

SolarTech Power Solutions

Chile s energy storage system is used for nighttime charging



Overview

Such projects help to provide more stable power during the night when solar output is low. Greenergy Renovables, an independent renewable energy company based in Spain, is delivering the world's largest hybrid solar and battery storage project, Oasis de Atacama, in northern Chile. Is Chile ready for a standalone energy storage project?

This project alone nears the capacity (13GWh) the Chilean Ministry of Energy sought in a public land bidding auction for standalone energy storage projects in May of 2024. Chile has been one of the countries at the forefront of the renewable energy transition in Latin America, first with solar PV and now with BESS.

Why is energy storage important in Chile?

Image: Greenergy Grid constraints have prevented Chile from maximising the potential of its world-class solar resources. Energy storage has, therefore, become a necessity to ensure the financial viability of PV projects, writes Jonathan Tourino Jacobo.

Does Chile need a nighttime electricity supply?

"Mining represents roughly 60% of the total energy consumption [in Chile]. Out of roughly 12GW, nearly 7-8GW comes from mining, all of which need to be supplied 24/7. There's a lot of space [to supply with batteries]," explains McDonough. Rojas outlined the urgent need to decarbonise the nighttime electricity supply in Chile.

Should Chile decarbonise the nighttime electricity supply?

Rojas outlined the urgent need to decarbonise the nighttime electricity supply in Chile. In 2023, only 19% of renewable energy was used at night and 25% during peak hours - from 7pm to midnight - while the daytime sat at around 56% on average.

How many energy storage projects are in Chile?

According to a December 2023 publication on the InvestChile website, the country had 23 approved energy storage projects with a total of 3,000 MW of capacity. Chile is exploring a variety of solutions to keep abreast of the changing energy demand landscape ranging from BESS to innovative projects using CO₂.

How much energy storage will Chile have in 2024?

During the Energy Storage Summit Latin America (ESS LatAm) in October 2024, Ana Lía Rojas, executive director at the Chilean renewable energy and energy storage association (ACERA), explained how the current levels of curtailment in Chile, which could end up at approximately 5TWh in 2024, could power up to 3.4GW of 4-hour duration energy storage.

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