Philippines bin grid-scale energy storage

Philippines bin grid-scale energy storage

As the Philippines makes the switch to more renewable energy sources, the country is stabilizing grid reliability with its largest ever integrated grid-scale Battery Energy Storage System (BESS) at Limay in Bataan Province, supplied by ABB for Universal Power Solutions Inc. (UPSI), a unit of San Miguel Corporation Global Power Holdings Corp. Financial details were not disclosed.

The Limay site forms part of a broader contract with UPSI, for a 240MW capacity packaged BESS solution to strengthen the reliability and stability of the Philippine grid on the islands of Luzon and Visayas.

The San Miguel Global Power battery energy storage systems facilities in Limay were inaugurated by the president of the Philippines, Ferdinand R. Marcos Jr., in March 2023. At this site, ABB provided a 50MW capacity packaged BESS solution to strengthen the reliability and stability of the grid on the main island of Luzon. The solution is designed to avoid large frequency deviations that can result in costly equipment damage and disruptive power system failure.

A significant amount of the Philippines" primary energy supply is still fossil fuel-based, making the country vulnerable to rising energy costs and market volatility while the energy production is at the same time CO2 intensive. The island nation is also exposed to tropical storms and natural disasters that adversely impact its energy infrastructure. To address these challenges while accelerating its ambitions towards a net zero energy supply, the Philippines aims to achieve 35 percent renewable energy generation by 2030 and 50 percent by 2040.1 As of 2022, the Philippines has reached a 22% percent clean energy mix.2

No posted data yet for Q123 from the DOE publication as of this time.

UPSI collaborated with strategic partner ABB to develop an innovative solution to transform the reliability of the area"s grid, which was highly susceptible to automatic load shedding and frequency fluctuations.

Calogero Saeli, Global Product Group Manager, ABB Electrification Distribution Solutions explains: "Energy storage is a key offering of our modular and scalable solutions portfolio. By combining the knowledge of our ABB execution team, based in Manila, with the local grid knowledge of the UPSI team, we are proud to support the most ambitious BESS plan the Philippines has ever embarked on. This pioneering solution will ensure that the grid is more stable and will satisfy the reliability challenges associated with moving to a stronger mix of renewables."

The BESS is the first ABB eStorage Max, pre-engineered, modular, large-scale BESS, delivered as a solution, within the Philippines and the APAC region. The solution is designed to significantly reduce imbalances in the grid that cause power interruptions to enable local industrialization and economic growth. It is also supporting the integration of renewable energy sources, such as wind or solar, into the grid.

The project uses the ABB eStorage OS Energy Management System to act as the intuitive interface to the BESS, allowing users to make real-time decisions based on grid parameters to ensure performance stability.

To satisfy the complicated needs of the scheme and ensure easy and quick installation, ABB developed a complete solution that uses standardized building blocks that are scalable and modular. The BESS includes the provision of battery enclosures, EcoFlex eHouses, UniGear ZS1 medium-voltage switchgear, and integrated skid units with transformers and inverters.

The building block designs include an integrated combination of Energy Storage Modules and power distribution equipment, that can be increased or reduced in capacity to suit specific site location requirements. The installation period was reduced by up to 30%, as all equipment was delivered fully integrated and pretested. Adopting this approach philosophy also ensured a reduction in site works and associated costs for the customer.

Learn more by visiting https://new.abb /medium-voltage/packaging-and-solutions.