

## SolarTech Power Solutions

# The development of flywheel energy storage in China



## Overview

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On October 31, China's first independently developed and patented magnetic levitation flywheel energy storage system—the largest of its kind globally—was successfully installed at CHN Energy's Shandong Company. Do flywheel energy storage technologies exist in China?

Author to whom correspondence should be addressed. The literature written in Chinese mainly and in English with a small amount is reviewed to obtain the overall status of flywheel energy storage technologies in China. The theoretical exploration of flywheel energy storage (FES) started in the 1980s in China.

What is China's largest flywheel energy storage plant?

China's massive 30-megawatt (MW) flywheel energy storage plant, the Dinglun power station, is now connected to the grid, making it the largest operational flywheel energy storage facility ever built.

When did flywheel energy storage start?

The theoretical exploration of flywheel energy storage (FES) started in the 1980s in China. The experimental FES system and its components, such as the flywheel, motor/generator, bearing, and power electronic devices, were researched around thirty years ago.

What is China's first grid-connected flywheel energy storage project?

The 30 MW plant is the first utility-scale, grid-connected flywheel energy storage project in China and the largest one in the world. From ESS News China has connected to the grid its first large-scale standalone flywheel energy storage project in Shanxi Province's city of Changzhi.

Which country has the largest flywheel energy storage system?

Previously, the largest flywheel energy storage system was the Beacon Power flywheel station in Stephentown, New York, with a capacity of 20 MW. Now,

with Dinglun's 30 MW capacity, China has taken the lead in this sector. Flywheel storage technology offers several advantages over conventional energy storage methods.

What is the main technology of Flywheel energy storage system?

The main power circuit technology is mature, and the main research is the conversion control algorithm. China has successfully developed MW-class motor converters for flywheel energy storage systems. 4. FES System

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