## **SOLAR PRO.** Uruguay energy storage and applications

How much electricity does Uruguay generate?

According to 2022 data from MIEM, Uruguay generated 14,759 GWhof electricity, 13,343 GWh for internal demand and exported 1,416 GWh to Brazil and Argentina Typically, Uruguay generates a surplus of electricity due to an excess of wind-power capacity.

Why does Uruguay generate a surplus of electricity?

Typically, Uruguay generates a surplus of electricity due to an excess of wind-power capacity. The country seeks to identify additional domestic uses for excess electricity and potentially increase exports to Argentina and Brazil.

How much electricity did Uruguay export in 2022?

In 2022, exports of electricity represented \$222 millionwhich was less than 50 percent of the total amount of electricity exported in 2021. This decrease was primarily due to a severe drought which adversely affected the generation in Uruguay.

How many charging stations are there in Uruguay?

In May 2022, there were 89 charging stations and 122 chargers, distributed in most departments of the country. The electric vehicles sold in Uruguay have Type 2 connectors according to UNIT standards (UNIT - IEC 61851-1:2017 and UNIT - 1234:2016).

Will Uruguay become a leading country in the development of E-Fuels?

Due to its highly decarbonized energy sector with strong wind and solar capacity, Uruguay is expected to become a leading country in the region in the development of e-fuels, or synthetic fuels that are produced using renewable energy.

What products can be imported into Uruguay duty free?

Additionally, electric vehicles, renewable-energy generators and capital equipment can be imported into Uruguay duty free. In comparison, for conventional equipment an average of 14 percent duty applies to products that are not products of Mercosur countries.

Uruguay is a frontrunner in renewable energy integration in Latin America, with developing potential in the areas of battery storage and smart grid technologies. The country's electricity matrix is highly renewable, with over 97% of its power generated from renewable sources.

Overview of energy storage technologies and concepts, NREL's storage and analysis tools and support capabilities, phases of storage deployment, the role of storage in the power system, and road maps for incorporating energy storage

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This paper analyses the incorporation of energy storage into the Uruguayan network, taking the different perspectives of a private investor and a central planner. From the investor point of view, we investigate the option of doing energy arbitrage in the wholesale market, taking advantage of the spot price fluctuations.

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This paper explores residential energy storage applications in Uruguay, one of the global leaders in renewable energies, where new low-voltage consumer contracts were recently introduced andumerical results indicate that storage could be profitable, even considering battery degradation, under some but not all of the studied contracts.

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