

Chile energy storage companies

By the EMIS Insights Editorial Team

As the world aims to reduce its dependence on fossil fuels and is becoming increasingly reliant on renewable energy sources, the battery energy storage system (BESS) has emerged as a super-high growth market. The global market for battery storage grew twofold y/y to exceed 90 GWh in 2023, according to data of the International Energy Agency, and the volume of battery storage in use rose to over 190 GWh. Underpinned by hefty supportive policies, BESS has proven to be resilient to supply chain disruptions and challenges stemming from the exponential growth of clean energy industries and continues to surpass growth expectations.

BESS is of core importance for renewable energy generation because of the intermittent nature of renewable sources, whose output is highly contingent on weather conditions, daily, and seasonal variations. In addition, renewable projects are often located in remote areas, and transmitting the produced energy to demand sites presents a huge logistical challenge.

At the grid level, BESS helps manage the temporal misalignment between power generation and consumption, level out peaks in demand via peak shaving, and avoid node congestion. BESS can store surplus energy produced by renewable sources during periods of high generation and release it at peak demand, during low production, or whenever there is available grid capacity. Thus, BESS ensures reliable power supply and eases the integration of renewable generation facilities into the market.

All of this makes BESS a rather attractive investment target with over USD 5bn worth of investments in 2022, according to analysis by McKinsey & Company, almost a threefold increase from the previous year. According to a Frost & Sullivan report from January 2024, the BESS market was estimated at USD 21.3bn in 2023 and is expected to grow to USD 72bn by 2030, scaling from a global annual capacity of 22.4 GW/51.3 GWh to reach 104.2 GW/301.0 GWh. McKinsey is even more optimistic in its predictions, according to which the global BESS market will reach USD 120bn-150bn by 2030.

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.

Engie has also recently announced plans to convert its decommissioned Tocopilla coal plant into a 116 MW standalone BESS facility. The investment is estimated at around USD 180mn and construction works will start in June 2024. The Tocopilla BESS will be capable of storing 660 MWh of energy generated by solar and wind facilities in the Antofagasta region and will have a discharge duration of 5.7 hours.



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According to the company, the facility will have annual generation capacity of 211 GWh, equivalent to supplying 90,000 homes with power, thus avoiding 51,231 tonnes of CO2 emissions a year.

In March 2024, Atlas Renewable Energy announced it has signed a power purchase agreement (PPA) with Chilean mining giant Codelco for the supply of 375 GWh of energy per year, to be generated by a new renewable energy project with an integrated battery energy storage system. The project is Atlas Renewable Energy's first foray into battery storage technology, which the company sees as essential for increasing the share of renewable energy sources in the power system.

In November 2023, Spain-based Grenergy announced it would build a USD 2.6bn BESS in Chile's northern region of Atacama. Construction works are expected to be completed in 2026. With a capacity of 4.1GWh in storage and about 1GW of solar, once operational Oasis de Atacama will provide green energy to over 145,000 homes, avoiding 147,000 tonnes of annual CO2 emissions.

According to estimates of the national electric system of Chile (SEN) cited by Americas Market Intelligence, the country will have 13.2 GWh/ 2 GW (6-8-hour duration) of operating energy storage by 2026. The northern regions of Antofagasta and Atacama account for nearly 5GW of the BESS pipeline.

All recent developments point to the fact that the Chilean market is ripe for BESS investment, underpinned by a strong renewable sector and a solid regulatory backing. But the investment opportunities are not limited to Chile alone - as the world is increasingly relying on renewable generation and building transmission lines is a lengthy and expensive project, storage assets will provide grid stability and counterbalance the inherent intermittency of renewable energy across the region.

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