

# Mexico Energy Project Financing

A report to assist California companies to locate financing for energy projects in Mexico, focusing on renewable energy and energy efficiency.

*Prepared For:*  
**California Energy Commission**

*Prepared By:*  
**Power Project Financing**

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**CALIFORNIA ENERGY COMMISSION**  
**Contract 500-00-015**

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**January 2, 2002**

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## ***Introduction***

This report was researched and written by Power Project Financing (“PPF”) under contract to the California Energy Commission (“CEC” or the “Commission”). The purpose of the contract is to identify, evaluate and provide advice on financing options for energy projects in international markets, primarily in Mexico and China, and perform specific financial assistance tasks for California-based energy companies. This work is intended to stimulate opportunities to export energy technologies to international markets that involve energy efficiency, cogeneration, and small power systems requiring less than \$100 million in capital investment. The CEC’s ultimate goal is to stimulate jobs and tax revenues in an energy industry sector in which California has a leadership position.

Specifically, the contract includes performing the following four tasks, producing the required related deliverables, and making presentations:

- Task 1 – Identify Mexico Energy Project Financing Sources
- Task 2 - Identify China Energy Project Financing Sources
- Task 3 – Develop Financial Screening Criteria for International Energy Projects
- Task 4 – Provide Technical Assistance to Evaluate/Secure International Energy Project Financing

This report relates to Task 1, to identify Mexico energy project financing sources. In our experience, many energy projects are based on sound engineering and economics, but the developers often cannot find financing that meets the project needs. This first task involved identifying financing sources and techniques suitable for energy generation and energy savings projects in Mexico, and includes sources within and outside Mexico. Debt and equity sources include the World Bank, International Finance Corporation, Mexican banks and governmental sources, US banks and governmental sources, other foreign government sources, equity and venture capital investors/funds, pension and other institutional investors.

The results of this report will be presented at a Commission-sponsored and organized conference on international energy project opportunities in April 2002. In addition, PPF will use the information and contacts gathered to develop financial screening criteria for Task 3 and provide Technical Assistance to companies with potential energy projects in Task 4.

This report provides background information on Mexico, including the energy and environmental context in Mexico, and identifies what PPF believes to be a significant business opportunity for California companies. Standard and Poor’s predicts that Mexico will need \$60 billion of investment in the energy sector over only the next six years and much of it will be in the power sector. A significant portion of that investment could be spent on California-produced goods and services including wind turbines, energy-saving lighting, instrumentation, renewable energy engineering, development services, and microturbines.

At the same time that new technologies and energy-savings methods are being commercialized in California, PPF research indicates that Mexico is seen as a favorable investment destination

among emerging market countries. We found several new initiatives for energy financing, especially relating to environmentally-oriented projects.

We hope that this report is useful for developers, equipment vendors, energy financing companies, and government officials. For more information on the program, please contact:

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## **Mexico Background**

### ***Importance of Mexico to the U.S. and California***

Mexico is vitally important to the United States and to California for a host of reasons. For example, according to World Bank statistics, Mexico is the 13<sup>th</sup> largest economy in the world and the fourth largest oil-producing country. In addition, the CIA World Factbook claims that in 2000 Mexico's population was 102 million with a Gross Domestic Product (GDP) of \$915 billion. The U.S. and Mexico share almost a 2,000 border with intensive trade. In 2000, the U.S. exported \$111 billion of goods to Mexico and imported \$136 billion. Mexico now sells the U.S. seven times more goods than does China. Some economists predict that Mexico could become the U.S.'s largest trading partner in 5 to 10 years, surpassing Canada.

As an emerging market, Mexico's position has become stronger in the last five years. Since the signing of the North American Free Trade Agreement (NAFTA) in 1991 and peso crisis in 1994, Mexico has gained in economic strength and political flexibility. In 2000, Mexico became the largest economy in Latin America. Inflation has declined to single digits while GDP growth has increased to about 7%, until the downturn in the U.S. economy this year. For the first time in 70 years an opposition political candidate was elected president of the country; however, the legislature remains in control of the PRI (spell out).

Mexico's economy is tied to the U.S. economy and oil. This year has been especially difficult for Mexico because the U.S. recession (which was just announced to have officially started in March 2001) and a significant drop in oil prices from \$30 to \$17 per barrel. As a result, Mexico's 3d quarter 2001 GDP shrank 1.6% in real terms.

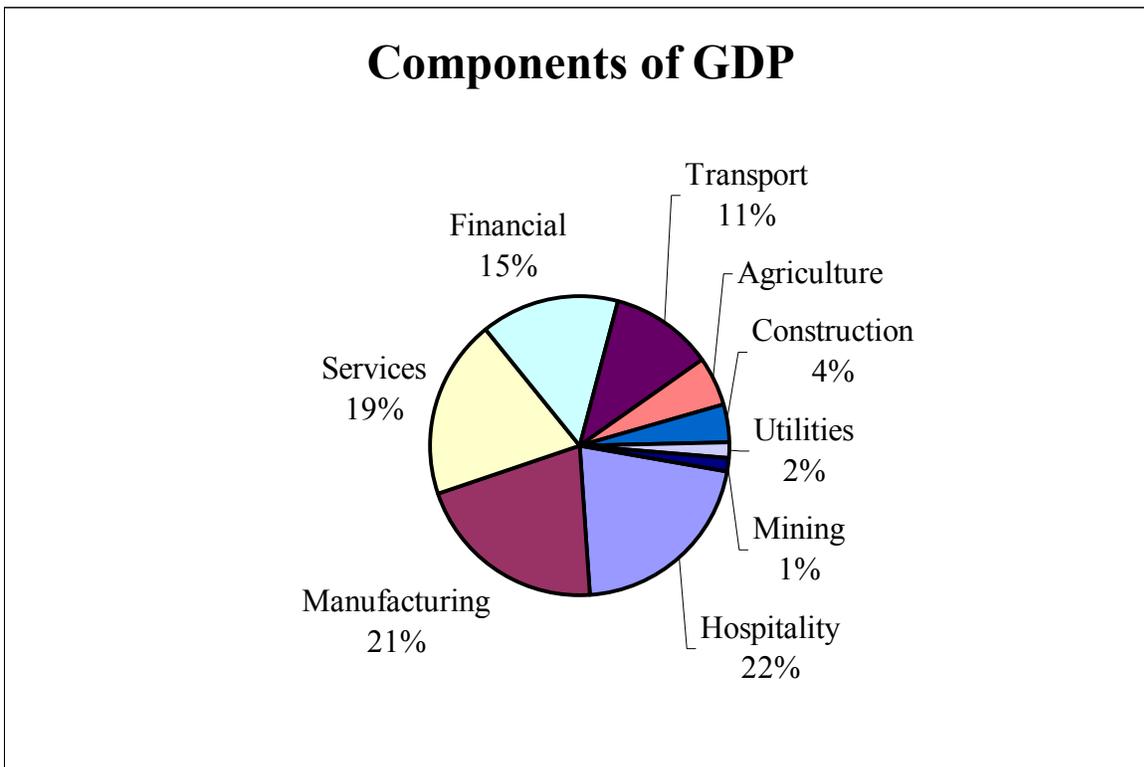
### ***Growth, Industrial Sectors and Risks***

Mexico's economy has two key special sectors: oil and maquiladoras. After Venezuela, Mexico has the second largest proven crude oil reserves in the Western Hemisphere. Pemex, one of the largest oil companies in the world is 100% government-owned. Oil accounts for a third of all Mexican government revenues. Mexican oil exports totaled \$10.4 billion in 2000, with comparable domestic sales. During 2000, oil exports represented 6.3% of Mexico's total export value of \$166 billion. Taxes paid by Pemex to the (complete sentence or delete).

Maquiladoras are factories that import (duty-free) partially finished goods, perform final assembly, and export finished goods, paying duty only on the value added at the maquiladora factory. An enormous infrastructure has grown in Mexico at the U.S. border, consisting of 3,300 maquiladora factories. According to U.S. Department of Commerce, maquiladoras are estimated to account for 40% of Mexican exports. In general, maquiladora operations involve only light manufacturing and assembly of component parts. Wages range from USD \$1.20 to \$1.50 per hour, which are premium in Mexico. As a result of NAFTA, maquiladoras are subject to increased labor and environmental scrutiny and regulation.

According to an International Monetary Fund (IMF) report issued in October 2001, the Mexican GDP is composed mainly of services and manufacturing in the following sectors:

**Figure 1. Year 2000 Percentage Components of GDP**



This figure shows that Mexico is an advanced emerging market country with services, finance, tourism, and manufacturing comprising a large share of GDP. Also there is a good balance amongst the service sectors. The recent drop in oil prices has had a direct negative impact on the overall Mexican economy, but has been good for oil consumers such as industry and transportation.

### ***Structure of Government, Taxes and Finances***

The Mexican federal government has an elected president, a bicameral legislature, and supreme court. The current president, Vicente Fox, a reform candidate of the PAN (spell out) party won the presidential election in July 2000. It is the first time in 70 years that a non-PRI candidate has won the presidency.

The composition of the legislature is split among PRI, PAN, and other smaller parties. The PRI is the majority party in only one house of the legislature. As a candidate, Fox promised drastic reform and privatization. Once in office, Fox has focused his attention on focused on basic

economic and fiscal issues but has backed off from trying to privatize Pemex. The split political power structure makes it difficult to implement certain reforms in the power sector because each house requires a two-thirds vote for passage.

Mexican states and cities have some taxing authority but they also have restrictions and federally prescribed allocations for funds received. According to Standard and Poor's, Mexican states and cities typically receive 85% to 95% of their revenues from federal transfers. However, some cities are better off than others as they receive only about 48% of their revenues from federal transfers.

The federal budget was \$130 billion in 2000. Due to recession and oil price drops, there is pressure on government spending. Pemex, Commission Federal de Electricidade (CFE), and Luz y Fuerza Centro (LyFC) are said to not operate on a commercial basis. (What does this mean?) According to Platt's Global power report, LyFC required a government subsidy of \$1.1 billion last year.

### ***Financing, Rating Trends and Banking***

Energy project developers should consider the availability of bank funding and the stock market to finance construction, operation, and exit strategies.

As a sovereign borrower, in 2001 Mexico achieved an investment grade rating from Moody's of Baa1. This rating lowers its financing costs and makes it eligible for a much wider universe of investors. The rating also increases the credit ceiling for subnational government borrowers (municipalities and states) and for corporate borrowers.

Standard and Poor's has rated 36 municipalities, though none have issued municipal bonds as of yet. Financing is obtained from net federal transfers and from bank loans. There are federally-mandated requirements for social services that cities and states must provide such as street-lighting. The level of municipal revenue generation or cost-savings realizable provides discretionary spending resources. Hence, the motivation for municipalities to explore energy savings strategies.

Banking in Mexico is becoming more transparent (what does this mean?) and better regulated, and so it is not seen as a threat to the economy as it is in, for example, Japan, Korea, and China. Previous Mexican president Zedillo allowed foreign buyers to buy Mexican banks. In May 2001, Citibank agreed to buy Banamex-Accival, the No. 2 Mexican bank for \$12.5 billion in cash and stock. Sandy Weill, chairman of Citibank noted that bank lending, as a percentage of GDP, is 15% in Mexico compared with 29% in Brazil and 79% in the United States.

The U.S. Department of Energy (DOE) and the U.S. Agency for International Development (USAID) are researching new financing models, based on U.S. examples, that can be used to fund energy-savings strategies for Mexican municipalities. These involve special municipal accounts and revenue set-asides. Some private U.S. developers, working on municipal energy savings projects, are exploring credit enhancements using Mexican commercial banks.

## **Energy and Environmental Trends**

### ***Power Sector and Industry Structure***

CFE owns generation plants producing 34,000 MWs of power (92% of all generation in the country), plus transmission and distribution. Pemex owns another 4% of the power generation (1,700 MW at 22 sites), and Luz y Fuerza Centro owns 2% of the power generation and serves Mexico City. Independent power producers (IPPs) own the remaining 2% of the power plants.

CFE and LFC are federal monopolies protected by the Mexican constitution. The first IPP plant (Samayaluca) was built on a lease basis to circumvent ownership restriction. However, this restriction was lifted and so that now major power plants (starting with Merida 3) can have private equity ownership. There is a plan to have functional unbundling of CFE, with business groups separated and commercially set up but not corporatized (what does this mean?). Privatization is not possible now but may be in the future. Thus, the business opportunities in transmission and distribution relate to equipment sales and services but not equity ownership.

### **Independent Power Projects**

CFE's IPP program has been successful in attracting foreign investment. In contrast to China, India, Indonesia, and Pakistan, Mexico has adopted an incremental approach to bringing in foreign investment. This approach allows investors and the host country to accommodate a regulatory framework that is not changing too quickly. It has also avoided the building of excess capacity and projects with payment deficiencies. The following table includes a selected list of independent power projects underway in Mexico.

**Table 1. Selected Large IPP Power Plants in Mexico**

<b>Project Name</b>	<b>MW</b>	<b>Sponsors</b>	<b>Fuel</b>	<b>Comments</b>
Campache	250	Transalta	Gas	BOO
Tamuin-II	230	Termoelectrica; Sithe; Alstom	Pet-Coke	SS
Monterey	245	Enron	Gas	SS
Monterey-III	880	Iberdrola	Gas	BOO/SS
Bajío	600	Energia Aztec; Intergen; AEP	Gas	BOO
Rio Bravo-II	495	EdF	Gas	BOO
Saltillo	247	EdF	Gas	BOO
Tamuin	230	Termoelectrica; Sithe; Alstom	Pet-Coke	SS
Hermilloso	225	Union Fenosa	Gas	BOO
Ciudad del Carmen	500	Westcoast; Marubeni	Gas	SS
Altamira	120	Enertek; Iberdrola	Gas	SS
Altamira	15	Trigen	Gas	SS
Merida-III	484	AES	Gas	BOO
Rosarito-III	540	ABB; Nissho Iwai	Gas	BLT
El Encino	435	Mitsubishi	Gas	BLT
Monterey-II	450	ABB; Nissho Iwai	Gas	BLT
Samalayuca-II	700	GE; Intergen; ICA/Fluor Daniels	Gas	BLT
Cerro Prieto	100	Mitsubishi	Geothermal	BLT
Chihuahua	259	Transalta	Gas	BOO
Altamira-III/IV	1036	Iberdrola	Gas	BOO
Tuxpan-II/IV	983	Union Fenosa	Gas	BOO
Rosarito-IV	750	Aztec Energy ( )	Gas	BOO-Export
Tres Virgenes	100	Alstom	Geothermal	BOO
Tuxpan-II	450	Mitsubishi; Kyushu Electric	Gas	BOO
Altamira-II	495	EdF; Mistubishi	Gas	BOO
Naco-Nogales	302	Union Fenosa	Gas	BOO
Baja	256	Energia de Mexacali; AEP	Gas	BOO-Export
Veracruz	700	ABB Alstom; ICA	Gas	BOO
Monterey	445	TermoNoreste; Intergen	Gas	Merchant
Pala	180	Ahmsa	Coal	SS
Mexicali	600	Sempra	Gas	Export
Los Ventanos	100	Princeton; EdF	Wind	BOO

Many of the projects listed above have the support of multilateral and bilateral international financing. French sponsors (EdF and Alstom) have received the support of French export financing bank, COFACE. Spanish sponsors (Union Fenosa and Iberdrola) received financing support of the Inter-American Development Bank. Japanese sponsors (Mitsubishi) received financing from Japanese ExIm. The Campeche project, with Canadian developer Transalta, had financing from Canadian government Export Development Corp. U.S. sponsors (GE, Intergen) have received support of US Export-Import Bank (see financing listings). The Inter-American

Development Bank lists six power projects in which it has provided financing including: Samalayuca-II, Hermosillo, Termoeletrca del Golfo, Bajio, Monterrey-III, and Vitro.

## Regulation

The Mexican Energy Regulatory Commission (CRE) regulates the power and gas industry. It issues permits, sets tariffs, supervises the industry, and assures adequate supply and, in the case of gas, promotes competition.

In the past several years, former President Zedillo and current President Fox introduced legislation to reform the power sector, and both were rebuffed. In May of this year, President Fox published a presidential decree that would amend regulations to the Electric Public Service Law, including:

- For “self-supply” projects, allow more than 20MW to be sold to CFE, up to 50% of the capacity of a project for projects more than 40 MW.
- For certified cogeneration projects, allow 100% of electricity to be sold to CFE.
- Obligate CFE to buy surplus power if attractive prices and terms are offered, and if CFE needs the power.

The CFE will specify the price conditions and methodology for buying surplus power and for cogeneration certification. There is opposition to the reforms. A lawsuit was filed in July 2001 by a group of legislators who charged that President Fox violated the constitution by trying to make these changes in the form of a decree.

The transmission network has four major grids: Baja North, Baja South, North, and South. South serves Mexico City and is the biggest grid. The Baja grids are not connected with the rest of Mexico but are connected to Southern California with a 230 kV inter-tie. The Northern grid is connected to Texas with three 138kV lines, one 115 kV line, and two 69 kV lines. Power sales are cumbersome between Texas and Mexico due to the lack of synchronization between the two grids. So when power flows either way, portions of the northern Mexico grid have to be disconnected from the rest of Mexico and synchronized with Texas. A Texas-Mexico connection was installed in July 2000 that operates on a direct current basis and so can accommodate each system operating independently.

## Gas

Gas is deregulated more than electricity in Mexico. Pemex retains a monopoly position on exploration and production, but distribution was opened to private operators starting in 1995. Three foreign companies have established gas distribution companies serving retail customers: Tractabel (Belgium), Gas Natural (Spain), and Sempra Energy Resources (California). The list of independent power projects shows that there are numerous gas-fired projects under development, and this is spurring development of additional gas infrastructure of pipelines and distribution. There are also two proposals for LNG terminals under development in Mexico.

## Environmental

Mexico's environmental regulations are less strict than those in the U.S. This causes a conflict especially for certain projects in Mexico that are right across the border from the U.S. One of the goals of NAFTA was environmental improvement and, as a result, certain side agreements to NAFTA were made. Two key entities were created: the Border Economic Cooperation Commission (BECC), and the North American Development Bank (NADB). Another bilateral organization is the Commission for Environmental Cooperation, which has negotiated prohibition on trade in certain dangerous chemicals, and successfully implemented a ban on DDT.

The NADB has been very active in water projects, financing 31 projects for nearly \$1 billion to clean up water supplies, provide safe drinking water, and create efficient irrigation schemes. Recently, NADB has enlarged its mission to consider energy efficiency and renewable energy, but it has not yet made any financing available outside of water. The BECC has a forum to work out environmental issues such as the environmental effects of power plant and maquiladora development near the border.

According to the U.S. Energy Information Administration, the air pollution problem in Mexico is due more to automobiles rather than power generation or industry. The Mexican government has programs to address this problem, though the economic resources are meager. For example, there is a \$13.3 million program to reduce air pollution in Mexico City.

### ***Opportunities for Energy Investment***

#### Large Utility Projects

Before the U.S. recession started in March 2001, there was projected to be a significant power capacity shortfall in Mexico. According to Latin American Power Watch, reserve margin dropped to 5% in 2000. Forecasted capacity shortfalls have since been shifted out several years. Still, if economic growth returns near historic 7% levels, and with many of the existing CFE power plants more than 30 years old, there will certainly be a need for large-scale replacements and new capacity additions. Also, since the California power crisis seems to have subsided, the need for Mexican power capacity to export to California has likely been pushed out in time.

CFE is bidding out opportunities for the private sector to develop gas-fired projects, geothermal, and hydroelectric. This year the Mexican government proposed to call for developer bids to build and operate a \$650 million hydroelectric plant in Nayarit state in 2002.

## Renewables

According to Sandia Laboratories, tremendous opportunities exist in Mexico for growth in the use of renewable energy technologies. According to some estimates, more than 5,000,000 Mexicans do not have access to grid electricity in 88,000 villages, while more than 100,000 rural communities are in need of potable drinking water. More than 600,000 rural ranches need water for livestock or irrigation. Given Mexico's abundant solar and wind resources, these rural needs alone represent a potential market for renewable energy technologies of more than \$1 billion.

Mexico has excellent natural resources for geothermal, solar, and wind energy. CFE has built 700 MW power plants using geothermal energy where the geothermal part of the power plant is handled by a private developer. CFE is now asking for entire power plants to be developed, built and operated as a private venture, with up to 100 MWs built into the financial structure.

Mexico has one of the best wind resources in the world in the most southern tip of the country. Hydro generation makes up 28.8% of installed capacity at present. CFE plans to solicit bids for four new hydroelectric projects, but none have been bid so far. In 2000, CFE awarded a contract for \$115 million to Alstom for three 310 MW turbines in the southern state of Chiapas.

In an innovative solicitation that CFE is making this year for new capacity, bidders are being asked to propose a combined gas-fired and solar-thermal project. The proposed project would involve the construction of a solar thermal/natural gas-fired hybrid power plant in the North Baja grid with a total net installed capacity of about 300 MWs, including 30 MWs of solar. According to the World Bank, the plant would be part of CFE's system expansion plan under which up to 500 MWs each of combined cycle gas turbine systems would come online in year 2004 in the sites of Laguna or Hermosillo, and in 2005 in Cerro Prieto. The proposed hybrid power plant would be developed by an IPP through a Build Own Operate (BOO) contract with CFE, which will purchase capacity and energy under an appropriate Power Purchase Agreement (PPA). CFE will require prospective bidders for the planned conventional combined cycle plant to add a solar field to the plant, for which up to US \$50 million of grant assistance from the Global Environmental Fund (a World Bank entity) would be made available.

There is about 850 MWs of existing geothermal generation in Mexico. According to the Geothermal Education Office, a Marin-county based trade group, "A huge hot-water (280-360 degrees C) geothermal system occurs at Cerro Prieto along an offshore segment of the East Pacific Rise which bounds the North American and Pacific plates. This field now (in 2000) produces 720 MWs from reservoirs up to 4,000 meters deep. In the Central Mexican Volcanic Belt, where the Cocos Plate is subducting under the North American Plate, Los Azufres produces 88 MWs and Los Humeros, 35 MWs. More geothermal power of 65 MWs is planned." Since the time of that assessment another 100 MWs was added, with Alstom of France investing in the geothermal resource and steam plant.

Cogeneration is an important component of power supply due to industrial needs for quality power and as a methodology to comply with the regulations for building new power plants. The regulations for building new power plants have shifted in the last six years, but basically, there is

a preference and allowance to build power plants with a legitimate steam or thermal load. As a result, there are some large cogeneration power plants being built. For example, Pemex will go out for tender on a 650 MW cogeneration power plant during the first quarter 2002. It will produce steam and electricity at the new gas processing center in the state of Tabasco. The total project cost is projected to be \$500 million.

An example of a smaller plant is Trigen's (White Plains, NY company owned by Tractabel) cogeneration plant in Tampico. The plant produces 17 MWs of electricity, 160,000 pounds per hour of steam, and 5,500 tons per hour of chilled water to serve industrial customers in Mexico.

Due to CFE's lack of expansion financing, poor voltage quality, and lack of reliability, industrial cogeneration represents a significant market for on-site cogeneration. This is especially true as Mexico evolves into industries requiring better quality power.

### Energy Efficiency

Energy efficiency has had a difficult road in Mexico due to lack of financing and better investment opportunities with shorter payback and less risk. Lack of financing is demonstrated by the low level of commercial bank financing available in Mexico, relative to GDP. Also, due to political pressure, industrial and commercial power rates have not been established on a cost-of-service basis, and so natural economic market forces sometimes avert good efficiency projects.

Pure efficiency efforts (replacing motors and lighting, installing insulation) may be done now, but are often financed and buried within a corporate structure. In general, corporate investment hurdle rates are usually higher than those in the utility industry. As a result, an energy efficiency project with a 4-year payback would always be disfavored compared with other investment projects and the cost of corporate capital. Yet, many energy efficiency improvements can be implemented at little cost, and for these the solution is not financing but education.

Government energy efficiency is a big business in the U.S., as government financing resources are stretched ever thinner. In Mexico, the institutional factors have not been significant enough to pressure government to save money and reduce energy demand.

The Alliance to Save Energy, a Washington D.C.-based trade group, has made a significant effort to do outreach in Mexico, gather and share information on this subject. They estimate that lodging is the 4<sup>th</sup> most energy intensive industry in the U.S. Since hospitality in Mexico is such a significant industry, the energy savings could be great.

## Financing Sources

### Introduction, Index, and Commentary

PPF collected information for this guide from September to December 2001 from publicly available information in trade journals and websites, and from telephone interviews. PPF contacted more than 100 financing sources. Each entry was prepared and verified individually with the financing sources.

The September 11 terrorist attack and the uncertainty created thereafter impeded the information gathering process. Some investors said that Mexico, due to geographic location and religious uniformity (being 80% Catholic), may have been helped relative to other emerging markets. None of the investors indicated that their outlook on Mexico was changed negatively by September 11 as evidenced by the October 2001 closing of Fondelec's new \$65 million fund for renewable energy in Mexico and Brazil.

Certain types of organizations were not open to financing projects in the renewable and small projects part of the market. In general, money center banks (Bank of America, JP Morgan/Chase, Sumitomo, Bank of New York, Citibank) were open to Mexico for large projects, but were not interested in small power projects. Large developers (Transalta, Cogentrix, NRG) were also open to Mexico for large projects only.

Winston Abbott, Managing Director at Citibank, said that they have a \$2 billion portfolio in energy efficiency loans in the U.S. and that they are a lead lender in Samalyuca and La Rosita in Mexico. However, Citibank is not yet open for energy efficiency lending in Mexico. According to Nina Lockhardt of the National Association of Energy Efficiency Companies, the international side of the business has never really taken off beyond isolated pilot projects.

PPF simply did not find a large universe of pure project financiers of small renewable energy projects in Mexico.

### Definitions and Methodology

The types of financing typically available are debt, equity or a combination of the two. For the purpose of this guide, we considered that if a developer gets financing by selling his or her project to a larger developer, it is a form of equity financing. Developers seeking financing, especially developers not planning to invest cash equity often are forced to sell some or all of their projects. This is referred to as case acquisition financing.

Another financing category is bilateral government support. This distinction is not made in the case of multilateral financing, since these entities act more like private investors. U.S. Ex-Im bank or OPIC requires U.S. involvement in a project, whereas the Inter-America Development Bank does not care where sponsors are from or where equipment originates.

Thus, the four categories of financing addressed in this report are debt, equity, acquisition, and government. Debt financing is the hardest to get and the lowest cost, but it requires a substantial equity contribution by the developer who must be well-capitalized with a track record of many projects.

Equity financing can be “passive” or “active,” where active means the investor gets involved in management decisions. Passive means the investor leaves operating decisions (except big decisions) up to the active investor. In the case of energy projects in Mexico, as compared with those in the U.S., passive equity investors would almost certainly require the developer to invest substantial cash, and not just provide development services in exchange for equity.

Acquisition financing is when an active developer takes over a project and commits to finance it, whether on its own balance sheet or with project financing.

Government-related financing is when financing (even if it is equity or debt) or credit support is coming from a government institution or from a multilateral institution. Government financing sources have special criteria (like being a U.S. exporter), or have non-commercial objectives (like social development or demonstrating an environmentally-related pilot program).

The following is a list of financing sources grouped by financing category:

#### Debt Sources

Econergy Investment Company  
Fortis Bank  
John Hancock Financial Services  
New York Life  
TIAA Securities

#### Equity Sources

Environmental Enterprises Assistance Fund  
Energy Investors Fund, LLC  
Fondelec Fund  
Scudder Latin American Power Fund  
Ridgewood Power Corp.

#### Acquisition-Oriented

Alliant Energy Services Company  
Calpine Corporation  
CHI Energy Corp.  
Covanta Energy Company  
Trigen Energy Corp

Government and Multilateral Related

U.S. Export Import Bank  
International Finance Corporation  
U.S. Trade and Development Agency  
Inter-American Investment Corp.  
Multilateral Investment Fund

A listing of the funding sources follows.

# Alliant Energy ISCO

## SERVICES PROVIDED

Alliant Energy Integrated Services Company offers technical advice, engineering, power and gas supply, financing, equipment specification, and renewables generation development services. Alliant Energy is part of Alliant Energy, a diversified utility company including a regulated distribution utility, an unregulated independent power production company, and a significant international power development company.

## TYPES OF PROJECTS

Alliant Energy offers a wide variety of on-site Energy services, including Energy infrastructure and mechanical systems; central plant construction and operations; demand-side management programs; and on-site generation. Alliant Energy recently closed financing on a \$100 million transaction in Mexico where they provide all utility services to a large resort: power, water, telecom, sewer, and roads. Alliant Energy in this case is a lender to the host entity, and the operator of the project. In the U.S. they have significant experience in all kinds of generation and ESCO projects as developer and owner. They hope to expand in Mexico as lead developer and acquirer of generation and Energy-savings projects at commercial and industrial sites.

## MINIMUM PROJECT SIZE

About \$5,000,000 and/or 5 MWs of power generation, or Energy savings contracts.

## MAXIMUM PROJECT SIZE

Unlimited

## TYPES OF FINANCING

Alliant Energy is an Energy service provider who, for special occasions, can provide financing. They can acquire projects from the initial developer and carry on as lead developer. Alliant Energy does not provide passive financing for others' projects.

## FINANCING TERMS

Alliant Energy would seek to get involved in projects having a payback in the range of 3-4 years.

## MINIMUM FINANCING QUALIFICATIONS

There has to be strong industrial or commercial host, with a good balance sheet, and significant hard currency cash inflow.

## CONTACT

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# Calpine Corporation

## SERVICES PROVIDED

Calpine is a leading developer of power projects in the world, and has a portfolio of 50 projects, with net ownership capacity of 5,900 megawatts. It has a strong background in geothermal energy and operates geothermal wells in Mexico for the electric utility CFE.

## TYPES OF PROJECTS

Core competencies are in gas-fired cogeneration and geothermal projects. In Mexico, Calpine would consider acquiring gas-fired projects and renewable energy projects, as well as possibly electric power transmission facilities.

## MINIMUM PROJECT SIZE

About \$20 million and/or 20 MWs of power generation, depending on the technology, renewables can be smaller projects than conventional cogeneration.

## MAXIMUM PROJECT SIZE

Unlimited

## TYPES OF FINANCING

Calpine is a developer and equity investor that would seek active owner's role in a project. They can acquire projects from the initial developer and then carry on as lead developer.

## FINANCING TERMS

Calpine is not a source of passive financing as such, but rather would seek to acquire projects and bring them to financial closure. There is no set formula and structuring a transaction is on a case-by-case basis. In the U.S., Calpine has acquired many power projects and whole companies. In Mexico, Calpine would seek projects that have a good start and have good prospects for high returns and appropriate risk factors.

## MINIMUM FINANCING QUALIFICATIONS

A project has to far enough along in progress milestones to warrant due diligence review. Calpine would want to enter into a project after there is demonstration of value achievable, but before all of the arrangements are locked in and unchangeable.

## CONTACT

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# CHI Energy, Inc.

## SERVICES PROVIDED

CHI Energy, Inc. and its sister company Energia Global International Ltd. (EGI) are subsidiaries of Erga SpA and part of the world's largest company devoted exclusively to renewables. They focus on providing clean, reliable and reasonably priced energy using renewable resources such as hydropower, biomass, landfill gas, wind, solar, and geothermal, along with other environmentally beneficial services. CHI and EGI have an extensive operating portfolio of renewable energy plants in North and South America and seek to acquire and develop additional renewable projects.

## TYPES OF PROJECTS

Mainly wind, hydro, and biomass projects in the under \$100 million size range. CHI is owner and operator of renewable energy plants in North America, with 82 projects in 15 U.S. States and 2 Canadian Provinces. Energia Global, acquired last year by ERGA, owns wind and hydroelectric projects in Central and South America.

## MINIMUM PROJECT SIZE

Approximately \$25 million

## MAXIMUM PROJECT SIZE

No limit.

## TYPES OF FINANCING

CHI Energy provides equity financing. Once a project is in control they would be the lead in getting debt financing.

## FINANCING TERMS

These are made on a case-by-case basis. Acquisitions are based on a project that has either has, or has demonstrated chance to gain the key project contacts: PPA, permits, financing, etc.

## MINIMUM FINANCING QUALIFICATIONS

CHI would get involved in a project after substantial progress has been made toward resolving key project issues (technical, PPA, licenses or permits, land rights, etc.). Also it has to be in a country with decent legal framework for contract enforcement, ability to repatriate hard-currency profits, and other institutional conditions that mitigate risks.

## CONTACT

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# Covanta Energy Company

## SERVICES PROVIDED

Covanta Energy Corporation is an internationally recognized developer, owner and operator of power generation projects and provider of related infrastructure services. The Company's independent power business develops, structures, owns, operates and maintains projects that generate power for sale to utilities and industrial users worldwide.

## TYPES OF PROJECTS

Gas-fired cogeneration, coal, liquid fuel, biomass, landfill gas, waste-to-energy, hydroelectric, and geothermal.

## MINIMUM PROJECT SIZE

About \$40 million and/or 40 MWs of power generation, depending on the technology, renewables can be smaller projects than conventional cogeneration.

## MAXIMUM PROJECT SIZE

Unlimited

## TYPES OF FINANCING

Covanta is a developer and equity investor that would seek active owner's role in a project. They can acquire projects from the initial developer and carry on as lead developer. Covanta does not provide passive financing for others' projects.

## FINANCING TERMS

Covanta would seek to get involved in projects having an appropriately healthy equity IRR after-tax, depending on many risk factors.

## MINIMUM FINANCING QUALIFICATIONS

There has to be strong industrial or commercial host, or power off-taker, with a good balance sheet, and significant hard currency cash inflow.

## CONTACT

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# Environmental Enterprises Assistance Fund

## SERVICES PROVIDED

Environmental Enterprises implements sustainable development by investing in smaller, private sector businesses in emerging markets. Established as a non-profit organization in 1990, EEAF brings hands-on venture capital experience to the sustainable development movement. It manages and co-manages approximately \$85 million in investment capital and has financed entrepreneurs in 11 countries. By making these long-term debt and equity investments, EE addresses a gap in developing country capital markets and creates replicable models for entrepreneurs and local investors.

## TYPES OF PROJECTS

EEAF invests in companies and projects engaged in agriculture, forestry, aquaculture, tourism, renewable energy, energy efficiency, pollution abatement and recycling. Investment stage: Later stage is preferred, but start-up investing will be considered. They have done several transactions in Mexico, both equity and debt. One project was a solar PV leasing transaction, in which direct collection for power payments was established with villagers.

## MINIMUM PROJECT SIZE

\$100,000.

## MAXIMUM PROJECT SIZE

Up to about \$5 million and/or up to 5 MW of power generation, but this is not a hard and fast rule.

## TYPES OF FINANCING

\$100,000 to \$2 million in debt, equity or a combination, with syndication in excess of these amounts.

## FINANCING TERMS

EEAF provides commercial-style financing, not grants or subsidized financing. EEAF has four funds for which it acts as co-manager: Solar Development Capital (\$29 million equity fund to invest globally in solar photovoltaic (PV and related businesses), Terra (\$15 million for biodiversity), REEF (\$65 million for renewable energy), and CFA (\$10 million for Central American environmental projects). Solar Development Corp. has a website at [www.solardevelopment.org](http://www.solardevelopment.org). The funds have a projected life of 10 years and are capitalized by institutional investors and multi-lateral development banks. EEAF has provided a variety of financing structures on a case-by-case basis – there is no set formula for investing.

## MINIMUM FINANCING QUALIFICATIONS

Management requirements: Entrepreneurs must have their own capital at risk, a proven track record, and near-term profitability. Sponsors should submit a brief introductory letter describing the company and financing plan. For projects of interest, business plans and other materials may be requested.

## CONTACT

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# Econergy International Corporation

## SERVICES PROVIDED

EIC is a technical, financial and economic consulting firm that serves domestic and international clients in the energy and environment industries. EIC has recently established the CleanTech Fund, a venture capital fund for financing energy efficiency and renewable energy projects in Latin America, primarily Brazil and Mexico. The fund is a private equity projected to have a 10-year life. EIC expects that most investments will range from three to five years. EIC is also developing a grant facility of up to \$5 million to help companies with the development of business plans, financial analysis, and other technical support.

## TYPES OF PROJECTS

Energy efficiency retrofits for commercial and industrial facilities, industrial and biomass cogeneration, wind energy, solar and small hydroelectric plants. CleanTech Fund will also finance water, pollution prevention, and clean transportation projects.

## MINIMUM PROJECT SIZE

\$500,000 and/or 2 MWs of power generation.

## MAXIMUM PROJECT SIZE

\$3.5 million and up to 10 MWs of power generation.

## TYPES OF FINANCING

The total capital pool available for the CleanTech Fund will be \$35 million. CleanTech Fund offers equity financing only, though associated debt funds may be available. Fund equity ownership will typically range from 25-50% on a project or deal.

## FINANCING TERMS

The maximum term for projects in Mexico is up to five years. The desired return on investment for renewable energy projects will range from 20 to 30% and 30 to 35% for energy efficiency projects. Exit strategies will range from buyback by the project owners to acquisition by a multinational energy-related company. EIC expects that it will take about six months to perform due diligence and fund projects.

## MINIMUM FINANCING QUALIFICATIONS

Project financing eligibility is based on the size of the respective project, sponsorship experience and financial strength. Since a lead investor to the CleanTech Fund is the Inter-American Development Bank (IDB), each project must have a Latin American sponsor. Per IDB requirements, the recipient will typically generate \$5 million or less in sales and have less than 100 employees. The applying entity must have a foreign sponsor. Proven management and technical expertise are preferred. EIC typically wants a seat on the board and may require that a proven financial manager be in place. While EIC prefers later stage expansion and new projects by proven companies, it will consider projects by startup companies. Conventional technologies are preferred but EIC will also consider innovative technologies.

## CONTACT

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# Energy Investors Funds Group

## SERVICES PROVIDED

The Energy Investors Funds Group, part of Dresdner Kleinwort Capital, is a private equity investor in the global energy and utilities sector. The fund's primary focus is investment in projects located in Central America and the Caribbean. The Group expects that most investments will be about seven years. The Group also co-manages the Renewable Energy & Efficiency Fund (REEF) which invests in renewable energy projects such as hydroelectric, geothermal, wind, solar and biomass. In addition to financing, the Group will also structure transactions and raise third-party capital.

## TYPES OF PROJECTS

Energy efficiency retrofits for commercial and industrial facilities, industrial and biomass cogeneration, wind energy, solar and small hydro.

## MINIMUM PROJECT SIZE

\$5,000,000

## MAXIMUM PROJECT SIZE

\$15 million with no limit on the amount of power generation.

## TYPES OF FINANCING

The total capital pool available for the EIF Group is \$75 million. The Group can offer equity financing up to 100%, but up to 40% is typical. Group equity ownership varies on each project or deal.

## FINANCING TERMS

The typical term for projects in Mexico is seven years but may be longer. The desired return on investment ranges from 20 to 25%. EIF expects that it will take a minimum of three to six months to perform due diligence and fund projects.

## MINIMUM FINANCING QUALIFICATIONS

Project financing eligibility is based on the size of the respective project, sponsorship experience and financial strength. Proven management, technical expertise and track record are preferred. The Group typically requires a seat on the board but does not micromanage the recipient. The Group will consider startup companies.

## CONTACT

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# U.S. Export Import Bank

## SERVICES PROVIDED

Ex-Im Bank provides guarantees of working capital loans for U.S. exporters, guarantees the repayment of loans or makes loans to foreign purchasers of U.S. goods and services. Ex-Im Bank also provides credit insurance that protects U.S. exporters against the risks of non-payment by foreign buyers for political or commercial reasons. Ex-Im Bank does not compete with commercial lenders, but assumes the risks they cannot accept. Also, Ex-Im Bank offers limited recourse project finance support to assist U.S. exporters competing in international growth industries.

## TYPES OF PROJECTS

In project financing in Mexico, Ex-Im Bank has focused mostly on large projects in the \$500 million to \$1 billion range. However, they have also recently financed a series of small projects, three \$2.6 million power projects in Bangladesh. Also Ex-Im Bank can finance a project with used equipment.

## MINIMUM PROJECT SIZE

There are no minimum or maximum size limitations. For small project finance transactions, Ex-Im Bank may consider, on a case-by-case basis, using due diligence of another senior lender. The other lender should be a well-known multilateral or bilateral agency or commercial bank, and have a sizable stake in the project. A financial advisor may not be required for small transactions.

## MAXIMUM PROJECT SIZE

There is no maximum size limitation.

## TYPES OF FINANCING

Ex-Im Bank has a range of programs for loan structures or guarantees. No equity financing is available.

## FINANCING TERMS

The Ex-Im Bank website has comprehensive and detailed elaboration of financing terms. In general, Ex-Im would provide financing at the best terms available from commercial sources adjusted for taking one level more of country risk not available commercially.

## MINIMUM FINANCING QUALIFICATIONS

Ex-Im Bank support is available only for goods and services originating from the U.S. and the transaction must not affect the U.S. economy adversely. One of its major goals is to increase the export of environmental goods and services. The total level of support for a supply contract will be the lesser of: 85% of the value of all eligible goods and services in the U.S. supply contract; or 100% of the U.S. content in all eligible goods and services in the U.S. supply contract. The goods and services in a U.S. supply contract must be shipped from the United States to a foreign buyer.

## CONTACT

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# Fondelec Group, Inc.

## SERVICES PROVIDED

An equity financing fund of \$50 is expected to be ready in fall of 2001 for energy and environmental projects in Brazil and Mexico. Fondelec is managing partner, Inter-American Development Bank, and others are strategic investors, Sumitomo is technical partner. FondElec Group Inc. is a private equity investment firm with more than \$220 million of investment capital. The group is a worldwide communications and utility investor and has closed over \$600 million of global infrastructure investments. The group's various funds are backed by several dozen leading international energy, utility and financial organizations. The firm was founded in 1992 to capitalize on the rapid growth of worldwide market electricity, utility, technology and communications businesses and currently has four funds under management. These funds include the Latin America Energy and Electricity Fund L.P., FondElec Essential Services Growth Fund L.P., Dexia-FondElec Energy Efficiency and Emissions Reduction Fund, L.P. and the Pegasus Fund L.P.

## TYPES OF PROJECTS

For the new fund, energy retrofits for commercial and industrial facilities, industrial cogeneration, carbon credits, and small power plants.

## MINIMUM PROJECT SIZE

\$200,000 and/or 1 MWs of power generation, or energy savings contracts.

## MAXIMUM PROJECT SIZE

For the new fund, up to about \$5 million and/or up to 5 MW of power generation, but this is not a hard and fast rule.

## TYPES OF FINANCING

The total capital pool available for the Fund will be \$50 million. Fondelec offers equity financing only.

## FINANCING TERMS

The maximum term for projects in Mexico is five years or longer. The desired return on investment for energy projects, whether they are environmentally oriented or power generation will be in the range of 25%. The fund has a ten year life, and thus projects have to return equity with profit within that time horizon, or have an exit strategy that provides liquidity to the Fund. The timing to provide funds is expected to be several months from the time of receiving a data adequate package.

## MINIMUM FINANCING QUALIFICATIONS

There has to be strong industrial host and/or an experienced sponsor for the project. The projects have to make sense economically, and not only hinging on a legalistic or tax-oriented framework.

## CONTACT

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# Fortis Bank

## SERVICES PROVIDED

Fortis Bank S.A./N.V. is part of the Fortis Group, a Dutch/Belgium based global banking and insurance service provider. The energy finance group provides project financing and advisory services to the industry world-wide and has a dedicated renewable energy team which is the world's leading arranger of project financing for the wind energy market. They are one of the largest lenders to the wind industry in the world. Fortis acquired MeesPierson in 2000, increasing its resources and capabilities in renewable energy financing.

## TYPES OF PROJECTS

Fortis finances large projects that use proven technologies.

## MINIMUM PROJECT SIZE

About \$30 million total project size, with typically 60-70% debt finance arranged by Fortis.

## MAXIMUM PROJECT SIZE

None

## TYPES OF FINANCING

Commercial loan financing only.

## FINANCING TERMS

Financing terms are set on a case by case basis, depending on the project, country and the credit risk. As a bank lending in Mexico, Fortis would be limited by the sovereign credit risk ceiling. Loan maturity would be in the 8-10-year range with rates based off of a spread off LIBOR. Fees and loan decision process are typical for a commercial bank with a strong understanding of renewable energy.

## MINIMUM FINANCING QUALIFICATIONS

There must be a strong sponsor also acting as equity investor. The equity component should be in-place prior to soliciting debt funds from Fortis. There must be a revenue stream in dollars to fund the dollar-denominated debt service component. Large energy projects only would be considered.

## REPRESENTATIVE PROJECTS

Previous projects financed include the 125MW Lake Benton project for Enron Wind, purchased by GE Capital; the ...

## CONTACT

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# John Hancock Financial Services

## SERVICES PROVIDED

John Hancock is a diversified financial services firm and long-term lender in the power and project finance markets. They invest \$8-10 billion annually in corporate bonds and private equity transactions across all sectors of the economy, much of which is in structured private placements. Deal flow sources include Wall Street investment banks, regional bank intermediaries, and direct relationships with borrowers. Most of the lending activity is handled out of the Boston office. John Hancock assists issuers with flexible terms and creative structures, for projects in North America and in foreign markets as well.

## TYPES OF PROJECTS

Power projects in the U.S. have included virtually all types of power generation technologies. Energy efficiency has not been too much of a focus. John Hancock would be interested in well-structured projects with proven technologies, strong sponsors, and long-term revenue contracts. Financing vehicles include private lending, public bonds, and Rule 144A placements (public-style, but placed to large institutional investors). Each project and financing is approached on a case-by-case basis, though, in each case, a project has to be financially strong and led by experienced players.

## MINIMUM DEBT INVESTMENT

\$25 million investment size.

## MAXIMUM DEBT INVESTMENT

\$75 million investment size

## TYPES OF FINANCING

Fixed rate debt, with preference for long tenor.

## FINANCING TERMS

John Hancock makes long term investments, and has financed 5 power projects in Mexico. Credit evaluation and pricing would be constrained by sovereign ratings limits for domestic projects. Committed exports or offshore revenues or guarantees can raise the credit profile above that of the sovereign.

## MINIMUM FINANCING QUALIFICATIONS

To be considered for financing, a project would have to be led by a strong developer that contributes significant cash equity. Investments in Mexico would also have to be supported by long-term output sales contracts that can support debt repayment. Cash flows would have to be indexed to U.S. dollars to limit peso risk.

## CONTACT

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# International Finance Corporation

## SERVICES PROVIDED

The IFC Power Department does debt, equity and combination financing only. However, as a member of the World Bank Group, the Power Department makes appropriate referrals to other parts of the organization for advice and technical assistance.

## TYPES OF PROJECTS

Energy retrofits for commercial and industrial facilities, industrial cogeneration, and small power plants. IFC will also finance power distribution systems and alternative sources such as wind, biomass and solar. Although primarily a financier of private sector projects, IFC may provide financing for a company with some government ownership.

## MINIMUM PROJECT SIZE

\$30 million; no minimum on the plant capacity. IFC will cover up to 25% of the project costs for new project and up to 50% for expansion projects, provided its investments do not exceed 25% of the total project capitalization. IFC will also join bank syndications to provide 70/30 debt to equity financing.

## MAXIMUM PROJECT SIZE

No limit.

## TYPES OF FINANCING

The total capital pool available ranges from \$300 to \$350 million annually with more than half of the funds spent on power generation. IFC offers debt, equity and combined debt & equity financing. IFC will participate with subordinated loans, interest rate swaps, and local currency financing in Mexico. The maximum equity ownership IFC will assume on a project is 10%.

## FINANCING TERMS

The maximum term in Mexico is up to 17 years. The interest rate is risk-based. For loans, the spread is equal to the short term LIBOR rate swapped into the equivalent term in years. There are front-end commitment, processing and lender fees. The desired rate of return on equity is 18-22%. IFC desires a debt service coverage ratio ranging from 1.3 to 1.5. From the time IFC enters a development agreement until a transaction closes is typically six months to a year. The appraisal takes about one month with a term sheet following in one to two months.

## MINIMUM FINANCING QUALIFICATIONS

Project financing eligibility is based on the size of the respective project, sponsorship experience and financial strength. Collectively, the local and foreign sponsors must account for at least 15-20% of the project equity. The Engineering, Procurement and Construction (EPC) contractor must have a demonstrated track record. In general, IFC finances conventional technologies but will consider alternative technologies.

## CONTACT

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# Inter-American Investment Corporation

## SERVICES PROVIDED

The IIC is one of three windows of financing of Inter-American Development Bank, and it is focused on small and medium-sized enterprises, as defined below. The IADB, established in 1959, is the oldest and largest regional multilateral development institution. In addition to the IADB Bank, which deals with large projects, the IADB Group has the Inter-American Investment Corporation (IIC), and the Multilateral Investment Fund (MIF). The IIC is an autonomous affiliate of the Bank, was established to promote economic development of the region by financing small and medium-scale private enterprises.

## TYPES OF PROJECTS

IIC has invested in generation projects in Argentina and Costa Rica, and through its equity investment in Scudder Fund for Latin America Power, IIC has participated indirectly in many projects throughout Latin America., in technologies include hydroelectric, thermal, geothermal, transmission, and distribution. IIC was investor in the original Fondelec fund. A later Fondelec fund is being done with another window of IADB, the Multilateral Investment Fund (see MIF). IADB's involvement in Mexico energy sector were done through the Bank window, and were for large projects such as Samalayuca and Hermosillo.

## MINIMUM PROJECT SIZE

IIC has made investments in enterprises as small as the "micro-finance" level, though not in energy.

## MAXIMUM PROJECT SIZE

IIC defines a large business as more than \$35 million in sales, and small business as less than \$10 million. Medium-sized is in-between. More than 750 staff members is also defined as large.

## TYPES OF FINANCING

Equity and debt.

## FINANCING TERMS

Debt terms can be 8 to 12 years, in an "A/B" format, where part of the loan is syndicated and part held directly by IIC. Loans are repayable on a U.S.-dollar basis, and can be made on a corporate finance basis or a project basis. Financing can be up to only 33% of project costs for new projects or up to 50% of project cost for expansions. Interest rates and fees are set according to typical commercial market practices. Equity investments are targeted to have healthy return appropriate for the risk and time frame of the investment. A reasonable defined exit strategy is necessary. Finally, a high quality and experienced sponsor is required, and moreover since IIC would only provide 33% (green-field projects) or up to 50% (expansion projects) of the total financing required, the sponsor group has to be well-capitalized.

## MINIMUM FINANCING QUALIFICATIONS

IIC tries to not compete directly with commercial lenders and investors. It targets situations in the region where there is a developmental aspect, but the project does not quite qualify for financing on a pure commercial basis. When it does finance, the IIC provides financing on a commercial basis.

## CONTACT

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# **NY Life Investment Management**

## **SERVICES PROVIDED**

NY Life is a conservative long-term lender in the project finance market. They provide straight senior debt (that is, not convertible and not subordinated) for large projects.

## **TYPES OF PROJECTS**

NY Life would be interested in well-structured projects with proven technologies and strong sponsors. Any type of technology or power sector investment is open for consideration, however, noting that NY Life would be the senior lender in front of any subordinated debt and project equity.

## **MINIMUM PROJECT SIZE**

\$50 million project size, with exposure of \$15 million to \$20 million from NY Life.

## **MAXIMUM PROJECT SIZE**

Up to around \$100 million.

## **TYPES OF FINANCING**

Loan financing only.

## **FINANCING TERMS**

Since they are associated with long-term pension and retirement payouts, NY Life can provide funds on a long-term basis: 15- 20 years. Loans are dollar denominated, there is no appetite for peso-risk. Pricing is fixed, based on US treasury bonds, and is limited by sovereign credit ceiling of Mexico as a country. On a very exceptional basis, the sovereign credit-risk assessment ceiling can be bettered.

## **MINIMUM FINANCING QUALIFICATIONS**

Projects should be proposed by, and capitalized by, an experienced and well-capitalized developer. The equity component must be in place prior to soliciting debt funds from NY Life. There must be a revenue stream in dollars to fund the dollar-denominated debt service component.

## **CONTACT**

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# Multilateral Investment Fund

## SERVICES PROVIDED

The Multilateral Investment Fund (MIF), is one of three windows of financing of the Inter-America Development Bank, and it is focused on development of small enterprises that have US\$ 3-5 million in sales and fewer than 100 employees. The MIF is a US\$ 1.3 billion-dollar grant and investment facility with a general mandate to improve and accelerate the climate for private sector growth in Latin America and the Caribbean. Since 1994, MIF has approved 27 small business investment funds, three microfinance investment funds and eight direct investments in financial intermediaries.

## TYPES OF PROJECTS

Mainly, MIF invests in funds that in turn invest in projects, such as the Latin American Energy Services Fund described under the entry for Fondec. MIF will invest up to \$10 million in equity in the fund, which will make equity or quasi-equity investments in small innovative companies that use energy-efficient measures or renewable energy for generating power. Another example of MIF's investment is in CFA, the first "Eco-fund" for small environmental businesses in Central America. Corporación Financiera Ambiental provides long-term investment capital for businesses with solid growth potential. These enterprises involve the sustainable or environmentally friendly use of natural resources. CFA is managed by Empresas Ambientales de CentroAmerica and its parent company, Environmental Enterprises Assistance Fund.

## MINIMUM PROJECT SIZE

MIF invests in funds and in intermediate entities that entertain very small projects, i.e., village-level microfinance. This approach is a strategic cornerstone of MIF, in order to encourage sustain financing infrastructure rather than individual pilot projects with no follow-on.

## MAXIMUM PROJECT SIZE

IIC defines a large business as more than \$35 million in sales, and small business as less than \$10 million. Medium-sized is in-between. More than 750 staff members is also defined as large.

## TYPES OF FINANCING

The funds financed by MIF would have debt and equity structures.

## FINANCING TERMS

This would be handled case by case, depending on the fund deployed.

## MINIMUM FINANCING QUALIFICATIONS

MIF finances at earlier stage, in smaller deals, and with greater risk exposure than the other parts of IADB. Some financing can be done on a grant basis

## CONTACT

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# Ridgewood Power LLC

## SERVICES PROVIDED

Ridgewood Power is a leading developer, owner, and operator of small cogeneration and renewable energy projects. Ridgewood invests in and operates independent power projects as well as environmental, water and other infrastructure projects. Ridgewood manages over \$200 million for investment, which has been invested in operating projects in New York, Connecticut, Virginia, Rhode Island, Maine, Massachusetts, and California and Egypt and the United Kingdom.

## TYPES OF PROJECTS

Ridgewood has the expertise to manage projects with diverse fuel sources, including gas, oil, waste and small hydro. In addition to power plants, They have invested in recycling, waste-handling and water purification projects and is pursuing other environmental infrastructure projects. Ridgewood has recently expanded its efforts to include non-U.S. projects and has a number of power facilities operating and in development in Europe, and the Mideast. In Mexico, Ridgewood has done due diligence on projects but has not made investments yet.

## MINIMUM PROJECT SIZE

About \$10,000,000 and/or 10 MW of power generation, or energy savings contracts.

## MAXIMUM PROJECT SIZE

In the U.S., the maximum would be 50 MW. In Mexico, the first exposures would be somewhat lower.

## TYPES OF FINANCING

Ridgewood is an engaged and experienced power project developer. They can acquire well-structured projects from an initial developer. Ridgewood does not provide passive financing for others' projects.

## FINANCING TERMS

Ridgewood would seek to get involved in projects having a payback in the range of 3 years.

## MINIMUM FINANCING QUALIFICATIONS

The project has to make sense on a risk/reward basis. There has to be strong industrial or commercial host, with a good balance sheet, and significant hard currency cash inflow.

## CONTACT

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# Scudder Latin American Power Fund

## SERVICES PROVIDED

The Fund is an equity investor in energy projects located in Latin America, including Mexico, Central America, the Caribbean and Latin America, but excluding Cuba and Puerto Rico. The Fund has a long-term 20-year investment horizon. The current fund for \$157 million is almost fully invested. The primary investors are the International Finance Corporation, CAF of Venezuela, CMS Energy and NRG Energy. A second fund is planned for up to \$250 million involving the same plus additional institutional investors. Besides providing equity capital, the Fund also provides financial analysis and structuring assistance.

## TYPES OF PROJECTS

Energy efficiency retrofits for commercial and industrial facilities, industrial cogeneration, hydroelectric and geothermal power generation. The Fund has primarily financed electricity generation, but will also invest in power distribution. The Fund is open to considering a wide variety of energy-related projects.

## MINIMUM PROJECT SIZE

The minimum the Fund will invest is \$8 million. There is no minimum regarding power generation.

## MAXIMUM PROJECT SIZE

The maximum the Fund will invest is \$25 million. There is no maximum on project size or power generation. The average investment has been \$20 million.

## TYPES OF FINANCING

The total capital pool available for the Fund is \$157 million. The Fund offers equity financing only. Fund equity ownership has ranged from 10% to 85% and a Board seat, with no set minimum or maximum. Ownership is negotiated on a case by case basis.

## FINANCING TERMS

The maximum term for projects in Mexico is up to 20 years. The desired return on investment is 20% or greater. There are no investment fees or set exit strategies. The Fund has a reputation of being fast-acting and been known to perform due diligence and fund projects within weeks.

## MINIMUM FINANCING QUALIFICATIONS

Project financing eligibility is based on the project type, size, location, and conformance to World Bank environmental and social guidelines as a result of investment by the International Finance Corporation. Foreign sponsorship is desired but not required. The Fund will consider startups and acquisitions. A primary concern regarding power purchase agreements is local currency risk.

## CONTACT

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# U.S. Trade and Development Agency

## SERVICES PROVIDED

The U.S. Trade and Development Agency assists in the creation of jobs for Americans by helping U.S. companies pursue overseas business opportunities. Through the funding of feasibility studies, orientation visits, training grants, conferences, and various forms of technical assistance, TDA enables American businesses to become involved in the planning stages of infrastructure and industrial projects in middle-income and developing countries. The agency provides American firms with market entry, exposure, and information helping them to establish a position in markets that are otherwise difficult to penetrate.

## TYPES OF PROJECTS

TDA funds large, capital-intensive projects such as power plants, refineries, telecommunications, and other infrastructure. In energy, TDA has helped with feasibility studies for cogeneration power plants, wind projects, biomass, hydroelectric, and solar thermal projects.

## MINIMUM PROJECT SIZE

About \$20,000,000. TDA looks for a 100:1 ratio of its funding to the potential US exports.

## MAXIMUM PROJECT SIZE

None

## TYPES OF FINANCING

For projects, TDA provides financing for feasibility analysis. Such funding is provided after a suitable level of pre-feasibility is established, either through the sponsor's own studies and/or through a TDA-sponsored Definitional Mission. Also the project pre-feasibility may be established through a Desk Study, when on-site study would be unwarranted. TDA publishes on its website the criteria for deciding to fund a feasibility study. Generally, TDA requires the involvement of a substantial company as sponsor or at least as significant participant in a project. Feasibility study funding can range from around \$100,000 to around \$600,000.

## FINANCING TERMS

Feasibility study funding is provided on a cost share basis if it is provided directly to U.S.-based project sponsor. If it is provided to the host country, then it is made on a grant basis, and can finance 100% of the cost of the study. In the grant case, the host country must bid out the study to qualified technical advisor on an open, competitive basis.

## MINIMUM FINANCING QUALIFICATIONS

TDA publishes a 14-point checklist on its website, including the usual parameters: economic, technical, legal, financial, and other criteria. There is also a screen to test for no negative impact on U.S. labor.

## CONTACT

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# TIAA Investments

## SERVICES PROVIDED

TIAA is a conservative long-term lender in the project finance market. The project finance group underwrites direct, public and 144A issues, and oversees a \$1.7 billion portfolio including power, sports facilities, infrastructure, natural resources, and industrial projects.

## TYPES OF PROJECTS

TIAA would be interested in well-structured projects with proven technologies and strong sponsors. Most types of technology or power sector investments will be considered, however, TIAA is generally the senior lender in front of subordinated debt and project equity. In addition to senior debt positions, TIAA can provide subordinated debt in project finance transactions.

## MINIMUM PROJECT SIZE

\$50 million project size, with minimum \$20 million participation of TIAA.

## MAXIMUM PROJECT SIZE

None

## TYPES OF FINANCING

Loan financing only.

## FINANCING TERMS

Since they are associated with long-term pension and retirement payouts, TIAA can provide funds on a long-term basis: 15 to 20 year tenor. Loans are dollar denominated and priced off of interpolated treasury bonds (a kind of average). However, under these long structures, there has to be almost no country risk or off-taker risk. In addition, TIAA can provide short term debt (3 to 5 years) and frequently provides financing during the construction phase of a project with periodic funding.

## MINIMUM FINANCING QUALIFICATIONS

Projects should be proposed by, and capitalized by, an experienced and well-capitalized developer. The equity component must be in place prior to soliciting debt funds from TIAA. There must be a dollar denominated or dollar converted revenue stream to fund the dollar-denominated debt service component. Only large projects would be considered, since TIAA's minimum investment threshold is \$20 million.

## CONTACT

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# Trigen Energy Corp.

## SERVICES PROVIDED

Trigen is a leading developer, owner, and operator of energy systems for industrial, commercial and institutional, and government energy users throughout North America. They integrate the use of highly efficient energy technologies-including combined heat and power (CHP) systems-with flexible, customer-centered business structures to deliver reliable utility solutions. Services include development, design, construction, operation, and maintenance of generation facilities, which produce electricity, hot water, steam, and cooling water for process or space conditioning purposes. Utility infrastructure services include compressed air, process water and wastewater.

## TYPES OF PROJECTS

Trigen completed installation of one project in Mexico and is looking at several others. In 1999, Grupo Primex selected Trigen Energía, S.A. de C.V., a wholly owned subsidiary of Trigen Energy Corporation, to provide energy services at Altamira. Trigen Energía signed a 15-year energy services agreement with Primex to supply the facility with electricity, steam, and chilled water. Under the agreement, Trigen Energía constructed and operates a state-of-the-art, 17-megawatt trigeneration facility at Altamira. Grupo Primex receives low-cost and reliable steam, electricity, and chilled water for its petrochemical complex.

## MINIMUM PROJECT SIZE

About \$15,000,000 and/or 15 MWs of power generation, or energy savings contracts.

## MAXIMUM PROJECT SIZE

Unlimited. Larger projects might be done in association with Trigen's parent company, Tractebel.

## TYPES OF FINANCING

Trigen is an active developer of projects who is able to come in with financing as part of a total solution. They can acquire projects from an initial developer and carry on as lead developer. Trigen does not provide passive financing for others' projects.

## FINANCING TERMS

Trigen would seek to get involved in projects having a payback in the range of 3-4 years.

## MINIMUM FINANCING QUALIFICATIONS

There has to be strong host company, with a good balance sheet, and hard currency cash inflow.

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