



CUSTOMER: Ferroamp
INDUSTRY: Smart Grid
COUNTRY: Sweden
ABOUT: Nilar has teamed up with leading smart energy company Ferroamp. Together, the two companies provide the necessary energy storage, monitoring and control capability, for efficient, safe and reliable energy management. The first customer for this system is ETC Solpark.

ferroamp



Ferroamp EnergyHub powered by Nilar

Intelligent solar energy management
with effective storage

Nilar has teamed up with leading smart energy company Ferroamp to create a comprehensive energy management system designed for smart storage and distribution of solar energy. Ferroamp's award-winning EnergyHub with current equalization, has been integrated with a high voltage energy storage solution from Nilar with a storage capacity of 30 kWh. The system, which store energy from small to midsize solar power installations, is expected to become a popular energy-saving addition to Nordic households and office blocks in the coming years.



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The Challenge

Ferroamp develops and sells innovative energy systems for homes and offices. Prior to the launch of their new smart energy management control unit – EnergyHub – they were testing different energy storage solutions. One key criterion was that any solution had to be able to store up to 30 kWh of energy, safely. Following a pilot project with Nilar, Ferroamp decided to use Nilar energy storage integrated with a mid size solar power plant. This project was quickly deemed a success and the two companies entered into a collaborative partnership to supply a full system to the Swedish solar panel manufacturer ETC Solpark in Katrineholm, southern Sweden.

EnergyHub has the ability to communicate with all the components in an energy system and gather relevant information from external sources such as weather forecasts and energy spot prices. Based on this data, the smart system optimises energy flow between the solar panels, energy storage unit and power grid.

The system is also featuring current equalization which allows the user, in an efficient way to balance the load between the three phases and on the same time increase the own consumption of renewable energy. This feature can either be used to reduce the mains fuse rating or to increase the load for example more efficient and faster EV charging.

The Solution

Following the successful integration of the two systems a cabinet was designed to fit the Ferroamp EnergyHub together with a 30 kWh high voltage energy storage unit from Nilar. This system can store solar energy collected from the solar panels mounted on the roof of a building. The Ferroamp EnergyHub controls the energy storage to support the three-phase grid. When the voltage drops below a certain level the Nilar energy storage kicks in to raise the voltage. The flow of energy - to and from the storage – is managed by Nilar's Battery Management System (BMS) and Ferroamps' Energy Storage Optimizer (ESO). The two systems create the EnergyHub, powered by Nilar.

The Result

The bi-polar Nilar Hydride® battery technology provides Ferroamp with a fresh approach that is innovative and reliable. Together, the two companies provide the necessary energy storage, monitoring and control capability, for efficient, safe and reliable energy management. The first customer for this system is ETC Solpark, which is using the Energyhub system to maximise the use of renewable energy.

The Ferroamp EnergyHub system will enter full-scale production shortly, with the ability of controlling energy storages of up to 200 kWh.

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About Nilar

Nilar was founded in 2001 as a research project by leading battery industry experts from Europe and the US. The company has been producing safe and environmentally-conscious Nilar Hydride® batteries for energy storage at commercial properties, private households, industrial plants and for use with the smart grid, since 2015. Nilar's Hydride® energy storage solutions are robust with non-flammable electrolyte and durable with a low lifetime cost. The modular design supports scalability to handle the energy requirements of everything from small residential systems to large-scale electrical installations. With R&D departments in the US and Sweden, and a manufacturing plant in Sweden, Nilar is revolutionizing energy and power supply technology, and is taking automated battery production to the next level. [Read more at: www.nilar.com](http://www.nilar.com)