



Colombia upgrades solar power generation for home use

Does Colombia have solar power?

In the first renewable energy auction for the country, over 1 GW of wind power was awarded in 2019 for a 15-year power purchase agreement from 2022. Colombia has significant solar power resources because of its location in the equatorial zone, but the country sits in a complex region of the Andes where climatic conditions vary.

Will Colombia's utility-scale solar PV capacity increase over the 2020-22 period?

Colombia's utility-scale solar PV capacity additions are expected to increase more over the 2020-22 period than they did in 2019. Two auctions (for energy and reliability) combined will bring online almost 500 MW of utility-scale PV.

How much wind power does Colombia have?

Colombia has an estimated theoretical wind power potential of 21 GW just in the Guajira Department --enough to generate sufficient power to meet the national demand almost twice over. However, the country only has an installed capacity of 19.5 MW of wind energy, tapping only 0.4% of its theoretical wind potential.

What is Colombia's Biomass power potential?

Colombia has a great biomass power potential from agricultural residues (banana, coffee pulp, and animal waste). Its annual biomass power potential is estimated to be over 16 GWh, which is still less than 0.1% of current electricity production. The potential is distributed as follows:

Why is hydropower important in Colombia?

With 70 percent of the country's power generation, hydropower is a very important national energy source. The total large hydropower potential for Colombia is estimated at 93GW, with an additional 25GW of small hydropower (<20MW). The wind regime in Colombia is among the best in South America.

How much hydropower does Colombia have?

The total large hydropower potential for Colombia is estimated at 93GW, with an additional 25GW of small hydropower (<20MW). The wind regime in Colombia is among the best in South America. Offshore regions of the northern part of Colombia, such as in the Guajira Department, have been classified with class 7 winds (over 10 meters per second (m/s)).

As of 2023, Colombia's renewable electricity generation capacity was 14.3 GW. Most of this capacity is hydropower. Solar power is growing fast, and in 2023 accounted for about 5% of the renewable capacity, up from almost zero five years earlier. The country has significant wind and solar resources that remain largely unexploited. According to a study by the World Bank's Energy Sector Management Assistance Program (ESMAP), exploiting the country's significant wind pot...

But that's beginning to change thanks to a hybrid "mini grid" installed in 2025. The system pairs solar power with backup diesel generators, supplying 24-hour electricity to four of ...

Along with the La Loma Solar Park, the Fundación Solar Park, equipped with more than 244,000 solar panels, also came into operation. This park will provide 267 GWh/year, which represents ...

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