



U.S. Embassy–Mexico City Renewable Energy Factsheet

Key Facts:

- Mexico has enormous renewable energy potential: as much as 6,550 MW in solar, 20 GW in wind, and 1,000MW in geothermal, in addition to excellent possibilities for biofuels.
- Mexico is a net exporter of electricity to the United States and has the potential to export considerably more, particularly from wind, if regulation and finance are in place and transmission capacity can be expanded.
- Mexico currently generates 26% of its electricity through renewable and clean fuel sources, including hydro-electric (11%) and geothermal. Per the new climate change law, 35% of the country's electricity must come from renewable sources by 2024.

Mexico has the world's highest growth in wind energy, and is ranked #20 in the world.

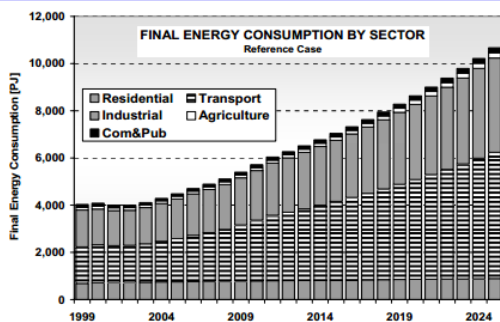
Mexico's Federal Electrical Commission (CFE) estimates Mexico's wind energy potential at 71 GW, with up to 33,000 MW of wind energy in Oaxaca and 10,000 MW in Baja California alone. La Ventosa 79.9 MW wind farm in Oaxaca is one of the world's largest. When fully operational, it will produce enough energy to power a city of 500,000 people.

Many experts believe a national target of 12 GW of wind power by 2020 is feasible, though not determined officially. In 2011, Mexico had 304 MW of installed capacity and more coming online in 2012 with projects by power producer Gamesa and corporate projects from Walmart, FEMSA and Bimbo. Grupo Bimbo has invested \$200 million to provide 90 MW of wind electricity to 65 of its facilities.

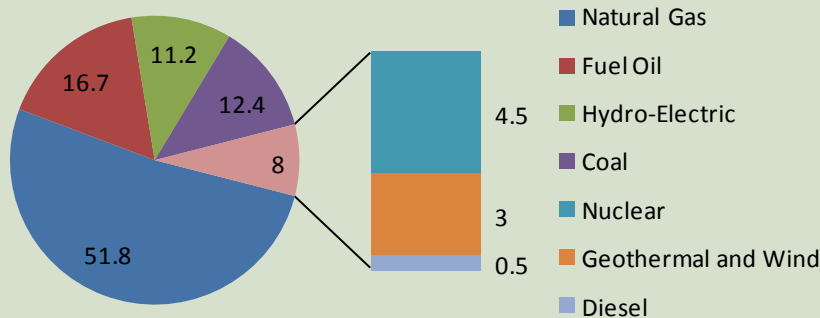
Wind Power
MW of Electricity Production

2006	84
2007	85
2008	85
2009	520
2010	733
2011	873
2012	*2000

*Projected
Source: IEA Wind Energy Report



Electricity Generation Percentages by Source, 2009



Source: CFE

Mexico Passes Groundbreaking Climate Change Legislation in 2012

- Mexico committed to reducing greenhouse gas emissions by 30% in 2020 and 50% by 2050
- National Institute of Ecology (INE) rebranded to tackle Climate Change

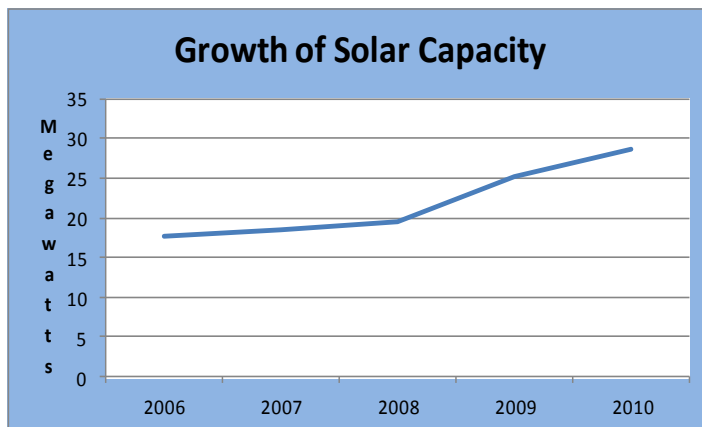
In 2012, Mexico passed one of the world's most ambitious climate-change laws. The new law contains many sweeping provisions to mitigate climate change, including a mandate to reduce emissions of carbon dioxide by 30% below business-as-usual levels by 2020, and by 50% below 2000 levels by 2050. Furthermore, it stipulates that 35% of the country's electricity should come from renewable sources by 2024, and requires mandatory emissions reporting by the country's largest polluters.



The act also establishes a commission to oversee implementation, and encourages development of a carbon-trading scheme. Although there was initial resistance from Mexico's steel and cement industries, the bill passed with bipartisan support. In addition, the National Institute of Ecology (INE) was rebranded as the National Institute of Ecology and Climate Change (INECC), which will serve as the lead agency on the issue.

Mexico leads Latin America in solar energy production.

Per Mexico's National Association of Solar Energy (ANES), Mexico produced in 2010 28.62 MW of solar power but has the potential to reach 6,550 MW given its solar resources. (See map below). Experts believe that photovoltaic (PV) electricity and solar thermal will comprise up to 5% of Mexico's energy matrix by 2030 and up to 10% by 2050.



There are several solar projects in the works.

The Federal Electrical Commission (CFE) plans to build a 30 MW photovoltaic (PV) plant in Baja California Sur. In March of 2012, U.S.-based SolFocus, Inc. announced a venture with Mexican land and real estate developer Grupo Musa and U.S.-based energy developer Synergy Technologies, LLC to build a 450MW concentrated photovoltaic (CPV) solar power plant near Tecate, Baja California. The plant will be Mexico's first large-scale PV project. Construction began in 2012, and the plant will be built in 50MW stages. Energy production is expected to begin by late 2013. As of January 2012 the state of Durango is seeking to attract USD 462 million in capital to develop at least four solar energy plants. According to state officials, Durango's geographical location is ideal for solar plants, since it receives three times more solar radiation than the world's average.

Mexico has a large riparian system, capable of much greater "Small Hydro" production.

There are at least 50 public and private small-scale hydropower dams operating in Mexico, most of which are using obsolete technology. Together, they generate around 50 MW of energy. The National Commission for Energy Efficiency (CONUEE) estimates that Mexico's southern states have the potential to produce over 400 MW of energy through small hydro projects at 72 identified locations.



Geothermal sources generate 3% of power but has greater potential.

Mexico is the world's fourth largest Geothermal energy producer. According to the International Geothermal Association, Mexico's installed geothermal capacity is 958 MW from 37 units, currently operating in four geothermal fields: Cerro Prieto (720 MW), Los Azufres (188 MW), Los Humeros (40 MW) and Las Tres Vírgenes (10 MW). However, SENER believes Mexico's geothermal potential to be 10,644 MW, 1,144 MW of which can be extracted using existing facilities. No new important addition has been realized since 2005, except one 5 MW unit at Los Humeros.

