

SolarTech Power Solutions

Does Uruguay s new energy need energy storage



Overview

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Ken Silverstein covers global energy and climate issues. TOPSHOT - Three birds fly past a wind farm near the city of Florida, about 100 km north of Montevideo, as a storm darkens the sky in the afternoon on February 8, 2018. (Photo by Mariana SUAREZ / AFP) (Photo by MARIANA SUAREZ/AFP via Getty.

Uruguay has shown clean power can beat fossil fuels on price, stability and jobs. By rewriting market rules and running competitive auctions, it built an electricity system that is nearly 99% renewable while halving generation costs. Former energy minister Ramón Méndez Galain argues the transition.

used for oil and gas in Uruguay. Uruguay generates nearly half of its electricity from wind and solar, more than any other country in Latin America and the Caribbean. Source: Visual Capitalist: Solar & Wind Power by Country 2020 The World Bank, Source: Global Solar Atlas 2020

Once reliant on exorbitantly priced fossil fuel imports for nearly half of its energy needs, Uruguay has gone from suffering frequent blackouts and power cuts to relative energy sovereignty based almost entirely on electricity generated from a stable mix of wind, solar, hydroelectric, and bioenergy.

Montevideo, Uruguay's coastal capital, has become a testing ground for energy storage innovations that could reshape how cities use renewable power. With wind and solar supplying 98% of the country's electricity since 2022, you'd think they've solved the clean energy puzzle. But here's the catch:.

These natural storage systems reduce the urgency of deploying large-scale battery storage, though complementary technologies are being explored for industrial and residential use. Uruguay's modern grid infrastructure, supported by over 90% broadband penetration and extensive fiber-optic deployment. How much electricity does Uruguay produce?

The results speak for themselves. Today, Uruguay produces nearly 99% of its electricity from renewable sources, with only a small fraction—roughly 1%–3%—coming from flexible thermal plants, such as those powered by natural gas. They are used only when hydroelectric power cannot fully cover periods when wind and solar energy are low.

How much green energy does Uruguay use?

In 2016, even before several more renewables projects went online, it hit 94.5 percent green energy. In 2019, according to an analysis by the Uruguayan company SEG Engineering, the country ran on 98 percent renewable energy.

Why did Uruguay switch to renewables?

Uruguay's shift to renewables, he argues, demonstrated that clean energy can be cheaper, more stable, and create more jobs than fossil fuels. Once the country adjusted the playing field that had long favored oil and gas, renewables outperformed on every front: halving costs, creating 50,000 jobs, and protecting the economy from price shocks.

How does Uruguay generate 97 percent of its electricity from renewable sources?

Going for gales: Wind turbine farms are one of the ways Uruguay managed to generate 97 percent of its electricity from renewable sources. (Courtesy of Natasha Hakimi Zapata).

Why is Uruguay a 'relative energy sovereignty'?

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Is Uruguay a net importer of energy?

Once a net importer of energy, Uruguay now exports its surplus energy to neighbouring Brazil and Argentina. In less than two decades, Uruguay broke free of its dependence on oil imports and carbon emitting power generation, transitioning to renewable energy that is owned by the state but with infrastructure paid for by private investment.

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