Table 3.4:	NAFIN Guarantee Fees and Coverage	. 25
Annex 7:	Current Official Mexican Standards for Energy Efficiency	111
Annex 8:	Electricity Rates under CRE's "Public Services" Category	113

## Units of Measure

bbl barrels (of oil)
CO<sub>2</sub> carbon dioxide

GW/MW/kW giga/mega/kilo watt (s)  $(1x1^{09}/1x1^{06}/1x1^{03})$ 

Wh watt hours (unit of energy equivalent to one watt of power expended for

one hour of time)

## Abbreviations and Acronyms

APF Federal Public Administration (Administración Publica Federal)

CAINTRA Industrial Chamber for the Transformation of Nuevo León

(Camara de la Industria de Transformacion de Nuevo León)

CCP commercial bank's average cost of funds

CDM Clean Development Mechanism

CEC North American Commission for Environmental Cooperation

CHP combined heat and power

CFE Federal Electricity Commission (Comisión Federal de Electricidad)

CONAE National Energy Efficiency Commission (Comisión – Nacional para el

Ahorro de Energía)

CRE Energy Regulatory Commission (Comisión Reguladora de Energía)

DSR Debt Service Reserve Fund

EE energy efficiency

EIA Energy Information Administration (U.S.)

ESCO energy services company

EU European Union

FIDE Trust for Electrical Energy Efficiency

(Fideicomiso para el Ahorro de Energía Electrica)

FLACES Fondelec Latin American Clean Energy Services

FONACOT Fondo de Fomento y Garantía para el Consumo de los Trabajadores

GDP gross domestic product
GoM government of Mexico

IEA International Energy Agency

IMSS Mexican Social Security Institute (Instituto Mexicano del Seguro Social)

INFONAVIT Instituto del Fondo Nacional de la Vivienda para los Trabajadores

JBIC Japan Bank for International Cooperation

JV joint venture

LCRE Ley de la Comisión Reguladora de Energía (Energy Regulatory Commission Act)

LIBOR London Interbank Offered Rate

LFC Luz y Fuerza del Centro

LSPEE Ley del Servicio Público de Energía Eléctrica (Public Electricity Service Act)

NADB North American Development Bank

NAFIN The national development bank (Nacional Financiera)

NAFINSA Nacional Financiera, SNC

NAFTA North American Free Trade Agreement

NOM Mexican official norms

OECD Organisation for Economic Co-operation and Development

PEMEX Mexican National Oil Company (Petrólios Mexicanos)

RE renewable energy

SAR social security, retirement system (Sistema de Ahorro para el Retiro)

SENER Mexico Department of Energy (Secretaría de Energía)

SHCP The Department of Treasury and Public Credit

(Secretaría de Hacienda y Crédito Público)

SIMEPRODE (Sistema Integral para el Manejo Ecológico y Procesamiento de Desechos)

SPE special purpose entity

SRL Sociedad de Responsabilidad Limitada

T&D transmission and distribution

TLP total loan portfolio

TIIE interbank balance rate

USAID United States Agency for International Development

USDoE The United States Department of Energy

### Preface

The purpose of this ESMAP activity is to create a dynamic financing structure to support implementation of energy efficiency projects in Mexico. The project was designed to leverage previous technical assistance efforts to promote greater energy efficiency investments, and to help establish an energy services company (ESCO) industry in Mexico. Notwithstanding the considerable efforts of multilateral institutions, donor agencies and Mexican national government initiatives, investments in energy efficiency projects in Mexico have been very limited.

The project is unique in that it seeks to create a special financial model in order to attract commercial lending for energy efficiency projects. The innovative financial model involves the creation of a special purpose entity (SPE) to bundle several energy efficiency projects for financing through a single process and a single debt instrument. This model has been very successful in pooling small-scale projects for financing, and has been widely used in the United States and other industrial countries.

The SPE is designed to serve as a conduit for the North American Development Bank (NADB) or other commercial bank financing. Under the proposed structure, NADB would provide 50 percent of debt financing for the SPE on favorable terms (approximately 9 percent peso loans or 5-6 percent dollar loans) and would obtain the balance of debt financing from other leading institutions. If equity investments in the SPE are deemed necessary, investors will be identified and their contribution will be integrated in the SPE structure.

The objectives of the SPE are to: (a) lower transaction costs by developing standard transaction documents; (b) mitigate risk by spreading the lending over a portfolio of qualified projects; (c) provide umbrella credit enhancement facilities for the pool of projects; (d) improve the comfort of both borrowers and lenders by creating a process that is standard, transparent and predictable; and (e) create a critical mass of projects to attract financing from commercial banks.

This project undertook the groundwork to establish a special purpose entity for energy efficiency projects in Mexico. There remains a need for additional activity in order to close the financial transaction. Actual financial structures are still under discussion, and their final form may ultimately differ from the structures discussed in this report.

## Acknowledgments

This report was made possible thanks to the financial and technical support by the Energy Sector Management Assistance Program (ESMAP). The report was prepared by Mr. Brad Johnson, President of Resource Mobilization Advisers with the assistance of Ms. Helen Tobar of ManattJones Global Strategies. Mr. Juan Casillas and Mr. Allan Holst in the Mexico City office of ManattJones Global Strategies also contributed to the report. EPS Capital performed technical reviews of preliminary energy audits. The team completed its work in 2006, while the consulting firm made their final report available to the team in 2007. After undergoing a series of internal and external reviews, the report was put into production in 2008, under the publishing guidance of ESMAP. Although the authors note that the energy costs and terms of financing in the Mexican market cited in the report have undergone numerous changes, the report's conclusions and lessons learned remain valid.

Special thanks to Ms. Karin Berry of the United States Department of Energy (USDoE) who provided initial funding to design this project and offered valuable input throughout its implementation; Mr. Carlos Dominguez and Mr. Diego Arjona from Comisión Nacional para el Ahorro de Energía (CONAE), the national energy efficiency commission, for their

considerable insights into the Mexican energy efficiency market; Mr. Scott Storment of the North American Development Bank (NADB) for his guidance on banking matters; and the California State Energy Commission for funding preliminary energy audits of several potential projects.

The legal documents contained in this report relating to the SPE structure were drafted by the law firm of Cacheaux, Cavazos and Newton, LLP, with offices in San Antonio, Texas. Mr. Jose Luis Garcia Cantu of Mexico City drafted the "fideicomiso" for the public sector street lighting projects. The documents contained in this report are designed to guide both lenders and energy efficiency project developers in the process of financing projects through an SPE or "fideicomiso."

These documents are not deemed enforceable by their terms. Local counsel should be retained to review these documents and modify them to meet the unique circumstance of a particular energy efficiency or SPE transaction. The World Bank team included Mr. Charles Feinstein and Mr. Peter Johansen. Mr. Daniel Farchy prepared the Executive Summary and edited the report. Ms. Marjorie K. Araya and Ms. Ananda Swaroop coordinated the final editing, production and dissemination of the report.

## **Executive Summary**

Although renewable energy (RE) has captured much of the attention in the recently heightened discussion on actions to limit climate change, it is energy efficiency that offers – at least in the short- to medium-term – the richest vein of "win-win" emission reduction opportunities. Much of the energy that is currently consumed is wasted through inefficient use. Mexico has comparatively high industrial electricity tariffs for the region, meaning that electricity consumption is often amongst the larger budget items of many large firms and public entities – offering a large number of lucrative energy efficiency project opportunities.

Despite this, the energy efficiency market in Mexico remains dormant, facing both financial, market and institutional barriers. This Energy Sector Management Assistance Program (ESMAP) activity sought specifically to address some of the financial barriers. These financial barriers include conservative lending practices in Mexico (along with high collateral requirements), a lack of widespread understanding of the nature or potential returns of energy efficiency projects by local lenders, and the small size of most energy efficiency projects, leading to prohibitively high transaction costs for most potential lenders.

#### **Background**

In 1989, the Mexican government established CONAE to develop and disseminate training materials, operational guides and self-assessment tools to allow organizations to self audit their

energy usage. It also established a program for energy efficiency in public buildings. However, CONAE do not engage in financial issues that surround private sector involvement in energy efficiency. To try to address these issues, the government has established Fideicomiso para el Ahorro de Energía Electrica (FIDE), the trust for electrical energy efficiency, to lend to energy efficiency, and a collaborative project between the Nacional Financiera (NAFIN), the national development bank, and Japan Bank for International Cooperation (JBIC). However, both are perceived to be somewhat burdensome in their requirements, and have so far failed to develop much activity in the sector.

#### **Energy Service Companies**

The conditions would appear to be right for the entry of ESCOs into the energy efficiency scene, as they have in other countries: high energy costs, relatively low financing costs, favorable policy initiatives and increased awareness due to CONAE's activities. However, so far there has been little activity, and there are only 14 ESCOs active in all of Mexico. Energy efficiency activities are simply too small to justify any one ESCO overcoming all the various market, institutional and financial barriers to their implementation

In particular, most ESCOs are thinly capitalized, and financial barriers mean that they cannot raise debt for energy efficiency activities, and are limited to that which they can undertake with their own capital, that of local private investors, or their customers' own lines of credit.

## Financial Barriers to Energy Efficiency Projects in Mexico

In the first place, as mentioned above, the typically small size of energy efficiency projects means that they are difficult to finance. The transaction costs associated with legal arrangements, due diligence, acquiring institutional experience for the lenders, and generally in time to overcome the barriers associated with a new area of business, are prohibitively high given the scale of the potential rewards. This related to the second barrier, namely, a lack of sectoral experience for most local lenders. Amongst other things, this translates into a lack of standardized financing vehicles for energy efficiency.

Mexico has, in general, a very low commercial lending rate, and, furthermore, most local commercial banks in Mexico finance on a balance sheet basis, and will not recognize energy efficiency savings as collateral. Unfamiliarity with the sector (and especially with performance-based contracts), results in high risk perceptions, and not only restrictive collateral requirements, but also high demanded rates of interest. ESCOs are not well suited to equity fund investments as they have a relatively long-time horizons, while most equity funds are focused on short-term growth opportunities. Venture capital investments are also unsuitable as they focus instead on providing early stage development with a potential for rapid growth. As mentioned above, FIDE is considered overly burdensome by many, and is consequently underutilized. In addition, FIDE covers only activities in the electricity sector, missing rich opportunities in the coal, gas and fuel oil sectors. One source which has been used to some extent is vendor financing, but this is limited to foreign equipment, and bears currency risk and tends to lead to distorted "oversizing" of equipment supplied.

Pure equity investment is not usually attractive: the high rates of return demanded on equity investments are usually equal to the rates obtainable through energy efficiency projects so that, without leveraging, the projects cannot generate a profit and are not worthwhile.

Special purpose entities (SPEs) can offer a number of potential solutions to overcome these financing difficulties. SPEs can be either in the private sector, or public entities in the form of government agencies or parastatal institutions. They are usually characterized by being not-for-profit, limited lifespan entities established for financial engineering purposes. Unlike an equity fund, they usually mix both equity and debt, and their project information is made publicly available to enhance deal flow. They have successfully been used in some Organisation for Economic Co-operation and Development (OECD) countries to finance small-scale local government infrastructure projects.

An SPE can provide affordable and predictable financing to energy efficiency projects by bundling these small-scale loans together to form a critical mass attractive to a lender. They use standardized documents to minimize transaction costs, and can achieve a lower interest rates due to the lower risk profile they achieve through project bundling. This credit rating will be further enhanced as they establish a successful track record in this "new" area. For energy efficiency projects in Mexico, SPEs could also be used as a pooling agent for carbon revenues from the Clean Development Mechanism (CDM). The costs are simply those of the initial set-up (of legal arrangements, documentations, and so on, and so forth), and the cost and due diligence requirements to lenders is no greater than a traditional, large, infrastructure project. SPEs can, therefore, potentially provide the terms under which ESCOs can access capital.

The purpose of this ESMAP activity was to create just such a pilot pooled financing

intermediary to bundle projects through an SPE that would serve as both project aggregator and assessor. The SPE would be managed by experts with both financial and technical experience in the energy efficiency field and ESCO markets. The pilot SPE would use standardized procedures on project intake, evaluation and transaction documents, and would be used as a vehicle to formulate standardized documentation for dissemination and use in future projects. Pilot projects would be undertaken in both the public and private sectors.

In the **public sector**, pilot Sistema Integral para el Manejo Ecológico y Procesamiento de Desechos (SIMEPRODE), the integrated system for ecological management and processing of waste, an established agency of the Nuevo León state government would be used as a bundling agency, with NADB as the major project lender. The pilot project selected was in the city of Allende, for the installation of new, more efficient street lighting equipment in 10 separate circuits, offering a 25 to 35 percent energy saving with a 100 percent illumination improvement. The structure was designed as follows: a fideicomiso (or trust) would be established by the state, with SIMEPRODE acting as trustee. NADB would make a loan to the fideicomiso, which would then finance and execute street lighting projects on behalf of 51 municipalities. Local authorities would sign agreements to repay the fideicomiso, and pledge transfer payments as collateral to improve creditworthiness. The project investment costs would be shared between a NADB loan and State grants.

In the **private sector**, a limited liability company would borrow money from a commercial bank, and use the loan to purchase energy savings contracts from ESCOs, acquiring the collection rights through purchase/acquisition agreements. A separate *fideicomiso* is established to hold all the purchased contracts and other assets as a means of providing

assurance to lenders, which would then repay directly to the lenders – making payments to the SPE only after these payments were made. The SPE would be staffed by personnel experienced in project intake, screening and so on, and so forth, alleviating the pressure on the inexperienced banks.

#### Current Status of Pilot Implementation and Key Lessons Learned

In the public sector, the creation of a fideicomiso has run into a legal barrier. Current interpretation of the law suggests that if the fideicomiso is created by the state, then its debt would, in turn, appear on the state's balance sheet - something the state government is not prepared to countenance. A fideicomiso established by SIMEPRODE would not run into these problems, but SIMEPRODE was initially established as a tool for managing solid waste and its charter does not include scope for this. A number of potential solutions are being considered, and, in the meantime, the legal structure has been prepared, and a loan application has been filed to NADB. In the private sector, legal arrangements have already been drafted, and three potential projects are already under preparation. NADB has indicated that it would like to bring some U.S. ESCOs on-board to provide a performance guarantee, before it grants the loan.

Since neither SPE is yet up and running, the lessons learned so far are limited to those involving the creation of such entities, and not their function. However, as these entities start to perform their function, they should provide valuable experience to allow the sector to grow in Mexico. Clearly, given the problems the public sector pilot has encountered, an important lesson learned has been the significance of reviewing legal and technical capacity of the institutions involved before proceeding to the institutional design, and screening for potential conflicts of interest before project

implementation – in the pilot project several parties had to withdraw as potential conflicts of interest became apparent. The process will, at least at this early stage, also clearly require patience, as the process takes a long time: at least two years from project inception to the first investment. Finally, efforts should include funding for upfront project identification and energy audits in order to establish a healthy pipeline.

### Introduction

This report provides a summary of ESMAPsupported activities in Mexico focused on the creation of a pooled financing program for multiple energy efficiency projects through a single debt instrument.

The energy efficiency market in Mexico is substantial and growing with the global increase in energy prices. Notwithstanding the efforts of multilateral institutions, bilateral donor agencies, and the Mexican government to promote energy efficiency investments in the public and private sector, the energy efficiency market remains relatively dormant due to market, institutional and financial barriers.

This ESMAP activity was designed to address the financial barriers to energy efficiency project implementation. These barriers are numerous, but essentially boil down to the following:

- Conservative lending environment with high collateral requirements;
- Lenders' lack of understanding of energy efficiency project structures and technology; and
- Project size deters lending as commercial banks consider the deal size too small to justify the costs of project intake, evaluation, due diligence and final approval.

The activity specifically sought to reduce transaction costs for borrowers by creating a pooled financing intermediary to bundle several energy efficiency projects for finance through an SPE. The SPE would use standard transaction documents for all qualified energy efficiency projects.

The SPE would be managed by a group of experts with extensive financial and technical experience in the energy efficiency market and ESCO operations; designed to address the knowledge gap that exists in the banking community.

NADB is a partner in this project and is seeking to finance numerous energy efficiency projects through a bundling process to streamline their project evaluation and review process for this sector. NADB lends against international lending standards and is not captive to the restrictive lending market in Mexico. This addresses the liquidity issue as it relates to the first rounds of pooled energy efficiency projects.

The SPE would have a legal architecture built on standard project intake, evaluation and transaction documents for all projects financed through the entity. These documents would be built around an actual energy efficiency transaction in Mexico. The pilot project would be tied to other related projects under development, so that once the first project obtains NADB financing, a deal flow of other projects will be prepared for SPE financing. Standard documentation and SPE technical and financial review of projects addresses the transaction costs impediments to financing.

**Chapter 1** provides additional details regarding the ownership, structure and operation of an SPE; it discusses the flexibility of this structure and how it can serve a pool of private or public sector projects. The general overall design of the SPE is provided with a brief commentary on issues unique to the Mexican context.

**Chapter 2** provides an overview of the Mexican energy sector with a focus on the electricity supply, demand and pricing.

**Chapter 3** reviews the market potential for energy efficiency investments and provides comparative data on Mexico's energy prices and costs of capital in other countries where the energy efficiency and ESCO market is active. It also reviews policy drivers in the Mexican market, and the current status of ESCO activity in Mexico.

**Chapter 4** reviews the current financial market conditions in Mexico, and the restrictive nature of commercial lending. It discusses the availability and terms of debt, equity, and utility and vendor financing for energy efficiency and ESCO projects.

**Chapter 5** identifies the market, institutional and financial barriers to implementation of energy

efficiency and ESCO projects in Mexico with a focus on financial issues.

**Chapter 6** provides an overview of the pilot SPE structures under development for the pool financing of multiple projects. A separate SPE is being created for public and private projects. The design of each SPE is set forth with an explanation of the flow of funds, and a discussion of the legal architecture for each.

**Chapter 7** reviews the current status of each SPE initiative, and takes a look into the future with a discussion of next steps.

**Chapter 8** provides a summary of lessons learned from this project, and their application to future efforts in this area.

A companion report entitled "Special Purpose Entity Financing of Energy Efficiency Projects in Mexico: Financial Structure and Legal Architecture" has been prepared and is available from the ESMAP library. This report contains copies of model transaction documents necessary to establish an SPE, and finance a pool of energy efficiency projects. Note that actual financial structures are still under discussion, and their final form may ultimately differ from the structures discussed in this report.

## Structure, Benefits and Ownership of Special Purpose Entities

Most energy efficiency projects are, by their nature, small-scale initiatives. This makes projects more difficult to finance, as transaction costs relative to project size can be high, serving as a deterrent to project implementation. In addition, project developers do not have the time and resources to individually overcome many of the market, financial and institutional barriers to project implementation in Mexico. In this case, the economic benefits to a developer for project implementation may not outweigh the costs of resolving outstanding financial issues.

Local financial institutions in Mexico have not seen a sufficient market potential for energy efficiency projects to justify the expenditure of bank resources to establish special financing programs. As a result, local banks are generally reluctant to finance individual energy efficiency projects, and are not willing to develop financial solutions for the unique nature of energy efficiency projects in Mexico.

To address these concerns, and to overcome many of the key market and financial barriers to energy efficiency project financing, this ESMAP activity was initiated to set up innovative financial mechanisms with a focus on establishing a Special Purpose Entity (SPE) to bundle projects for financing and implementation. An SPE created for this specific purpose would seek to accomplish the following:

- Provide affordable and predicable financing for qualified projects;
- Bundle projects for financing to attain critical mass to attract commercial lending;

- Lower transaction costs through the utilization of standard transaction documents;
- Utilize umbrella credit enhancement facilities to lower the risk profile of a pool of projects by providing risk diversification to lenders;
- Establish a track record of successful financing of energy efficiency projects for proof of concept to commercial lenders; and
- In addition to aggregation of small-scale projects for financing, the SPE could also serve as the pooling agent for carbon credits generated by eligible projects.

An SPE may have any one of a number of legal forms. They may be public entities in the form of government agencies or parastatal institutions. In the United States, and in some other Organisation for Economic Co-operation and Development (OECD) countries, public sector SPEs have been established for the financing of small-scale local government infrastructure projects. This method of financing has been highly successful and has leveraged more than US\$50 billion in private sector financing for local government projects.

An SPE may also be a private sector entity in the form of a corporation, partnership, trust, or joint venture (JV). These forms of private sector SPEs are common in Mexico and are used to finance a wide variety of business transactions. As a recognized method of investment in Mexico, SPEs do not, therefore, involve "first time" risk considerations.

The common features that identify an SPE are:

- "Auto-pilot" arrangements that restrict the decision-making capacity of the governing board or management;
- Use of professional directors, trustees or partners;
- Absence of an apparent profit-making motive, such that the SPE is engineered to pay out all profits in the form of interest or dividend;
- A specified and limited lifespan;
- Exists for financial engineering purpose; and
- The creator or sponsor may transfer assets to the SPE, often as part of a transaction involving financial assets.

SPEs are distinct from equity funds in that they mobilize debt and equity funding for projects and are entirely transparent. When equity fund managers establish a financing model or program for particular kinds of projects (for example, energy efficiency or renewable energy [RE]) in a particular country, they carefully guard this information as proprietary. In contrast, the SPE model is based on total transparency, where the SPE's standard financing documents (that is, loan agreements) are broadly disseminated to local project developers and communities to help generate deal flow.

Since SPEs are structured around standard lending documents, they also provide local energy services companies (ESCOs) with terms of financing that are acceptable to a source of capital. As a result, the SPE uses standard financial documents as marketing material for local ESCOs, allowing dissemination of valuable transaction material to ESCOs in Mexico.

This approach should not be considered an intrusion on commercial bank lending activities as local banks have shown little interest in this

sector. If, however, local banks become more interested in energy efficiency and ESCO projects, the SPE could be transferred to a commercial bank in the form of a special lending program. Indeed, it is hoped that successful financing of projects through SPE structures will eventually facilitate local lending institutions to become more active in this sector.

The major cost involved in creating an SPE is establishing the financial structure, developing underwriting criteria and drafting necessary transaction documents. However, once established, these can be utilized repeatedly for each new set of projects. The associated administrative costs would be covered by fees charged to each project financed through the SPE.

Due diligence and project evaluation costs for pooled project financing through an SPE are no more expensive than commercial bank lending for a single large project. The SPE structure, however, allows lenders to an SPE to make one credit decision that will result in the financing of numerous small-scale projects.

Creating an SPE for the financing of energy efficiency projects calls on the participation of a number of key players. These include project developers, potential lenders who help establish the terms of financing acceptable to the SPE, government agencies, and international and local financial and legal experts to design and structure the transaction.

This report discusses the legal architecture necessary to establish a SPE for financing private sector and public sector energy efficiency projects in Mexico. It provides draft legal documents for this purpose and includes commentary on each document to help explain judgments made during the drafting process.

#### **Private Sector Pilot Project**

For private sector energy efficiency projects, the SPE serves as the focal point of the financial structure. Under the financial plan, the SPE borrows funds from domestic or international lenders and uses the loan proceeds to purchase energy savings contracts from local ESCOs or engineering firms. The SPE will acquire the collection rights of each ESCO project through a purchase/assignment agreement. For purposes of this structure, we assume that NADB will serve as the primary lender to the SPE.

To provide lenders to the SPE with additional assurance that payments from each project acquired by the SPE will be used to repay loans, a trust or "fideicomiso" is established to hold all contracts purchased by the SPE. The SPE, through an assignment agreement with the trustee, transfers all contracts (which are considered assets), insurance policies, warranties and other assets to the trust. The trust will collect payments directly from the ESCO clients under the various contracts and make timely debt service payments to the lenders. Income beyond debt service payments, operation and maintenance expenses, contributions to a debt service reserve fund and other contractual obligations will be paid to the SPE in the form of management fees.

The legal documents discussed in this report are:

- Draft SPE by-laws;
- Terms of a "fideicomiso" or trust agreement;
- Asset pledge agreement between the SPE and NADB/lender;
- Assignment agreement between the local ESCO and the SPE; and
- Assignment agreement between the SPE and trustee.

To help understand the legal and financial structure of a private sector SPE, Figure 1.1 indicates the key players and flow of funds for the SPE and Figure 1.2 identifies the legal agreements necessary for the creation of an SPE structure.

This report reviews the nature and purpose of these legal documents and the unique issues of each in the Mexican context.

Figure 1.1: SPE – Finance Structure/Flow of Funds

#### Credit Enhancements Debt - 70% Equity - 30% NADB Mex\$6 Million -50% = Mex\$7 Million **Equity Investors** Other Debt SPE Financing 50% = Mex\$7 Million OPIC NAFINSA Others EE Project EE Project EE Project **EE Project Project Payments** "Fideicomiso" Trust

**US\$20 Million Financing** 

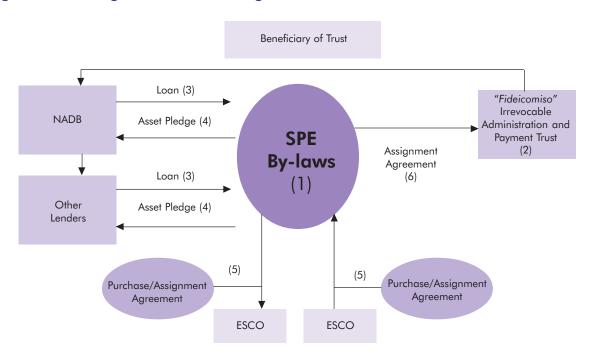


Figure 1.2: SPE Legal Documents and Agreements

#### **Special Purpose Entity By-laws**

#### Annex 1

#### **Overviews**

SPEs are usually created for a single well-defined and narrow purpose whose operations are limited to the acquisition and financing of specific assets. The SPE may have any one of a number of legal forms, including corporation, partnership, JV, or trust.

SPEs are common in Mexico and are used to finance a wide variety of business transactions. The common features that identify an SPE are:

- Auto-pilot arrangements that restrict the decision-making capacity of the governing board or management;
- Use of professional directors, trustees, or partners;
- Absence of an apparent profit-making motive, such that the SPE is engineered to pay out all profits in the form of interest or dividends;

- Specified term of existence;
- Existence for financial engineering purpose; and
- Structure as a bankruptcy remote entity.

This last feature is of particular importance to an SPE serving as a financing intermediary or conduit for a number of projects. The bankruptcy remote function is designed to minimize the likelihood that the SPE will file itself into (voluntary) bankruptcy or will be filed by third parties into (involuntary) bankruptcy.

To accomplish this goal, the following restrictions have been included in the SPE by-laws:

- Restrictions on objectives, powers and purposes;
- Limitations on ability to incur indebtedness;
- Restrictions or prohibitions on merger, consolidation, dissolution, liquidation, winding up assets;
- Incorporation of separateness covenants restricting dealings with parents or affiliates;

- "Nonpetition" language (that is, a covenant not to file the SPE into involuntary bankruptcy);
- · Security interests over assets; and
- An independent director (or functional equivalent) whose consent is required in order to file a voluntary bankruptcy petition.

#### **Choice of Legal Entity**

Based on a review of Mexican law, the SPE will be established as a Mexican limited liability association with variable capital (Sociedad de Responsabilidad Limitada, generically referred to as an SRL). An SRL in Mexico shares many characteristics with a limited liability company in the United States.

A Mexican SRL must have at least two owners, who may be non-Mexican entities or individuals. The minimum capitalization requirement is Mex\$3,000 pesos (approximately US\$285). Forming the SRL involves obtaining a permit from the Mexican Department of Foreign Relations that reserves and confirms the availability of the proposed SRL's name. The owners of the SRL typically execute special powers of attorney authorizing local attorneys to appear before a notary public in Mexico to complete the formation of the SRL.

The by-laws of the SRL, once drafted, are formalized by a Mexican notary public and recorded at the Public Registry of Commerce in the city where the SRL has its domicile. Such recordings are analogous to registration with the Secretary of State in the United States, which is common in a U.S. incorporation or entity formation procedure.

If the SRL has foreign investors, it will also need to register with the Mexican National Registry of Foreign Investments.

#### **Construction Financing**

In some cases, the SPE could provide construction and long-term financing for qualified energy efficiency projects. However, based on discussions with potential equity investors in the SPE, it was determined that the SPE would focus exclusively on long-term financing. Equity investors did not want to enter the construction finance business and believed that construction financing was currently available to qualified local ESCOs.

If the SPE determines that a project qualifies for long-term financing, it will issue a "take out" letter to the local ESCO. The local ESCO can present this letter to local banks to obtain construction financing.

#### **Banking Regulatory Issues**

While the SPE is designed to be a special financial intermediary for specific classifications of projects, it will not engage in banking activities. It will not take deposits from the general public or provide individuals with financial services. The SPE by-laws are carefully drafted to make this distinction in order to avoid subjecting the SPE to banking and security regulations.

#### Tax Issues

For tax purposes, the SPE would take title to all equipment involved in each project. Ownership of equipment will transfer to the project host or beneficiary after the SPE financing is repaid. This will allow the equity owners of the SPE to depreciate the value of the equipment for tax purposes during the financing period. The value of depreciation would be factored into the return on investment for the equity investors. As a result, under this financial structure, all SPE assets will be assigned to the trust and pledged to the lender, while ownership of the equipment will remain with the SPE.

#### Trust Agreement or "Fideicomiso"

#### Annex 2

Trust agreements, or "fideicomisos" in Mexico are one of the most versatile legal documents available for structuring a financial transaction. In this transaction, a trust is established to protect the interest of the lenders. It is a way of controlling assets without legally owning them. The original owner of the assets (the SPE) places the real or personal property, cash, investments, or any other assets into a trust to be administered by a trust company bank (the trustee). The trustee then administers the assets for the benefit of others (the lenders to the SPE).

Up to four characters play a role in Mexican trusts: the creator (fideicomitente), the trustee (fiduciario), the beneficiary (fideicomisario) and a fourth party – allowed but not required by Mexican law – a technical committee (comité técnico). For this SPE structure, a technical committee is not established.

The creator of the trust, the SPE, decides what property will be transferred to the trust, how the assets will be managed, who will administer the property and who the beneficiaries are. In Mexico, the trustee is always a financial institution, and it holds title to the property. Trustees are legally bound to ensure that the trust agreement is adhered to. The beneficiaries of the trust, lenders to the SPE, receive the benefits of the property in trust, usually income, principal, or a combination thereof. These benefits are almost always subject to restrictions as to how, when and under what circumstances the beneficiaries may enjoy them.

The trust indenture or agreement establishes the rights, duties, responsibilities and remedies of the lenders and trustee, and determines the exact nature of the security for the lenders. The trustee is generally empowered to enforce the terms of the trust on behalf of the lenders.

In the SPE structure, an irrevocable administration and payment trust is established pursuant to a

trust agreement between the SPE (settler), the trustee and trust beneficiaries (lenders to the SPE). The trust agreement is executed between the SPE and the trustee for the benefit of the lenders to the SPE. Under the trust agreement, all assets of the ESCO projects, including ESCO contracts, will be transferred to the trust. Payments from ESCO clients will be made directly to the trustee, who will, in turn, make payments directly to the lenders before any funds flow to the SPE. It protects the lenders from misuse of project payments by the SPE and from SPE bankruptcy.

Only financial institutions in Mexico can act as trustees. Under no circumstances can the creator of a trust or any other entity serve in this capacity. Traditionally, only Mexican banks were authorized to serve as trustees. Recently, however, insurance companies have also been authorized in this regard. Trustees are required to provide their services on a fiduciary basis. This means that they are held to a higher standard in handling trust assets than they are in handling their own assets. They must always put the interests and wishes of the creator first. Assets in the trust do not belong to the trustee. They belong to the trust and are maintained for the beneficiaries.

The "fideicomiso" document contains the following provisions:

- An acknowledgment of the transfer of trust property from the settler (SPE) to the trustee, subject to the terms of the trust deed;
- A provision whereby the trustee can accept further property as part of the trust fund, and the initial transfer need only be a nominal amount;
- A statement as to the duration of the trust – in this case, it would be equal to the term of the financing;
- A statement identifying the beneficiaries by name or class – in this case, the lenders to the SPE or NADB;

- A statement as to the circumstances under which the income and the capital of the trust fund are to be disbursed to beneficiaries;
- The powers and duties of the trustee;
- A statement as to the removal of the trustee and the appointment of a new one; and
- A statement of the law to which the trust deed is subject.

There are no standard trustee fees and, thus, fees are open to negotiation. The more complex the trust, the more expensive it is to administer, and the higher the fees. If a trust is created for business purposes, it is considered a taxable entity and the trustee or the beneficiaries must obtain a tax identification number for the trust, file tax returns and pay taxes if due. The trust agreement for the SPE structure is carefully worded to ensure that it is not considered a trust for business purposes.

#### Loan Agreement

#### Annex 3

This agreement stipulates the terms under which a lender will provide funding to the SPE. No loan agreement is provided in this report as each lender will have its own unique lending terms, conditions and requirements. A proposed NADB term sheet is provided in the Appendix 3 to give a general overview of lender terms and conditions. This document is provided for illustrative purposes only and should not be considered a standard term sheet for NADB or any other lending institution to a SPE.

#### Asset Pledge Agreement without Transfer of Possession between SPE and NADB

#### Annex 4

The asset pledge agreement without transfer of possession is an agreement by which the debt (SPE) gives a first priority lien pledge to the lender (NADB) pursuant to the Mexican General Law on Negotiable Instruments and Credit Transactions. Under this agreement, the SPE acknowledges that the ESCO's client (Bailee) has the possession but not the property title of all the equipment and assets that the SPE has derived from agreements with the local ESCOs. An exhibit A "Inventory of Pledge Equipment" and an Exhibit B "Inventory of Pledge Assets" will be attached to this agreement for each of the projects financed by the NADB loan to the SPE.

This agreement also requires the SPE to obtain the required insurance policies that cover loss or damage to the pledged assets and requires that the insurance policy names the lender (NADB) as the cobeneficiary of the insured pledged assets.

The SPE and the ESCO's clients are required to maintain and conserve the pledged assets at all times. They are not allowed to transfer possession of the pledge assets to a third party or remove the pledged assets. The lender (NADB) retains the right of inspection of the assets for purposes of verifying their existence, quality and general state and condition.

### Purchase/Assignment Agreement between SPE and Local ESCO

#### Annex 5

This agreement covers the assignment of the contractual rights between the ESCO and the ESCO's client to the SPE. This includes the collection rights that the ESCO obtained as a result of its energy efficiency investments as well as all promissory notes from the client.

For banking purposes, an ESCO contract with a client, which involves a legal obligation of the client to make periodic payments to the ESCO, is considered an asset. This asset is assigned by the ESCO to the SPE through the purchase/assignment agreement.

The underlying contract between the ESCO and its client must contain the rights of the ESCO to transfer the contract to a third party. This provision prevents the client from making a challenge to the authority of the SPE to enforce the terms of the contract executed between the ESCO and its client. It is important to ensure that the authority of the SPE, under local law and the provisions of the SPE by-laws, is sufficient to be able to enforce all measures in the ESCO contract.

The assignment agreement will not cover the maintenance and operation agreement between the ESCO and the client, should such an agreement exist. The SPE, however, may require the ESCO to pledge the operation contract as additional collateral for the purchase of the implementation contract. This would allow the SPE to use the operations contract as leverage over the ESCO should some disagreement emerge between the SPE and the ESCO client.

All insurance provisions, warranties and other collateral involved in the ESCO contract will be transferred to the SPE. The SPE will, in turn, pledge all these assets to the lenders to the SPE.

## Assignment Agreement between the SPE and the Trustee

#### Annex 6

Under this agreement, the SPE assigns all collection rights for the energy efficiency projects to the trustee. The provisions of this agreement are similar to the provision in the purchase/assignment agreement between the ESCO and the SPE. All the collection rights, promissory notes and other pledge assets that were assigned by the ESCO to the SPE are, in turn, pursuant to this agreement, assigned to the trustee.

#### **Public Sector Pilot Project**

The public sector SPE is modeled on the

government agency financial structure in which an agency is created for the purpose of pooling projects for financing without pledging the credit of the government that created the agency. This model is well established in the United States and has been deployed in other markets. It has successfully financed over US\$50 billion of environmental projects in the United States, and has been used to mobilize private sector financing for small-scale municipal infrastructure projects in India and elsewhere.

The creation of a special government agency to pool projects for presentation to private sector lenders can be a lengthy process. For this reason, an existing state government agency in the state of Nuevo Leon was identified to serve this purpose. Sistema Integral para el Manejo Sistema Integral para el Manejo Ecológico y Procesamiento de Desechos (SIMEPRODE), is a regional government authority established initially to engage in regional solid waste management. It was the government agent that facilitated methane recovery from a landfill project financed by the World Bank Prototype Carbon Fund in 2005.

The management of SIMEPRODE was familiar with the bundling concept and energy efficiency project potential. It also had relationships with local governments in the region. SIMEPRODE representatives initially approached NADB seeking financing for 51 municipal street lighting projects in the state. Representatives of NADB then approached the ESMAP team seeking technical, financial and legal assistance in establishing a pooled financing structure for this initiative.

To help advance the 51 municipal street lighting proposals, SIMEPRODE conducted a pilot project in the city of Allende in October-November 2005. This involved installation of new street lighting technology for 10 separate street lighting circuits. Following the completion of this work, Comisión Federal de Electricidad (CFE), the federal electricity commission conducted a

validation study of the pilot project and confirmed that levels of savings ranged at a minimum of 25-35 percent.

Under the public sector SPE financing structure, the NADB would make a loan to a "fideicomiso" established by SIMEPRODE. Under the terms of the "fideicomiso," the implementation of each project would be assigned to SIMEPRODE. Contracts for project implementation would be signed between SIMEPRODE and each local municipal government. As such, SIMEPRODE would be the administrative agent of the trust and would implement each street lighting project. To credit-enhance this structure, each municipal government would pledge transfer payments from the state government as collateral.

The financial structure is provided in Figure 1.3.

Under this arrangement, the financing of the 51 projects would not appear as debt on the state's budget.

The total estimated project cost is approximately US\$30 million. NADB would finance 80 percent of the total cost and the state would provide the

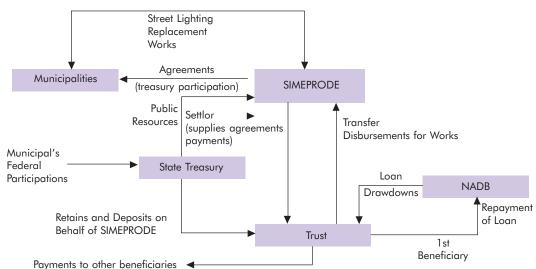
balance in the form of grants to the local governments. No equity financing is required in this structure, which helps keep the total cost of financing at lower rates.

#### State Debt Issues

The first legal question that had to be addressed was how to establish SIMEPRODE as the pooled financing SPE without adding debt to the state. This is possible under the state of Nuevo Leon government financing law that stipulates that public agency debt is not the debt of the state. While this answered the debt question, it raised other questions regarding the existing legal authority of SIMEPRODE to implement energy efficiency projects. Based on a legal review of SIMEPRODE's charter, it appears that SIMEPRODE does not have the authority to engage in energy projects.

As a result, an alternative structure is necessary that may require another state agency with authority to engage in energy projects to establish the "fideicomiso." In this case, the legal text of the "fideicomiso" would not change except for the identification of the "settler" of the trust agreement.





#### **Procurement Issues**

To streamline the implementation process and reduce costs, one entity should be selected to implement all 51 street lighting projects. If implementation were open to competitive bidding at each site, the review and approval process would be cumbersome and timely. Moreover, it would be difficult to finance the 51 projects with several different companies involved. For this reason, SIMEPRODE was selected as the implementing agent of the state. SIMEPRODE could also serve as a technical adviser to the "fideicomiso" if it is determined that the settler should be another government agency or a private investor.

#### Collateral Issues

Each local community would be required to pledge state government transfer payments as collateral for the street lighting loans. This is common practice for local governments seeking loans from the NADB and is required for NADB financing of the "fideicomiso." This collateral, in essence, replaces the need for state government support for the projects or the "fideicomiso." Discussions with the state treasury office have confirmed the ability of local governments to do this and the willingness of the Treasury Department to facilitate the process.

# 2. Energy Sector Overview in Mexico

### Projected Energy Supply and Demand Outlook in Mexico

Mexico's energy sector is diverse and dynamic. Globally, Mexico ranks ninth in crude oil proven reserves, 21st in natural gas proven reserves, seventh in crude oil production and eighth in natural gas production.

Notwithstanding Mexico's substantial energy supply, the demand for natural gas and electricity will outpace supply over the next several decades, putting a premium on effective utilization of energy resources. Moreover, the price of energy in Mexico will be greatly influenced by global energy factors that go beyond the supply and demand equation in Mexico itself. Mexico is vulnerable to price spikes in energy due to a heavy dependence on imported natural gas for electricity generation. Nearly 66 percent of electricity generation in Mexico is oil- and-gas based, as compared to only 33 percent in the United States. Approximately, 85 percent of Mexico's primary energy supply is based on hydrocarbons, and while Mexico is a net exporter of primary energy, it is a net importer of secondary energy (it imports gasoline and gas for its internal markets).

The Mexican government runs, to a large extent, on revenue from oil. In 2004, oil exports accounted only for 8.4 percent of Mexico's gross domestic product (GDP) and 12.5 percent of

the total exports; however, they provided the federal government with 37 percent of all its revenues. While Mexico has benefited from rising oil prices and soaring export revenues, it has also been harmed by sharp increases in the cost of imported natural gas and refined products, and the resulting pressure on electricity costs. The Mexican economy will be directly affected by its future net energy trade balance, and the evolution of global energy prices.

Mexico has the fastest growing population among the OECD countries, and nearly 29 million people will be added to Mexico's population in the first three decades of the 21st century (a rate of over one million new citizens per year). The total population is expected to peak at 131 million inhabitants and stabilize after 2050. Population growth alone will thus tend to increase energy consumption. Add falling poverty and increasing wealth, together with an expansion of public services, and there will be significant additional energy supplies required over the coming years.

According to a study by the North American Energy Working Group, reflected in Figures 2.1 and 2.2, Mexico's energy demands have grown more rapidly than supply since 1980 and will continue on this path for the balance of this decade and beyond. Given these factors, the energy market in Mexico is primed for extensive implementation of energy efficiency investments.

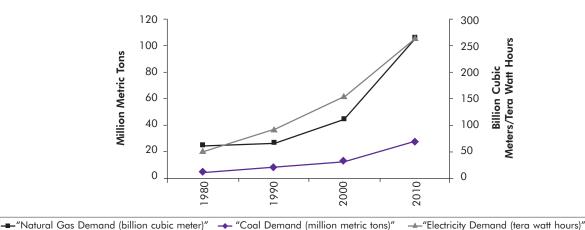
800 700 Thousand Barrels/Day 600 500 400 300 200 100 0 2010 2005 985 990 995 2000

--- Liquefied Petroleum Gas --- Motor Gasoline --- Jet Fuel --- Residual Fuel Oil --- Other Oil

Figure 2.1: Mexico Oil Demand (1980-2010)

 $Source: www.eia.doe.gov/emea/northamerica/engdata.htm \#\_VPID\_3,2002.$ 

Figure 2.2: Mexico Energy Demand (1980-2010)



Source: www.eia.doe.gov/emea/northamerica/engdata.htm#\_VPID\_3,2002.

#### **Electricity Market Demand and Supply**

According to Mexico's Secretaría de Energía (SENER), the department of energy, the country had 45.9 giga watt (s) per hour (GWh) of installed electricity generating capacity in 2004, and generated 209.2 billion kilo watt (s) per hour (BkWh) of electric power in 2003. Of this, 83 percent came from conventional thermal sources, 9 percent from hydroelectricity, 5 percent from nuclear power and 3 percent from other renewables. Consumption in 2003 was 193.9 BkWh.

As Figure 2.3 indicates, the bulk of the conventional thermal capacity in the national

electricity system (excluding private generators) consumes fuel oil, followed by coal and natural gas. In 2003, SENER reported that fuel oil represented 51 percent of the thermal feedstock for the national electricity system, natural gas 25 percent and coal 20 percent. The general trend in the sector is for natural gas to replace fuel oil as the feedstock of choice, and most new construction has focused on gas-fired generation capacity. In the case of private power producers, nearly all generating capacity runs on natural gas.

According to most recent official statistics, electricity demand in Mexico will grow at an annual rate of 6.3 percent during 2002-11. In order to meet such an increase in demand,

1,600 1,400 1,200 Diesel **Billion BTUs** 1,000 Natural Gas 800 Coal 600 ■ Fuel Oil 400 200 0 1999 2000 2002 2003 2001 Years

Figure 2.3: Consumption of Combustible Fuels for Electricity Generation in Mexico, 1998-2003

Source: SENER.

30,300 mega watt (s) (MW) of additional generation capacity will have to be added to the electricity system during that period, thereby nearly doubling the total current generation capacity of 38,519 MW. Of this amount, self-supply and combined heat and power (CHP) schemes will contribute 4,864 MW. Also, according to SENER, the total transmission capacity has to grow at an annual growth rate of 21 percent during 2001-06, also very high compared to the annual historic growth rate of less than 4 percent.

President Fox, in his 2005 state of the nation annual report, announced that the government would need to spend Mex\$45.4 billion to expand and modernize generation, transmission and distribution (T&D) infrastructure in the period 2004-11, or about Mex\$5.7 billion a year, to meet growing demand. The federal budget for the electricity sector in 2005 was Mex\$5.5 billion, 34.1 percent more than 2004, but 2.7 percent below annual requirements. Through the five years of Fox's administration from January 2001-July 2005, national electricity generation capacity has expanded by 33.9 percent, or 13,731 MW, compared to 2000. Total generation in the first half of 2005 increased 6.4 percent to 8,486 GWh compared to the same period in 2004.

Aggressive energy efficiency initiatives in Mexico could slow the demand for new generating

capacity, moderate the need for tariff increases to pay for new investments and reduce Mexico's dependence on imported natural gas.

The Comisión Federal de Electricidad (CFE), the federal electricity commission, is the dominant player in the generation sector, controlling 70 percent of the installed generating capacity, and with a monopoly on electricity transmission and distribution (T&D) outside of Mexico City and a few other municipalities. Within metropolitan Mexico City, another State-owned company, Luz y Fuerza del Centro (LFC) holds the monopoly on generation and distribution.

While the CFE has recently turned to private firms to provide needed investments in generation and transmission infrastructure, CFE effectively retains control of these assets and continues to operate the supply system as a vertically integrated monopolist.

In December 1992, the Ley del Servicio Público de Energía Eléctrica (LSPEE), the public electricity service act, was amended to allow private participation in generation activities. Article 3 of this Act lists five areas that are not considered as public service, and are open to private sector participation: (i) self-supply; (ii) cogeneration; (iii) independent power producer; (iv) imports and exports; and (v) small-scale generation. Just under 350 permits were issued for such projects in the period 1994-2005.

Self-supply and cogeneration are areas where some Mexican ESCOs are active in project development and implementation. These ESCOs typically focus on self-generation as a means of reducing peak period electricity rates for business and industries. In cases where cogeneration is financially viable, it will usually serve as a means of self-supply.

Several political figures and economists have called for the gradual phase out of consumer subsidies for electricity over the next 10 years. Analysts at Bear Stearns predict the cut in subsidies will drive consumer electricity bills up to 83 percent. Aggressive energy efficiency initiatives could help mitigate the impact of reductions in subsidy support.

Despite being heavily subsidized, commercial tariffs in Mexico are still the fourth most expensive in Latin America and the Caribbean, and higher than prevailing industrial power tariffs in the other two North American Free Trade Agreement (NAFTA) partners.

The high cost of electricity in the commercial and service sectors should, in theory, drive strong growth in energy efficiency investments and ESCO activities as potential savings could make industries more competitive in the global economy. In other countries, electricity prices at these levels have served as a major incentive for the development of ESCO industries.

#### **Legal and Regulatory Environment**

#### General Regulatory Framework

In Mexico, constitutional provisions set the legal framework for the electricity industry. Article 27 establishes that generation, T&D and supply of electricity for public service is the exclusive responsibility of the federal government. Article 28 further establishes that all strategic activities carried out by the federal government shall not be considered a monopoly. Article 25 provides that the federal government is empowered to own and operate public companies with the

exclusive purpose of implementing identified strategic activities such as the electricity sector.

In October 1995, the Ley de la Comisión Reguladora de Energía (LCRE), the Energy Regulatory Commission Act, transformed the Comisión Reguladora de Energía (CRE), the energy regulatory commission, from an advisory body on gas and electricity into an autonomous agency which regulates the electricity and natural gas industries. The main functions of CRE are to grant permits, authorize prices and rates, approve terms and conditions for the provision of services, issue directives, resolve disputes, request information and impose sanctions, among others. CRE promotes and enforces the efficient development of the following activities:

Regulated activities (natural gas)

- · Natural gas first hand sales;
- · Liquefied petroleum processing; and
- Natural gas transportation, distribution and storage.

Regulated activities (electricity)

- Public service electricity supply;
- Electricity generation of private parties;
- Exports and imports between private parties;
- Electricity acquisitions for public service;
- Transmission services between the supplier and private generation permit holders; and
- Verification of compliance with the applicable law and prevention of cross-subsidies among different businesses lines.

#### **Energy Efficiency Regulatory Framework**

Mexico has mandatory energy efficiency codes for lighting systems and building shells in commercial buildings. The code for lighting systems, which was created in 1995, applies to all offices, schools and educational centers, hospitals and clinics, hotels and motels, restaurants and cafeterias and commercial establishments (stores) that have an electricity load of more than 20 kilo watt (s) (kW).

The code for building shells, which was established in 2001, applies to all new commercial buildings and extensions to them. Complaints have been made by energy efficiency advocates that the code for buildings have not been aggressively enforced by government officials, and often ignored by developers.

Standards have been established for a broad range of appliances including refrigerators, freezers, washing machines, air conditioners, fluorescent lamps, indoor and outdoor lighting systems and water heaters. They have also been established for industrial equipment including boilers, motor pumps and transformers. In addition, most appliances are required to carry labels which specify their relative energy efficiency as compared to similarly tested and certified products. Testing laboratories and certification boards have been established to certify new equipment and verify that appliance

standards are properly implemented. Three government organizations have teamed up to accredit two certification boards, 47 testing laboratories and 379 verification units. In 2002, these standards are estimated to have reduced electricity demand by 9,120 GWh and capacity needs by 1,543 MW.

Annex 7 provides a brief summary of standards for appliances and pumps that have been established in Mexico, the number of units sold that comply with these standards and projected energy savings.

## **Electricity Tariff-setting Policies**

A comprehensive understanding of utility rate-setting and billing policies, as well as consumer accounting and payment procedures is essential to the structuring of an energy efficiency financing program. This information is especially important when dealing with public sector clients.

CFE does not establish electricity rates in Mexico. The authority for rate-setting is vested with the Secretaría de Hacienda y Crédito Público (SHCP), the department of treasury and public credit, which works with CFE and SENER to set the rates. However, it is the information that CFE has and provides on generation and T&D costs that are the basis for the rate-setting.

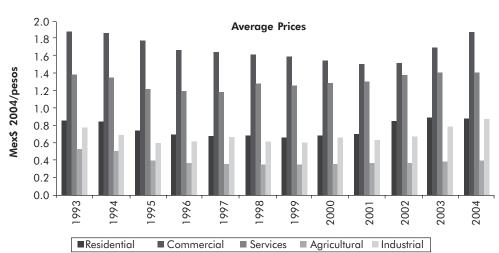


Figure 2.4: Electricity Prices by User-type

Source: SENER.

During 2004, the overall yearly average tariff was US¢6.33/kWh. The lowest tariffs were found in the agricultural sector (US¢3.13/kWh) where electricity prices are subsidized by the state to promote agricultural development, while the highest are in the commercial sector, which paid an average of US¢13.03kWh. The average price for domestic customers was US¢6.07/kWh.

Electricity rates in Mexico are structured under two sets: (a) specific; and (b) general.

Specific rates are subdivided by the type of customer:

- Residential (Domésticas);
- High consumption residential (Domésticas de alto consumo);
- Public services (Servicios públicos);
- Agricultural (Agrícolas); and
- Seasonal (Temporal).

General rates are subdivided by voltage level:

- Low-voltage (Baja tensión);
- Medium-voltage (Media tensión); and
- High-voltage (Alta tensión).
- There are also two more types of rates, one for backup services (Servicio de resplado) and

another one for service that can be interrupted (Servicio interrumplible). The last two are for customers with very high consumption (thus, high-voltage installations).

Municipal services, specifically street lighting and pumping of potable and sewerage water, fall under "specific rates" in the "public services" category. There are three particular rates under this category, two for public lighting and one for water pumping – these are given in detail in Annex 8. Beyond the distinction for street lighting or water pumping, there are no distinctions in rates as far as kinds of usage are concerned.

Most of what is charged for electricity in Mexico is based on meter readings, but street lighting is one of the exceptions, given the fact that less than 40 percent of all street lighting circuits have meters. In circuits without meters, electricity charges are based on load and time of use. Load is the sum of the watts of all of the inventoried lamps in the streets, multiplied by a "ballast factor." Time of use is set at 11.5 hours a day (for every day of the year).

CFE billing practices should not create difficulties for ESCOs. In the case of billing based on metering, there should be no problem. In the case of billing based on inventories of lamps (street lighting), the issue is the acceptance of CFE to modify the inventory (ballast factor) it uses to determine the bill.

<sup>&</sup>lt;sup>1</sup> Public lighting includes street lighting, traffic lights and lighting of parks and public spaces.

# 3. Market Potential for Energy Efficiency Investments

## **Comparative Electricity Prices**

The market for energy efficiency investment is driven by two major economic factors, energy prices and the costs of capital. Energy prices in Mexico vary based on source of energy, time of use and sector of consumer. In assessing the impact of energy prices on the energy efficiency market in Mexico, it is helpful to look at the energy prices in other countries where these markets are active.

Details in Tables 3.1 and 3.2 are comparative average household and industrial energy prices in a number of countries provided by the Energy Information Administration (U.S.) (EIA). These prices reflect an average energy price based on a unique formula developed by the EIA and do not differentiate between various country peak energy prices, for example. They may, therefore, understate market demand for energy efficiency investments in certain instances. Although the information available lags behind existing prices, the Tables are useful for comparative purposes.

Table 3.1: Electricity Prices for Households\* (Mex\$ per kWh)

Countries	2002	2003	2004	2005
Argentina	NA	0.037	0.038	NA
Bolivia	NA	0.055	0.072	NA
Brazil	NA	0.079	0.093	NA
Canada	0.054	0.062	NA	NA
Chile	NA	0.086	0.088	NA
Colombia	NA	0.071	71 0.084	
Costa Rica	NA	0.060	0.065	NA
Cuba	NA	0.137	0.138	NA
Czech Republic	0.076	0.085 0.097		NA

(continued...)

(... Table 3.1 continued)

Countries	2002	2003	2004	2005
Ecuador	NA	0.123	0.128	NA
El Salvador	NA	0.135	0.129	NA
France	0.105	0.127	0.141	0.141
Guatemala	NA	0.79	0.156	NA
Honduras	NA	0.045	0.045	NA
Hungary	0.080	0.103	0.137	0.149
Italy	0.156	0.186	0.191	NA
Jamaica	NA	0.169	0.187	NA
Japan	0.174	0.186	0.196	NA
Mexico	0.092	0.091	NA	NA
Nicaragua	NA	0.135	0.140	NA
Peru	NA	0.115	0.113	NA
Poland	0.084	0.095	0.103	NA
Spain	0.114	0.137	NA	NA
United Kingdom	0.105	0.116	0.138	NA
United States	0.085	0.087	0.09	NA
Uruguay	NA	0.103	0.113	NA
Venezuela, R.B. de	NA	0.055	0.046	NA

Source: Energy Information Administration, Table Posted: February 28, 2006. Note: NA = Not applicable.

Household energy prices in Mexico are considerably higher than similar prices in the United States and Canada where ESCO industries have been active for many years. Mexican household energy prices are comparable to those in Poland and the Czech Republic where ESCOs have been established and have obtained financing from local commercial banks.

Industrial energy prices in Mexico are considerably higher than prices in the United States and Canada. They are also considerably higher than prices in Argentina, Brazil, Uruguay and República Bolivariana de Venezuela and comparable to prices in Eastern Europe. The cost of electricity in Mexico is sufficiently high to support a strong ESCO industry and bank

<sup>\*</sup> Energy end use prices including taxes, converted using exchange rates.

Table 3.2: Electricity Prices for Industry\* (Mex\$ per kWh)

Countries	2002	2003	2004	2005
Argentina	NA	0.025	0.033	NA
Barbados	NA	0.197	0.197	NA
Bolivia	NA	0.041	0.051 NA	
Brazil	NA	0.037	0.047	NA
Canada	0.041	0.049	NA	NA
Chile	NA	0.056	0.057	NA
Colombia	NA	0.064	0.081	NA
Costa Rica	NA	0.067	0.069	NA
Cuba	NA	0.081	0.078	NA
Czech Republic	0.049	0.056	0.066	NA
Denmark	0.070	0.092	0.096	NA
Ecuador	NA	0.098	0.089	NA
El Salvador	NA	0.123	0.120	NA
France	0.037	0.045	0.050	0.050
Guatemala	NA	0.075	0.116	NA
Honduras	NA	0.035	0.035	NA
Hungary	0.059	0.078	0.090	0.097
Italy	0.113	0.147	0.162	NA
Jamaica	NA	0.115	0.130	NA
Japan	0.115	0.122	0.127	NA
Mexico	0.056	0.063	NA	NA
Nicaragua	NA	0.124	0.128	NA
Peru	NA	0.060	0.079	NA
Poland	0.084	0.056	0.060	NA
Spain	0.048	0.054	NA	NA
United Kingdom	0.052	0.055	0.067	NA
United States	0.049	0.051	0.053	NA
Uruguay	NA	0.040	0.055	NA

Source: Energy Information Administration. Table Posted: February 28, 2006.

Note: NA = Not applicable.

Energy end use prices including taxes, converted using exchange rates.

financing of energy efficiency projects. Even in France and Brazil, where industrial energy prices are lower than in Mexico, government policies focused on partial financing of certain energy efficiency projects have created an active market for local ESCOs.

## **Comparative Costs of Capital**

The cost of capital is the other major market factor that impacts on the energy efficiency market, as high interest costs can substantially reduce net savings from projects and require longer payback periods before projects reach financial viability. Table 3.3 provides a comparative analysis of Mexico's short-term cost of capital to other countries.

Mexico's short-term rates are considerably higher than most other OECD countries or that of the Euro area. These rates will limit the number of energy efficiency projects that can be financed by commercial banks to those with substantial energy savings. However, interest rates in Mexico have declined considerably in the last three years, while interest rates in many other countries, particularly in Eastern Europe, have increased.

Table 3.3: Short-term Interest Rate (percent, per annum)

Countries	2001	2002	2003	2004	2005	2006	2007
Australia	4.9	4.7	4.9	5.5	5.7	5.7	5.7
Canada	4.0	2.6	3.0	2.3	2.8	4.1	4.3
Czech Republic	5.2	3.5	2.3	2.4	1.9	2.3	3.3
Denmark	4.6	3.5	2.4	2.1	2.1	2.2	2.9
Euro Area	4.3	3.3	2.3	2.1	2.2	2.2	2.9
Hungary	10.8	8.9	8.2	11.3	6.8	5.8	5.5
Japan	0.1	0.1	0.0	0.0	0.0	0.0	0.7
Korea, Rep. of	5.3	4.8	4.3	3.8	3.6	4.4	5.4
Mexico	13.4	8.5	7.2	7.4	9.5	8.9	7.4
New Zealand	5.7	5.7	5.4	6.1	7.1	7.6	7.6
Norway	7.2	6.9	4.1	2.0	2.2	3.5	4.7
Poland	15.7	8.8	5.7	6.2	5.2	4.1	4.1
Slovak Republic	7.5	7.5	5.9	4.4	2.6	2.9	3.7
Sweden	4.0	4.1	3.0	2.1	1.7	2.4	3.4
Switzerland	2.9	1.1	0.3	0.5	0.7	1.4	2.0
Turkey	92.4	59.5	38.5	23.8	15.9	12.5	10.5
United Kingdom	5.0	4.0	3.7	4.6	4.7	4.5	4.5
United States	3.7	1.8	1.2	1.6	3.5	4.8	4.9

Source: OECD Economic Outlook.

Note: Individual Euro area countries are not shown after 1998 (2000 for Greece) since their short-term interest rates are equal to the Euro Area rate.

As Table 3.3 indicates, Mexico's current short-term rates today are below interest rates in Poland and Hungary in 2000 and 2001, when ESCO industries were able to obtain debt financing for energy efficiency projects. The cost of capital in Mexico, therefore, may have some limited impact on the growth of the ESCO industry, but is unlikely to be a barrier to finance. Indeed, Mexico's short-term rates could increase by more than 150 basis points and still remain below levels than prevailing in Eastern Europe when ESCO companies emerged as viable business concerns.

## **Policy and Institutional Context**

In addition to market forces, there are numerous policy drivers and facilitators that promote energy efficiency investments in Mexico. The government of Mexico (GoM) and various Mexican private sector institutions are actively promoting energy-efficient industrial technologies, clean and efficient energy production and RE sources to reduce pressure on the national electrical grid system.

### **National Energy Efficiency Commission**

Recognizing the importance of energy conservation in public buildings, the Mexican government, in 1989, established the Comisión Nacional para el Ahorro de Energía (CONAE), the national energy efficiency commission. Since its inception, CONAE has facilitated:

- A voluntary pilot project called "100 Public Building" to assess electricity consumption in public buildings through audits and studies;
- The establishment of the Programa de Austeridad Presupuestaria (National Program for Budget Austerity) in the Administración Publica Federal (APF), the federal public administration;
- The development of technology tools and software systems that allow facility managers to carry out preliminary energy studies autonomously;

- Training programs for the development of local Mexican ESCOs;
- Training programs for federal building managers to allow them to perform lighting assessments and report the information to CONAE by e-mail; and
- The development of an operational guide for facility managers to implement "no cost" operational measures to reduce energy consumption.

Although these technical tools, training materials and manuals were designed for federal facilities and managers, they are fully applicable to government facilities at the state and local level.

However, CONAE's assessment tools and energy audits do not meet investment standards; the energy audits are only preliminary assessments of energy use and potential savings. They do not include implementation plans and precise estimates of savings from new technology. Full investment grade audits would be still needed to obtain commercial financing for energy efficiency projects.

However, these preliminary audits are very useful in helping facility managers set priorities and assess the potential benefits of energy efficiency project implementation. Preliminary audit programs in several European countries have proven very effective as a marketing tool for energy efficiency investments. This is especially true where local government officials are reluctant to spend limited resources on preliminary audits without knowing whether the audit will result in investments and real energy savings. This reluctance on the part of local officials is often matched by the reluctance of ESCOs, knowing that their preliminary audit work will ultimately lead to a competitive bidding process. These circumstances, which are unique to the public sector, have been a major impediment to energy efficiency project development in public facilities. CONAE's preliminary audit material can help to overcome this impediment and serve as an effective marketing tool in the local government sector.

Given the focus on federal buildings and the limited ability of federal agencies to finance projects, CONAE has not been extensively involved in private sector financing for public projects. As a result, they have not developed model transaction documents to date. CONAE, however, is increasingly interested in developing transaction documents for financing ESCO and/ or energy saving investments.

The absence of standard financial transaction documents in Mexico for public sector projects underscores the lack of financing of energy efficiency projects in the country. In addition to a "model" ESCO contract, there is a need for "model" lending documents for energy efficiency projects. The nature of these contractual documents would vary depending on the nature of the financial structure. Guaranteed savings and shared savings structures require somewhat different lender and ESCO contracting provisions.

#### **National Program for Budget Austerity**

In an effort to reduce energy consumption in federal buildings, the Mexican Minister of Energy issued a decree in 1999, creating the APF, designed to create incentives for energy conservation, and to provide technical assistance to government agencies. Under the initial APF program guidelines, all federal government agencies were mandated to participate in the Energy Savings Program to be designed by CONAE.

All agencies with buildings of at least 5,000 square meters were directed to create an Energy Savings Internal Committee to be supervised by a high-level official. These representatives were trained through specific workshops on performance assessment and the use of tools for energy audits. In addition, specialized courses in different energy saving

technologies were offered for qualified personnel in air conditioning, power equipment and lighting. Subsequent guidelines required participating agencies to prepare an annual report stating their 1999 energy consumption levels, quarterly reports on the energy efficiency actions performed and data from their electricity bills.

APF guidelines for 2001 enlarged the program's scope and required buildings between 1,000 and 3,000 square meters to register with CONAE, and buildings with more than 3,000 square meters and high indices of energy consumption to propose a biannual working plan, provide CONAE with quarterly reports and send representation to participate in energy efficiency courses and workshops. To date, 877 buildings, with more than 4.6 million square meters of floor space, have registered with CONAE.

Notwithstanding these efforts and mandates, very few energy efficiency projects have been implemented in federal buildings due to procurement rules that prevent government agencies from signing long-term contacts (more than one year) for goods and services.

#### Trust for Electrical Energy Efficiency

Fideicomiso para el Ahorro de Energía Electrica (FIDE), the trust for electrical energy efficiency, is another institution established by the Mexican government for the promotion of energy efficiency initiatives with a primary focus on the private sector. FIDE has implemented a number of lending programs focused on high efficiency motors and appliances, and is currently working with the North American Development Bank (NADB) on a financing program for replacement of inefficient refrigerators. FIDE is also currently launching a new program to provide financing to high efficiency air conditioning units with a credit line from the Nacional Financiera (NAFIN), the national development bank. Customers will repay loans for new units through their electricity bills. Each loan will be credit

enhanced by a reserve account, equal to 20 percent of the loan amount, funded by Comisión Federal de Electricidad (CFE), the federal electricity commission, FIDE also has established lending programs for energy efficiency projects in the industrial sector, which are described in greater detail below.

## Japan Bank for International Cooperation/NAFIN

In addition to FIDE's lending programs, the only other special lending facility in Mexico for energy efficiency projects involves a JV between the Japan Bank for International Cooperation (JBIC) and NAFIN. Under this program, JBIC has made a Mex\$138 million line of credit available to NAFIN for renewable energy and energy efficiency projects. NAFIN, in turn, funds projects through "first floor" banks in Mexico that identify projects, conduct due diligence on project proposals and perform credit review of borrowers.

NAFIN provides funds for peso loans to first floor banks at the Mexican 28-day interbank balance rate (TIIE) (currently 9-10 percent). Funds for dollar loans are provided at the three or six month London interbank offered rate (LIBOR) plus 1 percent. First floor banks may add a 2 percent margin on dollar loans and a 4 percent margin on peso loans. Interest is calculated on the remaining loan balance and payable quarterly or semiannually.

First floor banks use their own collateral and credit review policies in determining borrower eligibility. This has been a concern for ESCOs in Mexico, as most banks generally require

collateral pledges equal to 200 percent of a loan amount. And as is detailed below, banks do not accept ESCO guarantees of savings as collateral, reflecting a bias toward balance sheet analysis of project creditworthiness.

NAFIN will also provide a guarantee of repayment to first floor banks for qualified projects. Guarantee fees are assessed annually for the life of the loan (Table 3.4). The guarantee fees and coverage are as follows: JBIC funds may cover up to 80 percent of the total amount of a project. The remaining 20 percent must be contributed by the company requesting the credit. The minimum amount NAFIN may request from JBIC is US\$1 million (Figure 3.1).

Several first floor banks are unhappy with the program's extensive paperwork and inflexibility while local ESCOs complain that the collateral requirements of first floor banks are overly restrictive. As a result, only a small number of energy efficiency projects were financed through this program. According to JBIC officials, approximately 50 percent of the JBIC loan have been disbursed. However, a portion of the loan has been used to finance RE products which account for a substantial amount of dispersed funds.

The key lesson learned from this program is that even with the provision of liquidity and guarantees, local banks in Mexico are not inclined to fund ESCO projects for a number of financial reasons. The program also highlighted the conservative lending environment in Mexico, and the financial barriers to ESCO projects financing.

Table 3.4: NAFIN Guarantee Fees and Coverage

Fees	Coverage
2.5%	50% Working Capital
2.5%	70% Equipment Construction
2.15%	80% New Machines

NAFIN

First
Floor
Banks

≈ 9.5% Peso
≈ 3.5% Mex\$

Maximum 4% Premium + 2.5% Guarantee Fee
Maximum 2% Premium + 2.5% Guarantee Fee
Total Cost of Capital to Borrower
Peso Loans 15-16%
Mex\$ Loans 7-8%

Figure 3.1: Flow of Funds of JBIC/NAFIN Program

## **Current ESCOs' Activity in Mexico**

Although the economic trends – higher energy costs and lower borrowing costs – in Mexico favor energy efficiency projects, very limited investments have been made in this sector. While Mexico has advanced policy initiatives and capacity-building efforts for energy conservation, and has raised the awareness of the value of energy efficiency projects, the market remains relatively dormant.

ESCOs and local engineering firms are generally thinly capitalized and unable to finance or obtain financing for energy efficiency projects on a regular basis. Because of their economic condition, these ESCOs are unable to provide energy savings guarantees that are considered of value to their customers or lenders. Moreover, most local providers of energy services do not have the financial resources to work through all the market, institutional and financial barriers to project implementation. Each project is too small to support these expenses. In Mexico, local ESCOs can provide the technical resources, but are generally unable to provide the financial needs of the energy efficiency sector.

Notwithstanding the considerable efforts of CONAE, the United States Agency for International Development (USAID) and multilateral lending agencies to promote an

ESCO industry in Mexico, there are only 14 ESCOs in operation today, as opposed to more than 100 ESCOs in the United States certified by the U.S. Department of Energy. Many Mexican ESCOs have difficulty obtaining financing for projects. This is an indicator of the financial impediments to energy efficiency project development in Mexico – many more ESCOs would be in operation if the market for their services began to grow.

A few U.S. ESCOs are currently exploring JV arrangements with their counterparts in Mexico. These strategic alliances are designed to provide additional expertise and credibility to Mexican firms, particularly in areas where Mexican ESCOs have limited experience. Based on discussions with Mexican ESCOs, these partnerships are focused on joint marketing and project development. U.S. ESCOs appear to have neither the financial resources nor the inclination to be a major source of capital for their potential Mexican partners.

None of these proposed partnerships have materialized to date for several reasons. Firstly, the terms offered by U.S. ESCOs and investors have been seen as unattractive to their Mexican counterparts. As one Mexican ESCO executive stated, they are not interested in "selling cheap" to foreign investors. Secondly, the price offered

by U.S. ESCOs reflects their assessment of market growth potential in Mexico based on past experience. The lack of robust growth in this sector is viewed by U.S. ESCOs as a result of market barriers that may not be easily overcome in the near term. As a result, U.S. ESCOs believe that substantial investments in technology and training of local partners may not result in corresponding economic returns. Finally, most Mexican ESCOs, although in need of financing, are unwilling to give up control or management of their companies in exchange for the possibility of additional financing. Nevertheless, two JVs are under consideration at this time.

As part of this project, interviews were held with the more active Mexican ESCOs in the market. Based on these interviews, the following general observations can be made:

- Most ESCOs in Mexico are relatively small, privately-owned companies with an average number of employees between 5 and 10;
- Most ESCOs are thinly capitalized and have limited access to financing;
- None of the local ESCOs surveyed have a broad ESCO practice comparable to large U.S. ESCOs such as Johnson Controls or Honeywell;
- Virtually, all successful ESCOs in Mexico have focused on a particular specialty in the market. For example, one has focused on hotels in Cancun, another on power factor projects in Monterrey and a third on self-generation and cogeneration; and
- Each ESCO's business model is driven by its source of capital. These business models can be divided into three general categories:
  - ESCOs that have raised funds internally from friends and local investors (these ESCOs are constrained by the amount of equity funds that can be raised from these sources);
  - ESCOs that convince a client to go forward with a project by using the client's existing

- credit line with a local bank; and
- ESCOs that have developed a relationship with equity funds that provide third-party financing for ESCO projects.

Given the restrictive lending environment in Mexico, several ESCOs have developed alternative means of financing. Each of these alternatives is expensive and/or difficult to market to customers. Direm, a Mexican ESCO in operation for over eight years, has a strong client base and sound business plan based on self-financing projects for its customers. While this allows Direm the opportunity for strong rates of return, its business is limited to the capital raised from individual local investors. If Direm had access to affordable debt financing, it could expand operations considerably.

Empress is another ESCO with several years of operation in Mexico. Its financing structure basically requires its client to finance the energy efficiency project with an Empress guarantee of energy savings. Under this structure, Empress signs a guaranteed energy saving agreement with its clients, and Empress obtains a performance bond to back up its energy savings guarantees for which they pay between 2.5 and 3.0 percent. Unfortunately, the local banks do not consider the performance bond as collateral. As a result, Empress is paying 2.5 percent for a bond that is helpful in marketing its services to customers, but is of little help with the financial aspects of the project.

Optima Energia is a third local ESCO in Mexico with another unique financing arrangement. Optima has access to debt and equity financing through Fondelec Latin American Clean Energy Services (FLACES), a special equity fund created to finance renewable and energy efficiency projects. FLACES' capital is limited, and its transaction documents are proprietary, as is the custom with equity funds of this type. This precludes broader dissemination of successful financial structures in the local energy efficiency market and with local lending institutions.

## 4. Current Financial Conditions, Availability of Financing and Barriers to Implementation of Energy Efficiency Projects

## **Market Barriers**

In Mexico, energy efficiency projects are generally viewed by private sector businesses (end use consumers) as a low priority "infrastructure" investment versus investing in the growth and development of their core business. This results in energy efficiency projects rarely being funded with internal capital as even the most creditworthy businesses typically have capital needs for core business activities that exceed their annual capital budgets and debt capacity ceilings. Unless the energy efficiency projects can meet very aggressive hurdle rates in many private industries, which often equal a simple payback of less than one year, they cannot compete for their limited internal capital. Requiring collateral or reducing current credit capacity for end use industrial customers further reduces their likelihood of implementing any projects.

In addition to government budget limitations, a number of other barriers impede energy efficiency investments in the Mexican public sector. At the national government level, procurement laws preclude agencies and building managers from engaging in long-term (that is, greater than one year) contracts for services. This procurement policy serves as an absolute barrier to ESCO projects regardless of the potential energy savings or support by government facility managers.

Additional barriers to implementation of energy efficiency projects in the public sector include:

- Insufficient information and expertise about energy efficiency technologies, products and practices among government facility managers;
- Separation of functions between the facility management and procurement departments;
- Rigid procurement practices that do not allow (or appear to allow) life-cycle costing, services procurement, multiyear contracting or other mechanisms to encourage the adoption of energy efficiency equipment and systems;
- Lack of access to multiyear financing, either through budgeting or appropriate financing, for typical three- to five-year energy efficiency projects; and
- Lack of incentives to promote energy savings projects, since energy costs are budgeted centrally, but accounted as an expense to each government facility. As a result, if energy costs are reduced by an energy efficiency project, the local facility manager is not allowed to retain operational savings for other purposes. Instead, the facility budget is reduced in the next year.

Untested local contract law on performance-based contracting for ESCO projects creates risks that an ESCO or its lenders are typically uncomfortable assuming. If the ESCO or lender cannot get comfortable with this risk, it will typically require substantial cash down payments or other forms of collateral from the customer to ensure its financial protection on the project.

A final major barrier for an ESCO, entering a nascent market, is the lack of adequate sales, financial and energy engineering experience in the local market to expeditiously develop and implement performance projects. These skills are particularly specialized to the ESCO's performance-based business model, which requires individuals who are highly talented in the technical, financial and legal aspects of selling and structuring energy savings projects.

## **Commercial Lending**

Mexico's financial market is dominated by risk-averse, local commercial banks that finance almost exclusively on a balance sheet basis. As mentioned above, none of the banks in Mexico is willing to recognize energy savings as collateral, and is generally unfamiliar with energy savings concepts and unwilling to fully engage this sector until there is sufficient deal flow to justify the costs of developing special financial products.

The banking sector in Mexico has experienced tremendous changes in the past 15 years. In the early 90s, the sector was quickly privatized and liberalized, and financial intermediation grew at a fast pace. The 1994 financial crisis caused massive losses for banks and the government put in place a rescue package over several years, with a cumulative cost in the order of US\$64 billion, or 13 percent of the gross domestic product (GDP) in 1999.

Since 1996, reforms have been steadily implemented, improving most aspects of how banks operate and compete in Mexico.

Nevertheless, in 2001, a World Bank study found that bank credit extended to the private sector amounted to less than 20 percent of the GDP in Mexico, compared to an international average of 136 percent.

After years of relative stagnation, bank lending in Mexico has very recently become more dynamic. Private sector bank financing slightly declined in 2003-04, measured as a share of GDP, this figure is affected by the fast write-off of bad loans. However, from the end of 2003 through mid-2005, commercial bank private lending increased at an annualized rate of about 26 percent, compared to an annual growth rate of 8.5 percent in 2000-03. Notwithstanding this growth in lending, as of March 2005, the total commercial bank lending in Mexico as a share of GDP was less than half the Latin American average.

Although approximately 90 percent of Mexico's banking industry is now foreign-owned, Mexican banks have failed to develop broad-based lending programs and continue to serve a relatively small and elite group of companies, leaving medium and small companies with limited credit access to commercial lenders. The historic shortage of bank credit and high financing costs has put Mexico at a disadvantage in relation to its global competitors, and has inhibited lending to local start-up ESCOs in Mexico.

As Figure 4.1 indicates, the cost of capital in Mexico has been declining recently from the highs of the summer of 2005 and is now at levels approaching 2004 interest rates. This is good news for energy efficiency projects as reductions in financing costs will make more projects economically viable.

Local bank credit evaluation procedures and policies are not as sophisticated as U.S. lenders, and in the absence of a fully mature credit rating system, the differential in interest rates is relatively flat. Nevertheless, there is a discernible

12.00% 10.00% 8.00% 6.00% 4.00% 2.00% 0.00% 0.00% 0.00% 0.00% 0.00%

Figure 4.1: Mexico: Commercial Bank Lending Rate

Source: Mexican Central Bank.

difference in rates charged to borrowers based on their credit quality, and local ESCOs, with limited credit histories and limited years of operation, are likely to pay higher interest rates than well established companies.

Taking advantage of the reticence of Mexican banks, nonbank institutions have played a critical role in the intermediation of funds in the economy. Bank of Mexico data shows that nonbank lenders have increased their share of total credit from 35 percent in 1997, to 58 percent in 2002. Nonbank lenders such as retailers Elektra (appliances), Sears and car manufacturers expanded their credit operations, while banks showed an increased preference for government bonds and profit centers. In addition, financing by other financial intermediaries, mainly specialized nonbank intermediaries – known as Sofoles – and pension funds (through the purchase of commercial paper), expanded at a fast pace. These sources of capital, however, are not readily available to small enterprises or ESCOs.

Barriers to commercial financing of energy efficiency projects in Mexico can be assessed from two perspectives. Firstly, the local financial institutions perspective of energy efficiency projects and, secondly, the general financial conditions of local ESCOs that are seeking financing for energy efficiency projects.

In addition to a conservative lending environment, ESCOs in Mexico face particular challenges in obtaining financing for projects from local commercial banks. These barriers can be summarized as follows:

- Lack of understanding by financial institutions

   due to the lack of understanding of this market and the contracting characteristics (that is, performance contracts), the commercial banks consider it a risky business.
   This generally equates to above market interest rates and excessive collateral requirements.
- Lack of supporting collaterals by the ESCOs - commercial banks, in general, demand collaterals as a guarantee for the funding. The ESCOs, small/medium-size service companies in general, are most often unable to offer these guarantees. The greatest barriers to ESCO financing are not high interest rates - many projects have sufficient energy savings to carry this cost – it is the very restrictive collateral requirements of local banks. Virtually all Mexican banks limit their lending to balance sheet transactions. Under this approach, the energy savings generated by energy efficiency projects are not given any collateral value. This is a particular challenge for local, thinly capitalized ESCOs. This is compounded

by the fact that equipment in an energy efficiency project, due to the retrofit nature, pledged as collateral, is usually valued at 20 percent of the acquisition costs;

- Project size limitation the average project size of an ESCO project is too small in relation to the transaction costs, which serves as a deterrent for financing; and
- Most commercial banks are not familiar with the intricacies of financing energy efficiency projects and, therefore, have limited internal capacity to properly evaluate the risks and benefits of their design, nor to structure their financing in a way acceptable to the market.

## **Equity Investment Environment** in Mexico

Direct equity investments in Mexican ESCOs have been limited, and have come primarily from family and friends of ESCO company owners. Investors in private equity and venture capital seek to purchase interest in companies which have a potential of appreciation, which significantly exceed the returns available through investments in securities.

The principal source of equity investments has come from FE Clean Energy's Mexican affiliate, FLACES. The new Clean Tech Fund, with a focus on renewable and energy efficiency projects in Latin America, has not invested in ESCO projects in Mexico.

The core strategy of equity funds determines the selection of the invested companies, their stage of development and prospected sectors of the economy, among other items. Some characteristics of investment funds common throughout the world that have relevance for Mexican ESCOs are:

 Venture capital and private equity funds in general are incorporated in the form of closed-end funds. The funds have a predetermined duration, with provisions concerning an "investment period" and a subsequent period, for "disinvestment." ESCO projects typically have investment time frames that go beyond the typical equity fund mandates;

- The funds in general have specific mandates over sectors of the economy and/or stage of development of the companies to be invested, and carry out a business prospect within these parameters. There are only two equity funds active in Mexico with a mandate that includes investments in ESCOs and ESCO projects;
- In general, private equity investments need to be approved by an investment committee which represents the main investors. This process tends to extend the necessary term for carrying out the investments; and
- The venture capital funds, in general, focus their investments in companies with a potential for rapid growth as well as sound profit generation. The private equity funds, besides seeking companies with a sound potential for profit generation, may specialize in strategies such as investments in companies with financial difficulties, management buyout, mezzanine financing, and so on, and so forth. The ESCO industry in Mexico has not shown sufficient growth to attract financing from these sources.

Barriers to equity financing of ESCOs in Mexico can be summarized as follows: ESCOs are seen as companies in the services sector. In general, equity fund managers are predisposed against investments in services companies. There is a perception, widespread throughout the industry, that services' companies tend to grow at a slower rate than companies that commercialize products. There is also a perception that service companies, due to lower market entry costs, suffer greater pressure on their profit margins, and that gains in economies of scale are not easily practicable.

The tax burden on payroll in Mexico is extremely high, causing many small- and medium-sized services companies to operate informally, hiring employees as service providers, which gives rise to significant contingencies. Such contingencies frequently make the investment of equity funds untenable.

The cost of capital of equity funds is very close to the average return of energy efficiency projects. Without leveraging the invested capital via debt, in a manner to reduce the average cost of the capital employed, the equity investors will continue to be reluctant to enter the sector. The difficulty in raising finance via debt for projects has been, and continues to be, the greatest impediment for the growth of equity investment in ESCOs and energy efficiency projects in Mexico.

## **Utility Programs**

FIDE is the single largest supplier of credit in Mexico for energy efficiency projects and products. It provides financing under a number of programs with different terms and conditions. A selected summary of these programs is provided below:

## Electric energy savings projects in corporate groups and companies that are representative of industry with intensive energy consumption.

- Companies with electric energy demand above 3,000 kW:
  - Maximum loan amount Mex\$5,500,000; and
  - FIDE finances 50 percent of the project investment.
- Companies with electric energy demand from 1,000 to 3,000 kW:
  - Maximum loan amount Mex\$2,000,000; and

FIDE finances 50 percent of the project investment.

## Projects of electric energy savings in companies with high consumption and recovery of financial cost

- Companies with demands above 1,000 kW:
  - Maximum loan amount Mex\$2,000,000.
- Companies with demands below 1,000 kW, but above 300 kW:
  - Maximum loan amount Mex\$750,000.

Almost 100 percent of the cost will be financed when the measures are implemented. The maximum term to cover the loan are 12 quarterly fixed payments with an interest rate of the commercial bank's average cost of funds (CCP)+3 at the moment – in which FIDE authorizes the project.

## Electricity energy savings projects in corporate groups and industrial companies with intensive energy consumption:

- Corporate Group:
  - Maximum loan amount Mex\$5,500,000;
  - At least three companies of the group should be included, with a demand above 1,000 kW; and
  - FIDE finances up to 50 percent of the total cost of the projects with an interest rate of CPP+3.
- Companies with electric energy demand above 1,000 kW:
  - Maximum loan amount Mex\$2,000,000; and
  - FIDE finances up to 60 percent of the total cost of the project, and can include the cost of the energy audit, with an interest rate of CCP+3.

- Companies with electric energy demand below 1,000 kW.
  - Maximum loan amount Mex\$500,000;
     and
  - Same as the case above, financing reimbursement will take place in eight quarterly terms, calculated according to the simple payback period.

Installation of electric energy savings equipment in new buildings: This program is designed to promote subcontracting companies to install in new buildings more efficient equipment and systems, even though they have a higher price:

- Mex\$1,500,000 per project;
- The interest rate will be charged over unpaid balances, and will be fixed and equal to the average percentage costs at the moment that FIDE authorizes the project plus 3 points;
- Users are: Hotels, restaurants, retail and self-service stores, educational facilities, hospitals, buildings and service provider companies;
- Equipment includes: air conditioning equipment, heating systems, fluorescent lamps T-8 and T-5, electronic ballasts, refrigeration systems, automation and control systems, aluminum reflectors, compact fluorescent lamps, high efficiency motors;
- Equipment subject to financing must have to be approved by FIDE; and
- Financing is up to two years (eight quarterly payments).

Electric energy saving projects in commercial and service establishments, with financial cost recovery: This program provides the use of commercial financing sources to develop feasible electric energy savings projects:

- Financing of 100 percent of the measures application cost, with a limit of Mex\$1,500,000;
- The interest rate will be charged over the unpaid balances, and will be fixed and equal to the value of the CCP at the moment in which FIDE authorizes the project, plus 3 percentage points;
- In the case of chains with more than 50 facilities, a minimum of 10 projects can be developed simultaneously as long as the user provides at least 50 percent of the total project cost; and
- Financing is for up to three years (12 quarterly payments).

## Replacement of air cooling systems (chillers):

This program is designed to achieve electric energy savings through the replacement of air cooling equipment with chilled water (chillers):

- Financing available up to Mex\$1,800,000 per project;
- The interest rate that will be charged is the CCP+3 fixed annual over the unpaid balances;
- Type of users: Chains and independent users of hotels, hospitals, department and self-supply stores, educational facilities, buildings and service provider companies, that have cooling equipment of chilled water (chillers) that use refrigerants that do not harm the ozone layer;
- Financing is up to three years (12 quarterly payments); and
- The user will reimburse the financing provided by FIDE in a term no greater than 36 months.

While the FIDE program has been highly successful in particular areas, Mexican ESCOs

have not fully utilized FIDE programs to date for a variety of reasons: ESCOs generally believe the administrative and reporting requirements are overly burdensome and that since the amount of funding provided for each project is not sufficient to cover all of the project costs, it does not often justify the time and expense of compliance with FIDE's regulation. Also, FIDE only is able to finance electric savings technologies, which eliminates a significant amount of the thermal savings opportunities in Mexico's industrial sector from reducing gas, coal, fuel oil and other fossil fuels in their manufacturing processes.

## **Supplier Credit**

Although supplier credit is available to ESCOs in Mexico, it is not broadly utilized by Mexican

ESCOs, and is limited primarily to foreign suppliers, typically, therefore, involving currency exchange risk. Optima is the only Mexican ESCO that has utilized supplier credit on a regular basis and has effectively incorporated it into its project financial model.

Supplier credit is more commonly utilized by individual companies purchasing foreign technology, but has the following associated shortcomings: (1) terms of financing are not usually transparent to the buyer; (2) suppliers will seek to oversize their product to client needs; and (3) optimum integration of technology into a system of operations can be sacrificed. The utilization of supplier credit through ESCO projects provides the best integration of technology for the customer.

# Innovative Financial Structures – Pilot Projects

In an effort to establish SPE structures for public and private sector projects, the ESMAP team spent considerable time attempting to identify potential energy efficiency projects for financing. This effort required extensive outreach, including consultation with local and international ESCOs, industrial associations, industrial park managers, state and local government officials and equipment suppliers. These discussions initially focused on identification of potential projects to pool under as SPE for financing, and then moved to discussions regarding an appropriate pooling agent to run the SPE.

## **Public Sector SPE Pilot Project**

In the public sector, efforts were focused in the state of Nuevo León, which is known for its innovative approach to government services and interest in energy efficiency improvements in the public sector. After exploration of a number of possible agents for bundling local projects like the integrated system for the ecological management and processing of waste Sistema Integral para el Manejo Ecológico y Procesamiento de Desechos² (SIMEPRODE), a regional government agency of the State was identified as a key candidate for this function.

SIMEPRODE was initially established to engage in regional solid waste management, and was

the government agent that facilitated the landfill methane recovery project with the World Bank Prototype Carbon Fund in 2005.

The management of SIMEPRODE was familiar with the bundling concept, and the potential of energy efficiency projects. It also had relationships with local governments in the region. SIMEPRODE representatives initially approached the NADB seeking financing for 51 municipal street lighting projects in the state. Representatives of NADB then approached the ESMAP team seeking technical, financial and legal assistance in establishing a pooled financing structure for this initiative.

NADB has expressed an interest in financing energy efficiency projects in the U.S./Mexico border region over the last two years. NADB was established by Acts of Congress in Mexico and the U.S. as a part of the NAFTA. NADB's mandate is to finance environmental projects within 300 km of the U.S./Mexico border. While NADB initially focused on water and other municipal infrastructure projects, it has determined that energy-related projects are deserving of attention, and within its investment charter. NADB officials felt, however, that each energy efficiency project was too small to justify the time and expense of a full NADB review and approval on an individual basis, but that

<sup>&</sup>lt;sup>2</sup> Integrated System for the Ecological Management and Processing of Waste.

establishing a credible project pooling agent would facilitate NADB financing.

To help advance the 51 municipal street lighting projects proposal, SIMEPRODE conducted a pilot project in the city of Allende in October-November 2005. The pilot project involved installation of new street lighting technology for 10 separate street lighting circuits. Following the completion of this work, CFE conducted a validation study of the pilot project, and confirmed that levels of savings ranged at a minimum of 25 to 35 percent. A separate illumination study was commissioned and found that street lighting had improved 100 percent over previous levels.

The CFE study allows SIMEPRODE to use the approved technology and it confirms (but does not guarantee) that 25 to 35 percent savings can be achieved from the installation of new street lighting equipment, helping to address the credibility issue associated with energy efficiency projects. The report will be used for discussions with all other municipalities in the state.

Based on a number of meetings and discussions with SIMEPRODE, NADB and state representatives, it was initially decided that the financing would be organized through a trust or "fideicomiso" structure.

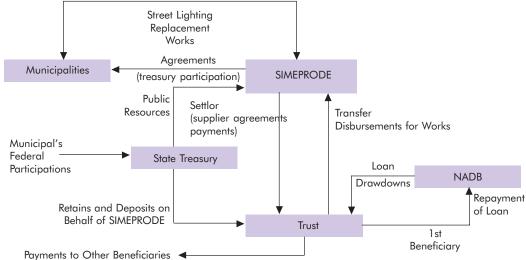
As stated previously in this report, a SPE can take many forms. In this case, the SPE will be a trust, or "fideicomiso" established by the state with SIMEPRODE serving as the trustee agent. In this structure, NADB would provide a loan to a "fideicomiso" which would, in turn, execute and fund the 51 municipalities street lighting projects.

SIMEPRODE would be the administrative agent of the "fideicomiso" and would implement each street lighting project. The local governments would sign an agreement with the trust to repay the costs of the project. To credit enhance this structure, each municipal government would pledge transfer payments from the state government as collateral.

Details of the financial structure are provided in Figure 5.1.

Under this arrangement, the financing of the 51 projects would not appear as debt on the state's budget. The financial structure is designed to allow the state to facilitate financing of the projects without the loan appearing on the state's balance sheet.





The total estimated project costs will be approximately US\$30 million. NADB will finance 80 percent of the total costs, and the state will provide the balance in the form of grants to the local governments. No equity financing is required in this structure which will help keep the total costs of financing at lower rates.

A more detailed discussion of the financial structure and legal architecture of this financial model is provided in a companion report entitled "Special Purpose Entity Financing of Energy Efficiency Projects in Mexico: Financial Structures and Legal Architecture."

## **Private Sector SPE Pilot Project**

The private sector SPE will be structured rather differently from the public sector SPE.

While the public sector SPE is modeled on a government agency financing structure which has been extremely successful in the United States and in some emerging economies, the private sector SPE takes a more corporate form with equity investor involvement.

The private sector SPE will be a limited liability company established under the Mexican law. This SPE serves as the focal point of the financial structure. Under the financial plan, the SPE borrows funds from domestic or international lenders (NADB for purposes of this example) and uses the loan proceeds to purchase energy savings contracts from local ESCOs or engineering firms. The SPE will acquire the collection rights of each ESCO project through a purchase/assignment agreement.

To provide lenders to the SPE with additional assurance that payments from each project acquired by the SPE will be used to repay loans, a trust or "fideicomiso" is established to hold all contracts purchased by the SPE. The SPE, through an assignment agreement with the trustee, transfers all contracts (which are considered assets), insurance policies, warranties and other assets to the trust. The trust

will collect payments under the various contracts, and pay the lenders directly. The trustee will make payments for operation and maintenance expenses, contributions to a debt service reserve fund and other contractual obligations, before payment are made to the SPE.

The SPE would be managed by highly experienced experts in energy efficiency finance. It will conduct initial project intake evaluations and assess the technical and financial viability of each project proposed for financing. As such, the SPE will have the in-house technical and financial expertise in energy efficiency project financing that local banks lack.

To provide lenders to the SPE with additional financial comfort, the managers of the SPE would be required to make an equity investment in the SPE equal to 30 percent of the total of projects financed. The SPE management will, therefore, be in a first loss position on all projects financed. The SPE will bundle industrial energy efficiency projects together and present them as a package to NADB. Standard operating procedures, transaction documents and underwriting criteria will be developed for use by the SPE.

A flow of funds of this financial structure is provided in Figure 5.2.

A diagram of the legal agreements necessary to build an SPE structure is provided in Figure 5.3.

Lenders to the SPE will look at the legal architecture and all transaction documents before investing or lending to the SPE. This will include the loan or lease agreements for energy efficiency projects, the underwriting criteria, project intake protocols and evaluation procedures, disbursement policy, sanction procedures and post-project evaluation policy. All legal and transaction documents must be fully prepared for lender review before funding is provided.

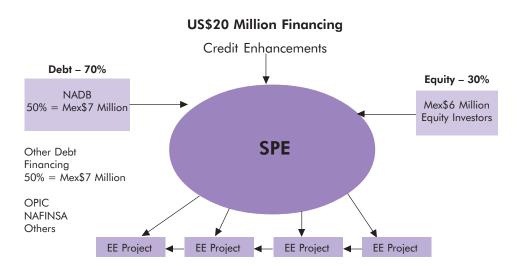
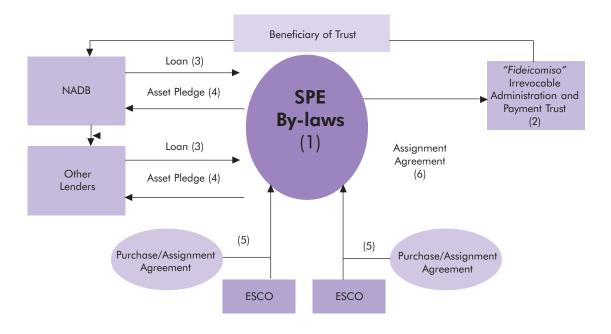


Figure 5.2: SPE Finance Structure/Flow of Funds

Figure 5.3: SPE Legal Documents and Agreements



To avoid conflicts of interest or the appearance of favorable treatment, SPE activities would be limited to the purchase of existing ESCO contracts. It will not compete with local ESCOs in the delivery of services and would not independently develop energy efficiency or ESCO projects in Mexico.

The SPE will assign all mortgages, insurance policies, equipment warranties and bonds to the NADB and colenders.

Based on discussions with NADB officials and local ESCOs, preliminary underwriting criteria are being developed. An outline of the preliminary criteria are provided below:

## **Project requirements**

- All projects must be based on an investment grade energy audit. The SPE will provide standard acceptable energy audit guidelines;
- All projects must have a simple payback period of five years or less, pursuant to standard audits;
- Maximum maturity of SPE financing will be seven years;
- Equipment installed in company facilities will be pledged as collateral to the SPE; and
- All equipment must involve proven technology.

## General information and company references of project beneficiaries

- Background Data. Concise description of company origin, legal status, ownership, facilities and business activities;
- Financial Statements. Independently audited balance sheets, income statements and cash flow statements for the last three fiscal years;
- Bank Reference. A creditor bank reference;

- Credit Report. A credit report (such as Dunn & Bradstreet) prepared within six months of the application date to the SPE;
- Credit report and creditor bank references contain no material adverse information;
- Audited statements adequately disclose financial conditions and were prepared according to accounting principles that afford a reasonable basis for reliance on the information provided;
- Auditor's statement is either: (a) unqualified or (b) qualified with respect to amounts and circumstances not considered material to creditworthiness;
- Positive operating profit and net income in each of the last two fiscal years;
- Total liabilities do not exceed 1.75 times tangible net worth at the end of the last fiscal year; and
- SPE exposure does not exceed 40 percent of tangible net worth at the end of the last fiscal year.

# 6. Current Status of Pilot Projects and Next Steps

#### **Public Sector SPE**

## Resolution of outstanding legal issues

Projects to be financed by the public sector SPE have been identified, SIMEPRODE had been identified as the implementing agency for the 51 street lighting projects, and a trust or "fideicomiso" agreement has been drafted to facilitate NADB lending for these projects. However, a number of issues remain outstanding as to the relationship of the state of Nuevo León to the project structure which must be resolved before projects move forward.

Local counsel retained for this project, representatives from NADB and SIMEPRODE officials have begun discussions of this issue and are seeking a means by which the state can help create the "fideicomiso" without creating a debt burden on the state. This will require assessment of state law and the Mexican legal framework for municipal finance. Current reading of the law indicates that if the "fideicomiso" is created by the state, the debt of the trust would be considered debt of the state. While state officials are willing to support this project, they are not willing to put the debt on their balance sheet.

As an alternative, SIMEPRODE could establish a "fideicomiso." Under state law, this would not create a debt burden for the state. The challenge here involves SIMEPRODE's charter and legal authority to operate. While SIMEPRODE could establish a trust, it must do so within the limits of its legal authority to operate. A review of

SIMPEPRODE's charter indicates that it does not have the specific authority to engage in projects in the electricity sector, including implementation of energy efficiency projects.

A number of potential solutions are under consideration which include:

- Amend SIMEPRODE's charter;
- Identify another state agency with the necessary legal authority to engage in energy projects that could establish the trust; or
- Creation of a special ESCO.

The creation of an independent ESCO for the purpose of implementing the local street lighting projects was considered as an off-balance sheet option to the state. While this would resolve the debt burden issue, it raises serious procurement issues. An independent ESCO would have to engage in competitive bidding for each local government street lighting project. Under the SIMEPRODE structure, the agency could be retained for the implementation of the street lighting projects without competitive processes. This is possible because SIMEPRODE, an agency of the state, is exempt from competitive bidding procedures for its services.

If an ESCO is created as the SPE financial intermediary, there would be no assurance that it would be able to win all competitively bid projects. This would defeat the purpose of the ESCO option, as NADB would not know what

level of projects could be bundled by the SPE/ESCO.

Additional discussions are moving forward on this topic and will have to be resolved before the final structure is put in place.

## NADB approval of a loan agreement

SIMEPRODE has filed a loan application with NADB which officially begins the NADB review process. In addition, NADB officials, in accordance with the guidance provided by the Board that NADB seek case-by-case authorization to proceed with the development of studies and projects in new sectors, has requested and received authorization from the Board to proceed in developing the Nuevo León project.

At this time, the lender and the agent for the SPE facilitator are fully authorized to advance the loan process. This process will take time as NADB's project review procedures require public hearings and independent environmental analysis.

## Legal structure for the SPE financing arrangement

The "fideicomiso" has been drafted for the 51 street lighting projects, pending the resolution of the legal issues described above.

## Preparation of local projects

SIMEPRODE continues to work with local officials on the street lighting projects. Technology for the projects has been verified by CFE, and the certified savings from the pilot project in Allende are being provided to each local mayor. Consultation with local officials will move forward simultaneously with the NADB loan approval.

#### **Private Sector SPE**

### **Outstanding legal issues**

There are no outstanding legal issues to be resolved in the private sector SPE structure other

than finalization of the drafted transaction document. Modifications to the legal agreements will be made as the SPE project moves forward, and as NADB official review these documents.

## NADB approval of loan agreement

An application for financing has not been filed with NADB for the private sector SPE, as NADB is seeking the involvement of a U.S. ESCO that can provide a performance guarantee for the pool of projects to establish the SPE and "fideicomiso." This will remove performance risk for NADB and make Board approval easier. Discussions with U.S. ESCOs is active and a selection of an ESCO should be made in the near future.

## Legal Structure of SPE Financial Arrangement

All necessary documents for the SPE have been drafted and include:

- Draft SPE by-laws;
- Terms of the "fideicomiso," or trust agreement;
- Asset pledge agreement between SPE and NADB/lender;
- Assignment agreement between local ESCO and SPE; and
- Assignment agreement between SPE and trustee.

Each of these documents will be subject to review and modification as negotiations between NADB and the SPE move forward. They have been drafted for preliminary discussion and do not represent binding agreements as to their terms.

### Preparation of local projects

Three potential groups of projects are under preparation for possible inclusion in the first set of pooled energy efficiency projects for the SPE. Mexicali. The San Diego Regional Energy Office is currently conducting preliminary diagnostics energy audits of seven industrial sites in Mexicali funded by NADB. Four additional set of studies will be prepared by the same company with funding from the California Energy Commission. These audits will be used for discussions with industrial site owners to assess their interest in implementing energy efficiency investments at their facilities.

Reynosa. Preliminary energy audits of six industrial sites in the PEMSA industrial park have been performed by Vince and Brown Associates under contract to the California Energy Commission. These studies have shown sufficient potential energy savings to justify financing. The owner of the PEMSA industrial

park is the city of Reynosa which contracted out the management of the park to a private operator. The newly elected Mayor of Reynosa has expressed an interest in moving this project forward and has expressed a willingness to provide support for the project.

Monterrey. The local Mexican ESCO, Direm, and a U.S. firm, EPS, have entered into a JV arrangement for the identification and implementation of energy efficiency projects in the Monterrey region. Their general approach is to work with existing Direm clients that have implemented power factor projects and now seek to implement more comprehensive energy efficiency projects. Direm currently has approximately 30 projects of this nature in place which is serving as the focus of these discussions.

## 7. Lessons Learned

A project of this nature, which calls for the creation of a financial intermediary to finance a pool of energy efficiency projects, requires the identification and extensive cooperation of a number of key players including potential lenders, project developers, potential project aggregators and government officials. During the course of this project implementation, key players initially identified for cooperation withdrew from the process due to potential conflicts of interest or lack of capacity. To avoid the appearance of a conflict of interest arising from the concerns that certain participants retained to assist in the design of the SPE may also benefit from the SPE, parties that could potentially benefit from the SPE in the future decided to withdraw from the project. This required a search for new key players and a delay in project implementation. Potential conflicts of interest should be carefully considered prior to project implementation and due diligence review of potential key players should include a review of their legal capacity to undertake a particular role in the financial structure.

A project of this nature requires patience, flexibility and perseverance. Patience is required; the ESMAP team was not in control of the decision-making process of all parties involved. In many cases, the ESMAP project was captive to delays while key players engaged in decision making. Flexibility is required; unexpected developments changed the nature and condition of key players in the process. Perseverance is required; all the key players in the process

were involved in other core activities during project implementation.

Identification of energy efficiency projects for financing through an SPE is critical to project success. This aspect of the project was time-consuming as key players, initially identified as having the necessary deal flow for the SPE, withdrew from the project. The project was also hampered by the lack of resources to fund preliminary energy audits of potential projects. This was funded either by project developers or interested third parties. The California Energy Commission and the San Diego Regional Energy Office Energy were very helpful in providing resources for preliminary energy audits of potential projects. However, the consultants hired through this process were not accountable to the ESMAP team. As a result, the ESMAP team could not influence the timing or the quality of these studies. Future efforts of this nature should include funding for project identification and initial audits.

Although SPE financing was not in place by the time this ESMAP activity terminated, tremendous progress was made toward that end. Given the continued interest of NADB, SIMEPRODE and project developers, we are confident that the effort will continue beyond the life of the activity, and are hopeful that the financing will be successful.

The time frame for an activity of this nature can be extensive relative to an ESMAP study of market barriers, or other energy policy issues. As a reference point, the Clean Energy equity fund that obtained Board approval from the Multilateral Investment Fund in 2000 did not make its first investment until 2005. The time frame from equity fund inception to first financial investment can typically take two or more years. A similar time frame should be expected for the creation of a SPE debt financing program.

Selection of an SPE operator is critically important earlier in the process of establishing a SPE structure, as the design of the SPE operation should be undertaken with the operator's extensive input. This created a unique conflict of interest issues for the ESMAP activity. Selection of an SPE operator through competitive bidding at the start of the project did not appear to be a useful process because selection of an operator without a defined, detailed structure in place would have been extremely complicated and time-consuming. Bidders would not have known the full nature of their financial responsibilities and duties until the SPE documents were completed.

Selection of the SPE was left to the NADB. In this regard, a number of established Mexican and U.S. ESCOs were consulted on this issue and asked to bring forward projects for pooling as an expression of interest. No projects have been brought forward to the ESMAP team's or NADB's attention by Mexican or U.S. ESCOs.

The SPE conflict of interest issue could also be resolved by making all SPE transaction documents available for broad dissemination. The SPE operator selected for implementation would not have proprietary rights to these documents. The operator would, however, be subject to first round funding and operations risk. All transaction documents would be available for broad dissemination, removing any special advantage to the first SPE operator. As a result, the ESMAP team was unable to partner with a potential SPE operator early in the process without creating the appearance of special treatment and a competitive bidding for an SPE operation at the start of the project. Future projects of this nature should address this issue before the project begins.

One possible solution to this issue is the selection of an SPE based on initial interest expressed by qualified candidates.

JVs between Mexican and U.S. ESCOs would be one means of addressing technology and financial risk and accelerate the energy efficiency market. Based on discussion with ESCOs in both countries, these efforts have not moved forward due to cultural, financial and control issues. It was not the ESMAP's objective or mandate to help negotiate these difference as it was believed that the private market will find the most appropriate means of cooperation.

## Annex 1 SPE By-laws

By-laws
of
, S. DE R.L. DE C.V

#### FIRST CHAPTER

## Name, Domicile, Purpose, Duration and Nationality

FIRST ARTICLE. BY-LAWS. The association of limited liability of variable capital will be governed by the following by-laws. In the event that the by-laws do not cover a particular matter, the provisions of the General Law of Business Associations and Foreign Investment Law shall apply.

SECOND ARTICLE. NAME. The name of the association shall be "\_\_\_\_\_" and it shall always be followed by the words "SOCIEDAD DE RESPONSABILIDAD LIMITADA DE CAPITAL VARIABLE" (Limited Liability Association with Variable Capital) or its abbreviation thereof, "S. DE R. L. DE C.V."

THIRD ARTICLE. DOMICILE. The association's domicile shall be in Monterrey, Nuevo León, Mexico, though it may establish other agencies, branches or representative offices elsewhere within or outside the Mexican Republic and may choose conventional domiciles.

**PURPOSES.** The association's purposes shall consist of the following activities: 1. To carry out any commercial activity related to the development, implementation, consulting and providing all the necessary economic resources for the execution of any kind of energy efficiency

projects executed directly or through a third party, including but not limited to the creation of any kind of property, business, guarantee and administration trusts for investing in any kind of energy efficiency projects; planning, developing, implementing and finalizing and facilitating the access to this kind of projects to any person, partnership or corporation without the necessary or sufficient resources to develop an energy efficiency project; 2. To facilitate, develop, consult, provide the necessary economic resources, acquire the obligations derived from the energy efficiency projects set forth in Schedule A [CCN: it will be recommendable to include in this section the content of Schedule A, because such document, if left apart, will be a part of this by-laws and can only be changed with the formalities set forth in/by the amendment of by-laws], developed with persons, partnerships and corporations, in conformity with the laws, regulations, norms and other legislation that is applicable, including those in matters of foreign investment and environmental development (collectively the "energy project assets"); 3. Acquire, own, lease, transfer, sell, assign and, otherwise, deal with (a) energy project assets; (b) leases, loans and conditional or installment sale contracts, notes and security agreements related to energy project assets; (c) receivables and proceeds from energy project assets; and (d) interests in the items described in clauses (a) through (c) (items (a) through (d) being collectively called "Specified Assets"); and 4. Carry out all types of contracts, acts and activities whether of a civil, administrative, mercantile or any other nature in order to comply with the purposes mentioned above. The association shall not engage in any business or activity other than that set forth in this Section.

**NOTWITHSTANDING** any other provision of this document:

**Obligations and Indebtedness.** The association shall not incur indebtedness for borrowed money except as permitted under any instruments or agreements related to the activities set forth in the association purposes.

Maintain Separateness. The association shall: (i) at all times hold itself out to the public as a legal entity separate and distinct from the associates and their affiliates by, among other things, maintaining a separate telephone number, suite number, stationery, invoices and checks from such persons or entities and conducting business from office space that is separate from that of its associates (other than an associate to the limited extent required or appropriate in connection with its servicing or management of the Specified Assets); (ii) file its own tax returns, if any, as may be required under applicable law, to the extent not part of a consolidated or combined group filing a consolidated or combined return or returns, and pay any taxes required to be paid under applicable law; (iii) not comingle its assets with assets of the associates or their affiliates, or any other third parties; (iv) conduct its business only under its own name and hold all of its assets in its own name; (v) pay its own liabilities, debt and obligations solely from its own funds, and not pay from its assets any liabilities, debt, or obligations of others (provided that overhead for shared office space and other shared expenses may initially be paid by the associates or an affiliate so long as it is promptly allocated

fairly and reasonably among the association and other persons or entities sharing such space or expense); (vi) enter into all transactions on an arm's length basis and in those with affiliates or related third parties the association will have to comply with all applicable laws, regulations and treaties signed by Mexico for transfer pricing; (vii) not guarantee or become obligated for the debts of any other person or entity or hold out its credit as being available to satisfy the obligations of others; (viii) not pledge its assets for the benefit of any other person or entity, or make any loans or advances to any person or entity, except as contemplated or permitted or required by the association purposes; (ix) not acquire obligations or securities of its associates or affiliates; (x) promptly correct any known misunderstanding regarding its separate identity; (xi) maintain adequate capital so as to remain solvent in accordance with applicable Mexican laws; (xii) maintain its own deposit account or accounts with commercial banking institutions separate from those of any affiliate and not divert the funds of the association to any other person or entity or for other than authorized uses of the association; (xiii) take reasonable measures to ensure that if the association and any of its associates or affiliates have offices in the same location, there shall be a fair and appropriate allocation of overhead costs among them, and that each such entity shall bear its fair share of such expenses; (xiv) conduct its affairs strictly in accordance with this document, and observe all necessary and customary association company formalities, including (a) holding all regular and special meetings of its associates and managers (or obtaining written consents in lieu of such meetings) required under this document or the General Law of Business Associations to authorize association action, (b) keeping separate and accurate records of any such meetings and its actions, (c) adopting all resolutions or consents necessary to authorize actions taken or to be taken, and maintaining appropriate association records, including

written consents of associates, as applicable, to actions required to be approved by such persons or entities and copies of the minutes of meetings of the board (or written consent approving resolutions adopted by consents in lieu of meetings), and (d) maintaining accurate and separate books, records and accounts, including payroll and inter company transaction accounts; and (xv) not to consolidate or combine its assets with other entity's, liquidate, wind up, merge or sell substantially all of its assets without prior written consent of any lender that the association may have as allowed by the association purposes.

FIFTH ARTICLE. DURATION. The duration of the association will be ninety-nine (99) years, starting from its incorporation, and shall be automatically extended for another ninety-nine (99) years, unless otherwise specified by a resolution adopted by an extraordinary meeting of the associates.

SIXTH ARTICLE. NATIONALITY. The association is of Mexican nationality; all physical persons and/or entities of Mexican nationality or foreigner may participate; the founding associates agree and establish for future associates as follows: "All foreigners who, upon the association or at any later time, acquire an interest or a participation in the association, by said act done before the Ministry of Foreign Affairs are deemed to be Mexican with respect to each other, and toward the goods, rights, concessions, participation or interests owned by the association or with respect to the rights and obligations derived from contracts entered into with Mexican authorities and have waived the right to invoke the protection of their government. This waiver is made under penalty of forfeiting said interests, rights or participation to the Mexican Nation."

### **SECOND CHAPTER**

## Association Capital and Association Interests

**SEVENTH ARTICLE. CAPITAL.** The association capital is composed of a fixed and a variable

portion. The minimum fixed capital is Mex\$3,000.00 pesos (Three Thousand and 00/ 100 Mexican pesos), and paid by the associates. The variable capital is unlimited. The association interests representative of the association capital shall have two series, the Series "A" association interests are to be issued to Mexican associates; the Series "B" association interests are to be issued to foreign associates. The association interests representative of the fixed capital shall be the Series "A-1" and "B-1", respectively. The association interest representatives of the variable capital shall be the Series "A-2" and "B-2," respectively. The value of the contributions in kind shall be authorized and approved by the associates. No associate may have more than one association interest in the same series of the association capital. When an associate realizes a new contribution or acquires the totality or a fraction of an association interests from a coassociate, the value in the association capital shall be increased in the respective amount. The associates' meeting that authorizes the increase in association capital shall determine the characteristics and conditions of the said increase and the association interests that should be issued.

EIGHTH ARTICLE. CERTIFICATES OF CONTRIBUTION. The association shall issue certificates of contribution which shall not be considered as credit instruments. The transfer of association interests, provided they are authorized under the terms of the by-laws and do not imply liquidation of the association, shall be carried out through the execution of the corresponding agreement. The associates of this association of limited liability shall have a vote for each peso, national currency (Mex\$1.00 peso), contributed to the capital of the association.

**NINTH ARTICLE. REGISTRATION OF ASSOCIATES.** The association shall maintain a registration book, setting forth the name, nationality and domicile of each associate, as

well as the number of association interests issued to each associate. Any transfer of association interest made by the associates, provided they have been authorized under the terms of the by-laws, shall be registered in the said registry book, which entries shall be signed by the Sole Manager or the Secretary of the Board of Managers and/or a legal representative of the association who has general powers of attorney for acts of administration.

# TENTH ARTICLE. INCREASES IN CAPITAL AND TRANSFER OF ASSOCIATION INTERESTS OR CONTRIBUTIONS BY NEW ASSOCIATES AND RESTRICTIONS ON TRANSFERS OF ASSOCIATION INTERESTS.

The association's capital may be increased by a resolution from an extraordinary associates' meeting except in case of an increase in the variable part of the association's capital, which may be carried through a resolution at an ordinary meeting of the associates. In the event the capital is increased, as a result of a capital contribution proposed by a new prospective associate, the associates will have a preferential right to subscribe a portion of the increase of the capital stock in proportion to the number of interests they own. Such preferential right must be exercised within fifteen (15) working days from the date of notification of the resolution to increase the capital is given and the eventual admission of the new associate. The said notification must be sent either: (i) via personal delivery or (ii) via internationally recognized courier service. However, if at the time of voting, the total association capital is represented at the meeting, whether personally or by means of powers of attorney, the said time limit will commence on the date the meeting was held and the associates will be considered as advised of the resolution approving the increase in association capital at said time.

The association shall have a capital variations book in which it will record the increase or decrease in the social capital of the association and whose entries shall be signed by the President or the Secretary of the Board of Managers and/or by a legal representative of the association that has a general power of attorney for acts of administration.

In the event that any associate desires to transfer through a sale of their association interest, such transfer or sale shall require the unanimous consent of the associates of the association who shall have the right of first refusal to acquire the association interest being sold or transferred. Likewise, in the event of a admittance of a new associate into the association as a result of acquisition of a previously issued association interest or as a result of an association capital increase subscription, the associates' admission shall be conditioned upon the unanimous consent of the associates of the association under the terms of the applicable provisions of the General Law of Business Associations.

## THIRD CHAPTER

## **Administration**

**ELEVENTH ARTICLE. ADMINISTRATION OF** THE ASSOCIATION. The administration of the association will be directed by the Board of Managers. The Managers shall be appointed by an ordinary associates' meeting. The sole manager or managers may or may not be members of the association and once appointed, continue their position until the person designated to substitute them takes charge of the position. In addition, the association may appoint a manager who acts as the assistant secretary without a right to vote. The Board of Managers shall receive compensation, if there is some that the general ordinary associates' meeting determines. The managers may be removed at any time by the ordinary meeting of the associates.

To the fullest extent permitted by law, the Independent Manager shall, in acting or otherwise voting on the matters referred to in the Fourth, Twelfth, Thirteenth and Fifteenth Article hereof: (i) consider only the interests of the association and the association's creditors; and (ii) not be required to act in the best interest of the associates. The Independent Manager shall not at any time serve as a judicial inspector, auditor or trustee in bankruptcy for any affiliate of the association. No resignation or removal of the Independent Manager, and no appointment of a successor Independent Manager, shall be effective until a successor has accepted his or her appointment as an Independent Manager by a written instrument. If a vacancy in the position of Independent Manager occurs, the associates shall, as soon as practicable, appoint a successor Independent Manager. The replacement for an Independent Manager must also be an Independent Manager, unless there remains at least one Independent Manager on the Board.

"Independent Manager" means a Manager that: (A) is not and has not been at any time during the preceding five years (i) a stockholder, director, officer, employee, manager, or partner of The Andersons, Inc., or any affiliate of The Andersons, Inc. (other than a Special Purpose Affiliate), (ii) a direct or indirect holder of any voting securities of The Andersons, Inc., or any affiliate of The Andersons, Inc., (iii) a creditor, supplier, contractor or any other person who derives any of its purchases or revenues from its activities with any of the associates or any of their affiliates, other than solely for compensation for its services as Independent Director, or (iv) a member of the immediate family of any stockholder, director, officer, employee, partner, customer, supplier or contractor of any of the associates or any of their affiliates; and (B) has (i) prior experience as an independent director for a corporation whose charter documents required the unanimous consent of all independent directors thereof before such corporation could consent

to the institution of bankruptcy or insolvency proceedings against it or could file a petition seeking relief under any applicable federal or state law relating to bankruptcy; and (ii) is employed with one or more entities that provide, in the ordinary course of their respective businesses, advisory, managerial or placement services to issuers of securitization or structural finance instruments, agreements or securities.

The Managers of the association, as the case may be, shall jointly have the following powers and authorities to administrate the association:

**GENERAL POWER OF ATTORNEY FOR ACTS** OF OWNERSHIP. With all the general and specific authorities under the terms of the third paragraph of Article 2554 of the Civil Code for the Federal District, including the corresponding sections in the Federal Civil Code and the other current Civil Codes for the States of the Mexican Republic. The attorneys in fact designated herein shall have all the necessary authorities to sign any type of document related to the transfer of any good belonging to the association, including, but not limited to, the execution of any act related with the transfer of any asset of the corporation, including, but not limited to, the execution of any type of public deed related with the transfer of the property of any asset of the corporation, as well as any type of request, notification, declaration or document related with the above indicated.

GENERAL POWER FOR ACTS OF ADMINISTRATION. All the general and specific powers which require a special grant, in accordance with the law, under the terms of the second paragraph of Article 2554 of the Civil Code in force of the Federal District, and the corresponding sections of the Federal Civil Code in force and other Civil Codes in force in all the states of the Mexican Republic, as well as grant and subscribe all types of public and private documents, civil, renouncements and declarations of civil nature, mercantile,

administrative or any other kind in accordance with the law, to sign and subscribe all types of tax declarations, including the Sistema de Ahorro para el Retiro (SAR), the social security, retirement system, the Instituto del Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT), the public housing authority, and that which corresponds to federal or local taxes of any sort, including the payroll tax. The powers will include those to carry out all types of petitions, consultations, measures or solicitations before all types of authorities, of any type, whether they be federal, state and/or municipal, including the solicitations for the refund of the value added tax. In addition, they shall have the authority to request all types of permits and/or authorizations before any governmental agency, the import and export permits and related permits, as well as any types of measures and transactions of customs before the Department of Finance and Public Credit and any other agency, whether federal, state or local.

GENERAL POWER OF ATTORNEY FOR LAWSUITS AND COLLECTIONS. All the general and special powers that require a specific grant, in accordance with the law and under the terms of the first paragraph of Article 2554 of the Civil Code of the Federal District, and the corresponding sections of the Federal Civil Code and other Civil Codes in force in all the states of the Mexican Republic, to exercise said power before all types of persons and judicial and administrative authorities, whether such be civil, penal, federal or local labor authorities, especially to desist from lawsuits, bind in arbitrations, articulate and dissolve positions, challenge judges, accept transfer of assets, receive payments and issue receipts and cancellations, prosecute civil, mercantile, tax or administrative actions and any other type of civil or criminal actions, including the presentation and/or desist of Amparo lawsuits in representation of the association, make all types of denouncements, claims, accusations or

claims of any type, to represent the association in any penal process, to be coadjutors to the public ministry, to grant pardons to the accused, when such is appropriate, to present evidence in penal proceedings, in accordance with that set forth in the Ninth Article of the Code of Penal Procedure for the Federal District, and the corresponding articles of the penal code of the states of the Mexican Republic and of the Federal Code of Penal Procedures.

#### SPECIAL POWER OF ATTORNEY FOR LABOR

MATTERS. The named individuals will have the powers of employer representation in accordance and for the purposes of Articles 11, 46, 47 and 134, Section III, 523 and 692, Sections I, II and III, 786, 878, 880, 883 and 884 of the Federal Labor Law; the power that is granted and the employer representation which is conferred will be exercised in accordance with the following powers which are enumerated for descriptive, but not limitative purposes, being able to appear in front of or before the unions with which there exists an executed collective bargaining agreement; before or in the presence of those considered confidential workers and in general for all employer/employee matters, and to exercise before any of the authorities for labor and social services for the matters referred to in Article 523 of the Federal Labor Law; and also may appear before the Boards of Conciliation and Arbitration, whether such be local or federal, and to carry out the employer representation for the purposes of Articles 11, 46 and 47 of the Federal Labor Law and also for the legal representation of the association for the purposes of verifying its identity and capacity in suits or outside of such, according to the terms of Article 692, Sections II and III of the Federal Labor Law; they may appear at the labor trial for the evidentiary questioning of the employee, according to the terms of Article 787 and 788 of the Federal Labor Law, with the powers to arbitrate and eliminate positions and present the evidence at all times; they may denote the association domicile for receiving notifications, in accordance with the terms of Article 876 of the Federal Labor Law; they may appear in the capacity of the employer, with all the authority and legal responsibility necessary for the hearings, which are referred to in Article 873 of the Federal Labor Law, in the three phases of: conciliation, complaint and defense; admission of evidence, in accordance with the terms of Articles 875 and 876, Sections I and IV, 877, 878, 879 and 880 of the Federal Labor Law; and they may also attend the hearing on the admission of evidence according to the terms of Articles 883 and 884 of the Federal Labor Law; they may make settlements, execute compromises, make all types of decisions, negotiate and sign legal agreements, and they may also execute individual and collective labor agreements, as well as terminating or rescinding such agreements.

POWER OF ATTORNEY FOR EXCHANGE AND BANKING. Powers of attorney to: (i) execute, grant and subscribe all types of credit transactions, evidenced in public or private documents, as well as authority to subscribe, endorse, guarantee, collect, accept and, in general, negotiate negotiable instruments in accordance with the terms of Articles 9 and 85 of the General Law of Negotiable Instruments and Credit Transactions; and (ii) general power for banks to carry out, in the name of the association, all types of banking transactions and operations, open, administer and cancel all types of accounts and banking operations, including the power to instruct credit institutions concerning the authority to sign checks, to carry out deposits, withdrawals or endorsements in all types of bank accounts.

**TWELFTH ARTICLE. MEETINGS OF THE MANAGERS.** The managers will meet at the association's principal place of business, unless otherwise agreed by resolution of the majority. Resolutions of the Managers will be valid when

adopted by a majority. In the event of a tied vote, the President of the Board of Managers shall decide by casting his vote. Minutes of the meetings shall be recorded in the association's minute book and will be signed by the president of the Board of Managers and another manager will be entered in the book carried out for this purpose. If the President of the Board of Managers is absent from the meeting, it will be presided over by any other manager. In order to be able to establish an annual budget of expenses, investments and costs and the monthly contributions of the associates, the Board of Managers shall receive from the officers of the association documentation, receipts, invoices, budgets and all other documentation necessary in order to be able to determine the economic and financial conditions of the association. its budgets and association contributions. The associates shall have the opportunity to take resolutions that are within their corresponding competency.

Limitation on Actions. Without the prior unanimous consent of the Members and the Board of Managers (including each Independent Manager, at least one of whom must at the time be serving on the Board in such capacity in order for any such action to be taken), the association, associate, Manager or other person or entity on behalf of the association shall not: (i) commence any voluntary bankruptcy (as defined below), consent to any bankruptcy proceeding to be taken against it by any other person or entity or cooperate or take any association action in furtherance of any such action or admit in writing the association's inability to pay its debts generally as they become due, or to the fullest extent permitted by law, to take any action in furtherance of any such action; (ii) except to the extent required by law, dissolve or liquidate, in whole or in part; (iii) merge, consolidate, or reorganize with or into any other person or entity; (iv) convey or transfer all or substantially all of its properties and assets to any other person or

entity (except for the direct or indirect pledge or conveyance of Specified Assets in compliance with the association's purposes); (v) engage in any business or activity or incur any debt other than as expressly permitted in the Fourth Article; (vi) amend this Article or any of the first four Articles of the by-laws of the association; or (vii) so long as any Securities are outstanding, cooperate to amend, alter, change or repeal the definition of "Independent Manager." The association shall do or cause to be done all things necessary to preserve and keep in full force and effect its existence, rights (by-laws and statutory) and franchises.

"Bankruptcy" will be construed as defined by the Commercial Bankruptcy Law of Mexico ("Ley de Concursos Mercantiles")

## THIRTEENTH ARTICLE. RESOLUTIONS OF THE MANAGERS BY UNANIMOUS CONSENT.

Any type of resolution that requires the intervention of the managers, including those referred to in the contents of the Article above, may be taken without a meeting of the managers so long as a unanimous consent, in writing, of the resolution is reached. Whenever any notice is required to be given under the General Law of Business Associations, a waiver of such notice in writing signed by all the managers, whether before or after the time stated in the waiver, will be deemed equivalent to the giving of such notice.

**FOURTEENTH ARTICLE. LIABILITY OF THE MANAGERS.** Liability of the managers is governed by the provisions of Article 76 of the General Law of Business Associations.

FIFTEENTH ARTICLE. POWERS OF THE MANAGER, BOARD OF MANAGERS AND MANAGER/PRESIDENT. In addition to the authorities granted in this association agreement, and subject to the limitations set forth in this document, the Board of Managers will

be the legal representative of the association, and shall have powers of attorney for acts of ownership, administration and lawsuits and collections, and special powers of attorney, in accordance with the law that require a special clause under the terms of the first two paragraphs of Article 2554 of the Civil Code of the Federal District, and the corresponding sections of the Federal Civil Code and other Civil Codes in force in all the states of the Mexican Republic. Likewise, the Sole Manager, the Board of Managers and/or the Manager/President, as the case may be, shall have those powers necessary to subscribe, negotiate and endorse negotiable instruments, as well as to undertake credit transactions on behalf of the association, including all types of banking, exchange and credit transactions in accordance with Articles 9 and 85 of the General Law of Instruments and Credit Operations; to file and contest lawsuits, challenge venue and jurisdiction of judges, negotiate, enter into arbitration, make and receive payments, enter into all types of agreements, represent the association in any type of court of civil, labor or commercial procedures, prepare and answer interrogatories, present accusations or criminal complaints and ratify them, submit evidence to the District Attorney, withdraw accusations or complaints presented and issue criminal releases, carry out all types of petitions, procedures and negotiations before administrative authorities in matters pertaining to the association, interpose all types of appeals, including injunctions (Amparo lawsuits) and withdraw appeals and injunctions.

In addition to the above-mentioned powers of attorney, the Board of Managers may do the following, including, but not limited to:

- Represent the association before all types of judicial, administrative or labor authorities with all the above-mentioned authorities;
- Carry out all acts and operations pertinent to comply with the association's purposes;

- Execute, grant and subscribe all types of credit transactions, evidenced by public or private documents, as well as the authority to subscribe, endorse, guarantee, collect, accept and, in general, negotiate negotiable instruments under the terms of Articles 9 and 85 of the General Law of Negotiable Instruments and Credit Transactions as well as to undertake, on behalf of the association, all types of banking transactions, open, administer and cancel all types of accounts and banking transactions, including the authority to instruct the credit institutions regarding the authorization to sign checks, undertake deposits, withdrawals or endorsements in all types of bank accounts;
- Name and remove officers, executives and employees of the association, and set their duties, obligations and compensation;
- Grant, delegate, substitute and revoke general and/or special powers of attorney with the authority they deem convenient;
- Summon ordinary or extraordinary associates' meetings and carry out all resolutions; and
- Effect and/or formalize all types of liens or Guarantee regarding the association assets.

The President of the Board of Managers will have the powers of attorney and faculties mentioned in this Article and the above Sections, if they are so previously authorized by the Board of Managers of the association by resolution.

SIXTEENTH ARTICLE. AUTHORITY OF THE MANAGER/PRESIDENT. The Manager/President will be the legal representative of the managers and the association and executor of the resolutions without requiring special authorization to execute those resolutions.

**SEVENTEENTH ARTICLE. DIRECT ADMINISTRATION.** The association will be

directed by one or more officers or executives named by the Board of Managers or by a general ordinary or extraordinary meeting of the associates. These officers and executives will have the authority and obligations that the Board of Managers or the associates indicates upon making their appointment and granting the necessary powers of attorney. The said officers will serve until their designations are revoked by the Board of Managers, Manager or through an ordinary or extraordinary meeting of the associates.

**EIGHTEENTH ARTICLE. GUARANTEES.** The managers, upon taking their duties, shall not be obligated to provide guarantees for the fulfillment of their duties.

#### **FOURTH CHAPTER**

#### Inspection

#### NINETEENTH ARTICLE. INSPECTION.

Auditing requirements of the association's activities will be performed by a Board of Inspectors appointed by the associates at an ordinary meeting or through a unanimous resolution by the associates. The said board will consist of two or more members.

TWENTIETH ARTICLE. NEW MEMBERS OF THE BOARD OF INSPECTORS. The members of the Board of Inspectors may or may not be associates of the association, shall serve in such capacity until removed by the associates at an ordinary meeting, and may be re-elected, in which case they shall continue to serve until the persons designated to substitute them are appointed.

TWENTY-FIRST ARTICLE. IMPEDIMENTS TO BEING A MEMBER OF THE BOARD OF INSPECTORS. The following persons cannot be members of the Board of Inspectors:

 Those who lack the legal capacity to engage in commerce; and  Direct descendants of managers, their relatives within the fourth degree and relatives by marriage within the second degree.

**TWENTY-SECOND ARTICLE. AUTHORITIES AND OBLIGATIONS.** The authorities and obligations of the Board of Inspectors are as follows:

- To undertake a review of the operations, documentation, registrations and other relevant evidence to the extent necessary to ensure proper inspection of activities as required by law, and to render the report mentioned in the following paragraph; and
- To furnish the general ordinary associates' meeting with an annual report regarding the accuracy, sufficiency and reasonableness of the documentation submitted by the administrators to said associates' meeting. Such report shall at least include:
  - The opinion of the Board of Inspectors as to whether the policies, accounting standards followed and information supplied by the association are adequate and sufficient in light of the particular circumstances of the association:
  - The opinion of the Board of Inspectors as to whether the association's policies and accounting standards have been consistently applied by the managers;
  - The opinion of the Board of Inspectors as to whether, as a result of the foregoing, the information and reports supplied by the managers reflect the financial status of the association in a truthful and sufficient form; and
  - Other matters as provided by law.

#### TWENTY-THIRD ARTICLE. GUARANTEES.

The members of the Board of Inspectors shall not be obligated to post guarantees for the fulfillment of their duties.

#### FIFTH CHAPTER

#### **Associates' Meetings**

**TWENTY-FOURTH ARTICLE. ASSOCIATES' MEETING.** A legally held meeting of the associates is the governing body of the association, and its decisions bind not only those who are present but also those absent, as well as dissidents.

TWENTY-FIFTH ARTICLE. CLASSIFICATION OF THE MEETINGS. The meetings of the associates may be ordinary and extraordinary. Except as stated herein, all meetings will be ordinary, including those relating to increases in the variable part of the association capital. Meetings held to deal with any of the following matters will be extraordinary meetings:

- Increase or reduction of contributions in the fixed capital of the associates;
- Admission of new associates;
- Transfer of the association interests;
- Amendment of the association agreement;
- Merger, spin-off or transformation of the association;
- Early dissolution of the association; and
- Any other matter that requires an extraordinary meeting in accordance with the provisions of this association agreement.

All the matters that require an extraordinary meeting will have to comply with the requirements set forth in these by-laws, particularly in Articles 4, 13 and 15 of these by-laws.

Resolutions by unanimous written consent without the need to hold a meeting of the associates may be adopted in all cases, provided that all terms and conditions indicated in Article 82 of the General Law of Business Associations are met. In these cases, internationally recognized courier

service from either Mexico or the United States may be used. Associates representing more than one-third of the association's capital shall have the right to call a meeting, as set forth in the second paragraph of Article 82 of the General Law of Business Associations.

#### TWENTY-SIXTH ARTICLE. ANNUAL MEETING.

An ordinary associates' meeting should be held at least once a year, within four months following the end of the association's fiscal year, and in addition to dealing with the subject matters included in the agenda, the meeting should include the following:

- Discuss, approve or amend the report of the administrators, referred to in Article 36 of this association agreement, the annual budget, investments and distributions proposed by the managers for the corresponding fiscal year, taking into account the members of the Board of Inspectors' report and adopting such steps as the associates deem appropriate;
- Name, confirm and/or remove the members of the Board of Managers, as may be the case, and the members of the Board of Inspectors; and
- Set the corresponding compensation payable to the members of the Board of Managers and the members of the Board of Inspectors.

#### TWENTY-SEVENTH ARTICLE. SUMMONS.

The summons for either the ordinary or the extraordinary associates' meeting shall be made by the Sole Manager, the Managers, or the Board of Inspectors. Associates representing at least thirty-three percent (33%) of the association capital may request the Sole Manager or the Managers or the Board of Inspectors, by written notice at any time, to summon an ordinary or extraordinary meeting, in order to address the matters indicated in the proposed agenda.

If the Board of Managers or the Board of Inspectors refuse or fail to call a meeting within fifteen (15) days following the date they received a notice, the court having jurisdiction in the city where the association is domiciled, may be asked to call a meeting, petitioned by those interested associates representing at least thirty-three percent (33%) of the association capital, who shall accredit their capacity as associates.

The ordinary and extraordinary meetings must be called by means of a notice through certified mail, return receipt requested, directed to each of the associates in the registry book, even when the said domicile is outside Mexico, except when a resolution is approved through an unanimous consent of the associates.

#### TWENTY-EIGHTH ARTICLE. FULL MEETINGS.

A meeting may be held without the requirement of publishing the call to meet nor with the notification referred to above and the resolutions will be valid if adopted, in the following cases:

- When the total association interests are represented one hundred percent (100%) during the entire meeting; and
- When a meeting is a continuation of one in which notice of the day and the time was properly given, however, no other matter may be dealt with, except those originally scheduled.

This provision does not apply to resolutions taken by the associates through unanimous consent, in accordance with Article 82 of the General Law of Business Associations.

#### TWENTY-NINTH ARTICLE. REPRESENTATION.

Associates have the right to be represented at meetings by the person or persons designated by them through proxy letters signed by the corresponding associate and two witnesses. The associates may not be represented by members of the Board of Managers or members of the Board of Inspectors.

# THIRTIETH ARTICLE. MINUTES OF THE MEETINGS. Minutes of the associates' general

meetings or resolutions agreed to by a unanimous written consent of the associates

(if no meeting held) shall be entered in the minute book and signed by, at minimum, the President and Secretary of the meeting, as well as members of the Board of Inspectors in attendance. In the case of resolutions adopted by unanimous consent, the Manager/President or any other Manager shall certify the existence of the resolution and sign the minute book.

**THIRTY-FIRST ARTICLE. PRESIDENT AND SECRETARY OF THE MEETINGS.** The meetings shall be presided over by the Manager/President or, in his absence, thereof, by the person designated by the majority vote of the associates present. The Secretary of the meeting will be designated by a majority vote of the associates present.

THIRTY-SECOND ARTICLE. RESOLUTIONS ADOPTED AT ORDINARY MEETINGS. For an ordinary associates' meeting to be legally held on first call, it is necessary for at least fifty-one percent (51%) of the association's capital to be represented, and resolutions will be valid only if approved by a majority of the total amount of the association's capital, regardless of what percentage is represented at a legally held meeting, except, in specific cases, when the association agreement require a higher percentage.

THIRTY-THIRD ARTICLE. RESOLUTIONS ADOPTED AT THE EXTRAORDINARY MEETINGS. An extraordinary meeting may be legally held on first call, when at least seventy-five percent (75%) of the association's capital is represented, and resolutions will be valid only if approved by a majority of the total amount of the association capital, regardless of what percentage is represented at a legally held meeting.

THIRTY-FOURTH ARTICLE. SECOND CALL FOR MEETING. If the ordinary or extraordinary meetings cannot be held on the day indicated, a second or subsequent meeting shall be called and held to decide the items set forth in the agenda, provided the quorum and resolution

requirements set forth for the first meeting are met at the second or subsequent meeting.

THIRTY-FIFTH ARTICLE. GENERAL ASSOCIATES MEETING MINUTES ADOPTED BY UNANIMOUS CONSENT. Any type of resolution(s) that are to be addressed in general ordinary or associates' ordinary or extraordinary meeting minutes may be adopted outside the meeting without the necessity of calling for an associates' meeting and shall be valid so long as all of the associates sign the minute(s) that have been adopted with the respective meeting minute addressing the respective matter(s) addressed therein being signed by all of the associates with voting rights.

#### SIXTH CHAPTER

#### **Financial Information**

#### THIRTY-SIXTH ARTICLE. ANNUAL REPORT.

The association under the responsibility of the Board of Managers shall submit an annual report which shall at least include:

- A report from the Board of Managers describing the operation of the association during the fiscal year, as well as the policies followed by the Board of Managers, and, when appropriate, an explanation of the principal projects for the association;
- A report in which the principal policies, information and accounting standards used in preparing the financial statements is set forth;
- Statements showing the financial condition of the association at the fiscal year end;
- Statements showing the annual financial results of the fiscal year, duly explained and categorized;
- Statements showing changes in the financial condition during the fiscal year;
- Statements showing changes in the entries of the association patrimony; and

 Footnotes and remarks which may be necessary to clarify or complete the information furnished in the above statements.

The foregoing information should be presented in addition to the Board of Inspectors' reports referred to in the Twenty-second Article of this association agreement.

#### **SEVENTH CHAPTER**

#### **Profits and Losses**

**THIRTY-SEVENTH ARTICLE. PROFITS.** The profits that result will be distributed in the following manner:

- First. At least five percent (5%) will be set aside annually, as a legal reserve. This procedure will continue until the legal reserve accumulates an amount equivalent to twenty percent (20%) of the capital of the association;
- Second. An amount determined in the meeting shall be set aside as a special reserve for future investments by the association;
- Third. Amounts required by the Federal Labor Law for employee profit-sharing shall be set aside; and
- Fourth. Once the associates have approved the financial statements for the corresponding fiscal year, the remaining sums shall be capitalized, retained in the association's treasury, reinvested or distributed among the associates in proportion to the amount of their contributions or in accordance with that determined at a meeting of the associates.

**THIRTY-EIGHTH ARTICLE. LOSSES.** Losses, if any, will be covered by the existing reserves.

**THIRTY-NINTH ARTICLE. AMORTIZATION OF LOSSES.** There should not be any distribution of profits until losses suffered in prior fiscal years are restored or absorbed by

application of other entries from the patrimony or the reserves formed by the association.

#### FORTIETH ARTICLE. FOUNDING ASSOCIATES.

Founding associates are not entitled to special participation in the association because of their position as original founding associates.

#### **EIGHTH CHAPTER**

#### Liquidation of the Association

**FORTY-FIRST ARTICLE. LIQUIDATION.** The association shall be dissolved upon the occurrence of any of the events set forth in Article 229 (two hundred twenty-nine) of the General Law of Business Associations.

#### FORTY-SECOND ARTICLE. LIQUIDATORS.

Once the association has been dissolved, it will be liquidated by one or more liquidators appointed at an extraordinary meeting of the associates. In those cases in which such procedure is not carried out, the Judge of the Civil or District Court having jurisdiction over the association domicile shall appoint liquidators at the request of any associate.

#### FORTY-THIRD ARTICLE. LIQUIDATION

**RULES.** Unless there are specific instructions to the contrary from the meeting dissolving the association, or by judicial resolution, the liquidation of the association will be carried out according to the following general rules:

- Termination of pending transactions in the least harmful way to the creditors and the associates;
- Preparation of the balance and general inventory;
- Collection of credits and payment of debts; and
- Transfer of the association's property and application of the proceeds first to pay creditors and then to the associates, in proportion to their ownership interests.

#### **Articles of Formation**

**FIRST ARTICLE. FISCAL YEARS.** Fiscal years will begin the first day of January and will end the 31st of December of each year. The first fiscal year, however, will be irregular, and will begin from the date of signature of this document and end on December 31, 2006.

**SECOND ARTICLE. CAPITAL STOCK.** The association's minimum fixed capital of Mex\$3,000.00 (Three Thousand and 00/100 Mexican pesos) has been fully subscribed and paid in the following manner:

	[please provide]				
subscribes one Series	"B-1" association interes	t			
with a face value of Mex\$2,999.00					
National Currency	Mex\$2,999.00	0			
	[please provide]				
subscribes one Series '	"B-1" association interes	st			
with a face value of Me	ex\$1.00.				

THIRD ARTICLE. ADMINISTRATION. Unless otherwise established by an ordinary meeting

Total of two contributions of capital with a total

value of Mex\$3,000.00.

of the associates:

The association shall be administered by a Board of Managers integrated in the following manner:

Managers	Position		
	_Manager/President		
	_Manager/Secretary		
	_Manager/Treasurer		
	_Independent Manager		

[Please provide full names as shown in passports]

Messrs. \_\_\_\_\_CPA and \_\_\_\_CPA shall function as members of the Board of Inspectors of the association. [It is a legal requirement to have a Board of Inspectors so we need to designate them.]

It is certified that the members of the Board of Managers and members of the Board of Inspectors appointed have accepted their positions without the need to guarantee their performance as described in the association agreement.

FOURTH ARTICLE. POWERS OF ATTORNEY. 1. \_\_\_\_\_, \_\_\_\_, [please provide full names as shown in passports] Rene Cacheaux Aguilar, Daniel Cavazos, Joseph Bradshaw Newton, Felipe Chapula Almaraz, Robert Michael Barnett, Mario Melgar Fernandez, Sergio Mario Ostos Iturbe, Jorge Raul Ojeda Santana, Juan Francisco Lopez Montoya, Floriberto Morales Molina, Justo Bautista Elizondo, Claudio Eloy Vazquez Cardenas, Francisco Jose Peña Valdes, Jose Soto Soberanes, Miriam Name Almanza, Iker Jose Dieguez Bonilla, Jorge Sanchez Cubillo, Jose Aaron Rodriguez Cadena and Ramon Concha Hein who shall have, jointly or individually, the following powers to represent the association:

GENERAL POWER FOR ACTS OF **ADMINISTRATION.** All the general and specific powers which require a special grant, in accordance with the law, under the terms of the second paragraph of Article 2554 of the Civil Code in force of the Federal District, and the corresponding sections of the Federal Civil Code in force and other Civil Codes in force in all the states of the Mexican Republic, which include the power to grant and subscribe all types of public and private documents, civil, mercantile, administrative or any other form of renouncements or declarations, in accordance with the law, to sign and subscribe all types of tax declarations, including the SAR, INFONAVIT and that which corresponds to federal or local taxes of any sort, including the payroll taxes. The powers will include those to carry out all types of petitions, consultations or solicitations before all types of authorities, of any type, whether they be federal, state and/or municipal, including the request for refund of the value added tax. Also included is the authority to request all types of permits and/or authorizations before any governmental agency, import and export permits related thereto, as well as customs requests and transmittals, before the Department of Finance and Public Credit, and before any other agency whether such be federal, state or municipal.

\_\_\_\_, \_\_\_, [please Messrs. provide full names as shown in passports] Rene Cacheaux Aguilar, Daniel Cavazos, Joseph Bradshaw Newton, Felipe Chapula Almaraz, Robert Michael Barnett, Mario Melgar Fernandez, Sergio Mario Ostos Iturbe, Jorge Raul Ojeda Santana, Juan Francisco Lopez Montoya, Floriberto Morales Molina, Justo Bautista Elizondo, Claudio Eloy Vazquez Cardenas, Francisco Jose Peña Valdes, Jose Soto Soberanes, Miriam Name Almanza, Iker Jose Dieguez Bonilla, Jorge Sanchez Cubillo, Jose Aaron Rodriguez Cadena and Ramon Concha Hein, who shall have, jointly or individually, the following powers to represent the association:

GENERAL POWER FOR LAWSUITS AND COLLECTIONS. All the special and general powers of attorney in accordance with the law that require a special grant, under the terms of the first paragraph of Article 2554 of Civil Code in force of the Federal District, and the corresponding sections of the Federal Civil Code in force and other Civil Codes in force in all the states of the Mexican Republic, and to exercise the said powers before all types of persons and judicial and administrative authorities, whether such be civil, penal, federal or local labor authorities, specifically those necessary to answer suits, enter into arbitration, articulate and dissolve positions, challenge the jurisdiction of judges, accept assignments of goods, collect payments and issue receipts and cancellations, prosecute civil, mercantile, tax or administrative

actions or any other type of civil or criminal actions, including presenting Amparo suits in representation of the association and/or dismissing such suits, make all types of denouncements, accusations or claims of any type, to represent the association in any penal process, to be a coadjutor to the public ministry, to grant pardons to the accused, when such is proper, to present evidence in penal proceedings, in accordance with that set forth in the Ninth Article of the Code of Penal Procedure for the Federal District and the corresponding Articles of the Penal Codes of the States of the Mexican Republic and of the Federal Code of Penal Procedures.

\_\_\_\_, \_\_\_, [please Messrs. provide full names as shown in passports] Rene Cacheaux Aguilar, Daniel Cavazos, Joseph Bradshaw Newton, Felipe Chapula Almaraz, Robert Michael Barnett, Mario Melgar Fernandez, Sergio Mario Ostos Iturbe, Jorge Raul Ojeda Santana, Juan Francisco Lopez Montoya, Floriberto Morales Molina, Justo Bautista Elizondo, Claudio Eloy Vazquez Cardenas, Francisco Jose Peña Valdes, Jose Soto Soberanes, Miriam Name Almanza, Iker Jose Dieguez Bonilla, Jorge Sanchez Cubillo, Jose Aaron Rodriguez Cadena, and Ramon Concha Hein, who shall have, jointly or individually, the following powers to represent the association:

#### SPECIAL POWER OF ATTORNEY FOR LABOR

MATTERS. The attorneys-in-fact shall have all the authorities of employer representation in accordance and for the purposes of Articles 11, 46, 47 and 134, Section III, 523 and 692, Sections I, II and III, 786, 878, 880, 883 and 884 of the Federal Labor Law; the power that is granted and the employer representation which is conferred will be exercised in accordance with the following powers which are enumerated for descriptive, but not limitative purposes: being able to appear in front of or before the unions with which there exists an executed collective bargaining agreement; before or in the presence of those considered and in general for all

employer/employee matters, and to exercise before any of the authorities for labor and social services for the matters referred to in Article 523 of the Federal Labor Law; and also may appear before the Boards of Conciliation and Arbitration, whether such be local or federal, and to carry out the employer representation for the purposes of Articles 11, 46 and 47 of the Federal Labor Law and also for the legal representation of the association for the purposes of verifying its identity and capacity in suits or outside of such, according to the terms of Article 692, Sections II and III of the Federal Labor Law; they may appear at the labor trial for the evidentiary questioning of the employee, according to the terms of Articles 787 and 788 of the Federal Labor Law, with the powers to arbitrate and eliminate positions and present the evidence at all times; they may denote the corporate domicile for receiving notifications, in accordance with the terms of Article 876 of the Federal Labor Law; they may appear in the capacity of the employer, with all the authority and legal responsibility necessary for the hearings, which are referred to in Article 873 of the Federal Labor Law, in the three phases of: conciliation, complaint and defense; admission of evidence, in accordance with the terms of Articles 875 and 876, Sections I and IV, 877, 878, 879 and 880 of the Federal Labor Law; and they may also attend the hearing on the admission of evidence according to the terms of Articles 883 and 884 of the Federal Labor Law; they may make settlements, execute compromises, make all types of decisions, negotiate and sign legal agreements, and they may also execute individual and collective labor agreements, as well as terminating or rescinding such.

Messrs. \_\_\_\_\_, \_\_\_\_, [please provide full names as shown in passports] who shall have jointly or individually the following powers to represent the association:

**POWER OF ATTORNEY FOR BANKING AND EXCHANGE MATTERS.** The attorneys-in-fact,

as representatives of the association, shall all have the necessary authority to: (i) execute, grant, and subscribe all types of credit transactions, evidenced in public or private documents, as well as the authority to subscribe, endorse, guaranty, collect, accept and, in general, negotiate negotiable instruments in accordance with the terms of Articles 9 and 85 of the General Law of Negotiable Instruments and Credit Transactions; and (ii) general power for banking to carry out, in the name of the association, all types of banking transactions and operations, open, administer and cancel all types of accounts and banking operations, including the power to instruct credit institutions concerning the authority to sign checks, to carry out deposits, withdrawals or endorsements in all types of banking accounts.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_\_, [please provide full names as shown in passports] who shall have, jointly or individually, the following powers to represent the association:

GENERAL POWER FOR ACTS **ADMINISTRATION.** All the general and specific powers which require a special grant, in accordance with the law, under the terms of the second paragraph of Article 2554 of Civil Code in force of the Federal District, and the corresponding sections of the Federal Civil Code in force and other Civil Codes in force in all the states of the Mexican Republic, which include the power to grant and subscribe all types of public and private documents, civil, mercantile, administrative or any other form of waivers or declarations, in accordance with the law, to sign and subscribe all types of tax declarations, including SAR, INFONAVIT and that which corresponds to federal or local taxes, of any sort, including the payroll taxes. The powers will include those to carry out all types of petitions, consultations or solicitations before all types of authorities, of any type, whether they be federal, state and/or municipal, including the request for refund or offset of all types of taxes, including the value added tax as well as the authority to

receive checks or any other type of document used to receive a refund of any type of tax to grantor. Also included is the authority to request all types of permits and/or authorizations before any governmental agency, import and export permits related thereto, as well as customs requests and transfers, before the Department of Finance and Public Credit, and before any other agency whether such be federal, state or municipal. In addition, the above-mentioned attorney-in-fact shall enjoy the authorities to undertake before, with and/or in relation to any authority, whether federal, state or municipal, the company's accounting, tax and financial obligations, limited to the Secretaría de Hacienda y Crédito Público (SHCP), the department of treasury and public credit, the Taxpayer's Administration Service, Instituto Mexicano del Seguro Social (IMSS), the Mexican social security institute, INFONAVIT, SAR and the state agencies for Finances or Treasury, including but not limited to the acts necessary to obtain and use the "advanced electronic signature" and those acts necessary for the fulfillment of all the obligations of the company of an accounting, tax and financial nature.

SPECIAL POWER FOR ACCOUNTING AND TAX MATTERS. With all the necessary faculties to comply with the obligations of an accounting, tax and financial character, including the faculties to grant and subscribe all types of public and private documents, waivers, notices, notifications, manifestations and declarations of an administrative, financial, accounting and tax nature. This special power of the attorney includes all the necessary abilities to sign all types of notices, declarations, notifications, manifestations and petitions of an administrative, financial, accounting and tax nature that are required before the federal, state or municipal authorities, including the IMSS, SAR and the INFONAVIT, as well as the applications or notices for return or offsetting of all types of taxes and fees. The special attorneys-in-fact may represent the association in all administrative procedures relating to consultations, confirmations of criteria and tax-type applications.

The power of attorney will include those necessary to carry out any type of requests, consultations and petitions before any authority of any type, whether federal, state and/or local, including all the necessary authorities for the request, measures, collection and receipt in representation of the grantor of any refund or compensation of the value added tax, including the receipt of checks or any other document through which a refund of any tax is received by the grantor.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_\_, [please provide full names as shown in passports] who shall have, jointly or individually, the following powers to represent the association:

SPECIAL POWER OF ATTORNEY FOR CUSTOMS MATTERS. All of the authority necessary to enter into, comply, and follow up on all types of public or private documents and notifications, as well as all types of commercial or administrative documents, whether such be of a tax, customs or accounting nature necessary in conformity with the applicable legislation, appear before customs authorities and carry out customs transactions on behalf of the association. In addition, the attorneys-in-fact shall have all of the authority necessary to formulate all types of petitions and requests for the issuance of permits for importing, including extensions of same; they shall enjoy the authority necessary to formulate and present customs documents for the manifestation of the value of merchandise, request for the acquisition of development programs, including all types of inventory transfers before the Department of Economy and SHCP and any other governmental authority, as well as to request any other additional permit necessary for the importation, as well as all types of permits, including those related to customs procedures carried out before SHCP, including the Mexican customs authorities, for purposes of authorizing him to act as customs representative of the association, during the management of its business. The attorneys-in-fact shall have the authority to request and obtain development programs for the export and support for foreign commerce, including, but not limited to, the maquila export program and its extensions, as well as the program for the temporary import for articles of export and its extensions. The attorneys-in-fact shall have the authority to intervene in all acts or procedures related to customs matters, as well as other procedures regarding the investigation or inspection of customs matters. In addition, they shall enjoy full authority to guaranty and carry out all legal acts related to customs operations, in conformity with the applicable provisions of the Customs Law in force.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_, [please provide full names as shown in passports] shall have, individually or jointly, the following powers and authorities to represent the association:

SPECIAL POWER OF ATTORNEY FOR **OBTAINING BONDS.** With all the authorities that are necessary for the purposes, in the name and representation of the association, that said attorneys-in-fact may execute any type of bond agreements with any bond agency authorized in the Mexican Republic or other countries, offer and commit guarantees and counter-guarantees whether real or personal, obtain bond policies, carry out payments and claims for the purpose of guaranteeing obligations charged to the association or third parties, including the authorities to obligate the association as a sole obligator or creditor with respect to bonds contracted by third parties, as well as those authorities necessary for committing and granting in guarantee the assets of the association. The attorneys-in-fact shall be authorized to present and substantiate claims under the terms of the applicable legal provisions, execute transaction agreements and contracts of any type to finalize obligations guaranteed by the contracts and respective bond policies. The attorneys-in-fact may also receive checks and indemnifications and payments charged to the bonds issued in benefit of the

association. The attorneys-in-fact shall have authorities to deliver and agree with the agencies on the text for the respective bond policies, as well as to carry out all legal and/or material acts necessary for compliance and make valid the bond policies issued in benefit of the association.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_\_, [please provide full names as shown in passports] who shall have, jointly or individually, the following powers to represent the association:

SPECIAL POWER OF ATTORNEY FOR ENVIRONMENTAL MATTERS. With all the authorities and special powers required in accordance with the law in order to carry out, in the name and representation of the association, the necessary transactions before the competent authorities of the Department of Environment, Natural Resources and Fishing, the National Institute of Ecology, the General Office of Environmental Protection, the National Water Commission, the Council of Water and Sewer of Mexico City, Federal District, and any other federal, state or municipal entity where the association realize activities, and, in general, before any federal, state or local administrative authority, centralized, decentralized and/or deconcentrated, authorized for the granting of licenses, permits, concessions and authorizations contemplated in the General Law of Ecological Equilibrium and the legal provisions, whether federal, state or local that are ecological in nature.

In addition, the above-mentioned attorneys-in-fact shall enjoy the authorities to subscribe all types of public and private documents, as well as all types of requests, notices, manifestations and public and private documents related with environmental and zoning matters in which the association is involved before any authority, whether federal, state and/or local, including the necessary authorities to request, transact and obtain ecological guides; they shall enjoin the authorities to initiate and maintain all types of

administrative procedures, contentious or not, as well as to impose all types of recourses available to the association relating to environmental and zoning matters above-mentioned, in relation to acts before federal, state and/or local authorities.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_\_, [please provide full names as shown in passports] who shall have, jointly or individually, the following powers to represent the association:

SPECIAL POWER OF ATTORNEY FOR ADMINISTRATIVE PROCEEDINGS. They will have sufficient and extensive authorities to represent the association in those administrative proceedings conducted in terms of daily operations, before the competent authorities and officers of the federal public administration, state and local, including its centralized or decentralized entities, such as Fondo de Fomento y Garantía para el Consumo de los Trabajadores (FONACOT), INFONAVIT; as well as to sign all types of documents, statements, formats, petitions, waivers and other instruments related to administrative proceedings above-mentioned. The named attorneys-in-fact will have the authority to delegate, grant or substitute this power of attorney, only to those third parties that are employees of the association, and must in all cases grant, delegate or substitute the said power of attorney for specific and private purposes, without it being considered as general powers. In addition to the above, the attorneys-in-fact will be able to intervene in all types of matters related to transactions, warnings, notices, contracts, quitting or cancellations of FONACOT, INFONAVIT, SAR, IMSS immigration proceedings of any type before the National Institute of Immigration and all types of proceedings, notices and requests before the Department of Labor and Social Security.

Messrs. \_\_\_\_\_, \_\_\_\_, [please provide full names as shown in passports] who shall have, individually or jointly, the following powers and authorities to represent the association:

SPECIAL IMMIGRATION POWER. The aforementioned representatives of the association shall have the authority to request in the name of the association all documents that are required in order to obtain visas of any type, in the name of the association, for the employees and workers of the association that are required and, in addition, to present all types of reports and documentation before the departments of governments and before any consulates that have competence with respect to immigration matters. The attorneys-in-fact shall be able to request all types of authorization with respect to immigration matters and to present all types of reports required according to the terms of the applicable legal provisions.

Messrs. \_\_\_\_\_\_, \_\_\_\_\_\_\_\_, [please provide full names as shown in passports] who shall have, individually or jointly, the following powers and authorities to represent the association:

SPECIAL POWER OF ATTORNEY FOR **REGISTRATION OF AUTOMOBILES.** With all the sufficient and extensive authorities to represent the association in those administrative proceedings conducted in terms of daily operations, before the competent authorities and officers of the federal, state and local public administrations, including its centralized or decentralized entities, as well as any agency or public or private institution that is related to the registration of automobiles, vehicles and motor vehicles of any type and all the necessary transactions for the purpose of obtaining the registration, vehicle ownership, obtaining license plates for circulation and circulation cards, decals, permits, and authorizations and/or concessions that correspond and the necessary permits for the vehicles the property of the association may circulate on the roads, highways and tollways in the Mexican territory. The attorneys-in-fact shall have authorities to request and contract insurance for the above-mentioned vehicles, as well as carry out any measure or transaction, sign all types of documents, statements, formats, petitions, waivers and other instruments related to administrative proceedings above-mentioned. In the event of an accident, embargo or confiscation of any vehicle the property of the association, the attorneys-in-fact shall have authorities to carry out all the legal and/or material acts necessary to obtain the release of said vehicles, said attorney-in-fact may pick up the vehicle of the

association signing the corresponding instruments or receipts.

The aforementioned general and special powers of attorney may not be delegated, substituted or granted to third parties by the named attorneys-in-fact with the exception of the powers of attorney for labor matters conferred above which may be delegated, substituted or granted by the named attorneys-in-fact.

# Annex 2 Trust Agreement

#### **Translation**

In the City of , State of it being the day of the month of of the year 2006, I, \_\_\_\_\_, Esq., Notary Public Number in this city hereby certify: THE CREATION OF AN IRREVOCABLE ADMINISTRATION AND PAYMENT TRUST, which is identified as the " under number \_\_\_\_ (hereinafter referred to as the "TRUST"), entered into by: the business association \_\_\_\_\_, anonymous corporation with variable capital, [SPE] represented in this legal act by Mr. \_\_\_\_\_, which shall hereinafter be referred to as the "SETTLOR" and/or "SECOND PLACE BENEFICIARY"; the International Finance Corporation (IFC) represented in this legal act by Mr. \_\_\_\_\_, which shall hereinafter be referred to as "FIRST PLACE BENEFICIARY A"; the Overseas Private Investment Corporation (OPIC), represented in this legal act by Mr. , which shall hereinafter be referred to as "FIRST PLACE BENEFICIARY B"; the North American Development Bank (NADB), represented in this legal act by Mr. \_\_\_\_\_, which shall hereinafter be referred to as "FIRST PLACE BENEFICIARY C"; Nacional Financiera, National Credit Association, Development Banking Institution (NAFIN), represented in this legal act by Mr. \_\_\_\_\_, which shall hereinafter be referred to as "FIRST PLACE BENEFICIARY D"; the business association , Anonymous Corporation,

Multiple Banking Institution, Trust Division, represented by its TRUSTEE delegate,
\_\_\_\_\_\_\_, Esq., who shall hereinafter be referred to as the "TRUSTEE".

Based on the foregoing, the parties appearing herein enter into this Trust Agreement in conformity with the following recitals and clauses:

#### Recitals

The SETTLOR and SECOND PLACE BENEFICIARY, the business association \_\_\_\_\_\_, Anonymous Corporation with Variable Capital, through Mr. \_\_\_\_\_\_, states that:

- It is a corporation duly incorporated and existing in conformity with the laws of the Mexican Republic as certified and shown in the corresponding chapter of this Public Instrument;
- The legal acts memorialized in this Instrument are included within its corporate purposes and are duly authorized through corresponding corporate legal actions, and do not violate any provision of its By-laws or contractual provision whatsoever;
- The capacity in which its legal representative appears in this legal act is shown in the Incorporation Deed that has been described in paragraph a) above;
- The authority granted to its legal representative has not been revoked or

limited in any way whatsoever so that no impediment exists to his/her binding his/her principal in accordance with that agreed to herein;

- That it is and will be the creditor, beneficiary and holder of various Loan Agreements and Promissory Notes through which it will provide the resources necessary for corporations or individuals to carry out energy efficiency projects with respect to which rights of collection will be assigned to it on each and every one of the agreements entered into in order to carry out such energy efficiency projects. The repayment obligations related to such agreements are secured by one or more Promissory Notes signed by the beneficiaries of the specific energy efficiency projects;
- That it is the owner of equipment acquired in order to carry out the energy efficiency projects by virtue of the Loan Agreement dated \_\_\_\_\_\_\_\_, 2006, entered into with the BENEFICIARIES which shall be granted in a pledge guaranty to the FIRST PLACE BENEFICIARIES through the execution of a Pledge Agreement without Transfer of Possession;
- It desires to enter into a trust for the purposes contained herein ownership of the Collection and Payment Rights derived from the energy efficiency agreements in order to constitute the Trust Corpus; and
- That it appears in order to enter into this TRUST in compliance and in conformity with the Loan Agreement dated \_\_\_\_\_\_\_, 2006, entered into with the FIRST PLACE BENEFICIARIES, by means of which it will obtain the necessary resources to carry out the energy efficiency projects.

First place **BENEFICIARY A**, the International Finance Corporation (**IFC**), represented in this legal act by Mr. \_\_\_\_\_, states that:

- It is an international organization established through a Charter among its member countries, including the Mexican Republic;
- The legal acts being certified in this instrument are within its authority and do not violate its charter or any other legal provision;
- The capacity in which its legal representative appears in this legal act has been shown in\_\_\_\_\_;
- The authority granted to its legal representative has not been revoked or limited in any way whatsoever so that no impediment exists to his/her binding his/her principal in accordance with that agreed to herein; and

**FIRST PLACE BENEFICIARY B**, the Overseas Private Investment Corporation (**OPIC**), represented in this legal act by Mr. \_\_\_\_\_\_, states that:

- It is an agency of the government of the United States of America, established through\_\_\_\_\_;
- The legal acts being certified in this instrument are within its authority and do not violate its charter or any other legal provision;
- The capacity in which its legal representative appears in this legal act has been shown in ;

- The authority granted to its legal representative has not been revoked or limited in any way whatsoever so that no impediment exists to his/her binding his/her principal in accordance with that agreed to herein.

FIRST PLACE BENEFICIARY C, the North American Development Bank (NADB), represented in this legal act by Mr.\_\_\_\_\_, states that:

- It is an international organization established through a charter entered into by the governments of the United Mexican States and the United States of America and charged with funding projects in the border region of such countries;
- The legal acts being certified in this instrument are within its authority and do not violate its charter or any other legal provision;
- The capacity in which its legal representative appears in this legal act has been shown in ;
- The authority granted to its legal representative has not been revoked or limited in any way whatsoever so that no impediment exists to his/her binding his/her principal in accordance with that agreed to herein; and
- That it appears to enter into this TRUST in compliance with and in conformity with the

Loan Agreement dated \_\_\_\_\_, 2006, entered into with the SETTLOR and the other FIRST PLACE BENEFICIARIES for the purpose of providing the funds necessary to facilitate carrying out energy efficiency projects to parties requiring such projects and by virtue of which the SETTLOR will provide the resources necessary for the companies or persons to execute projects of this nature.

FIRST PLACE BENEFICIARY D, Nacional Financiera, National Credit Association, Development Banking Institution (NAFIN), represented in this legal act by Mr.\_\_\_\_\_, states that:

- It is a national credit association created by the Mexican government through an incorporation decree dated August 31, 1933;
- The legal acts being certified in this instrument are within its authority and do not violate its charter or any other legal provision;
- The capacity in which its legal representative appears in this legal act has been shown in ;
- The authority granted to its legal representative has not been revoked or limited in any way whatsoever so that no impediment exists to his/her binding his/her principal in accordance with that agreed to herein; and
- That it appears to enter into this TRUST in compliance with and in conformity with the Loan Agreement dated \_\_\_\_\_\_, 2006, entered into with the SETTLOR and the other FIRST PLACE BENEFICIARIES for the purpose of providing the funds necessary to facilitate carrying out energy efficiency projects to parties requiring such projects and by virtue of which the SETTLOR will provide the resources necessary for the companies or persons to execute projects of this nature.

The business association\_\_\_\_\_\_\_, Anonymous Corporation, Multiple Banking Institution, Trust Division, through its TRUSTEE delegate states that:

- His principal is a credit institution duly incorporated and authorized to enter into this legal act and that he has sufficient authority to appear and sign this agreement, whose authority as of this date has not been revoked or modified in any way whatsoever, as shown in the certified copies of the public instruments number \_\_\_\_\_\_\_, granted before the attestation of \_\_\_\_\_\_\_, Esq., Notary Public number \_\_\_\_\_\_, dated \_\_\_\_\_\_ and the \_\_\_\_\_ day of \_\_\_\_\_\_\_ before the attestation of \_\_\_\_\_\_\_ before the attestation of \_\_\_\_\_\_\_ and registered under Folio \_\_\_\_\_\_ of Volume \_\_\_\_\_\_ in the Public Registry of Property and Commerce of
- The Trustee's representative continues stating that it unequivocally advises the SETTLOR, BENEFICIARIES and other parties hereto, through their representatives, of the content, the scope and legal effect of paragraph b) of Section XIX (nineteen) of Article 106 (one hundred six) of the Law of Credit Institutions that states:

Article 106. Credit Institutions are prohibited to: ... undertake transactions referenced in Section XV (fifteen) of Article 46 (forty-six) of this law:

 Be liable to the settlors, or principals for a breach of the debtors, for the loans granted, or for the issuers for the securities acquired, unless it is its fault as set forth in the final part of Article 356 (three hundred fifty-six) of the General Law of Negotiable Instruments and Credit Transactions or guarantee the receipt of profits for the funds whose investment has been entrusted to it.

If at the end of the Trust, Mandate or Commission created for the granting of loans, these have not been paid by the debtors, the institution shall

charge the Settlor or Beneficiary, as the case may be, or the principal absenting itself from paying the amount.

Any agreement contrary to that set forth in these two paragraphs will have no legal effect.

The Trust, Mandate or Commission agreements shall contain, in a conspicuous manner, the two paragraphs above and a declaration of the Trustee that it has unequivocally made the parties from which it received assets for investment aware of its content:

- It agrees to execute this Trust Agreement in its exclusive capacity as Trustee such that in no event will it assume any liability in regard to compliance with the TRUST's purposes; and
- It is its intention and desire to execute this
  Trust Agreement and accept its designation
  as Trustee and undertake each and every one
  of the activities, instructions and actions that
  are necessary or convenient for the fulfillment
  of the purposes of the Trust.

The Parties jointly state that:

a) The acknowledgment of desire is given without any reservation, free of all duress and/or duress and same constitutes the real and exact interpretation of their will.

FIRST, TRUST CREATION. In this legal act, the

		,				
SETTLOR		/				
<b>Anonymous Corporation with Variable</b>						
Capital, represe	ented in this legal o	act by				
Mr	, hereby creat	es an				
Irrevocable Admini	nistration and Paymer	ıt Trust				
which shall be ide	lentified hereinafter	as the				
"" ur	nder number	, in				
conformity with the t	terms and conditions s	et forth				
in this Public Instru	rument to be contribu	uted in				
order to comply wit	ith the purposes of this	s Trust,				
each and every one	e of its collection rights	under				
the agreements de	erived from energy eff	iciency				

projects funded by the SETTLOR, including the

endorsement of Promissory Notes and any other negotiable instruments executed in order to guarantee payment of the rights assigned, as mentioned in the Recitals section of this Agreement.

**SECOND: RECEIPT AND ACCEPTANCE OF PROPERTY.** The **TRUSTEE** shall acquire in trust ownership of the rights transferred by **SETTLOR**.

The **TRUSTEE**, through its **TRUSTEE** Delegate \_\_\_\_\_\_, hereby accepts in accordance with the terms of the law and this instrument the responsibility conferred to it and attests to its faithful and loyal performance, with the parties agreeing to fulfill strictly the purposes of this **TRUST**.

**THIRD. TRUST PARTIES.** The parties to this Trust are the following:

#### **SETTLOR:**

1\_\_\_\_\_, the business association named \_\_\_\_\_, Anonymous Corporation with Variable Capital, in compliance with the terms contained in this TRUST.

#### **BENEFICIARIES:**

**FIRST PLACE BENEFICIARY A,** the International Finance Corporation (**IFC**), in compliance with the terms contained in this **TRUST**;

**FIRST PLACE BENEFICIARY B,** the Overseas Private Investment Corporation **(OPIC)**, in compliance with the terms contained in this **TRUST**;

FIRST PLACE BENEFICIARY C, the North American Development Bank (NADB), in compliance with the terms contained in this TRUST;

FIRST PLACE BENEFICIARY D, Nacional Financiera, National Credit Association, Development Banking Institution (NAFIN),

in compliance with the terms contained in this **TRUST**;

SECOND PLACE BENEFICIARY, the mercantile corporation named\_\_\_\_\_\_, Anonymous Corporation with Variable Capital, in compliance with the terms contained in this TRUST; and

**TRUSTEE:** \_\_\_\_\_\_, Anonymous Corporation, Multiple Banking Institution, Trust Division.

**FOURTH. TRUST CORPUS.** The corpus of the trust shall be constituted by:

All of the economic rights of collection from each and all of the agreements derived from energy efficiency projects funded by the **SETTLOR**, through agreements of assignments of right and contribution into trust entered into between the **SETTLOR** and **TRUSTEE**, including Promissory Notes and any other negotiable instrument executed in order to guarantee payment of the rights assigned and that are endorsed in favor of the **TRUSTEE** according to the terms of the Recitals of this Agreement;

The cash, rights, investments, fruits and returns related to the property and rights referred to in the paragraph above received or delivered to the **TRUSTEE**; and

In general, any property or rights contributed into **TRUST CORPUS** by **SETTLOR** or acquired by the **TRUSTEE** upon instructions from the **TECHNICAL COMMITTEE** in order to fulfill the Trust's purposes or which formed a part as the **TRUST CORPUS** through any other legal form.

**FIFTH. TRUST PURPOSES.** The purposes of the Trust, in addition to creating an autonomous **TRUST CORPUS**, are the following:

That the **TRUSTEE** receive and maintain at all times ownership of the **TRUST CORPUS**;

That the **TRUSTEE** enter into agreements of collection rights and contribution into trust with

the **SETTLOR** with respect to agreements related to the energy efficiency projects, as well as the receipt of Promissory Notes and any other negotiable instruments that are endorsed in favor of the **TRUSTEE**, which guarantee payment of the assigned collection rights;

That the **TRUSTEE** receives the cash, fruits, and returns from the property and rights related to the collection rights assigned in favor of the **TRUSTEE** in order to invest and distribute such in accordance with this Trust and the instructions given by the **TECHNICAL COMMITTEE** of this Trust;

That the **TRUSTEE** may negotiate, sign or execute all legal acts, actions, documents, instruments, contracts, agreements and trusts necessary to fulfill the purposes of this Trust;

The **TRUSTEE** shall administer, invest and apply the **TRUST CORPUS** in conformity with the written instructions of the **TECHNICAL COMMITTEE** of this Trust;

The **TRUSTEE** shall, once the collection rights of *Pagares* and other instruments placed into Trust become payable, require, collect and receive the fruits and income of the property and rights placed in Trust and, as the case may be, carry out all judicial and extrajudicial collection procedures that are necessary, whether by itself or through parties designated for such purposes in writing by the **TECHNICAL COMMITTEE** of this Trust;

That the **TRUSTEE** receive, maintain and administer in conformity with the instructions of the **TECHNICAL COMMITTEE** the economic resources and funds derived from the collection or payment of the property and rights placed in the Trust;

That the **TRUSTEE** make payment in the name of and on the account of the **SETTLOR** to the **FIRST PLACE BENEFICIARIES**, in the order of priority established in this Agreement, based on the payment obligations of the **SETTLOR** in

relation to the loan agreement entered into among **SETTLOR** and the **FIRST PLACE BENEFICIARIES**, in conformity with the written instructions of the **TECHNICAL COMMITTEE** of this Trust;

That the **TRUSTEE** follow the instructions given in writing by the **TECHNICAL COMMITTEE** of this Trust, granted in favor of those individuals designating those powers of attorney necessary to defend the **TRUST CORPUS** so that in case of any judicial or extrajudicial controversy arising during the term of this Trust, based on the property or rights placed in Trust, the purposes of this Agreement or the effects produced by compliance with said purposes, as well as to carry out any other type of administrative transfer with respect to the said rights;

That the **TRUSTEE** carry out all those legal acts necessary to fulfill the purposes contained in this **TRUST** or any legal act related to the **TRUST CORPUS**, in accordance with the written instructions of the **TECHNICAL COMMITTEE** of the Trust; and

The purposes mentioned above may not be added to, modified, amended or cancelled except by an amendment agreed to in writing and entered into by the **SETTLOR** and **FIRST PLACE BENEFICIARIES**.

**SIXTH. ORDER OF APPLICATION OF CASH FLOW.** The **TRUSTEE** shall apply cash flow and the proceeds and income of the **TRUST CORPUS** in accordance with the following order:

- Expenses related to debt service on the Loan Agreement entered into among the SETTLOR and the FIRST PLACE BENEFICIARY;
- Transaction expenses and maintenance of the debt of the Loan Agreement referred to above;
- An expense reserve related to service of the debt of Loan Agreement referred to above;

- Transaction expenses and maintenance reserve for the debt of the Loan Agreement referred to above; and
- The remainder of the property and rights placed in trust, once all of the principal and interest of the debt in favor of the FIRST PLACE BENEFICIARIES has been paid, shall be delivered to the SECOND PLACE BENEFICIARY.

The application of cash flow shall be made by the **TRUSTEE** in accordance with previous instructions in writing received from the **TECHNICAL COMMITTEE** of the Trust.

(THE FORM AND ORDER OF PAYMENT AMONG THE FIRST PLACE BENEFICIARIES REMAINS TO BE DETERMINED. IN ADDITION, THE ORDER OF PAYMENT IN CASE OF A DEFICIT OF FUNDS FOR PAYMENT OF ALL LOANS NEEDS TO BE DEFINED.)

**SEVENTH. ASSIGNMENTS OF RIGHTS.** The **SETTLOR** may not assign, transfer or in any way alienate or dispose of the rights derived from this trust without obtaining prior written consent from all of the **FIRST PLACE BENEFICIARIES.** 

**EIGHTH. MANAGEMENT OF TRUST.** The **TRUSTEE** shall manage the **TRUST CORPUS** of this **TRUST** in accordance with the authorities and obligations established in Article 356 of the General Law of Credit Instruments and Transactions, and according to the terms of this **TRUST.** 

The **TRUSTEE** shall not have any other obligations than those expressly agreed to in this **TRUST.** 

NINTH. TECHNICAL COMMITTEE OF THE TRUST. To supervise and carry out all of the purposes of this TRUST, as well as to take decisions with respect to the same that are not expressly reserved to the BENEFICIARIES, a TECHNICAL COMMITTEE shall be created,

according to the terms of Article 80, Third Paragraph of the Law of Credit Institutions, which shall consist of two representatives of each one of the **BENEFICIARIES**.

The designation or removal of each one of the members of the **TECHNICAL COMMITTEE** shall be made freely and independently by the legal representative of each one of the **BENEFICIARIES.** 

The members of the **TECHNICAL COMMITTEE** shall serve in their positions during the time this Trust remains in force, but may be removed at any time by agreement of the **BENEFICIARY** that originally nominated such individual which, upon clear notification given to the **TRUSTEE**, shall be obligatory.

Ordinary Meetings. The **TECHNICAL COMMITTEE** shall meet at least once each month. Monthly meetings will not require any previous notice, because by agreement entered into by the Committee during its first session of the year, it will schedule the dates, times and places, each month for holding the meeting and this will be understood as constituting sufficient notice for all of the members of the Committee. Changes in the date, place or time of these monthly meetings of the Committee shall be notified to each one of the members of the Committee by the means set forth for extraordinary meetings.

The quorum to legally hold an ordinary meeting shall be half of all of the members of each one of the groups designated by the **SETTLOR**.

Extraordinary Meeting. The **TECHNICAL COMMITTEE** may meet at any time through a notice provided 10 calendar days in advance with such notice being provided to any one of the members of the **TECHNICAL COMMITTEE** or the **TRUSTEE**, and may be delivered through written communications sent in person or by fax to the address or telephone number of each one of the members. In order to be duly convened, the **TECHNICAL COMMITTEE** on the first call

to the meeting shall require attendance of all members of the Committee.

Upon the second notification of an extraordinary meeting, the **TECHNICAL COMMITTEE** will be considered duly convened with the attendance of at least one representative of each one of the **BENEFICIARIES**.

Decisions. At ordinary or extraordinary meetings, decisions of the **TECHNICAL COMMITTEE** shall be taken by a majority of their members and no party shall have the right to break a tie vote.

Resolutions taken outside of a meeting of the **TECHNICAL COMMITTEE** may be taken at any time and place. These Resolutions shall be mandatory if they are taken by a unanimous vote of the **TECHNICAL COMMITTEE's** members.

At each meeting of the **TECHNICAL COMMITTEE** minutes shall be taken and signed by all those in attendance. One copy of said meeting minutes shall be delivered to the **TRUSTEE**. All of the instructions to the **TRUSTEE** shall be in writing and any one of the members of the **TECHNICAL COMMITTEE** may be designated to communicate with the **TRUSTEE**. The **TRUSTEE** shall have the authority to require, if it deems necessary, a ratification of signatures before a Notary Public.

The **TECHNICAL COMMITTEE** shall have as its charge and responsibility oversight of the administration and application of resources forming part of the **TRUST CORPUS**, determining the date and amount of the application of cash flow in accordance with the order set forth in Clause 6, and all other decisions related to the purposes of this Trust. The initial **TECHNICAL COMMITTEE** shall enter into its positions upon executing this Agreement and shall consist of the following individuals:

#### For the FIRST PLACE BENEFICIARY A:

1.			
2.			

#### For the FIRST PLACE BENEFICIARY B:

3
4
For the <b>FIRST PLACE BENEFICIARY C:</b> 5.
6
For the <b>FIRST PLACE BENEFICIARY D</b> :
7
8
For the <b>SECOND PLACE BENEFICIARY</b>

In case of the resignation, incapacity, death or any other situation causing a vacancy of any member of the **TECHNICAL COMMITTEE**, the **BENEFICIARY** in question shall name a new member within a term of no more than 15 days from the date it becomes aware of such vacancy.

The position of member on the **TECHNICAL COMMITTEE** is honorific, which means that no member shall have the right to receive any compensation whatsoever.

The **TECHNICAL COMMITTEE** of the Trust shall have the following authority and obligations:

- To be the executive and oversight body concerning resolutions adopted by the BENEFICIARIES;
- To instruct the TRUSTEE with respect to the values and time periods in which to invest or reinvest the economic resources which comprise, as the case may be, the TRUST CORPUS of this Trust;

- To instruct the TRUSTEE to designate the person or persons to defend the TRUST CORPUS, in case such is necessary;
- To notify the TRUSTEE of any unforeseen situation that could affect the TRUST CORPUS;
- To review and, as the case may be, approve the monthly account statement sent by the TRUSTEE when liquid resources exist;
- To order application of the cash flow and fruits and income from the rights and property placed in Trust in compliance with the order set forth in this Agreement;
- To order and evaluate those judicial and extrajudicial actions and procedure, as well as to grant powers of attorney with respect to late loan payments related to the rights and property placed in Trust;
- To order and designate the person or persons that shall act as attorneys-in-fact to initiate any judicial or extrajudicial action necessary for collection of the rights and property placed in Trust;
- To approve and evaluate other actions and decisions made in compliance with the present Agreement which require previous approval of the TECHNICAL COMMITTEE; and
- In general, to have all of the authority and obligations necessary to resolve any conflict that could present itself with respect to the purposes of this Trust with the understanding that the said authority is annunciated but not limitative.

The **SETTLOR** and **BENEFICIARIES** expressly state that when the **TRUSTEE** acts upon the instructions of the **TECHNICAL COMMITTEE**, the **TRUSTEE** shall have no liability whatsoever and will be held free and harmless in case of any conflict with third parties.

TENTH. STATEMENTS OF ACCOUNT AND REPORTS. For the purpose of providing adequate follow-up on the state of the TRUST CORPUS, the TRUSTEE shall prepare a monthly report for review by the TECHNICAL COMMITTEE including statements of account and reports that shall contain at least the following information:

- The statement and results of investments made with the TRUST CORPUS;
- The statement and balance of all assets and values that comprised the TRUST CORPUS;
- The statement and situation with respect to collections of rights and property placed in Trust;
- The agreements, contracts, legal acts and trusts entered into by the TRUSTEE in the immediate prior period;
- The statement of judicial and/or extrajudicial proceedings initiated by the TRUSTEE to defend the TRUST CORPUS; and
- In general, all the important and relevant information regarding the purposes and corpus of this Trust.

The **TECHNICAL COMMITTEE** shall have the right to add and order the TRUSTEE to include additional information that it considers in its sole judgment necessary to make informed decisions with respect to purposes and corpus of this Trust. In addition, it shall be authorized to immediately request any type of information which shall be provided by the **TRUSTEE** within five (5) working days following receipt in writing of such request by the **TECHNICAL COMMITTEE**. The parties agree that the **TECHNICAL COMMITTEE** shall have a term of 15 days counting from the date of issuance of the mentioned statements of account and reports in order to, as the case may be, make clarifications to such, and request corrections of irregularities, and if the said term passes, the statements of account and reports shall be considered accepted without the necessity of any previous requirement.

**ELEVENTH. REVOCABILITY**. The Trust established pursuant to this Agreement shall be irrevocable.

TWELFTH. AMENDMENT. In order to amend the Trust Agreement, any such amendment shall require an agreement by the BENEFICIARIES, TRUSTEE and SETTLOR, which amendment shall be formalized before a Notary Public.

**THIRTEENTH. TERM.** The Trust shall exist for the term necessary to fulfill its purposes without exceeding the maximum term set by the law, and shall be dissolved once all the purposes have been fulfilled, with the Trust being subject to termination for any of the reasons set forth in Article 375 of the General Law of Credit Instruments and Transactions, with the exception of Paragraph VI of such article.

FOURTEENTH. DEFENSE OF TRUST **CORPUS.** The **TRUSTEE** shall not be responsible for the acts or actions of the parties, of the TECHNICAL COMMITTEE, of third parties or any authorities that impede or make difficult fulfillment with the purposes of this Trust. The TRUSTEE shall have, with regard to the TRUST CORPUS, the authority and rights attributed in the first part of Article 356 of the General Law of Negotiable Instruments and Credit Transactions; but shall not be obligated to exercise it on its own, given that in the event of a conflict or the need to defend the TRUST CORPUS, it shall only grant special power of attorney to the person(s) indicted by the TECHNICAL COMMITTEE under their responsibility and by means of written instruction accompanied by the acceptance of the attorney-in-fact and the declaration of agreement; the costs and fees incurred, or to be incurred, shall be exclusively charged to them jointly or to the Trust's funds without liability to the TRUSTEE.

The **TRUSTEE** shall not be responsible for the acts of the attorneys-in-fact or for the costs and

fees of such, and, in the event of an emergency, the **TRUSTEE** may undertake indispensable acts to conserve the **TRUST CORPUS** without prejudice to the obligation of the **TECHNICAL COMMITTEE** to designate as soon as possible the attorney-in-fact referenced in the paragraph above, with the **TRUSTEE** being immediately reimbursed for the costs incurred.

The attorney-in-fact fees, as well as the costs and expenses incurred, shall be covered by the **SETTLOR** or charged to the **TRUST CORPUS** as far as possible without any liability to the **TRUSTEE**.

**FIFTEENTH. FEES AND EXPENSES.** All the fees and expenses originating from the preparation, execution and registration of this public instrument, including expenses related to the issuance of the first testimony of such document, as well as notary expenses, shall be paid by the **SETTLOR**.

SIXTEENTH. RESIGNATION AND SUBSTITUTION OF TRUSTEE. The parties' agreement that the TRUSTEE may resign its charge or be substituted by the SETTLOR by means of the TECHNICAL COMMITTEE who will designate the substitute financial institution. In the event of a resignation or substitution of the TRUSTEE, the interested party shall communicate its interest in writing no less than 30 days in advance. The TRUSTEE that resigns or is substituted shall prepare an inventory of the property and investment held in trust that covers the term from the last report made to the date in which the said resignation or substitution is effective.

The **TECHNICAL COMMITTEE** shall have a term of fifteen (15) calendar days to examine the report and present clarifications that they consider pertinent. Once this term has expired, the report shall be considered as tacitly approved if no objection has been made. Upon designation of a successor for the Trustee duties, the new Trustee(s) shall be invested with all the authority, rights, powers and obligations that subject matter of the Trust with the **TRUSTEE** 

obligating itself to delver the corpus and documentation relative to the Trust to the new Trustee.

**SEVENTEENTH. ADDRESSES**. For all legal purposes that take place according to the terms of this **TRUST**, the parties designate of their addresses the following:

SETTLOR and SECOND PLACE BENEFICIARY:
FIRST PLACE BENEFICIARY A:
FIRST PLACE BENEFICIARY B:
FIRST PLACE BENEFICIARY C:
FIRST PLACE BENEFICIARY D:
TRUSTEE:
TECHNICAL COMMITTEE:

The notices to be made by the **TRUSTEE** to the **SETTLOR** and the **BENEFICIARIES** or the **TECHNICAL COMMITTEE** shall be made pursuant to the terms set forth herein and in the event of a change of address, the **TRUSTEE** should be notified of such change in writing; failing to do so will result in the notices to be made to be sent to the last known address with such delivery having full legal effect and releasing the **TRUSTEE** from any liability.

shall have the right to receive from the TRUST CORPUS or from the SETTLOR the following amounts established below in the form of fees:

•	For the review, preparation and acceptance of this Agreement, the amount of US\$
	( pesos, Mexican currency), at one
	time at the moment of execution of the Trust;
•	For administration and annual management of the Trust the amount of US\$
	(pesos, Mexican currency),
	for each years, paid in the following
	manner:

•	The	amou	ınt	of	USS	\$		
	(			peso	s, Me	xica	n curren	cy),
	for e	ntering	into	any	type	of	contract	or
	agree	ment, f	or ed	ach c	igreer	men	t related	l to
	the Tr	ust;						

- For each amendment of this Trust Agreement,
   the amount of US\$\_\_\_\_\_\_
   (\_\_\_\_\_\_\_pesos, Mexican currency),
   on each occasion;
- For granting powers of attorney, the amount of US\$\_\_\_\_\_ (\_\_\_\_\_ pesos, Mexican currency), on each occasion; and
- All of the expenses and fees generated by the contracting of accounting firms, auditors, attorneys, Notaries Public, expert appraisers, as well as the expenses from the issuance of powers of attorney, trips, traveling expenses, and so on, and so forth, shall be paid by the funds making up the TRUST CORPUS, if incurred therefore, or, as the case may be, by the SETTLOR and BENEFICIARIES.

The fees agreed to herein shall be subject to the corresponding value added tax, and the **TRUSTEE** shall be authorized to collect late interest concerning those amounts that have not been paid for in form of fees or any other expense it incurs, with the resulting amount being subject to the following interest rate \_\_\_\_\_ for the time such balance remains, plus corresponding value added tax.

In addition, the **TRUSTEE** may resign from its position when for any reason fees or any agreed to amounts have not been paid by the **SETTLOR** or **BENEFICIARIES**, without prejudice to its right to exercise any legal action to obtain collection of such, in which case the **TRUSTEE** shall only have the obligation of notifying the **SETTLOR** or **BENEFICIARIES**, as the case may be, within a term of no less than 30 days following designating a substitute Trustee or resolving the cancellation of the Trust with the **TRUSTEE** ceasing to have any liability whatsoever.

NINETEENTH. EXPRESS WAIVER. The lack or delay of any of the parties in enforcing at any time any one of the provisions of this Agreement, or in requiring at any time compliance by the other parties of any provision shall not be interrupted as a waiver of compliance of such provisions, nor shall it affect the validity of this Agreement or any part of it, nor shall it affect the rights of the other parties to subsequently enforce each one of the said provisions. Any waiver of the parties to any of the provisions of the Agreement shall be made in writing.

**TWENTIETH. SEVERABILITY.** The invalidity, illegality or lack of foundation of one or more of the provisions of this Agreement shall in no way affect the validity and enforcement of all of the other provisions of this Trust, the Loan Agreement or the assignment of Collection Rights Contracts.

**TWENTY-FIRST. PROVISIONS REGARDING PUBLIC POLICY.** The parties agree that any agreement established in this Trust, the Loan Agreement or the assignments of Collection Rights Contracts that is contrary to the provisions of Mexican public policy shall have no affect with the understanding that whenever possible the parties will negotiate an equivalent agreement to replace said terms.

TWENTY-SECOND. JURISDICTION AND **APPLICABLE LAW.** This Trust shall be governed in conformity with the provisions of General Law of Credit Transactions and Instruments and the Civil Code of the state of Nuevo León. In case of any controversy concerning the application, interpretation, validity, form, performance, execution or any other element related to this Trust, the parties have expressly agreed to submit themselves to the jurisdiction of the competent courts of the City of Monterrey, Nuevo León, México, waiving any other jurisdiction or court that could correspond by reason of their present or future domiciles, nationalities, or for any other reason. [It is probable that due to the nature of some of the beneficiaries, sovereign immunity will exist, and they may not be able to submit themselves to jurisdiction of Mexican courts or enjoy certain benefits, and it will be necessary to discuss and adjust this based on the circumstances.]

**TWENTY-THIRD. HEADINGS.** The headings in this Agreement are exclusively for the convenience of the parties and for their reference and identification and, as such, they will not be considered for purposes of interpretation or compliance with such.

[Legal Personality and Authorization of the Notary Public].

# Annex 3 NADB Term Sheet

#### **Proposed Loan Terms and Conditions**

SPC for Energy Efficiency projects – state of Nuevo León

**Project:** SPC for energy efficiency projects in the state of Nuevo León

**Sponsor:** SPC owned by U.S. ESCO

Borrower: SPC

Lender: North American Development Bank (NADB) through the

Corporación Financiera de América del Norte, S.A. de C.V.

(COFIDAN).

**Project Cost:** US\$10 million.

**Loan Terms** 

**Principal Amount:** Up to US\$10,000,000 (ten million dollars)

**Loan Uses:** The loan proceeds will be used to finance energy efficiency projects

developed by ESCOs in the state of Nuevo León

**Repayment Sources:** 1. Energy savings

2. All available reserve funds.

Collateral and Additional

Security:

SPC guarantee secured by equity placed in an escrow account,

ESCO guarantees, equipment, insurance, bonds and warranties.

Interest Rate: A market interest rate based on NADB's loan and guaranty policies

and procedures for Class II borrowers.

Currency: US\$

Exchange Rate Hedge: NA

**Repayment Period:** Up to ten (10) years, including twelve (12) months grace period.

**Grace Period:** Twelve (12) months on principal payments.

**Disbursement Period:** Twelve (12) months following the first disbursement.

**Loan Disbursements:** In accordance with NADB's disbursement policies

and procedures.

Principal and Interest

**Payments:** 

In accordance with the exchange hedge mechanism.

**Prepayment Provisions:** The borrower may prepay the loan when authorized by NADB.

Penalty Interest: In the event that NADB has not received the full amount of any

payment due on the payment date, an annual penalty interest rate of 24 percent shall be applied to such amount until such payment has been received in full by NADB. Penalty interest may be assessed

at the discretion of NADB.

Cuotas y Gastos: Application Fee: US\$1,500 or its equivalent in Mexican pesos.

Commitment Fee: 0.75% annually on the undisbursed balance of the loan. The fee will begin accruing after the first disbursement,

and payments will be made quarterly.

Expenses: The borrower shall pay NADB the legal, technical and financial expenses of the transaction pursuant to an acceptance

agreement.

Applicable Taxes: The borrower is responsible for paying all

applicable taxes.

Exchange Hedge: Any other expenses resulting from the execution

and termination or substitution of the exchange hedge coverage.

**Loan Proceeds Flow:** The borrower will repay the loan to NADB in dollars.

Subsequent Program

**Phases:** 

The borrower may apply to NADB for additional loan funds to finance future phases of the program. In that case, NADB will submit the corresponding loan proposal to the Board

for approval.

**Loan Conditions** 

Closing: Prior to signing the loan agreement, the borrower and guarantor

must provide the following information:

 Original or certified copy of the documents evidencing their legal existence and the legal status of their representatives;

- Certified copy of the Federal Taxpayer Registration and proof of address; and
- Certified copy of an official ID (passport or voter registration card) for each of its representatives.

#### Disbursements:

Prior to the first disbursement of the loan proceeds:

- The borrower must establish the loan administration, payment and guaranty mechanism, through a mandate agreement;
- The mandate agreement must have entered into force;
- The borrower must record the NADB loan and loan guaranty in the appropriate debt registry;
- The borrower must provide an executed legal opinion, in form and substance satisfactory to NADB, issued by the borrower's chief legal officer, indicating that the loan agreement, mandate agreement and all related documents have been duly executed, are valid and have entered into force;
- The borrower must provide evidence that a construction supervisor has been hired to verify and certify the physical and financial status of the project;
- The borrower must provide, in terms satisfactory to NADB, the final construction and disbursement schedules;
- The borrower must provide the construction contract(s) for the corresponding disbursement, in terms satisfactory to NADB;
- The borrower must provide to NADB copies of all permits, licenses, contracts and any other document necessary to carry out the project;
- The technical review of the final design for works associated with the corresponding disbursement must have been satisfactorily completed by a consultant selected by NADB; and
- The borrower must be in full compliance with its obligations under the loan agreements with NADB or the Guarantees furnished to NADB.

#### Covenants

During the term of the loan:

## Project Management and Execution:

The borrower will ensure the proper administration, execution and maintenance of the project.

**Project Completion:** The borrower will be responsible for covering any costs in excess of

the loan amount needed to complete construction of the project.

**Sufficiency of Funds:** The borrower will establish the necessary budgetary line item(s) as

> the source of repayment of all obligations set forth in these Loan terms and conditions. The borrower will ensure that monthly energy savings from projects exceed 120 percent of monthly debt service payments, and will guarantee debt service payment from equity funds held in reserve accounts if energy savings fail to meet debt

service payments.

**Project Supervisor:** The borrower will be responsible for hiring a construction

supervisor to verify and certify the physical and financial status

of the project.

**Procurement:** Loan proceeds may only be used in accordance with the provisions

set forth in NADB's procurement guidelines.

**Specific Project** The borrower will ensure that the project meets all the specific Requirements:

construction requirements imposed by NADB.

**Lender's Supervisor:** NADB may hire a Lender's Supervisor to review the execution of the

project during the life of the loan. The tasks to be performed by the Lender's Supervisor will be consistent with NADB's project supervision policy. The Lender's Supervisor will report directly to NADB. If NADB, based on its own or through its Supervisor's review, determines that the loan proceeds have been disbursed for ineligible expenditures, or actions have been taken that are not in accordance with the terms of the loan agreement, NADB will suspend future disbursements of its funds until the situation has been remedied.

Debt Service Reserve Fund: The Debt Service Reserve (DSR) Fund will be funded within

twenty-four (24) months after the first disbursement of the loan. The DSR will be available to cover debt service payments to NADB in the event energy savings are insufficient to make debt service payments. The DSR requirement will, at all times, be equal to two (2) months of principal and interest payments, and will be maintained throughout the life of the loan. If the DSR is used, the borrower shall replenish it within three months. DSR funds shall be maintained in a designated account. Any balance on the account after meeting the objectives and replenishments of the fund will be available to

the borrower.

Debt Service Coverage Ratio: The borrower shall maintain a debt service coverage ratio for each

fiscal year equal to or greater than 1.20, calculated as the ratio of a) gross energy savings less operating and maintenance costs, taxes,

and interest and principal payments on the NADB loan.

**Credit Rating:** 

The borrower shall maintain a minimum credit rating of BBB (Mex), or the equivalent of three grades below the Mexican federal government.

**Compliance with Laws** 

The borrower must manage the project in compliance with all the and Regulations: laws, rules, regulations, orders and directives applicable to the project or the borrower, enacted by any legislative, executive, administrative or judicial body having lawful jurisdiction (whether federal, state or local).

Audits of Project Operations: The borrower shall notify NADB of all audits that are performed on borrower and provide copies of those audits that NADB requests. NADB reserves the right to conduct spot financial and technical audits of the SPC.

Annual Income and **Expense Budget:** 

The borrower must deliver to NADB, at least thirty (30) days after the commencement of each fiscal year, an annual financial statement

Capital Investment Budget: Prior to the commencement of each fiscal year, the borrower shall deliver to NADB the capital investment budget for the project in the coming fiscal year.

**Annual Operations and** Maintenance Budget:

Forty-five (45) days prior to the commencement of each fiscal year, the borrower must deliver to NADB the annual operations and maintenance budget for the SPC.

**Reports:** 

The borrower will submit the following reports to NADB:

- No later than 45 days following the end of each fiscal year, a certificate as to the debt service coverage ratio for the fiscal year ending. Such certificate will be based on the borrower's records and financial statements, and must be signed by the legal representative of the borrower;
- No later than 180 days following the end of each fiscal year, a copy of its audited financial statements prepared in accordance with generally accepted accounting principles by an independent public accountant;
- No later than forty-five (45) days following the end of each quarter, the financial statements, including a quarterly balance sheet, income and expense statement, cash flow statement, signed by its legal representative;
- No later than fifteen (15) days following the end of the reporting period, quarterly project performance reports;
- · Promptly upon the occurrence of an event which is material to

the financial condition or operating effectiveness of the project, the borrower will notify NADB of such event and its expected impact on the project; and

 The borrower will report to NADB any litigation or proceeding filed against the borrower, as well as any anomaly or circumstance which may compromise the operation of the project.

### Limitation on Additional Indebtedness:

The borrower shall not contract any additional debt with a guarantee on par with or superior to its guarantee with NADB without the prior written authorization of NADB. The borrower shall submit a written request for authorization to NADB that must include information about the new debt to be contracted and, in particular, about the sufficiency of gross revenues for debt service payments, including the proposed debt.

#### **Limitation on Liens:**

The borrower may not contract any liens on the project equity, assets, revenues or funds, without the prior written authorization of NADB.

#### Sale, Lease or Encumbrance:

The borrower may not sell, lease or encumber all or any part of the project without the prior written authorization of NADB.

#### Insurance and Bonds:

The borrower and/or construction contractor will secure and maintain all the insurance policies and bonds necessary for all the project components, for the term agreed upon with NADB. In particular, the borrower must ensure the following policies are contracted:

- Performance bonds, advance payment bonds, warranties and/or any other required bond; and
- Liability insurance.

The borrower may cover acts of God and force majeure events on its own account or by securing insurance policies.

#### **Events of Default and Remedies**

#### **Events of Default:**

The following situations shall constitute events of default:

- Failure to make payment when due of any principal, interest or fees under the loan agreement in accordance with the established schedule, which continues unremedied for 30 or more days; or
- Any representation or warranty made by the borrower in the loan agreement proves to have been incorrect or false in any material respect; or
- The validity of the loan agreement or any other agreement between the NADB and the borrower is contested by the borrower,

the United Mexican states or any government authority thereof, or the borrower denies liability under the loan agreement, or any part of the loan agreement is, for any reason whatsoever, deemed invalid and unenforceable; or

- Failure of the borrower to perform any of the obligations or covenants contained in the loan agreement or in any other agreement between NADB and the SPC, which continues unremedied for a period of 30 days from the date the borrower receives written notice of such failure from NADB; or
- Any proceeding concerning its solvency is instituted by the borrower; or
- Significant adverse changes in the legal and financial position of the borrower that jeopardize its capacity to fulfill its obligations in the manner and under the terms agreed in the loan agreement; or
- Failure to comply with any of the provisions under the mandate agreement or such agreement ceases to be valid and enforceable.

Upon occurrence and continuance of an event of default, NADB may exercise any or all of the following remedies:

- Refuse to advance any funds to the borrower;
- Accelerate or terminate the loan;
- Exercise the remedies provided to enforce the guarantees, as set forth in each respective contract; and
- Exercise such other rights and remedies as may be available at law or equity.

Waiver of an Event of Default:

NADB may waive any event of default. Such waiver will not release the borrower from any of its obligations under the terms of the loan agreement.

Law:

The agreement shall be governed by, and construed in accordance with the laws of the United Mexican states.

Jurisdiction:

Remedies:

The borrower and COFIDAN will submit to the jurisdiction of the competent federal courts in Mexico City, Federal District, Mexico, for any action or proceeding arising out of, or relating to, the loan agreement, hereby waiving any other jurisdiction to which they may be entitled by reason of their present or future address.

#### Annex 4

# Assets Pledge Agreement Between SPE and Creditors

#### Asset Pledge Agreement Without Transfer of Possession

ASSET PLEDGE AGREEMENT WITHOUT TRANSFER OF POSSESSION (the "Agreement"), dated as of \_\_\_\_\_, 2006, \_\_\_\_\_ (SPECIAL by and between PURPOSE ENTITY, OR SPE), S. DE R.L. DE C.V., represented by Mr. \_\_\_\_\_, as its legal representative (hereinafter the "Debtor Pledgor"); and the INTERNATIONAL **FINANCE CORPORATION**, represented by Mr. \_\_, the OVERSEAS PRIVATE **INVESTMENT CORPORATION**, represented by Mr. , the **NORTH AMERICAN DEVELOPMENT BANK,** represented by Mr. , the **NACIONAL FINANCIERA**, S.N.C., represented by Mr. \_\_\_\_\_, as creditors under the Credit Agreement referenced below (hereinafter jointly referred as the "Creditor Pledgee"), and [Final client] represented by Mr. (hereinafter the "Bailee"), pursuant to the following Recitals and Clauses:

#### Recitals

WHEREAS, the Debtor Pledgor is a Mexican company duly organized under and operating in accordance with the laws of the United Mexican States, and is legally represented in this Agreement.

WHEREAS, the Creditor Pledgee, is comprised of several entities, that are organized or created as follows: (i) International Finance Corporation

is an international organization duly created by the Organizational Agreement between the member countries, and is legally represented in this Agreement; (ii) Overseas Private Investment Corporation is an agency of the United States of America government, and is legally represented in this Agreement; (iii) North American Development Bank is an international organization duly created by the Organizational Agreement between the United States of America and the United States of Mexico, and is legally represented in this Agreement; and (iv) Nacional Financiera is national credit corporation created by the Mexican government, and is legally represented in this Agreement.

WHEREAS, the activities that comprise part of the purposes of Debtor Pledgor include, among others, commerce in general, including, the facilitation, developing, consulting, providing the necessary economic resources, acquiring the obligations derived from the energy efficiency projects, developed with persons, partnerships, and corporations without the necessary or sufficient resources to develop this kind of projects or any type of energy efficiency projects.

WHEREAS, on \_\_\_\_\_, 2006, the Debtor Pledgor, as Borrower, and the Creditor Pledgee, as Lenders, executed a Credit Agreement (as amended, restated and modified from time to time, the "Credit Agreement") for the principal sum of US\$\_\_\_\_\_\_.00 (\_\_\_ million dollars 00/ 100 of the United States of America), to provide the economic resources to third parties for the development and execution of energy efficiency

projects in Mexico, in accordance with the terms and subject to the conditions set forth in the Credit Agreement.

WHEREAS, on , 2006, the Debtor Pledgor, as Assignor, and the Management and Payment Trust known as as Assignee, executed an Assignment Agreement of the collection rights that come from the Development, Construction, Installation, Maintenance and Service Agreements and any other related Agreements of the energy efficiency projects, including the endorsement of any promissory notes or secured interested executed as a collateral for the payment of the above-mentioned agreements, executed by the Debtor Pledgor with third parties. Such Assignment Agreement between the Debtor Pledgor, as Assignor and the Management and Payment Trust known as , as Assignee, was executed as part of the terms and conditions of the Credit Agreement.

WHEREAS, Debtor Pledgor desires to guarantee, by virtue of this Agreement, all of the Borrowers' obligations derived, or that will derive or relate to the Credit Agreement, the Assignment Agreement, as well as any other document related or referred by or in the Credit Agreement (hereinafter the "Guaranteed Obligations").

WHEREAS, in order to guarantee the Guaranteed Obligations, the Debtor Pledgor has agreed to give the Creditor Pledgee a first priority lien pledge, without transfer of possession, pursuant to the Mexican General Law of Negotiable Instruments and Credit Transactions (hereinafter the "LGTOC") of the equipment and assets that the that the Debtor Pledgor has, derived from Credit Agreement dated , 2006, between the Debtor Pledgor as Creditor and **[ESCO]**, and the infrastructure and service agreement dated \_\_\_\_\_, \_\_ 2006, between [ESCO] and the Bailee, in order to upgrade the systems of the Bailee, free of any and all liens, in order to create a first priority lien in accordance with this Agreement.

WHEREAS, the Debtor Pledgor and the Bailee represent and warrant that by virtue of the Credit Agreement dated \_\_\_\_\_, \_\_\_ 2006, between the Debtor Pledgor as Creditor and \_\_\_\_\_ [ESCO], and the infrastructure and service agreement dated \_\_\_\_\_, \_\_\_ 2006, between \_\_\_\_\_ [ESCO] and the Bailee, this last one has the possession, but not the property title of all of the equipment and assets that the that the Debtor Pledgor has, derived from the mentioned agreements.

WHEREAS, the representatives of the parties appearing herein have the authority to execute this Agreement and said authority has not been revoked, limited or modified in any form.

WHEREAS, the Debtor Pledgor represents and warrants:

- That the execution, signature and delivery of this Agreement, as well as the compliance with its derived obligations and the granting of the pledge and lien under this Agreement, do not contravene: (a) its by-laws; (b) any applicable law, regulation, decree or authorization; or (c) any binding contractual or other restriction, that affects it or any of its assets and/or rights, and will not create or require the creation of any lien, guarantee, charge, affectation, limitation of ownership, third party rights or with respect to any of its assets, besides the pledge granted under this Agreement;
- That it has sufficient capacity and necessary powers to execute this Agreement;
- That it has obtained the necessary corporate authorizations and approvals;
- That it does not need to obtain or request governmental authorization, approvals or registries to: (a) execute this Agreement, (b) create the lien as described in this Agreement; or (c) comply with its obligations under this Agreement;

- There are no pending or existing threatened suits before any court, governmental agency or arbitral tribunal or any action or procedure that may adversely affect in any manner the legality or validity of this Agreement, or the lien that is created through the execution of this Agreement;
- There are no contractual restrictions, prohibitions or impediments or judicial orders or resolutions that restrict, prohibit or impede the execution of this Agreement or the compliance of the same by the Debtor Pledgor according to the terms and conditions established herein;
- That it has obtained each and every required authorization or approval and has complied with each and every registration required from any governmental authority, agency or by Debtor Pledgor's by-laws, in order for the pledge granted under this Agreement to be valid and enforceable;
- That there are no pending debts or liabilities or any tax or labor liabilities that may constitute a preferred lien on any or all of the Pledged Assets; and
- This Agreement constitutes a legal, valid, and binding obligation of the Debtor Pledgor, enforceable against it pursuant to its terms.

WHEREAS, unless otherwise defined herein, capitalized terms used herein shall have the meanings ascribed to such terms in the Credit Agreement.

IN CONSIDERATION OF THE ABOVE, and the promises and agreements between the parties and other good, valuable, and legal consideration, the receipt and sufficient of which, that is recognized by the parties, the parties subject themselves to the following:

#### Clauses

## FIRST. CREATION OF THE PLEDGE WITHOUT TRANSFER OF POSSESSION

For purposes of guaranteeing the timely payment

of and compliance with all of the Guaranteed Obligations, including, without limitation, the timely and total payment of all the amounts owed under the Credit Agreement, the Debtor Pledgor, by this act, creates in favor of the Creditor Pledgee, which for its part accepts, a first priority lien by means of a Pledge without transfer of possession, pursuant to the terms of Articles 346 and 354 and other relative Articles of the LGTOC and the provisions of this Agreement with regards to all equipment and assets, derived from the infrastructure and service agreement executed by the

**[ESCO]** with the Bailee in order to upgrade its systems, assets that are in the possession of the Bailee, as referred to in **Exhibit "A"** Inventory of Pledged Equipment, and in **Exhibit "B"** Inventory of Pledged Assets, (the **"Pledged Assets"**). Such exhibits are attached to this Agreement and constitute part of this Agreement and have been duly signed by the parties. The Debtor Pledgor acknowledges and agrees that the pledge created by this Agreement will be governed by the Second Title, Fourth Chapter, Seventh Section of the LGTOC.

# SECOND. REPRESENTATIONS AND WARRANTIES OF THE DEBTOR PLEDGOR

The Debtor Pledgor represents and warrants to the Creditor Pledgee, the following:

- That all the Pledged Assets, under this Agreement are owned solely, validly and legally by the Debtor Pledgor, which are free of liens, attachments and limitations and restrictions of ownership;
- That there have been no assignments, transfers, cancellations, set offs or liens on any of the Pledged Assets under this Agreement; and
- That it has the legal capacity and authority to pledge either existing or future Pledged Assets pursuant to this Agreement, from time to time.

#### THIRD.USE OF THE PLEDGED ASSETS

In accordance with that set forth in Article 356 of the LGTOC, so long as there is no breach of any of the Guaranteed Obligations or of this Agreement, the Debtor Pledgor and the Bailee shall have the right to have possession and use of the Pledged Assets, and use them in combination with other assets for the benefit of the energy efficiency project. The Debtor Pledgor will not be allowed to sell or transfer the property or title of the Pledged Assets without the prior written consent of the Creditor Pledgee.

#### **FOURTH. INSURANCE**

The Debtor Pledgor is obligated to obtain the required insurance policy that covers loss damages and thefts of the Pledged Assets. In the respective insurance policy, the Creditor Pledgee will be appointed as the co-owner and beneficiary for the insured Pledged Assets.

The Debtor Pledgor is obligated to deliver to the Creditor Pledgee a copy of the insurance policy referenced in the paragraph above at the time of the execution of this Agreement.

If a loss occurs, the outstanding balance of the amounts due from the credit will be reduced with the insurance proceeds amounts received by the Creditor Pledgee, and if there is any difference, the Creditor Pledgee will deliver them to the Debtor Pledgor no later than the third labor day following the reception date of the insurance proceeds.

# FIFTH. POSSESSION AND PRESERVATION OF THE PLEDGED ASSETS.

The Debtor Pledgor and/or the Bailee shall maintain the possession of the Pledged Assets at all times, except as otherwise provided in this Agreement, pursuant to Articles 346 and 361 of the LGTOC and will be subject to the liability established by Article 380 of the LGTOC.

The Debtor Pledgor and/or the Bailee obligate themselves to conserve and maintain the

Pledged Assets. The Debtor Pledgor and/or the Bailee shall be responsible for the deterioration, loss and damage suffered by the Pledged Assets due to its fault or negligence. All costs necessary for the preservation, repair, administration and relocation of the Pledged Assets shall be at the Debtor Pledgor's and/or Bailee's expense.

The Debtor Pledgor shall not transfer the possession to third parties except to the Bailee nor remove the Pledged Assets from their respective establishments or from any other locations in which they are required for the energy efficiency projects, unless it has the prior written consent by the Creditor Pledgee or except as otherwise provided in this Agreement.

Except as otherwise provided in this Agreement, the Debtor Pledgor by this act expressly waives its right to create, transfer, assume or allow the existence of any lien, pledge, guarantee or any other charge or property limitation with or in connection with any of the Pledged Assets that it currently owns or that are acquired in the future after this act by the Debtor Pledgor on behalf of its creditor in accordance with Article 358 of the LGTOC.

# SIXTH. REPLACEMENT OF PLEDGED ASSETS DUE TO LOSS OR DETERIORATION

The Creditor Pledgee has the right to request from the Debtor Pledgor the replacement of the Pledged Assets in case of loss or deterioration of such. Upon the loss of or deterioration of the Pledge Assets, the Debtor Pledgor shall replace the Pledged Assets.

## SEVENTH. INSPECTION OF THE PLEDGED ASSETS

From time to time and during the term of this Agreement, the Debtor Pledgor and the Bailee shall allow the Creditor Pledgee to inspect the Pledged Assets for the purposes of verifying their existence, quantity and their general state and condition.

The said inspection shall be done on behalf of the Creditor Pledgee by a person so designated by the Creditor Pledgee and made known to the Debtor Pledgor and Client by means of written notice at least 24 (twenty-four) hours in advance.

The said inspections should be undertaken during business hours and business days without interfering with the operations of the Debtor Pledgor and Bailee.

## EIGHTH. DEBTOR PLEDGOR'S AND BAILEE'S OBLIGATIONS

Pursuant to Article 357 of the LGTOC, as long as the Guaranteed Obligations remain in force, the Debtor Pledgor shall maintain the Pledged Assets in the Bailee's facilities located in \_\_\_\_\_ and will not be allowed to remove them from such location without prior written consent of the Creditor Pledgee. The Debtor Pledgor and the Bailee will also be obligated to:

- Carry out any necessary or convenient act to maintain the value and status of the Pledged Assets and abstain from carrying out any act that may cause a decrease of value or limitation of the Pledged Assets;
- Provide to the Creditor Pledgee all the information relating to the Pledged Assets that may be requested from time to time by the Creditor Pledgee. The Debtor Pledgor will allow the Creditor Pledgee or any person designated by the Creditor Pledgee to make photocopies of the documents and registries of the Pledged Assets. The Debtor Pledgor shall provide to the Creditor Pledgee such documents if required in writing by the Creditor Pledgee or by the persons designated by the Creditor Pledgee;
- From time to time, execute and deliver the documents, instruments or guarantees or carry out any necessary or convenient act that may reasonably request the Creditor Pledgee in order to perfect and protect the pledge in

first place and lien created by this Agreement or to allow to the Creditor Pledgee to exercise and enforce its rights and remedies in accordance with this Agreement and in connection with the Pledged Assets;

- Immediately after the knowledge of any action or lawsuit that might affect any of the Pledged Assets or any of the rights, titles or liens of the Creditor Pledgee in the Pledged Assets, deliver a written notice to the Creditor Pledgee providing detailed information and documentation relating to such action or lawsuit;
- Regardless of the powers of attorney granted in this Agreement, at any time and under its own expense, defend its rights, ownership and capacities in the Pledged Assets, including its preference grade, against any and all the lawsuits;
- Not create, issue, assume or allow the existence of any pledge, lien or any other charge or attachment in or in connection with any of the Pledged Assets;
- Not carry out or accept any modification, change or release with respect to the Pledged Assets, nor celebrate any agreement or allow any limitations as to any of the Pledged Assets; and
- Not take any action that; (i) in any way may decrease or restrict the value of the Pledged Assets or the enforceability of the Creditor Pledgee's rights under this Agreement or (ii) as a result of the same, it could be expected that the value or the enforceability of this Agreement could be affected.

#### NINTH. INDIVISIBILITY AND TERM

The pledge in first place and grade and the lien created by this Agreement is indivisible and all and any of the Pledged Assets guarantee the timely and total payment of the Guaranteed Obligations, regardless that whether any party

at this time or in the future, partially or totally guarantees the payment of obligations by means of other pledges or any other guarantee. The Debtor Pledgor by this act expressly waives its right to request the division or reduction of the Pledged Assets in proportion to any partial payments of the Guaranteed Obligations pursuant to Article 349 of the LGTOC. The pledge in first place and grade and the lien created by this Agreement will remain in force and effect until all the Guaranteed Obligations have been totally satisfied and have been cancelled pursuant to this Agreement.

## TENTH. RELEASE OF THE PLEDGE GUARANTEE

Once all of the Guaranteed Obligations have been fully satisfied, the Credit Agreement and all documents related thereto have been terminated, the Creditor Pledgee is obligated, at the expense of the Debtor Pledgor, to release the pledge on the Pledged Assets, complying with the same formalities as those used in the execution of this Agreement. In order to proceed with the release and cancellation of this Agreement, the Creditor Pledgee shall have to issue a release letter after the Creditor Pledgee has determined under its own judgment the full satisfaction of the Guaranteed Obligations.

#### ELEVENTH. RATIFICATION OF AGREEMENT AND RECORDING IN THE PUBLIC REGISTRY OF COMMERCE

Pursuant to Articles 365 and 366 of the LGTOC, the parties are obligated to ratify their signatures before a Mexican Notary Public and to record this Agreement in the Public Registry of Commerce at the corporate domicile of the Debtor Pledgor.

#### TWELFTH, POWERS OF ATTORNEY

The Debtor Pledgor has irrevocably appointed the Creditor Pledgee as its special representative ("Special Representative") to act in its name and representation in the exercise of any right of the Debtor Pledgor derived or related with the Pledged Assets, considering that the Creditor Pledgee will not act until an Event of Default occurs. For such purposes, the Debtor Pledgor has granted general and special powers of attorney to the Creditor Pledgee, as legally necessary, with the purpose that the Special Representative, acting in the name and representation of the Debtor Pledgor exercise, defend and request, pursuant to this Pledge Agreement without transmission of possession, the compliance with any and all of the obligations or rights of the Debtor Pledgor in connection with the Pledged Assets. Within the powers of attorney, the Special Representative will have the following capacities:

- General power for lawsuits and collections, with all the powers of attorney, in accordance with the law, that require a special grant as well as a general power for acts of administration and acts of ownership, under the terms of Article 2554 of the Civil Code of the Federal District, as well as the corresponding sections of the other Civil Codes of the Mexican Republic, as well as the Federal Civil Code, including but not limiting the following capacities:
  - Prosecute or dismiss all kind of procedures, including the Amparo;
  - Negotiate;
  - Enter into arbitration;
  - Articulate and dissolve positions;
  - Challenge the jurisdiction of judges;
  - Accept assignments of goods;
  - Collect payments and issue receipts and cancellations; and
  - Make all types of denouncements, accusations or claims of any type, to represent the Debtor Pledgor in any penal

process, to be a coadjutor to the public ministry, to grant pardons to the accused.

The authority granted to the Special Representative pursuant to A) above is limited to carrying out acts or procedures related with the Pledged Assets.

• General powers of attorney for acts of ownership and acts of administration, as broad as necessary, to carry out, in the name of the Debtor Pledgor, any necessary or convenient act, in the Debtor Pledgor's judgment, to carry out the sale, transfer or enforcement of the Pledged Assets pursuant to this Agreement. In this act, the Debtor Pledgor ratifies all the acts that the Creditor Pledgee may carry out in exercise of these powers of attorney.

These powers of attorney are irrevocable, pursuant to Article 2596 of the Civil Code of the Federal District and its correlatives pursuant to the other Civil Codes of the Mexican Republic, considering that they are granted as an instrument to comply with the obligations acquired by the Debtor Pledgor under this Agreement.

The Debtor Pledgor expressly acknowledges and agrees that the Creditor Pledgee may request to the Debtor Pledgor at any time the granting, formalization or protocolization of these powers of attorney, or of any other similar powers of attorney or any other document that the Debtor Pledgor may consider convenient, and, in such case, all the fees and expenses incurred in exercising such powers of attorney will be paid by the Debtor Pledgor.

#### THIRTEENTH. ENFORCEABLE TITLE

The parties agree that the original of this Agreement that contains the Public Registry of Commerce recording information shall be considered as an executory instrument (título ejecutivo) with regards to the economic obligations contained and referenced herein and

charged to the Debtor Pledgor. Pursuant to Article 1391 of the Commerce Code, this instrument, for the purposes referenced herein, shall be considered as an executory instrument.

#### FOURTEENTH. EXECUTION PROCEDURE

Should there be any breach of the Guaranteed Obligations or this Agreement, the parties expressly submit themselves to the execution procedure established in Third Title of the Commerce Code, regardless of any other action or remedy that the Creditor Pledgee may have pursuant to applicable law.

#### FIFTEENTH. ACTIONS

The failure to exercise or the exercise by the Creditor Pledgee of any action derived from this Agreement or the Credit Agreement does not imply a waiver of any other action that it may have.

#### SIXTEENTH, REMEDIES

Upon the existence or occurrence of an Event of Default pursuant to the Credit Agreement, as well as the breach of any of the Debtor's and/ or Bailee's obligations under this Agreement of a false or inaccurate statement, representation or warranty in this Agreement or in the Credit Agreement, the expiration date of the credit under the Credit Agreement will be accelerated to the date of the Event of Default and the total outstanding balance will become due, at the moment or in any other moment thereafter, and the Creditor Pledgor may, in its sole discretion and without the need for judicial intervention, do, either partially or totally, any one or more of the following: (i) set off any amount owed by the Debtor Pledgor to the Creditor Pledgee under this Agreement, the Credit Agreement or any other legal relation; and/or (ii) upon notice to Debtor Pledgor and without any further liability, terminate or rescind this Agreement; and/or (iii) either itself or through a third party, collect the payments, rents, income and revenues of the Pledged Assets; and/or (iv) exercise any other right or remedy available to Creditor Pledgee under this Agreement, the Credit Agreement and related documents or applicable law, including the applicable provisions of the LGTOC; and the Creditor Pledgee may dispose, transfer, sell or enforce the Pledged Assets, considering that the Debtor Pledgor in this act grants to the Creditor Pledgee irrevocable powers of attorney, necessary and sufficient, to exercise, transfer, sell, pledge, collect, enforce or create other liens in the Pledged Assets, upon the existence or occurrence of an Event of Default. The remedies referred in this Agreement are not intended to be exclusive or limitative, but each shall be in addition to any other remedy available to Creditor Pledgee.

Debtor Pledgor and Bailee shall grant all the facilities in case of execution of the pledge in a default event, including but not limited to, free access to inspect and remove the pledged equipment and assets that have been sold to repay the debt. Therefore, such parties shall not engage in any act that may complicate or delay such execution.

Debtor Pledgor shall pay Creditor Pledgee for all costs and expenses incurred including, but not limited to, attorneys' fees, expenses and costs incurred by Creditor Pledgee in exercising any of Creditor Pledgee's rights or remedies hereunder, as well as in enforcing any of the provisions of this Agreement.

## SEVENTEENTH. APPLICABLE LAW AND JURISDICTION

For the interpretation and fulfillment of this Agreement, the parties shall submit themselves to the Mexican commercial laws and the jurisdiction of the competent courts in Monterrey, Nuevo León, Mexico. The parties expressly waive any other forum that could have jurisdiction by reason of their present or future domicile or for any other reason.

#### EIGHTEENTH. INDEMNITY

The Debtor Pledgor shall indemnify the Creditor Pledgee, as well as any of its counselors,

members, executives, officers, employees, agents, and attorneys; and hold such harmless of any losses, liabilities, lawsuits or damages to which any of them could be subject to as a result of the existence, compliance or enforcement of this Agreement or the Credit Agreement, and/ or the Assignment Agreement, including, without limiting to, the losses, liabilities, lawsuits or damages derived from the Debtor Pledgor's breach of this Agreement, the Credit Agreement and/or the Assignment Agreement, or in connection with the investigation, litigation or any other procedure, including any investigation or procedure, related to the above, and the Debtor Pledgor shall reimburse the Creditor Pledgee and any of its counselors, members, executives, officers, employees, agents and attorneys the incurred attorneys' fees, expenses and costs related to the investigation or procedure.

#### NINETEENTH. GENERAL PROVISIONS

- Modifications. All modifications of the terms or conditions of this Agreement must be made in writing and signed by the parties that intervene.
- Notices. All notices between the parties shall be in writing and delivered either personally or by an internationally recognized courier service. All notices shall be considered as duly delivered upon personal delivery or the third day after sending the notice by means of a courier service and addressed as follows:

To Debtor Pledgor:		
Attention:		
To Bailee:		
Attention:		

lo Credito	r Pleagee:		
Attention:			

With a copy to: Cacheaux, Cavazos & Newton, L.L.P. 333 Convent Street, San Antonio, Texas, USA, 78205

Attention: Robert M. Barnett

- Costs and Expenses: The Debtor Pledgor agrees to pay all costs and expenses incurred in the preparation, execution, notification and administration of this Agreement, as well as of the release as the case might be, including the recording in the Public Registry of Commerce in Monterrey, Nuevo León, Mexico.
- Languages: This Agreement has been prepared in its original version in the Spanish language. An English version of this Agreement has been prepared for reference purposes only. The parties agree that in the event of a controversy, the Spanish version prevails.
- Multiple Originals: This Agreement may be executed in three or more originals, each of which will be considered as an original; however, all of the originals shall be jointly considered as one and as the same document.
- Entire Agreement: This Agreement, along with
  its Exhibits attached hereto, contains the entire
  agreement between the parties and
  supersedes any and all prior agreements and
  understandings, be they oral or written,
  between the parties to this Agreement as it
  relates to the subject matter of same. No
  declaration, representation, guarantee, pact,
  indemnification or agreement of any type not
  expressly set forth in this Agreement shall
  affect the terms and provisions contained in
  this Agreement nor will it be used to interpret,

- change or limit the terms and provisions expressed in this Agreement.
- Waiver and Consent: The terms and provisions of this Agreement may be waived or consent may be given to diverge from same only by means of a written agreement between the parties. Each waiver or consent shall have effect only for the event and specific objective for which it was authorized and shall not constitute a continuous waiver or consent.
- Headings: The headings and titles to the various paragraphs and subparagraphs of this Agreement are solely for references purposes and do not modify or affect the significance or interpretation of any of the terms or provisions of this Agreement.
- Divisibility: The provisions of this Agreement are divisible and should any provision in this Agreement be declared null or void, the validity and enforceability of the remaining provisions shall not be affected or adversely affected in the understanding that if the said provision is modified in such a manner that it becomes valid and enforceable as a matter of law, the said provision shall be considered as modified so that it may be valid and enforceable to extent allowed by Law.
- Assignment: The Creditor Pledgee may assign or transfer in any way, any of its rights or obligations under this Agreement, or the Agreement, to any person, without the prior consent of the Debtor Pledgor, and such other person shall acquire all the benefits, rights, and obligations with respect to the same granted to the Creditor Pledgee under this Agreement. Any of the rights or obligations or the Agreement may not be affected, assigned or transferred in any way totally or partially by the Debtor Pledgor, without the prior express written consent of the Creditor Pledgee.

<ul> <li>Exhibits: All the Exhibits of this Agreeme are a main part of the same and the Debt Pledgor states under oath that all the information in the Exhibits is true, exact correct and verifiable at any time.</li> </ul>	or of this Agreement and execute such in Monterrey, Nuevo León, on the day
DEBTO	OR PLEDGOR:
	, S. DE R.L. DE C.V.
Ву:	
Name:	
Its: Lega	Il Representative
CREDIT	TOR PLEDGEE:
International Finance Corporation	Overseas Private Investment Corporation
Ву:	Ву:
Name: Its: Legal Representative	Name: Its: Legal Representative
North American Development Bank	Nacional Financiera, S.N.C.
By:	Ву:
Name: Its: Legal Representative	Name: Its: Legal Representative
	BAILEE:
Ву:	
Name:	
lts: Lega	Il Representative

98

#### Annex 5

# Assignment Agreement Between ESCO and SPE

<b>ASSIGNMENT</b>	AGREE	MENT	(THE
"AGREEMENT")	<b>ENTERED</b>	INTO B	/ AND
BETWEEN		(E	SCO),
	COMPANY	, (HEREIN	IAFTER
REFERRED TO	AS THE	"ASSIGI	NOR")
REPRESENTED B	Υ		; AND
, (SPE	CIAL PURP	OSE ENT	TY, OR
SPE), LIMITED L	IABILITY C	OMPANY	WITH
VARIABLE CA	APITAL,	(HEREIN	AFTER
REFERRED TO	AS THE	"ASSIGI	NEE"),
REPRESENTED	BY	; H	EREBY
<b>PURSUANT TO 1</b>	HE FOLLO	WING REC	CITALS,
STATEMENTS AI	ND CLAUS	ES:	

#### **Recitals**

- Pursuant to the Credit Agreement dated as of \_\_\_\_\_, 2006 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement") between , **[ESCO]** (the "Borrower") \_\_\_\_\_ **[SPE]** (the "Lender"), the Lender has agreed to make a loan to the Borrower for the development and execution of the energy efficiency project to change and update into energy systems that are more efficient than the ones that [Client] has in its facilities, in accordance with the terms and subject to the conditions set forth in the Credit Agreement. The terms used herein and not defined herein shall have the meaning assigned to such terms in the Credit Agreement;
- The obligations of the Lender to make the Loan are conditioned upon, among other things, the execution and delivery by the Assignor of this Agreement of all the collection rights that come from the Development, Construction, Installation, Maintenance and Service Agreements and any other related Agreements of the energy efficiency project to the Lender, including the endorsement of any promissory notes or secured interest executed as a collateral for the payment of the above-mentioned agreements, as specifically described in the Exhibit "A" of this Agreement ("Rights and Agreements") executed with [Client] to change and upgrade its energy systems to make them more energy efficient than the ones that the Client has in its facilities; and
- Pursuant to the Credit Agreement dated as of \_\_\_\_\_\_, 2006 the Borrower will assign all of his rights of collection that come from the Development, Construction, Installation, Maintenance and Service Agreements and any other related Agreements of the energy efficiency project, including the endorsement of any promissory notes or secured interest executed as a collateral for the payment of the above-mentioned agreements, to the Lender in order to repay the loan granted by the Lender, and will be also personally responsible for the payment of such Credit in case of default of the Client by any reason.

#### **Statements**

- The Assignor, through its legal representative, hereby declares that:
  - It is a \_\_\_\_\_ [corporation or any type of entity or person] duly organized, validly existing and in good standing under the laws of Mexico;
  - Its legal representative has the authority to obligate the Assignee in terms of this Agreement, and such authority has not been limited or revoked in any way;
  - It has the power and authority to enter into this Agreement, it has obtained the required corporate, third party and governmental authorizations and approvals, and has made all filings necessary to, enter into this Agreement, to perform its obligations hereunder and to permit the Trustee to exercise any rights granted to it hereunder;
  - The entering into this Agreement and the performance of its obligations hereunder do not contravene or result in any breach of: (i) its by-laws and articles or incorporation, (ii) any applicable law, rule, decree or authorization applicable to the Assignor, or (iii) any agreement to which Assignor may be a party; and
  - This Agreement constitutes a legal, valid and binding obligation of Assignee, enforceable against Assignee in accordance with its terms.
- The Assignee, through its Trust delegates, hereby declares that:
  - It is an association duly organized, validly existing and in good standing under the laws of Mexico;
  - Its legal representative has the authority to obligate the Assignee in terms of this Agreement, and such authority has not been limited or revoked in any way;

- It has the power and authority to enter into this Agreement, it has obtained the required corporate, third party and governmental authorizations and approvals, and has made all filings necessary to, enter into this Agreement, to perform its obligations hereunder and to permit the Trustee to exercise any rights granted to it hereunder; and
- The entering into this Agreement and the performance of its obligations hereunder do not contravene or result in any breach of: (i) its by-laws and articles of incorporation, (ii) any applicable law, rule, decree or authorization applicable to Assignor, or (iii) any agreement of any nature whatsoever to which Assignor may be a party.

This Agreement constitutes a legal, valid, and binding obligation of Assignee, enforceable against Assignee in accordance with its terms.

Based on the above, the Parties hereby state that they consent that this Agreement is governed by the aforementioned Recitals and Statements and by the following:

#### Clauses

FIRST. Assignment. The Assignor, by means of this Agreement irrevocably assigns and transfers to the Assignee all the economic and collection rights and proceeds derived and/or contained in the Rights and Agreements until the Obligations under the Credit Documents have been paid to the satisfaction of the Lender. The Assignor and the Assignee agree: (i) that the Rights and Agreements shall not be modified without the prior written consent of Assignee; and (ii) upon Assignee's request and during the term of this Agreement, the Assignor shall carry out any necessary act to guarantee that the Rights and Agreements would not be modified or affected.

The assignment of the Rights and Agreements shall not constitute payment, release or novation

of the obligations of the Borrower under the Credit Agreement and the Notes [if necessary], unless such obligations are effectively being paid with the proceeds, economic and collection rights derived and/or contained in Rights and Agreements. The Assignee will not assume any obligations of the Assignor related to the Rights and Agreements. Such obligations shall remain with the Assignor, who shall comply with such obligations in their totality. The Assignor does not have or retain any rights to challenge the assignment of the Rights and Agreements.

SECOND. Obligations. The Assignor, in addition to complying with any other obligations under this Agreement or applicable law, shall:

- Give notice to the applicable parties [client]
  and comply with the applicable requirements
  and formalities in order to make effective
  such assignment of Rights and Agreements;
- Carry out all the necessary or convenient acts to maintain the Rights and Agreements and the rights of the Assignee under this Agreement; and
- Unless otherwise provided in this Agreement, not sell, pledge, assign, transfer, lien or in any other way convey the Rights and Agreements, or accept a lien on the Rights and Agreement by any person other than the Assignee.

THIRD. Expenses. The Assignor shall be solely responsible to pay all the expenses derived from the preparation, execution, delivery and notification of this Agreement, including the notices to be given to the relevant and applicable third parties.

FOURTH. Further Assurances. Parties hereto hereby agree to execute and deliver such further documents and to take such further actions as may reasonably be required to effect the transactions contemplated hereby.

FIFTH. Joint and Several Obligation. In case of a default in payment from the Client of any rights hereby assigned, the Assignor will be jointly and severally liable to the Assignee for the payment of all the proceeds, economic and collection rights of the Rights and Agreements under default. Therefore, the Assignor will be entitled to collect from either the Client as principal obligor and/or the Assignor as joint and several debtor, in case of default.

SIXTH. Subrogation. As a result of the assignment contained in this Agreement, the Assignee will be subrogated immediately and without the necessity of previous authorization or notice in all the judicial and extrajudicial acts for the collection, claim and demand of the proceeds, economic and collection rights that come form the Rights and Agreements.

The Assignor may require from the Assignee the execution and delivery of any document necessary for the execution of the Assignee rights in accordance to this Agreement. Also the Assignor will be obligated to assist, cooperate and execute all the necessary and required acts to comply with the assignment of collection rights and to allow the Assignee to enforce the rights contained in this Agreement.

SEVENTH. Notifications. All notices, claims, instructions, or other communications to be given under this Agreement shall be given in writing and will be deemed duly given when: (a) personally delivered; (b) sent by courier; or (c) sent by facsimile transmission (in each case, with written confirmation or acknowledgment of receipt) to the address/facsimile number set forth below or such other address notified in writing from time to time to the other Parties, same which will be effective two days after receipt.

Assigr	nor:			

Tel:
Fax:
To the attention of:
Assignee:
Tel:
Fax:

EIGHTH. Successors, Assignees and Beneficiaries. The Agreement herein shall be obligatory and shall benefit the Assignor, the Assignee and their respective successors, assignees and beneficiaries, in the understanding that neither Party shall be able to assign, totally or partially, its rights or obligations deriving from this Agreement, without previous written consent from the other Party.

To the attention of:

NINTH. Amendments to the Agreement. The Parties hereby agree that none of the terms or conditions established in this Agreement may be amended, unless such amendments are evidenced in writing and signed by both Parties and formalized as required by applicable law to be valid and binding.

TENTH. Applicable Law and Jurisdiction. This Agreement will be governed by the laws of Mexico. For the interpretation, execution, and fulfillment of this Agreement, the Parties irrevocably and expressly submit to the laws and courts of Monterrey, Nuevo León, Mexico, expressly waiving any other jurisdiction that may correspond to them because of their actual or future domiciles or for any other cause.

ELEVENTH. Headings and Exhibits. Every title of the clauses, sections, subsections and any other

division of this Agreement or of its Exhibits, are used only to enable references, for which they shall not affect the contents of the clauses, sections, subsections and other divisions of this Agreement, in the understanding that its contents shall be ruled by the agreements of the Parties established in this Agreement.

The Exhibits of this Agreement are part of it and for every legal effect, are taken as reproduced as if literally inserted.

TWELFTH. Taxes. Each party hereto will pay the taxes, if any, deriving from the execution of this Agreement, as provided by applicable law.

THIRTEENTH. Total Agreement. This Agreement contains the total agreement between the Assignor and the Assignee and substitutes any and all previous agreements or understandings between such Parties referred to in this Agreement. There are no verbal agreements between the Parties. In case there is any conflict or inconsistency between the previous written communication between the Assignor and the Assignee and this Agreement, the terms used in this Agreement shall prevail for all legal effects.

FOURTEENTH. No Waiver. Except if expressly modified or amended herein, each of the Rights and Agreements shall continue to be, and shall remain in full force and effect. This Agreement shall not be deemed to be a waiver of, or consent to, or a modification or amendment of, any other term and condition contained in the Rights and Agreements or to prejudice any other right or rights which the parties may now have or may have in the future under or in connection with such documents or any instruments or agreements referred to therein, as amended from time to time.

n witness	WHEREC	DF, the Po	arties exect	ute this
Agreement ii	n [three co	opies] in		
on [	], [	], [		].

Assignor:		Assignee:	
	[ESCO]		[SPE]
Ву:		Ву:	
Name:		Name:	
Title:		Title:	

#### Annex 6

# Assignment Agreement Between SPE and Trustee

<b>ASSIGNME</b>	NT A	GREEME	NT	(THE
"AGREEMEN	NT") ENT	ERED IN	TO BY	AND
BETWEEN			_ (SPE	CIAL
<b>PURPOSE</b>	ENTITY,	OR SPE	), LI <i>N</i>	IITED
LIABILITY (	COMPAN	IY WITH	I VARI	ABLE
CAPITAL, (H	EREINAF	TER REFE	RRED 1	O AS
THE "ASSI	GNOR")	REPRES	SENTE	D BY
	; AND_	,	NSTITU	CIÓN
DE BANCA I	MÚLTIPLE	, QS TRU	STEE O	F THE
MANAGEM	ENT AN	D PAYM	ENT T	RUST
(LI				
REFERRED	TO AS	THE "A	SSIGN	ΕΕ"),
REPRESENTE	D BY TH	IE TRUST	DELEC	ATES
	AN	D		;
HEREBY PUI				
RECITALS, S	TATEMEN	TS AND	CLAUS	ES:

#### **Recitals**

Pursuant to the Credit Agreement dated as of \_\_\_\_\_\_, 2006 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement") between \_\_\_\_\_\_\_, S. de R.L. de C.V. (the "Borrower") and \_\_\_\_\_\_ [Lenders] (the "Lender"), the Lender has agreed to make Loans to the Borrower to provide the economic resources to third parties for the development and execution of energy efficiency projects in Mexico, in accordance with the terms and subject to the conditions set forth in the Credit Agreement. The terms used herein and not defined herein shall

have the meaning assigned to such terms in the Credit Agreement.

- The obligations of the Lender to make loans are conditioned upon, among other things, to the execution and delivery by the Assignor of this Agreement of all the collection rights that come from the Development, Construction, Installation, Maintenance and Service Agreements and any other related Agreements of the energy efficiency projects to the Trust, including the endorsement of any promissory notes or secured interests executed as a collateral for the payment of the above-mentioned agreements, as specifically described in the Exhibit "A" of this Agreement ("Rights and Agreements") executed with \_\_\_\_\_ [Client] to change and upgrade into more energy efficient systems than the ones that the Client has in its facilities.

payment of such Credit in case of default of the Client by any reason.

#### **Statements**

- The Assignor, through its legal representative, hereby declares that:
  - It is an association duly organized, validly existing and in good standing under the laws of Mexico;
  - Its legal representative has the authority to obligate the Assignee in terms of this Agreement, and such authority has not been limited or revoked in any way;
  - It has the power and authority to enter into this Agreement, it has obtained the required corporate, third party and governmental authorizations and approvals, and has made all filings necessary to, enter into this Agreement, to perform its obligations hereunder and to permit the Trustee to exercise any rights granted to it hereunder;
  - The entering into this Agreement and the performance of its obligations hereunder do not contravene or result in any breach of: (i) its by-laws and articles of incorporation; (ii) any applicable law, rule, decree or authorization applicable to Assignor; or (iii) an agreement of any kind to which Assignor may be a party; and
  - This Agreement constitutes a legal, valid, and binding obligation of Assignee, enforceable against Assignee in accordance with its terms.
- The Assignee, through its trust delegates, hereby declares that:
  - It is a multiple banking institution (institución de banca múltiple) duly organized and validly existing under the laws of Mexico;
  - It has all the necessary and sufficient authority to enter into this Agreement and

- to perform its obligations hereunder and has been authorized to enter into this Agreement through all required internal resolutions;
- The Management and Payment Trust Agreement allows the Assignee to receive in payment through an Assignment Agreement, totally or partially, the Rights and Agreement subject of this Agreement;
- Its trust delegates are duly authorized to enter into this Agreement on behalf of the Trustee, whose authority has not been limited, revoked or modified in any way;
- The entering into this Agreement and the performance of its obligations hereunder do not contravene or result in a breach of:

   (i) its trust purpose; or (ii) any applicable law or any agreement to which it is a party; and
- This Agreement constitutes a legal, valid and binding obligation of the Trustee, enforceable against the Trustee in accordance with its terms.

Based on the above, the Parties hereby state that they consent that this Agreement is governed by the aforementioned Recitals and Statements and by the following:

#### Clauses

FIRST. Assignment. The Assignor, by means of this Agreement, irrevocably assigns and transfers to the Assignee all the economic and collection rights and proceeds derived and/or contained in the Rights and Agreements until the Obligations under the Credit Documents have been paid in satisfaction of the Lender. The Assignor and the Assignee agree: (i) that the Rights and Agreements shall not be modified without the prior written consent of Assignee; and (ii) upon Assignee's request and during the term of this Agreement, the Assignor shall carry out any necessary act to guarantee that the

Rights and Agreements would not be modified or affected.

The assignment of the Rights and Agreements shall not constitute payment, release or novation of the obligations of the Borrower under the Credit Agreement, the Management and Payment Trust Agreement and the Notes [if necessary], unless such obligations are effectively being paid with the proceeds, economic and collection rights derived and/or contained in Rights and Agreements. The Assignee will not assume any obligations of the Assignor related to the Rights and Agreements. Such obligations shall remain with the Assignor, who shall comply with such obligation in their totality. The Assignor does not have or retain any rights to challenge the assignment of the Rights and Agreements.

SECOND. Obligations. The Assignor, in addition to complying with any other obligations under this Agreement or applicable law, shall:

- Give notices to the applicable parties [client]
   and comply with the applicable requirements
   and formalities in order to make effective
   such assignment of Rights and Agreements;
- Carry out all the necessary or convenient acts to maintain the Rights and Agreements and the rights of the Assignee under this Agreement; and
- Unless otherwise provided in this Agreement, shall not sell, pledge, assign, transfer, lien or in any other way convey the Rights and Agreements, or accept a lien on the Rights and Agreement by any person other than the Assignee.

THIRD. Expenses. The Assignor shall be solely responsible to pay all the expenses derived from the preparation, execution, delivery and notification of this Agreement, including the notices to be given to the relevant and applicable third parties.

FOURTH. Further Assurances. Parties hereto hereby agree to execute and deliver such further documents and to take such further actions as may reasonably be required to carry out the transactions contemplated hereby.

FIFTH. Joint and Several Obligation. In case of a default in payment from the Client of any of the assigned rights hereby assigned, the Assignor will be jointly and severable liable to the Assignee for the payment of all the proceeds, economic and collection rights of the Rights and Agreements under default. Therefore, the Assignor will be entitled to collect from either the Client as principal obligor and/or the Assignor as joint and several debtor, in case of default.

SIXTH. Subrogation. As a result of the assignment contained in this Agreement, the Assignee will be subrogated immediately and without the necessity of previous authorization or notice in all the judicial and extrajudicial acts for the collection, claim and demand of the proceeds, economic and collection rights that come form the Rights and Agreements.

The Assignor may require from the Assignee the execution and delivery of any document necessary for the execution of the Assignee rights in accordance to this Agreement. Also the Assignor will be obligated to assist, cooperate and execute all the necessary and required acts to comply with the assignment of collection rights and to allow the Assignee to enforce the rights contained in this Agreement.

SEVENTH. Notifications. All notices, claims, instructions, or other communications to be given under this Agreement shall be given in writing and will be deemed duly given when: (a) personally delivered; (b) sent by courier or (c) sent by facsimile transmission (in each case, with written confirmation or acknowledgment of receipt) to the address/facsimile number set forth below or such other address notified in writing from time to time to the other Parties, same which will be effective two days after receipt.

Assignor:
Tel:
Fax:
To the attention of:
Assignee:
Tel:
Fax:

EIGHTH. Successors, Assignees and Beneficiaries. The Agreement herein shall be mandatory and shall benefit the Assignor, the Assignee and their respective successors, assignees and beneficiaries, in the understanding that neither Party shall be able to assign, totally or partially, its rights or obligations deriving from this Agreement, without previous written consent from the other Party.

To the attention of:

NINTH. Amendments to the Agreement. The Parties hereby agree that none of the terms or conditions established in this Agreement may be amended, unless such amendments are evidenced in writing and signed by both Parties and formalized as required by applicable law to be valid and binding.

TENTH. Applicable Law and Jurisdiction. This Agreement will be governed by the laws of Mexico. For the interpretation, execution and fulfillment of this Agreement, the Parties irrevocably and expressly submit to the laws and

courts of Monterrey, Nuevo León, Mexico, expressly waiving any other jurisdiction that may correspond to them because of their actual or future domiciles or for any other cause.

ELEVENTH. Headings and Exhibits. Every title of the clauses, sections, subsections and any other division of this Agreement or of its Exhibits, are used only to enable references, for which they shall not affect the contents of the clauses, sections, subsections and other divisions of this Agreement, in the understanding that its contents shall be ruled by the agreements of the Parties established in this Agreement.

The Exhibits of this Agreement are a part of it and for every legal effect, are taken as reproduced as if literally inserted.

TWELFTH. Taxes. Each party hereto will pay the taxes, if any, deriving from the execution of this Agreement, as provided by applicable law.

THIRTEENTH. Total Agreement. This Agreement contains the total agreement between the Assignor and the Assignee and substitutes any and all previous agreements or understandings between such Parties referred to this Agreement. There are no verbal agreements between the Parties. In case there is any conflict or inconsistency between the previous written communication between the Assignor and the Assignee and this Agreement, the terms used in this Agreement shall prevail for all legal effects.

FOURTEENTH. No Waiver. Except if expressly modified or amended herein, each of the Rights and Agreements shall continue to be, and shall remain in full force and effect. This Agreement shall not be deemed to be a waiver of, or consent to, or a modification or amendment of any other term and condition contained in the Rights and Agreements or to prejudice any other right or rights which the parties may now have or may have in the future under or in connection with such documents or any instruments or agreements referred to therein, as amended from time to time.

IN WITNESS WHEREOF, the Parties execute this Agreement in [three copies] in on [], [].	ASSIGNEE: [TRUST]
Assignor: [SPE]	Ву:
By:	Name:
Name:	Title: Trust Delegate
Title:	

# Annex 7 Current Official Mexican Standards for Energy Efficiency

Standard/Equipment or System	Effective Date	Sold Units in 2005	Sold Units in 2005 (GWh)	Accrued E Ur	ifficiency nits
				(GWh)	(MV)
NOM-001-ENER-2000 Vertical Pumps	XII/2000	2,736	7	130	46
NOM-004-ENER-1995 Centrifugal Pumps	VII/1996	384,658	1	32	97
NOM-005-ENER-2000 Washing Machines	X/2000	1,830,236	97	435	0
NOM-006-ENER-1995 Systems	XI/1996	NA	NA	2,312	52
NOM-007-ENER-1995 Lighting for Buildings	IX/1996	NA	141	1,064	45
NOM-006-ENER-2001 Nonresidential Building	VI/2001	NA	54	197	48
NOM-010-ENER-1996 Waterproof Pumps	/1998	1,275	12	96	30
NOM-011-ENER-2002 Central Air Conditioner	X/2002	11,402	34	204	27
NOM-013-ENER-1996 Street Lighting	V/1998	NA	1	19	4
NOM-014-ENER-1997 Single-phase Motors	VII/1998	402,029	40	296	235
NOM-015-ENER-2002 Refrigerators and Freezers	V/2003	1,792,197	691	4,873	997
NOM-016-ENER-2002 Three-phase Motors	IV/2003	189,262	204	1,992	658
NOM-017-ENER-1997 Fluorescent Lamps	VI/1998	159,432	41	120	4
NOM-018-ENER-1997 Thermal Insulation for Buildings	VI/1998	NA	3	76	7
NOM-021-ENER-SCFINECOL 2000 Roof Air Conditioners	VI/2001	533,365	237	1,670	232
NOM-022-ENER/SCFINECOL Commercial Refrigeration Equipment	VI/2001	456,835	199	712	85

Source: FIDE/CONAE. Note: NA = Not applicable.

# Annex 8 Electricity Rates Under CRE's "Public Services" Category

• Tarifa 5, Public lighting in Distrito Federal (Mexico City), Monterrey and Guadalajara. This rate has charges differentiated by voltage (medium and low)

Voltage Level	Pesos/kWh (April 2003)
Low	1.43
Medium	1.70

 Tarifa 5-A, Public lighting in any other urban area. This rate also has charges differentiated by voltage (medium and low)

Voltage Level	Pesos/kWh (April 2003)	
Low	1.18	
Medium	1.41	

• Tarifa 6, water pumping (potable or sewerage). This has a fixed charge and a charge for energy consumed

Charge	Pesos³ (April 2003)	
Fixed	161.11	
Per kWh	0.89	

Other uses of electricity, such as that for office buildings or warehouses, are billed under General rates (depending on the voltage demanded), just as any other customer (independent of economic activity).

<sup>&</sup>lt;sup>3</sup> Rate of exchange to Mex\$ is around 10.7 pesos to US\$.

General rates will vary, depending on the voltage and demand level:

• **Tarifa 3,** services in low-voltage (up to 220 volts) with more than 25 kW of demand. This rate has two charges.

Charge	Pesos (April 2003)	
Maximum Demand (kW) <sup>4</sup>	138.37	
Energy Consumed (kWh)	0.87	

• Tarifa O-M, services in medium voltage with less than 100 kW of demand. This rate has two charges that depend on the region where the customer is located.<sup>5</sup> Also, there are different charges by season for three of the regions.

Charge	Pesos (April 2003)	
Maximum Demand (kW) <sup>6</sup>	From 68.03 to 87.69	
Energy Consumed (kWh)	From 0.52 to 0.85	

 Tarifa H-M, hourly rate for general services in medium voltage, with a demand higher than 100 kW. This rate has four charges, one for what is called "demand to be billed" (demanda facturable) and three for energy at three different parts of the day (base, intermediate and peak). These charges vary by region and by time of year.

Charge	Pesos (April 2003)
Demand to be Billed <sup>7</sup> (kW)	From 81.30 to 152.84
Energy Consumed (peak) <sup>8</sup>	From 1.40 to 1.74
Energy Consumed (intermediate)	From 0.48 to 0.67
Energy Consumed (base)	From 0.38 to 0.47

Source: Comision Reguldora de Energy.

<sup>&</sup>lt;sup>4</sup> It is the medium demand in the 15-minute interval with the greatest consumption in the billing period.

<sup>&</sup>lt;sup>5</sup> Baja California (Northern half of the Baja California peninsula), Baja California Sur, Baja California Sur (summer), Central (includes Mexico City), Northeast (mainly the northern part of the Gulf of Mexico Coast and Nuevo León, the state where Monterrey is located), Northwest (States located east of the Gulf of California), North (central northern states), Peninsular (Yucatan Peninsula) and Sur (Chiapas, Oaxaca and Guerrero).

<sup>&</sup>lt;sup>6</sup> It is the medium demand in the 15-minute interval with the greatest consumption in the billing period.

<sup>&</sup>lt;sup>7</sup> It is the medium demand in the 15-minute interval with the greatest consumption in the billing period.

<sup>&</sup>lt;sup>8</sup> Peak in some areas (mainly central Mexico) occurs at night (7 to 10 p.m.), but in other areas (mostly northern Mexico and the northern Pacific Coast) it occurs in the early afternoon.

# List of Formal Reports

Region/Country	Activity/Report Title	Date	Number
Africa Regional	Anglophone Africa Household Energy Workshop (English)	07/88	085/88
	Regional Power Seminar on Reducing Electric Power System		
	Losses in Africa (English)	08/88	087/88
	Institutional Evaluation of EGL (English)	02/89	098/89
	Biomass Mapping Regional Workshops (English)	05/89	_
	Francophone Household Energy Workshop (French)	08/89	_
	Interafrican Electrical Engineering College: Proposals for Short-		
	and Long-Term Development (English)	03/90	112/90
	Biomass Assessment and Mapping (English)	03/90	_
	Symposium on Power Sector Reform and Efficiency Improvement		
	in Sub-Saharan Africa (English)	06/96	182/96
	Commercialization of Marginal Gas Fields (English)	12/97	201/97
	Commercializing Natural Gas: Lessons from the Seminar in		
	Nairobi for Sub-Saharan Africa and Beyond	01/00	225/00
	Africa Gas Initiative — Main Report: Volume I	02/01	240/01
	First World Bank Workshop on the Petroleum Products		
	Sector in Sub-Saharan Africa	09/01	245/01
	Ministerial Workshop on Women in Energy	10/01	250/01
	and Poverty Reduction: Proceedings from a Multi-Sector	03/03	266/03
	and Multi-Stakeholder Workshop Addis Ababa, Ethiopia,		
	October 23-25, 2002	01/04	077/04
	Opportunities for Power Trade in the Nile Basin: Final Scoping Study Energies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Dakar, Sénégal,	01/04	277/04
	du 4 au 6 février 2003 (French Only)	01/04	278/04
		01/04	276/04
	Énergies modernes et réduction de la pauvreté: Un atelier multi-sectoriel. Actes de l'atelier régional. Douala, Cameroun du 16-18 juillet 2003. (French Only)	09/04	286/04
	Energy and Poverty Reduction: Proceedings from the Global Village		
	Energy Partnership (GVEP) Workshops held in Africa	01/05	298/05
	Power Sector Reform in Africa: Assessing the Impact on Poor People	08/05	306/05
	The Vulnerability of African Countries to Oil Price Shocks: Major	08/05	308/05
	Factors and Policy Options. The Case of Oil Importing Countries	00/03	300/03
	Maximizing the Productive Uses of Electricity to Increase the Impact of Rural Electrification Programs	03/08	332/08

Region/Country	Activity/Report Title	Date	Number
Angola	Energy Assessment (English and Portuguese)	05/89	4708-ANG
	Power Rehabilitation and Technical Assistance (English)	10/91	142/91
	Africa Gas Initiative - Angola: Volume II	02/01	240/01
Benin	Energy Assessment (English and French)	06/85	5222-BEN
Botswana	Energy Assessment (English)	09/84	4998-BT
	Pump Electrification Prefeasibility Study (English)	01/86	047/86
	Review of Electricity Service Connection Policy (English)	07/87	071/87
	Tuli Block Farms Electrification Study (English)	07/87	072/87
Botswana	Household Energy Issues Study (English)	02/88	_
	Urban Household Energy Strategy Study (English)	05/91	132/91
Burkina Faso	Energy Assessment (English and French)	01/86	5730-BUR
	Technical Assistance Program (English)	03/86	052/86
	Urban Household Energy Strategy Study (English and French)	06/91	134/91
Burundi	Energy Assessment (English)	06/82	3778-BU
	Petroleum Supply Management (English)	01/84	012/84
	Status Report (English and French)	02/84	011/84
	Presentation of Energy Projects for the Fourth Five Year Plan		
	(1983-1987) (English and French)	05/85	036/85
	Improved Charcoal Cookstove Strategy (English and French)	09/85	042/85
	Peat Utilization Project (English)	11/85	046/85
	Energy Assessment (English and French)	01/92	9215-BU
Cameroon	Africa Gas Initiative – Cameroon: Volume III	02/01	240/01
Cape Verde	Energy Assessment (English and Portuguese)	08/84	5073-CV
Central African	Household Energy Strategy Study (English)	02/90	110/90
Republic	Energy Assessment (French)	08/92	9898-CAR
Chad	Elements of Strategy for Urban Household Energy	00,72	7070 01.11
	The Case of N'djamena (French)	12/93	160/94
Comoros	Energy Assessment (English and French)	01/88	7104-COM
333.33	In Search of Better Ways to Develop Solar Markets:	0.,00	, , , , , , , , , , , , , , , , , , , ,
	The Case of Comoros	05/00	230/00
Congo	Energy Assessment (English)	01/88	6420-COB
	Power Development Plan (English and French)	03/90	106/90
	Africa Gas Initiative – Congo: Volume IV	02/01	240/01
Côte d'Ivoire	Energy Assessment (English and French)	04/85	5250-IVC
	Improved Biomass Utilization (English and French)	04/87	069/87
	Power System Efficiency Study (English)	12/87	
	Power Sector Efficiency Study (French)	02/92	140/91
	Project of Energy Efficiency in Buildings (English)	09/95	175/95
	Africa Gas Initiative – Côte d'Ivoire: Volume V	02/01	240/01
Ethiopia	Energy Assessment (English)	07/84	4741-ET
	Power System Efficiency Study (English)	10/85	045/85
	Agricultural Residue Briquetting Pilot Project (English)	12/86	062/86
	Bagasse Study (English)	12/86	063/86
	Cooking Efficiency Project (English)	12/87	
	Energy Assessment (English)	02/96	179/96
Gabon	Energy Assessment (English)	07/88	6915-GA
	Africa Gas Initiative – Gabon: Volume VI	02/01	240/01
The Gambia	Energy Assessment (English)	11/83	4743-GM
	Solar Water Heating Retrofit Project (English)	02/85	030/85
	Solar Photovoltaic Applications (English)	03/85	032/85
	Petroleum Supply Management Assistance (English)	04/85	035/85

Region/Country	Activity/Report Title	Date	Number
Ghana	Energy Assessment (English)	11/86	6234-GH
	Energy Rationalization in the Industrial Sector (English)	06/88	084/88
	Sawmill Residues Utilization Study (English)	11/88	074/87
	Industrial Energy Efficiency (English)	11/92	148/92
	Corporatization of Distribution Concessions through Capitalization	12/03	272/03
Guinea	Energy Assessment (English)	11/86	6137-GUI
	Household Energy Strategy (English and French)	01/94	163/94
Guinea Bissau	Energy Assessment (English and Portuguese)	08/84	5083-GUB
	Recommended Technical Assistance Projects (English & Portuguese)	04/85	033/85
	Management Options for the Electric Power and Water Supply		
	Subsectors (English)	02/90	100/90
	Power and Water Institutional Restructuring (French)	04/91	118/91
Kenya	Energy Assessment (English)	05/82	3800 KE
	Power System Efficiency Study (English)	03/84	014/84
	Status Report (English)	05/84	016/84
	Coal Conversion Action Plan (English)	02/87	_
	Solar Water Heating Study (English)	02/87	066/87
	Peri-Urban Woodfuel Development (English)	10/87	076/87
	Power Master Plan (English)	11/87	_
	Power Loss Reduction Study (English)	09/96	186/96
	Implementation Manual: Financing Mechanisms for Solar		
	Electric Equipment	07/00	231/00
Lesotho	Energy Assessment (English)	01/84	4676-LSO
Liberia	Energy Assessment (English)	12/84	5279-LBR
	Recommended Technical Assistance Projects (English)	06/85	038/85
	Power System Efficiency Study (English)	12/87	081/87
Madagascar	Energy Assessment (English)	01/87	5700-
	Power System Efficiency Study (English and French)	12/87	075/87
	Environmental Impact of Woodfuels (French)	10/95	176/95
Malawi	Energy Assessment (English)	08/82	3903-
	Technical Assistance to Improve the Efficiency of Fuelwood		
	Use in the Tobacco Industry (English)	11/83	009/83
	Status Report (English)	01/84	013/84
Mali	Energy Assessment (English and French)	11/91	8423-MLI
	Household Energy Strategy (English and French)	03/92	147/92
Islamic Republic			
of Mauritania	Energy Assessment (English and French)	04/85	5224-
	Household Energy Strategy Study (English and French)	07/90	123/90
Mauritius	Energy Assessment (English)	12/81	3510-
	Status Report (English)	10/83	008/83
	Power System Efficiency Audit (English)	05/87	070/87
	Bagasse Power Potential (English)	10/87	077/87
	Energy Sector Review (English)	12/94	3643-
Mozambique	Energy Assessment (English)	01/87	6128-
	Household Electricity Utilization Study (English)	03/90	113/90
	Electricity Tariffs Study (English)	06/96	181/96
	Sample Survey of Low Voltage Electricity Customers	06/97	195/97
Namibia	Energy Assessment (English)	03/93	11320-
Niger	Energy Assessment (French)	05/84	4642-NIR
	Status Report (English and French)	02/86	051/86
	Improved Stoves Project (English and French)	12/87	080/87
	Household Energy Conservation and Substitution (English and French)	01/88	082/88

Region/Country	Activity/Report Title	Date	Number
Nigeria	Energy Assessment (English)	08/83	4440-UNI
	Energy Assessment (English)	07/93	11672-
	Strategic Gas Plan	02/04	279/04
Rwanda	Energy Assessment (English)	06/82	3779-RW
	Status Report (English and French)	05/84	017/84
	Improved Charcoal Cookstove Strategy (English and French)	08/86	059/86
	Improved Charcoal Production Techniques (English and French)	02/87	065/87
	Energy Assessment (English and French)	07/91	8017-RW
	Commercialization of Improved Charcoal Stoves and Carbonization	.,,.	
	Techniques Mid-Term Progress Report (English and French)	12/91	141/91
SADC	SADC Regional Power Interconnection Study, Vols. I-IV (English)	12/93	-
SADCC	SADCC Regional Sector: Regional Capacity-Building Program	12,70	
or ib e e	for Energy Surveys and Policy Analysis (English)	11/91	_
Sao Tome	Tot Energy correspond relief values (English)	1 1/ / 1	
and Principe	Energy Assessment (English)	10/85	5803-STP
Senegal	Energy Assessment (English)	07/83	4182-SE
· ·	Status Report (English and French)	10/84	025/84
	Industrial Energy Conservation Study (English)	05/85	037/85
	Preparatory Assistance for Donor Meeting (English and French)	04/86	056/86
	Urban Household Energy Strategy (English)	02/89	096/89
	Industrial Energy Conservation Program (English)	05/94	165/94
Seychelles	Energy Assessment (English)	01/84	4693-SEY
,	Electric Power System Efficiency Study (English)	08/84	021/84
Sierra Leone	Energy Assessment (English)	10/87	6597-SL
Somalia	Energy Assessment (English)	12/85	5796-SO
Republic of			
South Africa	Options for the Structure and Regulation of Natural		
	Gas Industry (English)	05/95	172/95
Sudan	Management Assistance to the Ministry of Energy and Mining	05/83	003/83
	Energy Assessment (English)	07/83	4511-SU
	Power System Efficiency Study (English)	06/84 11/84	018/84 026/84
	Status Report (English) Wood Energy/Forestry Feasibility (English)	07/87	073/87
Swaziland	Energy Assessment (English)	07/87	6262-SW
OWAZNANA	Household Energy Strategy Study	10/97	198/97
Tanzania	Energy Assessment (English)	11/84	4969-TA
	Peri-Urban Woodfuels Feasibility Study (English)	08/88	086/88
	Tobacco Curing Efficiency Study (English)	05/89	102/89
	Remote Sensing and Mapping of Woodlands (English)	06/90	_
	Industrial Energy Efficiency Technical Assistance (English)	08/90	122/90
	Power Loss Reduction Volume 1: Transmission and Distribution		
	System Technical Loss Reduction and Network Development		
	(English)	06/98	204A/98
	Power Loss Reduction Volume 2: Reduction of Non-Technical		
	Losses (English)	06/98	204B/98
Togo	Energy Assessment (English)	06/85	5221-TO
	Wood Recovery in the Nangbeto Lake (English and French)	04/86	055/86
	Power Efficiency Improvement (English and French)	12/87	078/87
Uganda	Energy Assessment (English)	07/83	4453-UG
	Status Report (English)	08/84	020/84
	Institutional Review of the Energy Sector (English)	01/85	029/85
	Energy Efficiency in Tobacco Curing Industry (English) Fuelwood/Forestry Feasibility Study (English)	02/86 03/86	049/86 053/86
	Power System Efficiency Study (English)	12/88	092/88
	The specific strains of the sp	, 50	J, JJ

Region/Country	Activity/Report Title	Date	Number
	Energy Efficiency Improvement in the Brick and		
	Tile Industry (English)	02/89	097/89
	Tobacco Curing Pilot Project (English)	03/89	UNDP
			Terminal
	F A (F 1; 1)	10/0/	Report
	Energy Assessment (English)	12/96 09/99	193/96 221/99
Zaire	Rural Electrification Strategy Study Energy Assessment (English)	05/86	5837-ZR
Zambia	Energy Assessment (English)	03/88	4110-ZA
Zambia	Status Report (English)	08/85	039/85
	Energy Sector Institutional Review (English)	11/86	060/86
	Power Subsector Efficiency Study (English)	02/89	093/88
	Energy Strategy Study (English)	02/89	094/88
	Urban Household Energy Strategy Study (English)	08/90	121/90
Zimbabwe	Energy Assessment (English)	06/82	3765-ZIM
	Power System Efficiency Study (English)	06/83	005/83
	Status Report (English)	08/84	019/84
	Power Sector Management Assistance Project (English)	04/85	034/85
	Power Sector Management Institution Building (English)	09/89	_
	Petroleum Management Assistance (English)	12/89	109/89
	Charcoal Utilization Pre-feasibility Study (English)	06/90	119/90
	Integrated Energy Strategy Evaluation (English)	01/92	8768-ZIM
	Energy Efficiency Technical Assistance Project:		
	Strategic Framework for a National Energy Efficiency		
	Improvement Program (English)	04/94	_
	Capacity Building for the National Energy Efficiency		
	Improvement Programme (NEEIP) (English)	12/94	_
	Rural Electrification Study	03/00	228/00
	Les réformes du secteur de l'électricite en Afrique: Evaluation	11/0/	20//0/
	de leurs conséquences pour les populations pauvres	11/06	306/06
	EAST ASIA AND PACIFIC (EAP)		
Asia Regional	Pacific Household and Rural Energy Seminar (English)	11/90	_
China	County-Level Rural Energy Assessments (English)	05/89	101/89
	Fuelwood Forestry Preinvestment Study (English)	12/89	105/89
	Strategic Options for Power Sector Reform in China (English) Energy Efficiency and Pollution Control in Township and	07/93	156/93
	Village Enterprises (TVE) Industry (English) Energy for Rural Development in China: An Assessment Based	11/94	168/94
	on a Joint Chinese/ESMAP Study in Six Counties (English) Improving the Technical Efficiency of Decentralized Power	06/96	183/96
	Companies	09/99	222/99
	Air Pollution and Acid Rain Control: The Case of Shijiazhuang	0////	222///
	City and the Changsha Triangle Area	10/03	267/03
	Toward a Sustainable Coal Sector In China	07/04	287/04
	Demand Side Management in a Restructured Industry: How		
	Regulation and Policy Can Deliver Demand-Side Management	10/05	01.4/05
	Benefits to a Growing Economy and a Changing Power System	12/05	314/05
	A Strategy for CBM and CMM Development and Utilization in China	07/07	326/07
	Development of National Heat Pricing and Billing Policy	03/08	330/08
	,	/ - 3	, <del></del>

Region/Country	Activity/Report Title	Date	Number
Fiji	Energy Assessment (English)	06/83	4462-FIJ
Indonesia	Energy Assessment (English)	11/81	3543-IND
	Status Report (English)	09/84	022/84
	Power Generation Efficiency Study (English)	02/86	050/86
	Energy Efficiency in the Brick, Tile and Lime Industries (English)	04/87	067/87
	Diesel Generating Plant Efficiency Study (English)	12/88	095/88
	Urban Household Energy Strategy Study (English)	02/90	107/90
	Biomass Gasifier Preinvestment Study Vols. I & II (English)	12/90	124/90
	Prospects for Biomass Power Generation with Emphasis on		
	Palm Oil, Sugar, Rubberwood and Plywood Residues (English)	11/94	167/94
Lao PDR	Urban Electricity Demand Assessment Study (English)	03/93	154/93
	Institutional Development for Off-Grid Electrification	06/99	215/99
Malaysia	Sabah Power System Efficiency Study (English)	03/87	068/87
	Gas Utilization Study (English)	09/91	9645-MA
Mongolia	Energy Efficiency in the Electricity and District		
	Heating Sectors	10/01	247/01
	Improved Space Heating Stoves for Ulaanbaatar	03/02	254/02
	Impact of Improved Stoves on Indoor Air Quality in		
	Ulaanbaatar, Mongolia	11/05	313/05
Myanmar Papua New	Energy Assessment (English)	06/85	5416-BA
Guinea (PNG)	Energy Assessment (English)	06/82	3882-
	Status Report (English)	07/83	006/83
	Institutional Review in the Energy Sector (English)	10/84	023/84
	Power Tariff Study (English)	10/84	024/84
Philippines	Commercial Potential for Power Production from	-, -	, -
	Agricultural Residues (English)	12/93	157/93
	Energy Conservation Study (English)	08/94	_
	Strengthening the Non-Conventional and Rural Energy		
	Development Program in the Philippines:		
	A Policy Framework and Action Plan	08/01	243/01
	Rural Electrification and Development in the Philippines:		
	Measuring the Social and Economic Benefits	05/02	255/02
Solomon Islands	Energy Assessment (English)	06/83	4404-SOL
	Energy Assessment (English)	01/92	979-SOL
South Pacific	Petroleum Transport in the South Pacific (English)	05/86	_
Thailand	Energy Assessment (English)	09/85	5793-TH
	Rural Energy Issues and Options (English)	09/85	044/85
	Accelerated Dissemination of Improved Stoves and		
	Charcoal Kilns (English)	09/87	079/87
	Northeast Region Village Forestry and Woodfuels		
	Preinvestment Study (English)	02/88	083/88
	Impact of Lower Oil Prices (English)	08/88	_
	Coal Development and Utilization Study (English)	10/89	_
	Why Liberalization May Stall in a Mature Power Market: A Review of the Technical and Political Economy Factors that Constrained the Electricity Sector Reform in Thailand 1998-2002	12/03	270/03
	Reducing Emissions from Motorcycles in Bangkok	10/03	275/03
Tonga	Energy Assessment (English)	06/85	5498-
Vanuatu	Energy Assessment (English)	06/85	5577-VA
Vietnam	Rural and Household Energy-Issues and Options (English)	01/94	161/94
	Power Sector Reform and Restructuring in Vietnam: Final Report to the Steering Committee (English and Vietnamese)	09/95	174/95

Region/Country	Activity/Report Title	Date	Number
Vietnam	Household Energy Technical Assistance: Improved Coal		
	Briquetting and Commercialized Dissemination of Higher		
	Efficiency Biomass and Coal Stoves (English)	01/96	178/96
	Petroleum Fiscal Issues and Policies for Fluctuating Oil Prices	02/01	236/01
	In Vietnam	00/00	257/02
	An Overnight Success: Vietnam's Switch to Unleaded Gasoline The Electricity Law for Vietnam — Status and Policy Issues —	08/02	257/02
	The Socialist Republic of Vietnam	08/02	259/02
	Petroleum Sector Technical Assistance for the Revision of the	12/03	269/03
	Existing Legal and Regulatory Framework	12,00	207700
Western Samoa	Energy Assessment (English)	06/85	5497-
	SOUTH ASIA (SAR)		
SAR Regional	Toward Cleaner Urban Air in South Asia: Tackling Transport Pollution, Understanding Sources	03/04	281/04
	Potential and Prospects for Regional Energy Trade in the	08/08	334/08
	South Asia Region		
	Trading Arrangements and Risk Management in International	00/00	227/00
Panaladoch	Electricity Trade	09/08 10/82	336/08 3873-BD
Bangladesh	Energy Assessment (English) Priority Investment Program (English)	05/83	002/83
	Status Report (English)	03/83	002/83
	Power System Efficiency Study (English)	02/85	031/85
	Small Scale Uses of Gas Pre-feasibility Study (English)	12/88	<del></del>
	Reducing Emissions from Baby-Taxis in Dhaka	01/02	253/02
	Improving Indoor Air Quality for Poor Families: A Controlled	03/08	335/08
	Experiment in Bangladesh	,	,
India	Opportunities for Commercialization of Non-conventional		
	Energy Systems (English)	11/88	091/88
	Maharashtra Bagasse Energy Efficiency Project (English)	07/90	120/90
	Mini-Hydro Development on Irrigation Dams and		
	Canal Drops Vols. I, II and III (English)	07/91	139/91
	WindFarm Pre-Investment Study (English)	12/92	150/92
	Power Sector Reform Seminar (English)	04/94	166/94
	Environmental Issues in the Power Sector (English)	06/98	205/98
	Environmental Issues in the Power Sector: Manual for	0.4.400	0.0.0
	Environmental Decision Making (English)	06/99	213/99
	Household Energy Strategies for Urban India: The Case of	07/00	014/00
	Hyderabad	06/99	214/99
	Greenhouse Gas Mitigation In the Power Sector: Case Studies From India	02/01	237/01
	Energy Strategies for Rural India: Evidence from Six States	08/02	258/02
	Household Energy, Indoor Air Pollution, and Health	11/02	261/02
	Access of the Poor to Clean Household Fuels	07/03	263/03
	The Impact of Energy on Women's Lives in Rural India	01/04	276/04
	Environmental Issues in the Power Sector: Long-Term Impacts	/	, -
	And Policy Options for Rajasthan	10/04	292/04
	Environmental Issues in the Power Sector: Long-Term Impacts	10/04	293/04
	And Policy Options for Karnataka		

Region/Country	Activity/Report Title	Date	Number
Nepal	Energy Assessment (English)	08/83	4474-NEP
	Status Report (English)	01/85	028/84
	Energy Efficiency & Fuel Substitution in Industries (English)	06/93	158/93
Pakistan	Household Energy Assessment (English)	05/88	
	Assessment of Photovoltaic Programs, Applications, and		
	Markets (English)	10/89	103/89
	National Household Energy Survey and Strategy Formulation		
	Study: Project Terminal Report (English)	03/94	_
	Managing the Energy Transition (English)	10/94	
	Lighting Efficiency Improvement Program		
	Phase 1: Commercial Buildings Five Year Plan (English)	10/94	_
	Clean Fuels	10/01	246/01
C : 1	Household Use of Commercial Energy	05/06	320/06
Sri Lanka	Energy Assessment (English)	05/82	3792-CE
	Power System Loss Reduction Study (English)	07/83	007/83
	Status Report (English)	01/84	010/84
	Industrial Energy Conservation Study (English)	03/86	054/86
	Sustainable Transport Options for Sri Lanka: Vol. I	02/03	262/03
	Greenhouse Gas Mitigation Options in the Sri Lanka Power Sector: Vol. II	02/02	242/02
		02/03	262/03
	Sri Lanka Electric Power Technology Assessment (SLEPTA): Vol. III	02/03	262/03
	Energy and Poverty Reduction: Proceedings from South Asia	11/03	268/03
	Practitioners Workshop How Can Modern Energy Services		200/00
	Contribute to Poverty Reduction? Colombo, Sri Lanka, June 2-4, 20	003	
	EUROPE AND CENTRAL ASIA (ECA)		
Armenia	Development of Heat Strategies for Urban Areas of Low-income	04/04	282/04
	Transition Economies. Urban Heating Strategy for the Republic		
	Of Armenia. Including a Summary of a Heating Strategy for the		
	Kyrgyz Republic		
Bulgaria	Natural Gas Policies and Issues (English)	10/96	188/96
	Energy Environment Review	10/02	260/02
Central Asia and			
The Caucasus Central and	Cleaner Transport Fuels in Central Asia and the Caucasus	08/01	242/01
Eastern Europe	Power Sector Reform in Selected Countries	07/97	196/97
	Increasing the Efficiency of Heating Systems in Central and		
	Eastern Europe and the Former Soviet Union (English and Russian)	08/00	234/00
	The Future of Natural Gas in Eastern Europe (English)	08/92	149/92
Kazakhstan Kazakhstan &	Natural Gas Investment Study, Volumes 1, 2 & 3	12/97	199/97
Kyrgyzstan	Opportunities for Renewable Energy Development	11/97	16855-
Poland	Energy Sector Restructuring Program Vols. I-V (English)	01/93	153/93
	Natural Gas Upstream Policy (English and Polish)	08/98	206/98
	Energy Sector Restructuring Program: Establishing the Energy		
	Regulation Authority	10/98	208/98
Portugal	Energy Assessment (English)	04/84	4824-PO
Romania	Natural Gas Development Strategy (English)	12/96	192/96
	Private Sector Participation in Market-Based Energy-Efficiency Financing Schemes: Lessons Learned from Romania	11/03	274/03
	and International Experiences.		

Region/Country	Activity/Report Title	Date	Number
Slovenia Turkey	Workshop on Private Participation in the Power Sector (English) Energy Assessment (English) Energy and the Environment: Issues and Options Paper Energy and Environment Review: Synthesis Report Turkey's Experience with Greenfield Gas Distribution since 2003	02/99 03/83 04/00 12/03 03/07	211/99 3877-TU 229/00 273/03 325/05
	MIDDLE EAST AND NORTH AFRICA (MNA)		
Arab Republic	Energy Assessment (English)	10/96	189/96
of Egypt	Energy Assessment (English and French) Status Report (English and French) Energy Sector Institutional Development Study (English and French)	03/84 01/86 07/95	4157- 048/86 173/95
Morocco	Natural Gas Pricing Study (French)  Gas Development Plan Phase II (French)	10/98 02/99	209/98 210/99
Syria	Energy Assessment (English) Electric Power Efficiency Study (English) Energy Efficiency Improvement in the Cement Sector (English)	05/86 09/88 04/89	5822-SYR 089/88 099/89
Tunisia	Energy Efficiency Improvement in the Fertilizer Sector (English) Fuel Substitution (English and French)	06/90 03/90	115/90 —
	Power Efficiency Study (English and French) Energy Management Strategy in the Residential and	02/92	136/91
	Tertiary Sectors (English) Renewable Energy Strategy Study, Volume I (French)	04/92 11/96	146/92 190A/96
	Renewable Energy Strategy Study, Volume II (French) Rural Electrification in Tunisia: National Commitment,	11/96	190B/96
V	Efficient Implementation and Sound Finances	08/05	307/05
Yemen	Energy Assessment (English) Energy Investment Priorities (English)	12/84 02/87	4892-YAR 6376-YAR
	Household Energy Strategy Study Phase I (English) Household Energy Supply and Use in Yemen. Volume I:	03/91	126/91
	Main Report and Volume II: Annexes	12/05	315/05
	LATIN AMERICA AND THE CARIBBEAN REGION (LCR)		
LCR Regional	Regional Seminar on Electric Power System Loss Reduction in the Caribbean (English) Elimination of Lead in Gasoline in Latin America and	07/89	_
	the Caribbean (English and Spanish) Elimination of Lead in Gasoline in Latin America and	04/97	194/97
	the Caribbean - Status Report (English and Spanish) Harmonization of Fuels Specifications in Latin America and	12/97	200/97
	the Caribbean (English and Spanish) Energy and Poverty Reduction: Proceedings from the Global Village	06/98	203/98
	Energy Partnership (GVEP) Workshop held in Bolivia Power Sector Reform and the Rural Poor in Central America Estudio Comparativo Sobre la Distribución de la Renta Petrolera	06/05 12/04	202/05 297/04
	en Bolivia, Colombia, Ecuador y Perú OECS Energy Sector Reform and Renewable Energy/Energy Efficiency Options	08/05 02/06	304/05 317/06
	The Landfill Gas-to-Energy Initiative for Latin America and the Caribbean	02/06	318/06

Region/Country	Activity/Report Title	Date	Number
Bolivia	Energy Assessment (English)	04/83	4213-BO
	National Energy Plan (English)	12/87	_
	La Paz Private Power Technical Assistance (English) Pre-feasibility Evaluation Rural Electrification and Demand	11/90	111/90
	Assessment (English and Spanish)	04/91	129/91
	National Energy Plan (Spanish)	08/91	131/91
	Private Power Generation and Transmission (English)	01/92	137/91
	Natural Gas Distribution: Economics and Regulation (English)	03/92	125/92
	Natural Gas Sector Policies and Issues (English and Spanish)	12/93	164/93
	Household Rural Energy Strategy (English and Spanish)	01/94	162/94
	Preparation of Capitalization of the Hydrocarbon Sector	12/96	191/96
	Introducing Competition into the Electricity Supply Industry in	,	, , , ,
	Developing Countries: Lessons from Bolivia	08/00	233/00
	Final Report on Operational Activities Rural Energy and	00,00	
	Energy Efficiency	08/00	235/00
	Oil Industry Training for Indigenous People: The Bolivian	00,00	
	Experience (English and Spanish)	09/01	244/01
Brazil	Capacitación de Pueblos Indígenas en la Actividad Petrolera Fase II Best Practices in Mainstreaming Environmental & Social Safeguards	07/04	290/04
DIGZII	Into Gas Pipeline Projects	07/06	322/06
	Estudio Sobre Aplicaciones en Pequeña Escala de Gas Natural	07/04	291/04
	Energy Efficiency & Conservation: Strategic Partnership for	07/04	271/04
	Energy Efficiency in Brazil (English)	01/95	170/95
	Hydro and Thermal Power Sector Study	09/97	197/97
	Rural Electrification with Renewable Energy Systems in the	07/77	17//7/
	Northeast: A Preinvestment Study	07/00	232/00
	Reducing Energy Costs in Municipal Water Supply Operations		265/03
	"Learning-while-doing" Energy M&T on the Brazilian Frontlines	07/03	265/05
Chile	Energy Sector Review (English)	08/88	7129-CH
Colombia	Energy Strategy Paper (English)	12/86	_
	Power Sector Restructuring (English)	11/94	169/94
	Energy Efficiency Report for the Commercial		
	and Public Sector (English)	06/96	184/96
Costa Rica	Energy Assessment (English and Spanish)	01/84	4655-CR
	Recommended Technical Assistance Projects (English)	11/84	027/84
Dominican	Forest Residues Utilization Study (English and Spanish)	02/90	108/90
Republic	Energy Assessment (English)	05/91	8234-DO
Ecuador	Energy Assessment (Spanish)	12/85	5865-EC
LCUddoi		07/88	3003-LC
	Energy Strategy Phase I (Spanish) Energy Strategy (English)	04/91	_
	-, -, -, -, -, -, -, -, -, -, -, -, -, -		_
	Private Mini-hydropower Development Study (English)	11/92	
	Energy Pricing Subsidies and Interfuel Substitution (English)	08/94	11798-EC
C	Energy Pricing, Poverty and Social Mitigation (English)	08/94	12831-EC
Guatemala	Issues and Options in the Energy Sector (English)	09/93	12160-
11.20	Health Impacts of Traditional Fuel Use	08/04	284/04
Haiti	Energy Assessment (English and French)	06/82	3672-HA
	Status Report (English and French)	08/85	041/85
	Household Energy Strategy (English and French)	12/91	143/91
Honduras	Energy Assessment (English)	08/87	6476-HO
	Petroleum Supply Management (English)	03/91	128/91
	Power Sector Issues and Options	03/08	333/08

Region/Country	Activity/Report Title	Date	Number
Jamaica	Energy Assessment (English)	04/85	5466-JM
	Petroleum Procurement, Refining, and		
	Distribution Study (English)	11/86	061/86
	Energy Efficiency Building Code Phase I (English)	03/88	
	Energy Efficiency Standards and Labels Phase I (English)	03/88	_
	Management Information System Phase I (English)	03/88	
	Charcoal Production Project (English)	09/88	090/88
	FIDCO Sawmill Residues Utilization Study (English)	09/88	088/88
	Energy Sector Strategy and Investment Planning Study (English)	07/92	135/92
Mexico	Improved Charcoal Production within Forest Management for		
	the State of Veracruz (English and Spanish)	08/91	138/91
	Energy Efficiency Management Technical Assistance to the		
	Comisión Nacional para el Ahorro de Energía (CONAE) (English)	04/96	180/96
	Energy Environment Review	05/01	241/01
	Proceedings of the International Grid-Connected Renewable		
	Energy Policy Forum (with CD)	08/06	324/06
	Innovative Financial Mechanism to Implement Energy		
	Efficiency Projects in Mexico	06/09	338/09
Nicaragua	Modernizing the Fuelwood Sector in Managua and León	12/01	252/01
	Policy & Strategy for the Promotion of RE Policies in		
	Nicaragua. (Contains CD with 3 complementary reports)	01/06	316/06
Panama	Power System Efficiency Study (English)	06/83	004/83
Paraguay	Energy Assessment (English)	10/84	5145-PA
	Recommended Technical Assistance Projects (English)	09/85	
	Status Report (English and Spanish)	09/85	043/85
	Reforma del Sector Hidrocarburos (Spanish Only)	03/06	319/06
Peru	Energy Assessment (English)	01/84	4677-PE
	Status Report (English)	08/85	040/85
	Proposal for a Stove Dissemination Program in		
	the Sierra (English and Spanish)	02/87	064/87
	Energy Strategy (English and Spanish)	12/90	_
	Study of Energy Taxation and Liberalization		
	of the Hydrocarbons Sector (English and Spanish)	120/93	159/93
	Reform and Privatization in the Hydrocarbon		
	Sector (English and Spanish)	07/99	216/99
	Rural Electrification	02/01	238/01
Saint Lucia	Energy Assessment (English)	09/84	5111-SLU
St. Vincent and			
the Grenadines	Energy Assessment (English)	09/84	5103-STV
Sub Andean	Environmental and Social Regulation of Oil and Gas		
	Operations in Sensitive Areas of the Sub-Andean Basin		
	(English and Spanish)	07/99	217/99
Trinidad and			
Tobago	Energy Assessment (English)	12/85	5930-TR
	CLODAL		
	GLOBAL		
	Energy End Use Efficiency: Research and Strategy (English)	11/89	
	Women and Energy -A Resource Guide		
	The International Network: Policies and Experience (English)	04/90	
	Guidelines for Utility Customer Management and	•	
	Metering (English and Spanish)	07/91	

Region/Country	Activity/Report Title	Date	Number
	Assessment of Personal Computer Models for Energy		
	Planning in Developing Countries (English)	10/91	_
	Long-Term Gas Contracts Principles and Applications (English)	02/93	152/93
	Comparative Behavior of Firms Under Public and Private	05/00	155/00
	Ownership (English)	05/93	155/93
	Development of Regional Electric Power Networks (English)	10/94	_
	Round-table on Energy Efficiency (English) Assessing Pollution Abatement Policies with a Case Study	02/95	171/95
	of Ankara (English)	11/95	177/95
	A Synopsis of the Third Annual Round-table on Independent Power Projects: Rhetoric and Reality (English)	08/96	187/96
	Rural Energy and Development Round-table (English)	05/98	202/98
	A Synopsis of the Second Round-table on Energy Efficiency:	03/70	202/70
	Institutional and Financial Delivery Mechanisms (English) The Effect of a Shadow Price on Carbon Emission in the	09/98	207/98
	Energy Portfolio of the World Bank: A Carbon		
	Backcasting Exercise (English)	02/99	212/99
	Increasing the Efficiency of Gas Distribution Phase 1:	, , , ,	,
	Case Studies and Thematic Data Sheets	07/99	218/99
	Global Energy Sector Reform in Developing Countries:	.,,,,	, , , .
	A Scorecard	07/99	219/99
	Global Lighting Services for the Poor Phase II: Text	.,,,,	, , , .
	Marketing of Small "Solar" Batteries for Rural		
	Electrification Purposes	08/99	220/99
	A Review of the Renewable Energy Activities of the UNDP/	00, 7,	,,,
	World Bank Energy Sector Management Assistance		
	Program 1993 to 1998	11/99	223/99
	Energy, Transportation and Environment: Policy Options for	, , ,	,,,
	Environmental Improvement	12/99	224/99
	Privatization, Competition and Regulation in the British Electricity	-, , ,	,,,,
	Industry, With Implications for Developing Countries	02/00	226/00
	Reducing the Cost of Grid Extension for Rural Electrification	02/00	227/00
	Undeveloped Oil and Gas Fields in the Industrializing World	02/01	239/01
	Best Practice Manual: Promoting Decentralized Electrification		
	Investment	10/01	248/01
	Peri-Urban Electricity Consumers — A Forgotten but Important		0.40.405
	Group: What Can We Do to Electrify Them?	10/01	249/01
	Village Power 2000: Empowering People and Transforming		
	Markets	10/01	251/01
	Private Financing for Community Infrastructure	05/02	256/02
	Stakeholder Involvement in Options Assessment:	07/03	264/03
	Promoting Dialogue in Meeting Water and Energy Needs: A Sourcebook		
	A Review of ESMAP's Energy Efficiency Portfolio	11/03	271/03
	A Review of ESMAP's Rural Energy and Renewable Energy Portfolio	04/04	280/04
	ESMAP Renewable Energy and Energy Efficiency Reports 1998-2004 (CD Only)	05/04	283/04
	Regulation of Associated Gas Flaring and Venting: A Global Overview and Lessons Learned from International Experience	08/04	285/04
	ESMAP Gender in Energy Reports and Other related Information (CD Only)	11/04	288/04

Region/Country	Activity/Report Title	Date	Number
	ESMAP Indoor Air Pollution Reports and Other related Information (CD Only)	11/04	289/04
	Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshop on the Pre-Investment Funding. Berlin, Germany, April 23-24, 2003.	11/04	294/04
	Global Village Energy Partnership (GVEP) Annual Report 2003 Energy and Poverty Reduction: Proceedings from the Global Village Energy Partnership (GVEP) Workshop on Consumer Lending and Microfinance to Expand Access to Energy Services,	12/04	295/04
	Manila, Philippines, May 19-21, 2004	12/04	296/04
	The Impact of Higher Oil Prices on Low Income Countries and on the Poor	03/05	299/05
	Advancing Bioenergy for Sustainable Development: Guideline For Policymakers and Investors	04/05	300/05
	ESMAP Rural Energy Reports 1999-2005	03/05	301/05
	Renewable Energy and Energy Efficiency Financing and Policy Network: Options Study and Proceedings of the International Forum	07/05	303/05
	Implementing Power Rationing in a Sensible Way: Lessons Learned and International Best Practices	08/05	305/05
	The Urban Household Energy Transition. Joint Report with RFF Press/ESMAP. ISBN 1-933115-07-6	08/05	309/05
	Pioneering New Approaches in Support of Sustainable Development In the Extractive Sector: Community Development Toolkit, also Includes a CD containing Supporting Reports	10/05	310/05
	Analysis of Power Projects with Private Participation Under Stress	10/05	311/05
	Potential for Biofuels for Transport in Developing Countries	10/05	312/05
	Experiences with Oil Funds: Institutional and Financial Aspects	06/06	321/06
	Coping with Higher Oil Prices	06/06	323/06
	Designing Strategies and Instruments to Address Power Projects Stress Situations	02/08	329/08
	An Analytical Compendium of Institutional Frameworks for Energy Efficiency Implementation Regulatory Review of Power Purchase Agreements:	03/08	331/08
	A Proposed Benchmarking Methodology	09/08	337/08







Energy Sector Management Assistance Program 1818 H Street, NW Washington, DC 20433 USA

Tel: 1.202.458.2321 Fax: 1.202.522.3018 Internet: www.esmap.org Email: esmap@worldbank.org