

Article Overview

Mexico has rapidly expanded its photovoltaic power capacity, with major PV plants exceeding 1,000 MW and solar energy contributing significantly to the national grid.

Current Solar PV Capacity

As of 2024, Mexico has 11.99 GW of installed solar PV capacity, generating 27.55 TWh, which accounts for 7.6% of the country's total electricity production . The country benefits from high solar insolation, with 70% of its territory receiving more than 4.5 kWh/m²/day, making it highly suitable for large-scale PV deployment .

Largest Existing PV Plants

Some of the largest operational solar PV plants in Mexico include:

- o La Pimienta Solar PV Park in Campeche: 444 MW, the largest in Mexico as of 2024 .
- o Villanueva Solar PV Plant in Coahuila: 754 MW, developed by Enel Green Power Mexico, producing approximately 1,700 GWh annually .
- o Puerto Libertad Photovoltaic Complex in Sonora: 405 MWp, supplying energy to the Federal Electricity Commission (CFE), .
- o Don Jose PV Facility in Guanajuato: 238 MW, completed ahead of schedule in 2018 . Other notable plants are located in Coahuila, Aguascalientes, and San Luis de la Paz, Guanajuato, reflecting a broad geographic distribution of solar projects .

Upcoming and Planned Projects

Mexico is experiencing a surge in large-scale PV projects, often combined with battery storage systems. Key upcoming projects include:

- o Tarafert La Laguna Solar PV Park in Durango: 1,000 MW, expected to enter commercial operation in 2026 .
- o Puerto Penasco 1 Solar PV Park in Sonora: 1,000 MW, partially active and under development .
- o Hidalgo 1&2 Solar PV Park in Hidalgo: 357 MW, expected to be operational in 2026 .
- o La Esperanza Photovoltaica PV Park in Campeche: 350 MW, planned for commissioning in 2026 .
- o Alegria Solar Project in Campeche: 788.7 MW, integrated with 177.69 MW/314.98 MWh of battery storage . These projects are supported by recent regulatory reforms that provide clearer rules for private investment and project oversight, encouraging further growth in the sector .

Solar Energy Potential



Photovoltaic power plant in Mexico

Mexico's solar potential is enormous. With 15% efficient PV panels, a 25 km x 25 km area in the Sonoran Desert or Chihuahua could theoretically supply the entire country's electricity needs. The 2012 climate law mandates 35% of electricity from renewable sources by 2024 and 50% reduction in carbon emissions by 2050, further driving solar development.

Summary

Mexico is rapidly becoming a solar energy leader in Latin America, with a combination of operational mega-PV plants, ambitious upcoming projects, and favorable solar conditions. The integration of battery storage and regulatory support is expected to further accelerate the deployment of photovoltaic power across the country, contributing significantly to Mexico's renewable energy targets and carbon reduction goals.

The Mexican government said its electricity expansion plan aims to add 32 GW of capacity by 2030, with 70% coming

Mexico still shows a lack of studies regarding the monitoring of PV systems because available data are scarce. The

Once fully operational, Villanueva will be the largest PV facility producing energy in the Americas and Enel's largest

Mexico's push to expand renewable energy continues to create demand for solar, wind, geothermal, and energy

Using 15% efficient photovoltaics, a square 25 km (16 mi) on each side in the state of Chihuahua or the Sonoran Desert (0.01% of

Data and information about Solar power plants in Mexico plotted on an interactive map.

The CFE has launched a tender for the construction of Puerto Peñasco Sequence III Photovoltaic Power Plant, in the

A solar-panel complex was completed a few months ago in the Sonoran Desert in Mexico. From a bird's-eye view, the Puerto

In this study, the supposed production of the standard photovoltaic plant was determined for various Mexican states

Mexico is seeing a surge of large-scale solar and battery storage proposals across multiple states following an

Photovoltaic power plant in Mexico

Combining the capacity of this Mexican duo, Enel Green Power Mexico has developed and (partially) owns 45% of the

Mexico City has unveiled it's new solar energy plant, said to be the largest of its type in the

Listed below are the five largest upcoming Solar PV power plants by capacity in Mexico, according to GlobalData's

Spanish renewable company Acciona Energía has completed assembly of the Puerto Libertad photovoltaic (PV) plant

French utility Engie has powered the Solar Akin 100MW solar PV plant in the northwest

Get to know the projects' power generation capacities in MWp or MWAC, annual power output in GWh, state of location and exact

Web: <https://www.kremgroup.co.za>

