Integrating an engine power plant with energy storage

The European Union is currently driving one of the most ambitious carbon neutrality initiatives around the globe. Some of the more popular tactics in response to climate change include investing in renewable generation sources like wind, solar and hydro-power. One of the lesser known, though arguably equally significant efforts, is optimizing the current thermal energy generation infrastructure. Energy storage systems (ESS) have emerged as a viable upgrade to optimize generation performance for both renewable and traditional power sources and to help energy providers increase their revenue streams.

ALTEO Group is an energy service provider and trading company based in Hungary. ALTEO provides its customers reliable and environmentally conscious solutions for their energy needs while also focusing on sustainability. ALTEO was looking to increase is revenue streams, participate in the energy trading market and to have the first energy storage installation in Hungary. ALTEO turned to Wartsila for their EPC expertise and Greensmith’s industry leading software platform, GEMS, and experience in complex energy storage and multi-application systems.

“The project was accomplished smoothly, owing to the great engineering work of Greensmith. The integration of the energy storage system is a huge step in ALTEO’s Virtual Power Plant development and we strongly believe that this technology has opened us new opportunities to successfully respond to upcoming challenges.”

Peter Luczay, Director of Wholesale Energy Trading & Virtual Power Plant Mgmt at ALTEO
Hybrid solutions for optimized performance

The latest deployment between Wärtsilä and Sinergy KFT leverages energy storage to open new opportunities in the Hungarian energy market. A subsidiary of Alteo Group, Sinergy KFT will now participate in the electricity market by providing frequency and secondary regulation to the national grid operating in virtual power plant mode. Ancillary services are a proven application provided by GEMS, and will help generate revenue for ALTEO. The deployment showcases competencies in traditional and emerging energy generation as the existing power plant is running on 3 Wärtsilä W34SG engines.

Turnkey delivery

The 6 MW / 4 MWh energy storage system includes batteries, inverters and power electronics. It is fully integrated with the existing power plant using the GEMS software platform, an industry-leading energy management system from Greensmith Energy, a Wärtsilä company.

GEMS is a critical component of the engine plus storage installation as it is able to analyze changes in market conditions and rate structures. Having such robust optimization capabilities helps Alteo not only maximize revenue, but also protect their energy storage investment for years to come. An additional layer of protection will be provided by Wärtsilä’s services organization. The scope of service covers engineering, procurement and construction (EPC).

A winning combination

Wärtsilä energy storage solutions enable power companies and developers to integrate and optimize a diverse mix of grid resources and deliver flexibility, reliability and resilience for customers seeking best-in-class system performance. This was specifically achieved in this deployment by leveraging the expertise of subsidiary Greensmith Energy. Wärtsilä’s established EPC and engine plant experience, coupled with the knowledge and proven track record of Greensmith, provided the customer with an unmatched level of value and ultimately secured the project.

As one of the largest providers of energy storage software and integration services, Greensmith’s mission is to make energy storage a fundamental part of a cleaner, more intelligent and more distributed energy infrastructure.

Now in its fifth generation, Greensmith’s GEMS software platform optimizes the performance of energy storage by lowering costs and maximizing the system’s return on investment throughout its life.

KEY DATA

CUSTOMER
Sinergy KFT (Alteo Group)

SITE SIZE:
6 MW / 4 MWh

SITE LOCATION:
Budapest, Hungary

APPLICATION:
- Frequency Regulation
- Ancillary Services

wartsila.com