

SolarTech Power Solutions

Flywheel energy storage project at a Dutch power plant



Overview

In a 9-megawatt energy storage project, six flywheels have been installed in combination with a large battery to create an innovative hybrid storage system in Heerhugowaard, around 35 kilometers from Amsterdam. How much does a hybrid battery-flywheel storage facility cost?

S4 Energy and ABB recently installed a hybrid battery-flywheel storage facility in the Netherlands. The project features a 10 MW battery system and a 3 MW flywheel system and can reportedly offer a levelized cost of storage ranging between €0.020 (\$0.020)/kWh and €0.12/kWh. ABB regenerative drives power S4 Energy Kinext's energy-storage flywheels.

Can flywheels help the Dutch grid maintain a 50 Hz frequency?

S4 Energy, a Netherlands-based flywheel technology, and Swiss conglomerate ABB recently switched on a storage project that combines battery and flywheels to help the Dutch grid maintain a stable frequency of 50 Hz. The facility is located in Heerhugowaard, in the province of North Holland.

How many flywheels are in a hybrid energy storage system?

In a 9-megawatt energy storage project, six flywheels have been installed in combination with a large battery to create an innovative hybrid storage system in Heerhugowaard, around 35 kilometers from Amsterdam.

Can flywheels be used for energy storage?

While a few flywheels for energy storage have been deployed around the world in the past few years, including one of the US' earliest advanced non-pumped hydro storage systems in a pilot by the government Department of Energy, their widespread use has not taken off to date.

How does S4 Energy kinext support a wind energy park?

ABB regenerative drives and process performance motors power S4 Energy KINEXT energy-storage flywheels. In addition to stabilizing the grid, the

storage system also offers active support to the Luna wind energy park. “The Heerhugowaard facility is our latest energy storage system, but our first to actively support a wind park.

What is a QuinteQ flywheel?

The flywheel was basically designed by Boeing, and is now being further developed and marketed by QuinteQ, a Dutch startup. The QuinteQ flywheel is a compact, mobile, kinetic battery that can be deployed in regular containers. The flywheel is perfect for delivering high power for relatively short periods of time (seconds to minutes).

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