Microgrid control egypt

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ComAp, together with our partner, United for Electromechanical Supplies, provided a Hybrid Microgrid solution for a community development project in New Cairo, Egypt, to upgrade the community"s power supply system through the implementation of renewable energy, reducing its dependency on diesel. This project was run by the Better Home Group, an Egyptian real estate investment and development group that specialises in developing sustainable, world-class communities.

As a company that takes pride in developing modern and sustainable residential areas, Better Home wanted to ensure that their final build would have a low environmental impact. As such, they knew it would be necessary to take the appropriate steps to implement a sustainable source of energy to reduce the community"s diesel consumption.

Better Home decided to upgrade their power supply system by installing 500 KVA photovoltaics with four Huawei KTL inverters. This system would be connected to both a standby 550 KVA gen-set powered by a Cummins electronic engine and the main grid transformer in the future, combining the use of renewable solar energy with a traditional gen-set.

To achieve this, United for Electromechanical Supplies, with the support of ComAp, implemented a hybrid control panel operated by ComAp"s InteliGen 500 Microgrid controller alongside the InteliFieldbus Gateway. This facilitates the connection between the different sources of energy and ensures that the variable energy demand is met.

"United for Electromechanical Supplies designed and implemented the plant control system, ensuring the highest level of efficiency and reliability. Moreover, their technical support was very quick and efficient."

Microgrids provide resilience, sustainability, and efficient energy solutions by leveraging onsite renewable generation with smart grid resources, leading to better connectivity and driving toward decarbonization and the democratization of energy.

Microgrids are different from smart grids. A microgrid is a self-sufficient and localized energy system serving a discrete geographic footprint, which may be a business center, hospital complex, etc. It includes distributed energy sources and multiple loads, which can be operated parallelly with the broader utility grid. Smart grids, on the other hand, are electrical grids that operate on a larger scale and can regulate energy flows from generation points to consumption points. They include communication, automation, and IT systems.

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Schneider Electric offers a ready-to-use solution to help you design a microgrid, regardless of the application. Our pre-engineered microgrid control centers have all the components you need for power management, control, energy metering, and power monitoring. In addition, our microgrid management software - EcoStruxure - offers pre-engineered algorithms to make the functions standardized and reliable.

Decarbonisation, digitalisation and decentralisation are key players in the energy transition. And the integration and control of thermal, renewable and battery systems is going to be critical to power stability.Our off-grid and microgrid energy solutions put wind and solar power at the forefront, with optimised generator useand lower energy costs. Off-grid wind power, solar power battery storage and microgridenergy storagegive you the powerful option of renewable integration.

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Web: https://sumthingtasty.co.za/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346