Solution: Remote Management
Country: Dubai, United Arab Emirates
Company: Enerwhere

Benefits

○ Better control of the hybrid energy systems

○ Real time data from solar plants and diesel generators optimizes solar/diesel use

○ Quicker response times on technical issues, fuel theft etc

"With Netbiter, we can connect to anything and get reports and statistics online."

Hassan Shamma
Operations Manager, Enerwhere

Solar power in the cloud

Hybrid solar power plants realize the Industrial Internet of Things using cloud-based remote management. By using Netbiter Remote Management, Dubai-based power provider Enerwhere can keep track of their hybrid energy systems 24/7.

Online access does not only enable Enerwhere to keep maintenance costs down to a minimum, it also gives them real-time access to energy production and fuel consumption, enabling live calculation of the generators' efficiency.

In places with a lot of sunshine like the Middle East, Africa and Latin America, solar power is today the most efficient power source. New and innovative solar technology has long surpassed fossil fuels when it comes to both energy efficiency and costs. In fact, in the regions mentioned above, solar power is today 20-30% cheaper than power from diesel generators.

Dubai-based power supplier Enerwhere offers a hybrid power solution which combines solar plants with diesel power generators. The solar plants are used as much as possible when the sun is out, and the diesel generators add power when needed.

This makes up for a very reliable and cost-effective power supply. Enerewhere's customers are diverse: construction sites, temporary housing, manufacturing plants, oil & gas sites or even entire islands rely on Enerwhere's hybrid plants. These customers get a complete energy solution – Enerwhere installs all the necessary equipment to deliver power and the customer simply pays the bill with a good conscience, knowing that as much power as possible comes from green solar energy.

Online control important
As a power supplier, Enerwhere needs to make sure that their equipment is operational 24/7 and that power can be supplied at all times. But how do you do continual maintenance and more importantly, how do you know how much power is being consumed by each customer? To solve this issue, Enerwhere found the Netbiter Remote Management solution from HMS Industrial Networks.

"We first got in contact with Netbiter through DEIF, who supplies us with control panels for our Caterpillar gensets," says Hassan Shamma, Operations Manager at Enerwhere. "We had a look at a couple of different systems, but we appreciated the
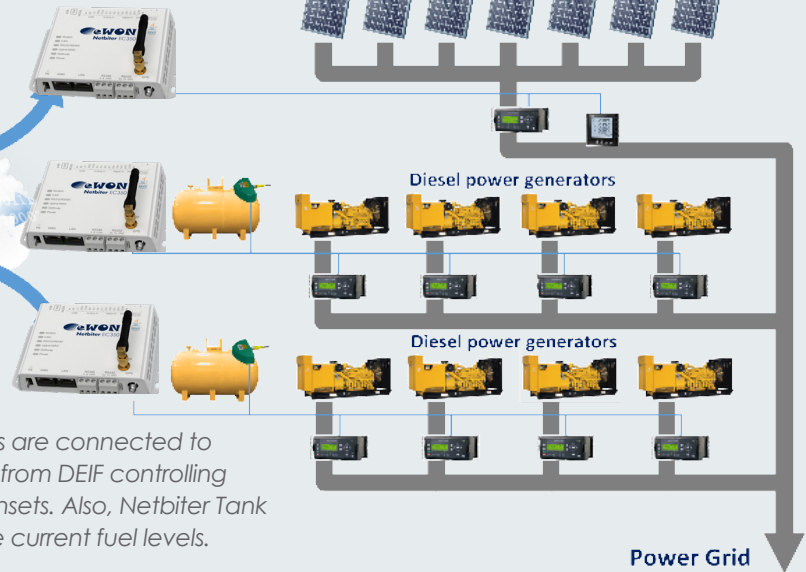
Information from the field flows into Enerwhere's business system via Netbiter API.

Netbiter Argos

Online access to current values at netbiter.net. Also reports, statistics and alarms.

Netbiter gateways are connected to genset controllers from DEIF controlling the Caterpillar gensets. Also, Netbiter Tank Sensors detect the current fuel levels.

Solar plant

Diesel power generators

Diesel power generators

Power Grid

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fact that Netbiter was a complete solution including the gateways which connect to the equipment as well as the cloud-based online monitoring system. We also liked the fact that there was an API which we could use to integrate Netbiter into our business system for fuel efficiency calculations."

How it works

When Enerwhere supplies a hybrid energy solution to their customers, they connect a Netbiter gateway to their control panel. The Netbiter gateway, which communicates with the control panel via Modbus, gathers data from the hybrid system such as temperature, fuel levels, energy consumption, running hours etc. and sends this data to a cloud-based service called Netbiter Argos.

Data can be sent both via the cellular network or Ethernet if an Internet connection is available. Enerwhere can log into Netbiter Argos and view current status and consumption of their systems at www.netbiter.net. Enerwhere also utilizes the Netbiter Tank Sensor which is attached to Enerwhere's diesel tanks to provide online access to fuel levels. "This has been quite a useful tool for us," says Hassan Shamma.

"Fuel theft can be a major issue in these types of applications and Netbiter has certainly helped us get a better overview of our systems and improve our response times."

API enables integration with business system

Through the Netbiter API, Enerwhere is able to integrate live data from the field into their own business system. This has enabled them to get a lot of useful information from their

hybrid systems in the field available at their fingertips. For example:Daily fuel efficiency reports, Bi-weekly fuel consumption and time-to-refill reports, Population of Enerwhere's own non-SQL database, Ad-hoc analysis directly in Excel

"The API is really easy to use and has been of great value to us since we now can see exactly how much power that has been consumed by each customer and how the system is performing, right in our own front end," says Hassan Shamma. As more and more customers are looking for green, sustainable and cost-efficient power solutions, Enerewhere has bright times ahead and Netbiter enables Enerwhere to supply an even more cost-efficient power solution to their customers.

"I like the fact that it is a vendor-independent solution. With Netbiter, we can connect to anything and get reports and statistics online, something which has direct impact on our bottom line," finishes Hassan Shamma.