
Flywheel energy storage project in the Netherlands

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 EUR0.020 (\$0.020)/kWh and EUR0.12/kWh. ABB regenerative drives power S4 Energy Kinext's energy-storage flywheels.

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 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.

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.

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A hybrid energy storage system combining lithium-ion batteries with mechanical energy storage in the form of flywheels has gone into operation in the Netherlands, from ...

Moerdijk, the Netherlands - 1 July 2025 - Steinweg Delta Marine Terminal B.V. a multipurpose terminal and member of the C. Steinweg Group (Steinweg), specialized in ...

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The transition to renewable energy presents a major challenge: energy storage. On sunny and windy days, energy surpluses occur while dark, windless periods risk shortages. ...

The Netherlands is experiencing a nationwide challenge known as "grid congestion," where the rapid electrification of industries, such as electric vehicle (EV) charging, renewable ...

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