



Photo credit: ABN AMRO

CUSTOMER: ABN AMRO
APPLICATION: DC grid
COUNTRY: Netherlands
ABOUT: ABN AMRO is a leading Dutch bank, with over 100,000 employees and 3,500 offices in over 60 countries.



Storing DC energy at Amsterdam's revolutionary Circl building

Indutecc supplies Nilar EC batteries for the world's first DC-net building

When the Dutch bank ABN AMRO were looking for a powerful energy storage solution for their Circle Pavilion that met their circular thinking, Nilar batteries were the obvious choice.





As part of the ground-breaking design of its new circular pavilion, ABN AMRO wanted to create the world's first DC grid-powered building.



The Challenge

As part of the ground-breaking design of its new circular pavilion, ABN AMRO wanted to create the world's first DC grid-powered building. The new building is called Circl, due to its use of circular thinking throughout. 16 000 pairs of old jeans from its employees are incorporated into the ceiling and serve as insulation material, while the window frames in the conference rooms come from demolished office buildings. Creating a DC infrastructure meant there was a need for a powerful system that could store sustainable energy from more than 500 solar panels located on the building, while meeting the company's stringent safety and environmental demands.

The Solution

The building's DC grid uses a 350V DC distribution system with components from Direct Current BV. Sustainable energy from the solar panels is channelled to three 19.2 kWh Nilar cabinets – each consisting of 16 Nilar Energy Compact (EC) batteries – which are controlled by the Nilar Battery Management System (BMS). The battery cabinets are connected to the DC network via a DC/DC converter, creating a system that minimizes losses by reducing conversions between AC and DC.

The Result

Constructing a circular building means recycling and reusing material where possible. The fact that Nilar batteries are fully recyclable, and have no hard to recover metals, makes them an obvious choice for such a project. According to Rob Kuipers, Product & Contract Manager Facility Management at the bank, "The innovative DC system installed at Circl opens up a new market within sustainable direct-current offices. When compared to existing AC installations, DC offers considerable amount of savings when it comes to raw materials and energy. Additionally, the way the solution allows for fewer inverters really fits to our circular idea."

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