

Sigenergy's modular C&I solar-storage solution drives sustainable aquaculture

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Sigenergy, a leading energy innovator, successfully hosted the highly anticipated Sigenergy Day APAC in Hainan, where over 300 industry professionals, partners, clients, and media representatives gathered to explore the future of solar-storage integration. The event provided a platform for discussing emerging trends and opportunities in the renewable energy sector, with a special focus on Sigenergy's cutting-edge C&I energy storage solution.

A major highlight of the event was the tour of a pioneering seawater fish farming project, powered by Sigenergy's C&I inverters and SigenStack energy storage system. This project integrates 6 MW of solar power with 5 MWh of storage, showcasing the transformative potential of renewable energy in non-traditional sectors and marking a significant advancement in sustainable energy deployment for aquaculture.

Optimizing Costs in Seawater Fish Farming with Solar-Storage

The farm, which cultivates the high-value Leopard Coral Grouper, requires precise environmental control to ensure the survival of the fish. This includes maintaining a constant water temperature, continuous oxygenation, and carefully regulated light penetration. With daily energy consumption reaching 43,200 kWh and annual energy usage exceeding 15 million kWh, the farm faces significant operational costs.

Sigenergy's solar-storage technology provides a cost-efficient and environmentally sustainable alternative, drastically reducing reliance on traditional power grids and enabling the farm to meet its energy demands while lowering operational costs.

Addressing Unique Challenges with Sigenergy's Modular Energy Solutions

The project site presented several unique challenges due to its environment, which conventional energy storage systems could not address. Sigenergy's modular and flexible approach to energy storage proved essential in overcoming these

obstacles:

- **Space constraints:** The narrow fishpond corridors made traditional, bulky container-based storage systems impractical. Sigenergy's modular storage solution, which features plug-and-play connectors, was able to fit seamlessly into these tight spaces, maximizing the use of available land, and perfectly fit into the narrow corridors.
- **Transport and installation:** The farm's proximity to water networks made it impossible for large machinery to access the site. Traditional energy systems that rely on cranes and heavy equipment were not feasible. Sigenergy's modular units enable quick and easy installation without requiring special cranes, with the entire system set up in just four days.
- **Foundation and load-bearing:** The site's sandy soil posed a risk of overloading the foundation, leading to potential long-term structural risks and safety concerns. Sigenergy's lightweight, modular storage units evenly distribute weight, minimizing impact on structural integrity and enabling installation on unstable ground.
- **Corrosion resistance:** Located just 300 meters from the coast, the site is exposed to high humidity and salt levels, posing significant corrosion risks. Sigenergy's system is equipped with IP66 and C5-M protection ratings, providing robust defense against saltwater corrosion and ensuring long-term durability in harsh environmental conditions.

This innovative solar-storage project not only provides the farm with a stable, cost-effective source of clean energy but also serves as a model for sustainable solutions in industries with unique energy needs. By demonstrating the practical application of solar-storage integration in challenging environments, it highlights the potential of these technologies to drive sustainability across diverse sectors and regions.