

Mexico

Overall Rank: 5

Type: Small Market; Large Market Share

Perhaps no market offers as much potential for future U.S. renewable energy exports as Mexico. Mexico’s proximity to the United States and its resource potential portend significant U.S. exports, but the market is currently small and growth is difficult to project given the ongoing energy reform efforts of President Peña Nieto. As implementing regulations are approved, exporters are encouraged to further develop their contacts in Mexico and position themselves for opportunities should new renewable energy investment begin to materialize.

Sub-Sector Rankings

Ethanol	Geothermal	Hydropower
5	12	7
Pellets	Solar	Wind
10	18	3

Mexico is already a key destination for U.S. renewable energy exports. The close relationship between many U.S.-based suppliers and their Mexican counterparts, as well as the interlinked nature of supply chains in both countries, has facilitated several export deals despite only modest investment in the sector compared to other markets. As a result, ITA ranks Mexico #5 on its list of top renewable energy export destinations through 2015, with opportunities projected in every renewable energy subsector.

Yet while exports are likely in a “business-as-usual” climate, ongoing energy reform efforts offer the potential to dramatically increase investment in the renewable energy sector, potentially creating even more opportunities in the near-to-medium term. Exporters are highly encouraged to monitor the development of implementing regulations for the reform package that passed in December 2013, keeping in mind that any change in incentives or procedures could generate new business opportunities.

Overview of the Renewable Energy Market

Mexico’s current renewable energy market is shaped by its “General Law on Climate Change,” which was enacted in June 2012. The law affirmed Mexico’s intent to increase its electricity generated from clean energy

sources, including nuclear energy, to 35 percent by 2024. International investment in Mexico’s renewable energy market increased sharply as a result of the legislation, rising from just \$532 million in 2011 to \$2.9 billion in 2012.

Most of the renewable energy investment in Mexico has historically supported the wind industry, but other sectors have benefited as well from opportunities created by the law. In fact, Mexico generated 28 percent more renewable energy in 2012 than the year prior, surpassing 12,000 GWh for the first time, and future growth is highly anticipated.

Based on language in the recent energy reform package, Mexico’s renewable energy market is expected to be strengthened – but only slightly. The reform bill is largely focused on PEMEX, Mexico’s state-run oil company, and is designed to facilitate foreign investment in unconventional oil and gas development, but some changes to electricity regulations could support new renewable energy development as well. As in any reform effort, early adopters to the reform regulations will likely capture new opportunities ahead of other competitors.

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Challenges and Barriers to Renewable Energy Exports

The vertically-integrated, single-buyer electricity market model historically used in Mexico has often made the Mexican regulatory framework difficult to navigate for many U.S. companies. Until the recent reform, most of the negotiating power was in the hands of the government and, as a result, prices offered to renewable energy developers were traditionally below prices offered in other markets.¹ In fact, by law, Mexico's state-owned electric utility, CFE, must still purchase the lowest cost electricity.

Squaring this mandate with Mexico's target to increase its share of clean energy generation to 35 percent by 2024 is exceedingly difficult. As a result, CRE, the Mexican energy regulator, has allowed renewable energy developers to file for a "self-supply" contract, meaning that individual consumers – mostly large industrial companies – can produce their own power somewhere in Mexico and then take an equal amount of power off the grid for their own use.

Self-supply contracts have accounted for the vast majority of renewable energy projects in Mexico, many of which are in the wind sector. Unless further policy changes make additional avenues more likely, these contracts will support future development as well. The "self-supply" model has even begun to expand outside the wind industry. Ford Motor Company agreed in June 2013, for example, to buy 3 MW from a 20 MW solar plant in Sonora.²

ITA anticipates further use of the "self-supply" model in the future and encourages exporters to identify Mexican companies that may be interested in developing a "self-supply" power plant, as developing projects this way seems like the fastest, more reliable method of doing business. The Foreign Commercial Service located in Mexico City can be a great supporter, helping interested American exporters develop a market entry strategy to this effect.

Opportunities for U.S. Companies

Wind

ITA expects wind energy to continue to be the dominant player in Mexico's renewable energy industry for the foreseeable future. Nearly 78 percent of the global investment in Mexico's renewable energy sector in 2012 supported wind energy development, most of which occurred in the Southern region of Oaxaca or in the state of Baja California. Several wind projects have been

supplied by U.S.-made turbines and those turbines not made in the United States likely included several component parts made in the United States.

According to *Bloomberg New Energy Finance*, in addition to wind turbines, Mexico currently lacks the ability to manufacture bearings and gearboxes for the wind industry, indicating that any future wind energy development will require some imports.

Solar

Solar development remains woefully short of its potential in Mexico. With one of the world's most robust solar resources, ITA believes the market could support significant solar exports over the coming decade. Prices have fallen dramatically over the past two years, making solar energy competitive in many parts of Mexico, particularly for small and medium sized enterprises that already pay commercial tariffs for electricity that are among the highest in Latin America.

To date, developers have amassed initial permits to construct only 393.7 MW of new solar generation, mostly in northern regions, but additional development is likely as demand increases and prices continue to fall. It will be important for U.S. suppliers to stress to potential clients that buying decisions should be determined based on the long-term cost of solar technologies, positioning U.S. technology more effectively against lower-cost products made elsewhere.

Geothermal

Mexico has traditionally been one of the largest geothermal markets in the world, yet little development has occurred over the past decade. Many geothermal fields no longer produce as much power as they once did and new facilities have been difficult to develop.

However, recent indications from the Mexican Government, suggest new geothermal development could be on the way. The Energy Ministry recently began an effort to put increased focus on this renewable energy source by launching the "International Geothermal Energy Forum." Early-stage geothermal services should provide opportunities for U.S. exporters, including engineering services, resource exploration and drilling services, and well/resource confirmation.

Biomass

The Mexican biomass and waste-to-energy value chains are 100 percent complete, according to *Bloomberg New Energy Finance*.³ As a result, though development will

continue, it is unlikely that the sector will support a significant amount of U.S. technology exports.

Hydropower

Development in the hydropower sector is likely to be focused on the small hydro industry, where U.S. exporters may find opportunities providing pipes, turbines, and engineering services to a relatively small and stagnant industry. Despite the lack of expected demand, Mexico still ranks 7th on ITA's list of top hydropower export markets based almost exclusively on the market share enjoyed by U.S. exporters

Upcoming Renewable Energy Trade Events for Exporters interested in Mexico:

- **Mexico Wind Power 2014**; *February 26-27, 2014* – Mexico City
- **Green Expo 2014**; *September 24-26, 2014* – Mexico City (for companies interested in Green Expo, contact Claudia Salgado at Claudia.Salgado@trade.gov)

U.S. Foreign Commercial Service Contact Information:

Miguel Vazquez
Commercial Specialist
Email: miguel.vazquez@trade.gov
Tel: (5255)5140-2643

For more information, please visit: www.export.gov/reee or www.export.gov/mexico.

2014 Renewable Energy Top Markets Report



This *Top Markets* case study is part of a larger report that includes rankings of 75 different markets in terms of overall U.S. renewable energy exports through 2015, as well as specific rankings for the ethanol, geothermal, hydropower, biomass pellets, solar and wind sectors. To access the full report, visit <http://export.gov/reee/topmarkets>.

¹ Bloomberg New Energy Finance, "Climatescope 2013" pp. 99

² Bloomberg New Energy Finance, "Mexico Sunshine Lures Cash for Solar After Panels Plunge" (04 October 2013)

³ Bloomberg New Energy Finance, "Climatescope 2013" pp. 101

About the Office of Energy and Environmental Industries

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