



Stockholmshem is at the forefront of environmental design. The company recently received a prestigious award for its land allocation agreements at one of its latest housing projects in Stockholm. The new properties combine environmentally-conscious construction and housing in a cutting edge design.

CUSTOMER: Stockholmshem
APPLICATION: Time-shifting
COUNTRY: Sweden
ABOUT: Stockholmshem is Stockholm's largest housing association. It provides homes for over 50,000 tenants at 3,700 locations across the capital.

Safe energy storage for multi-tenant apartments

Stockholmshem

Intelligent solar energy management with effective storage



To optimize the use of an existing solar energy solution, Stockholmshem invested in the installation of a Nilar energy storage solution for one of their apartment buildings in Stockholm. The project was a collaboration between Nilar and Ferroamp, and consisted of a 32.4 kWh system that served the entire multi-tenant building. The system enables solar energy to be stored during the day and transferred to apartments in the evening. This is the first Stockholmshem property to utilize a Nilar/Ferroamp solution. The safe, environmentally-conscious and powerful solution is in line with Stockholmshem's vision to offer welcoming, secure and comfortable accommodation for all its tenants.



Thanks to the safer than safe¹⁾ Nilar Hydride® battery technology with bi-polar design, the entire energy solution could be installed as is in the cellar of the building.



1) Nilar provides battery systems that are safer than many so called "safe" solutions available on the market. The Nilar battery system contains water based, nonflammable electrolyte. It does not generate short circuit failure even under low temperature charging. The electrodes cannot ignite spontaneously and will not cause heat propagation between modules. That's why we argue that we are safer than "safe".

The Challenge

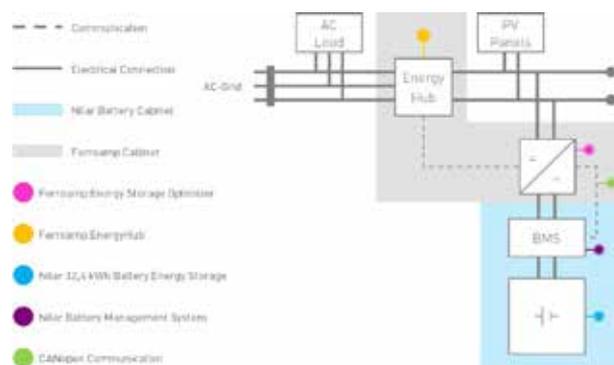
Stockholmshem wanted to optimize an existing solar energy solution with improved energy storage in one of their properties. The energy storage system had to be able to store excess solar energy produced during the day for use during the evening when most people are at home. Furthermore, the solution had to meet the strictest safety standards as it would be located in the apartment block.

The Solution

To meet the needs for safe, powerful and environmentally-conscious energy, the existing solar power inverter has been replaced with a Ferroamp EnergyHub system powered by Nilar batteries. A single cabinet consisting of 30 Battery packs was installed to provide 32,4 kWh of energy storage. The batteries are configured in 6 parallel strings, each with 5 battery packs in series. The Nilar Battery Management System provides seamless integration with the Ferroamp EnergyHub system, which controls the flow of energy between the solar cells and the batteries. The entire operation is running on a DC-grid, creating a far more efficient solution compared to conventional AC coupled systems.

The Result

Investing in the combination of Nilar batteries and the Ferroamp EnergyHub has led to considerable benefits for Stockholmshem and homeowners alike. Transferring stored solar energy to homes during the busiest period of the evening, when energy tariffs are at their highest, has led to reduced energy costs and increased use of sustainable solar power. Thanks to the safer than safe¹⁾ Nilar Hydride® battery technology with bi-polar design, the entire energy solution could be installed as is in the cellar of the building. On top of this, the environmentally conscious design of the batteries mean the energy storage solution meets Stockholmhem's sustainability requirements.



Nilar AB
Headquarters and Sales
Stockholmsvägen 116 B
SE-187 30 Täby, Sweden
Phone: +46 (0)8 768 00 00
Email: sales.europe@nilar.com

Nilar AB
R&D and Production
Bönvägen 55, Box 8020
SE-800 08 Gävle, Sweden
Phone: +46 (0)26 960 90
Email: production@nilar.com

Nilar Inc.
R&D and Sales
10800 E. Bethany Drive, Suite 525
Aurora, CO 80014, USA
Phone: +1 720 446 0169
Email: sales.america@nilar.com

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. The Nilar 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)