



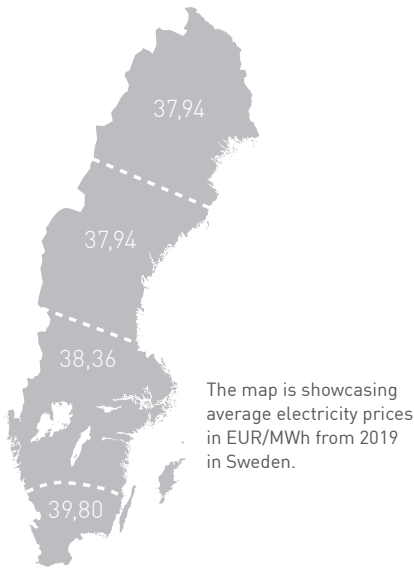
CUSTOMER: Enequi
END USER: Rickard Malm
APPLICATION: Time-shifting
COUNTRY: Sweden
ABOUT: Take charge of your energy supply. Rising electrification demands smarter energy solutions. Solutions that make energy storage simpler, charging easier and costs more controllable. Whether you need more power than your property can provide, solar energy storage, lower electric bills, safe backup power or smarter lighting controls, Enequi puts you in charge of your energy supply for a trouble-free transition to the era of clean energy. Read more at: www.enequi.com



Hassle-free electricity

For many consumers, investing in a new product means thinking about how it will make life easier.

Pairing an Enequi QuiPower Storage, powered by Nilar Hydride® battery packs, with a Solarwork photovoltaic installation is the kind of investment that will save the consumer money while being environmentally conscious. The technology works by harvesting the energy when it is available either from solar or at a low cost from the grid. The energy is then stored in the built-in battery packs where it can be allocated as needed to manage the total energy requirements of the property.



The Challenge

For an independent project manager like Rickard Malm, much of his daily job is to direct clients towards improvements for their home and way of life. For one of Rickard's Swedish clients, it was time to make a big decision regarding their personal economy. When investing in a new renewable energy system, there are different factors to consider. For one, there is the local utility. Sweden is separated into four regions based on the supply and demand of electricity in the area as well as the transmission capabilities. The Stockholm region, where Rickard's client resides, actually consumes almost 3 times more electricity than the other areas in Sweden. The electricity costs can vary amongst the regions and by time of day. There are system cost considerations. In Sweden, there is the benefit of various subsidies that support and promote the use of a renewable energy system, such as the Enequi QuiPower Storage. There are grants available to cover a percentage of the installation costs of PV and energy storage as long as the PV system generates more than a certain share of the annual usage. There may also be tax reductions associated with real estate, energy and micro production. Although price is part of the decision, Rickard has to work with his client to decide on what other factors are meaningful, such as safety and recyclability. They also have to think about how the system may be utilized or what expectations they may have for its function since that may limit the options.

Optimizing energy needs

It is clear that over time, these kinds of solar and storage installations will be economical while environmentally-conscious, which is why we made this investment.

The Solution

For Rickard, it was clear that he wanted to pursue a system with solar panels and battery storage to allow for time-shifting. The local utility, Spotty/Nordiska Elbolaget, allows for taking advantage of different Nord Pool spot prices over a 24 hour period. Rickard wanted the ability to buy when prices were low and sell back to the grid when prices were high. In looking at different energy storage solutions, he chose to pursue Enequi's QuiPower Storage and a photovoltaic solution from Solarwork. The Enequi system utilizes Hydride batteries from Nilar, which Rickard prefers due to their safety, battery life and recyclability. In addition, the energy storage system is able to interface with Nord Pool spot prices directly and is also connected to a weather service to improve energy optimization from solar panels. In the future, the system will further allow phase balancing within Rickard's client's house. Rickard noted that the solar installation by Solarwork consists of PV panels with coupled AC inverters, which are installed on several roofs on different houses. The current can directly feed into the fuse box of each house as well as directly into the Enequi QuiPower Storage, which simplifies installation enormously. Overall, Rickard was excited to pursue a solution that offers the safety and security he realized were his client's primary goals. He noted that all large battery systems have their risks, but the Nilar Hydride® battery packs, with water based, non-flammable electrolyte, pose no risk of spontaneous fire or explosion.

Rickard Malm, End user.

The Result

According to Rickard, the purchasing process was straightforward and easy. The communication with Enequi was very direct and trouble free. The design was solidified after three calls and a few meetings. Enequi provided a 12,5 kWh storage system and collaborated with Solarwork, the PV provider, to ensure seamless integration with their 17,5 kWp panels. Within a few days, a bicycle shed outside Rickard's client's garage was upgraded by a builder to house the energy storage system, with all the necessary electrical connections installed by Solarwork's electrician and the Enequi QuiPower Storage was installed and started up by Enequi's technician.

Rickard expects to see clear results almost immediately now that the system has been commissioned. Overall, he sees the benefit of having more flexibility and control over the energy usage of the property. He believes that the energy storage market is going to grow in the near future as energy storage is especially beneficial in southern Europe, where users experience significantly higher electricity prices than in the Nordics (and have more sun). When thinking about other customers like his client, Rickard advises that they do their online research, with most information regarding PV and energy storage readily available from suppliers and third-party reviews.

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
Bönavägen 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 produces safe and environmentally-conscious Nilar Hydride® batteries for energy storage at commercial properties, private households, industrial plants and for use with the smart grid. 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)