



Investments for a Windy Harvest

IFC SUPPORT OF THE MEXICAN WIND SECTOR DRIVES RESULTS

High Hopes, then Challenges, for Mexican Wind

Oaxaca, Mexico, is home to some of the best wind resources on earth. Beginning in the early 2000s, wind developers descended on Oaxaca and other windy Mexican regions to harvest the resource and develop profitable, utility-scale wind farms. Even though developers faced significant first mover costs, large multinational companies including Acciona, Gamesa, and Iberdrola had assembled a pipeline with over 3,800 MW of wind projects in Mexico, and the country was poised to become one of Latin America’s fastest growing wind markets.

Suddenly, in 2008, the burgeoning Mexican wind industry ground to a halt. In light of the global financial crisis and regulatory uncertainties, commercial lenders that were already weary of lending to a nascent and largely unproven industry rescinded debt funding from multiple project developers, even those with completed financial plans.¹ With lending drying up, most projects were effectively put on hold. Some wind developers found that financing projects with 100% equity was their only remaining option, reducing expected profits and weighing on company balance sheets. By late 2008, the private sector had yet to successfully operate a completed wind project in

Blended
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Mexico; CFE, the state utility, owned the only two operational wind farms (both in Oaxaca) for 85 MW of total installed capacity, far short of the estimated 500 MW of installed capacity required for the industry to reach scale.²

Key Investments Revive Sector

Jump-starting the stagnant Mexican wind industry required strategic anchor investments to help attract critical project financing, prove project feasibility, and bring back commercial lenders. Multilateral Development Banks (MDBs), including the Inter-American Development Bank (IDB) and the International Finance Corporation (IFC), remained relatively healthy even during the financial crisis and were thus well positioned to provide strategic anchor investments to help reinforce the industry during its difficult scaling phase. The MDBs thus identified two wind developments in Oaxaca, *Eurus* and *La Ventosa*, which were close to completion but in jeopardy due to developers' inability to source capital from frozen financial markets.

As the financial crisis deepened, EDF, the developer of the 67.5 MW *La Ventosa* wind farm, was unable

to secure commercial debt financing to complete the project. This created unforeseen liquidity constraints which put *La Ventosa* and many other renewable energy projects in jeopardy. Therefore, in 2009, IFC together with the IDB and Export-Import Bank of the United States stepped in to support *La Ventosa* with a \$125 million financing package. This package included \$22 million of IFC's own funds blended with a \$15 million subordinated concessional loan from the Clean Technology Fund (CTF) (see box). CTF concessional funds increased the total leverage of the project and brought the cost of capital in line with the expectations under which the project had originally been developed. This helped offset EDF's first mover costs and push *La Ventosa* toward completion. EDF also contributed \$64 million in equity, bringing the total project cost to \$189 million. *La Ventosa* began generating power in early 2010.

The Mexican Wind Boom

Shortly after the CTF-supported wind farms were completed and the global financial markets stabilized, Mexico's wind market witnessed significant growth (see Figure 1). Together with CTF, the MDBs

Why do MDB's Blend Concessional Finance?

- By deploying concessional funds, such as those provided by CTF, MDBs can help mitigate risk, reduce market barriers, and improve the economics of climate-smart projects
- These projects could not otherwise be developed on a purely commercial basis
- 'Blended' financing instruments are structured to help demonstrate a project's financial viability and help address the specific challenges of a high-potential yet challenging market
- Blended finance thus paves the way for future projects in the sector to be financed on fully commercial terms

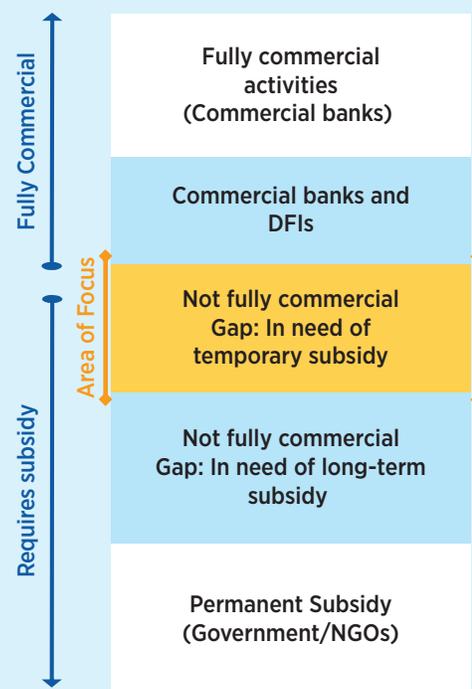
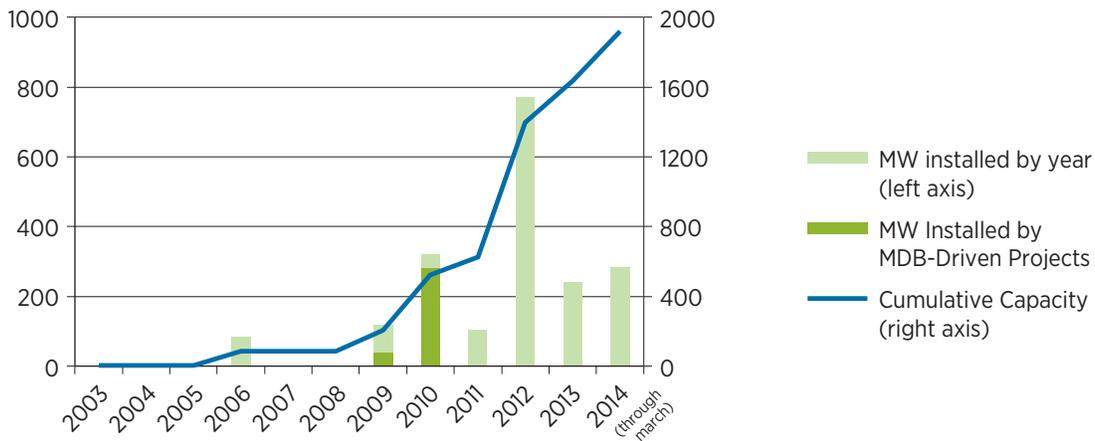


FIGURE 1. Wind Sector in Mexico



Source: IFC and The Wind Power

played a pivotal role in helping advance this market. According to analysis by IRENA (The International Renewable Energy Agency), MDB anchor investments of key senior and subordinated debt for Mexican wind parks effectively “catalyzed debt financing for wind projects in Mexico.”³ This financing, in addition to technical and financial expertise provided by the MDBs, helped restore confidence in

the Mexican wind sector, opening up the market to a plethora of new investments and developments. Thanks to favorable returns, Mexican wind projects have since attracted billions of dollars in investment from international debt and equity investors including commercial banks, pension funds, and hedge funds (see Case Study).⁴

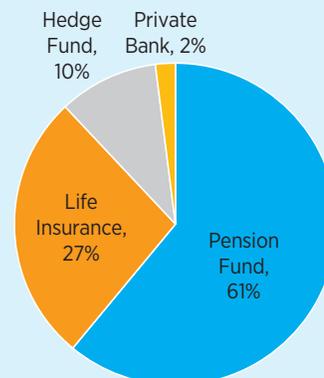
CASE STUDY Oaxaca II and Oaxaca IV Wind Farms

Debt financing via bond issuances is an important tool for capital-intensive industries such as wind power to attract favorable financing and reach scale. Bond issuances, however, are generally applied only when the most risk-averse financiers, such as pension funds and insurance companies, gain enough confidence in a sector’s regulatory environment and track record to begin making these investments.

In 2012, the Mexican wind industry became the first in Latin America to attract debt financing from international bond markets with Acciona Energía México’s \$298 million bond offering to refinance its 204 MW Oaxaca II and Oaxaca IV wind farms. Ultimately, factors including the structure of Acciona’s offtake agreement as well as the use of ‘proven’ turbines resulted in a critical investment-grade rating for the bonds; in fact, this was one of the first infrastructure projects in Latin America

to receive an international scale investment grade rating. This rating helped attract a diverse set of international investors to purchase the securities (see chart). Project Finance Magazine recognized the deal with its “Latin American Project Bond Deal of the Year 2012” award.

Oaxaca II and Oaxaca IV Bond Allocation by Investor Type



Source: Wind Power Monthly

Mexico has now approached 2,000 MW of installed capacity and is expected to reach 5,000–6,000 MW by 2016, generating \$12 billion in investments as well as spillover effects on a local value chain that includes over 45 developers, equipment manufacturers, and service providers.^{5,6} On the demand side, energy-intensive companies can now invest in renewable energy while locking in long-term, cost-saving contracts to hedge against Mexico's volatile electricity prices; Volkswagen's 20-year, 136 MW agreement with wind developer Mexico Power Group is expected to save the auto maker more than \$3.6 million in electricity costs per year.

Major Policy Changes Likely to Affect Industry

In 2012, as the Mexican wind industry was scaling up, the government passed an aggressive climate change law that requires 35% of the country's energy to come from renewable sources by 2024 (up from 26% in 2012). Since then, MDBs have used CTF funding to help stakeholders including Mexico's private sector wind power association (AMDEE) and government agencies formulate a wind sector development strategy moving forward. Further regulatory reforms will emerge in 2014 as Mexico begins to overhaul its power sector for the first time in more than 50 years, moving from a government-run monopoly to a more open market with a new regulatory framework and increased competition. Industry analysts are optimistic that the wind sector is now well-positioned to prosper under the new laws, though details have yet to emerge on how regulators will balance renewable energy goals with competitive electricity markets.



La Ventosa wind farm

Source: Creative Commons, Kitzero Routes

SOURCES

1. International Finance Corporation. (2009). *Clean Technology Fund Project Proposal for Mexico: Private Sector Wind Development*. Retrieved from http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Current_Information_Document_Mexico_Private_Sector_Wind.pdf
2. Ibid.
3. The International Renewable Energy Agency (IRENA). (2012). *Financial Mechanisms and Investment Frameworks for Renewables in Developing Countries*. Retrieved from <http://www.irena.org/DocumentDownloads/Publications/IRENA%20report%20-%20Financial%20Mechanisms%20for%20Developing%20Countries.pdf>
4. Garcia, David Alire. (2012). *Mexican Wind Energy Boom Plays Out on Gusty Shores*. Reuters. La Ventosa, Mexico. Retrieved from <http://www.reuters.com/article/2012/05/14/us-mexico-wind-idUSBRE84D05P20120514>
5. Cortés, Jesús Estrada. (2013). *Renewable Energies: Mexico's Green Bet*. Negocios ProMéxico. Mexico City, Mexico. Retrieved from http://embamex.sre.gob.mx/chile/images/stories/Documentos/pdffile_38_ne1013_web.pdf
6. Mexican Wind Energy Association (AMDEE). (No Date) List of service providers and equipment manufacturers. Retrieved from <http://www.amdee.org/socios-de-amdee>