Business Opportunity: Storage Systems as an Energy Solution

Currently, Brazil confronts two distinct, yet related, energy challenges that Battery Energy Storage Systems (BESS) are uniquely positioned to address: curtailment (the forced reduction of generation) and a persistent mismatch in operational flexibility between peak generation and peak consumption periods.

Following a protracted start, Brazilian governmental agencies are now actively developing a regulatory framework for BESS. Private investors have responded positively to these recent regulatory advances, leading commentators to regard the sector as ripe with substantial investment opportunities.

Intermittent generation sources in Brazil —particularly non-dispatchable solar, wind, and run-of-river hydroelectric plants—are being compelled by the National Grid Operator (ONS) to curtail or suspend generation due to supply-demand imbalances or transmission constraints, resulting in wasted potential energy, heightened uncertainty for renewable energy investors, and significant operational challenges for the ONS.

Complementing this issue, the structural mismatch between peak demand and peak generation requires the introduction of dispatchable resources that inject crucial operational flexibility into the grid. Consequently, the ONS must mandate system assets capable of rapidly accommodating load increases while strictly adhering to system ramp rate requirements.

In this context, BESS are consistently identified as a pivotal solution. By storing power generated during periods of excess supply and subsequently discharging it when demand surges, these batteries effectively reduce energy waste and stabilize the supply and consumption curves, thereby significantly mitigating the effects of curtailment.

Furthermore, BESS prove to be a highly efficient solution for alleviating the demand-supply mismatch. This efficacy stems from their instantaneous response capability, inherent operational and locational flexibility, and their potential for multi-use applications—such as peak shaving—in addition to their ability to provide essential ancillary services.

Internationally, BESS are already consolidated as a mature and highly efficient technological solution for enhancing the reliability and stability of electrical grids. Moreover, given their inherently modular characteristics, a progressive reduction in production costs is anticipated.

Consequently, this represents an emergent market with immense growth potential—particularly in a country like Brazil, which is blessed with abundant renewable sources, faces generation volatility, and exhibits a growing imperative for energy flexibility.

However, the market deployment of BESS in Brazil continues to confront pertinent regulatory impediments. The primary obstacle is the absence of a consolidated regulatory framework that clearly delineates rules concerning grid access, usage tariffs, and remuneration for ancillary services. Until these regulatory parameters are explicitly defined, investors—both domestic and foreign—will find it challenging to accurately calculate risks and project revenues.

A key issue pending maturity before the Brazilian regulation can be finalized is the discussion surrounding a possible 'double charge' or 'double tariff' for these systems. This mechanism involves applying network tariffs both to the energy utilized for charging the battery (*consumption*) and to the energy injected back into the grid (*generation*).

According to the 2024 report *Batteries and Secure Energy Transitions*, published by the International Energy Agency (IEA), this represents a recurrent challenge faced by jurisdictions implementing these systems. Notwithstanding this complexity, the Brazilian Federal Government has already taken the position that *"the definition of the contracting method and grid usage tariffs should not constitute an impediment to the insertion of storage systems into the National Grid, given the strategic importance of this solution for the future of system operation*".

Even in the absence of definitive regulation, the sector is beginning to gain momentum. In October 2025, the National Electric Energy Regulatory Agency (ANEEL) published guidelines for developers interested in installing BESS co-located with already authorized generating plants. This initiative has been favorably received by the market, marking a concrete step to unlock storage deployment in the country.

Furthermore, the Ministry of Mines and Energy (MME) has announced its intent to hold the first exclusive auction for storage systems in April 2026, targeting an estimated demand of 2 GW. This auction is expected to catalyze a new wave of opportunities for investors and manufacturers, particularly given the urgent need for solutions that enhance grid stability and reduce energy waste.

Ultimately, these movements signal that the Brazilian government fully recognizes the strategic role of storage in system balancing and is actively taking measures to ensure a clear, predictable, and functional regulatory framework. This is an essential prerequisite for the national battery market to attract sustained domestic and foreign investment in the long term.