

Mexico Wind Has Bright Horizons, Thanks To Energy Reform

Fueled by a commitment to sources such as wind and solar, the country stands ready to fulfill its renewable energy potential.

By Allan T. Marks & Miguel Duran

The long-awaited implementation of Mexico's energy reform has generated unprecedented opportunities for growth and foreign investment in the energy industry, including renewable energy. This multi-decade effort to liberalize the energy sector finally culminated last year with the enactment of new laws and regulations that opened the market to private-sector participants. The new rules should create new opportunities for wind power development, but there are still challenges to overcome.

The new regulatory system that has emerged from the energy reform process should contribute to the creation of a more efficient and open energy sector. However, there will be growing pains and uncertainty during the transitional period for the next few years.

The responsibilities for regulation of the energy sector are divided among several public entities, including the Federal Electricity Commission (CFE), the Energy Regulatory Commission (CRE), the Secretariat of Energy, the Secretariat of Finance and Public Credit, the Secretariat of Environment and Natural Resources, and the National Center of Energy Control (CENACE).

The increased bureaucratic requirements and interagency coordination of responsibilities could cause delays and uncertainty. For instance,

utility-scale wind power projects historically connected to CFE's national grid will be split off to an independent grid operator, CENACE, under the new rules.



Marks



Duran

CENACE's new role as the independent grid operator, Mexico's first, will almost certainly present a learning curve that may increase investors' insecurity in regards to a range of practical issues, such as interconnection agreements, dispatch priority, congestion management, load balancing and payments. Fortunately, other jurisdictions have successfully completed similar transitions, and Mexico should benefit from lessons learned elsewhere.

Wind expansion

For years, it was widely anticipated that the oil and gas sectors would experience the greatest impact from the reform. After all, Mexico historically has relied on oil and gas to meet its energy demands, and there are still substantial

oil reserves for which deepwater drilling technology would be required.

While a monopoly has fallen behind other big, multinational oil companies in technology and financial strength, PEMEX – the state-owned entity in charge of oil and gas operations – will be allowed to partner with foreign firms. PEMEX will also be permitted to invest directly in oil and gas exploration and production for the entity's first time in 75 years.

For all the hype and high expectations of the opening of the oil and gas sector, renewable energy may actually offer more promising near-term opportunities. Recent sharp declines in crude oil prices globally since late 2014 – combined with the latest policy developments seeking to diversify sources of energy in Mexico by promoting emission reductions and encouraging the development of clean energy sources – continue to open up opportunities for the expansion of renewable energy. Ultimately, the wind energy sector may become an important success story.

CFE estimates that 55,000 MW of new generation capacity will be needed over the next 15 years to keep up with demand growth. Mexico has taken serious steps to curtail growth in carbon emissions with the planned capacity additions. In an effort to promote renewable energy, the government established a goal to obtain no

less than 35% of the country's power from renewable energy sources by 2024. As is the case in most members of the Organisation for Economic Co-operation and Development, it is expected that wind energy alone would generate approximately one-half of the renewable target.

2015 and 2018. That amount constitutes a threefold increase in investment compared to the period from 2009 to 2014. Both Mexican and international entities are expected to participate. Entities including Iberdrola, Gamesa and Acciona have announced their intentions to continue

the government developed three main strategies: the imposition of a tax on carbon in fossil fuel products (with the amount of the tax based on the carbon content); the creation of a carbon credit trading platform on the Mexican Stock Exchange, where credits for carbon emissions reductions could be purchased to offset the emissions that would otherwise be subject to the new tax; and the creation of a new public, national emissions registry, to which industry participants are required to report emission amounts. By participating in the exchange, wind power industry participants may be able to monetize a product that, until recently, had limited value. By capturing and assessing the economic cost of carbon emissions, that hidden subsidy is removed, and renewable resources become more competitive on price.

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Fortunately, Mexico has ample wind resources, especially in the states of Oaxaca, Tamaulipas and Baja California. Accordingly, the government anticipates that installed wind capacity will reach 9.6 GW (approximately 8% of the total energy production in Mexico) by 2018 and predicts that the country will have at least 12 GW of installed wind energy capacity by 2020. Beyond 2020, Mexico's wind energy sector could still continue to grow substantially, and recent studies have placed Mexico's wind power potential at 50 GW to 71 GW.

The first steps toward these lofty goals are already in the works. By the end of 2014, Mexico had 31 operating wind farms with an aggregate capacity of nearly 2.6 GW, which is seven times greater than the installed wind energy capacity in 2009, but it represents just about 2% of the country's energy generation. An additional 26 wind farms have already been approved by CRE for development during the next two years. These new projects are expected to increase the country's total wind energy capacity to approximately 5 GW. Many of these projects are being developed as contracted assets with a reliance on creditworthy corporate off-takers (such as manufacturers and large retailers) for power production.

In January, the Mexican Ministry of Energy and the Mexican Wind Power Association jointly announced a plan to attract approximately \$14 billion in new investments for wind energy generation projects between

investing in Mexico's wind energy sector and, in fact, have already confirmed new investments in wind energy in the country. Additionally, CFE itself plans to participate in the plan as an investor and developer. Its involvement is expected to ultimately create eight new wind farms with an aggregate capacity of up to 2.3 GW through an investment of approximately \$3.7 billion.

Additional incentives

In many regions around the world, governmental subsidies and tax credits constitute a broadly used benefit for investors in wind energy. However, Mexico's Ministry of Energy has chosen, for the time being, not to over-rely on them, in part, as a way to promote the most competitive renewable energy sources. Nevertheless, Mexico's tax code provides for accelerated depreciation of investments in renewable energy equipment. Under these provisions, a company investing in wind power generation equipment may deduct up to 100% of its total investment during its first taxable year (and may be able to carry forward any deduction amount it is unable to use).

An additional source of revenue for Mexico's wind power investors is the newly created trading platform for carbon credits. At the 2009 United Nations Climate Change Conference, Mexico voluntarily committed to diminish its carbon emissions below 2000 levels: 30% by 2020 and 50% by 2050. To accomplish these goals,

Challenges

Despite all the benefits of renewable energy sources, the strong governmental support and promotion of wind energy, and the other incentives, there are still challenges to overcome. For instance, some of the new generation facilities have sparked controversy and local resistance due to environmental and land-rights concerns. Such is the case of several projects located in the Isthmus of Tehuantepec, in the state of Oaxaca in southern Mexico. The Tehuantepec region's wind resource is thought to be enough to supply the entire electricity demand of Mexico, and 21 wind energy generation facilities are already in operation.

However, the state of Oaxaca is also one of the poorest states in the country, and more than 34% of the population is indigenous. Nonprofit environmental law organizations have claimed that the government is not properly regulating energy projects in the region. As a result, they claim indigenous populations are disproportionately encountering negative social and environmental impacts. While they recognize the potential for wind energy developments to combat

climate change and bring energy self-sustainability, these groups are calling for greater accountability and further studies to ensure that the harm caused on indigenous populations does not outweigh the benefits of clean energy. These groups' main complaints include a lack of information for local communities; a lack of free, prior and informed consent; unreasonable terms of land leases; aesthetic degradation of the environment; a loss of biodiversity; and an absence of community-wide benefits.

These concerns are already being addressed in the new legislation that originated as part of the energy reform process. As the energy minister recently explained, developers are obligated to conduct thorough, public, free and informed consultancy procedures to discover and mitigate potential effects on the surrounding communities.

Moreover, the regulations include criteria to define the social impact of energy generation facilities and to provide adequate compensation to landowners. These new rules may create a forum for projects to obtain local support. If so, projects could benefit from greater certainty about site approvals and permits based on

local consensus and transparency.

Additionally, the government expects that the energy reform will create over half a million new jobs during the current government's term, and by 2025, the reforms are expected to increase Mexico's GDP by 2% and to create an additional 2 million jobs.

Currency volatility should be another important consideration for wind power investors, especially when a project's revenue will be received in Mexican pesos. The recent collapse of oil prices, combined with the general strength of the U.S. economy, has caused volatility in the value of the peso compared to the U.S. dollar. Although, at the moment, pesos are commonly considered to be one of the most robust currencies in Latin America, some experts are already predicting further declines in 2015. To avoid the currency risks, especially when financing will be provided in U.S. dollars, some project developers have started to move away from peso-denominated off-take agreements. As more direct, corporate off-takers continue to get comfortable with U.S. dollar contracts, investors may have further options to obtain more predictable revenue streams and reduce risk, as well as align capital costs, debt

service and project cashflows with minimal currency risk.

The favorable environment created by the culmination of significant energy reforms, combined with strong governmental support, has created a fertile ground for important investment opportunities in wind power in Mexico. The commitment of Mexico's government to advance the wind energy sector has already attracted the attention of a number of international energy market participants. With uncertainty (at best) surrounding the production tax credit in the U.S., developers that had previously focused on the U.S. market are taking a renewed look at neighboring Mexico and its favorable investment climate and incentives for potential long-term investment. In fact, there is already an uptick in Mexican investment activity for wind power developers and cross-border lenders – a trend that should continue beyond 2015. **SVP**

Allan T. Marks is partner and Miguel Duran is an associate at law firm Milbank. Marks can be reached at (213) 892-4376 or amarks@milbank.com. Duran can be reached at (213) 892-4566 or mduran@milbank.com.