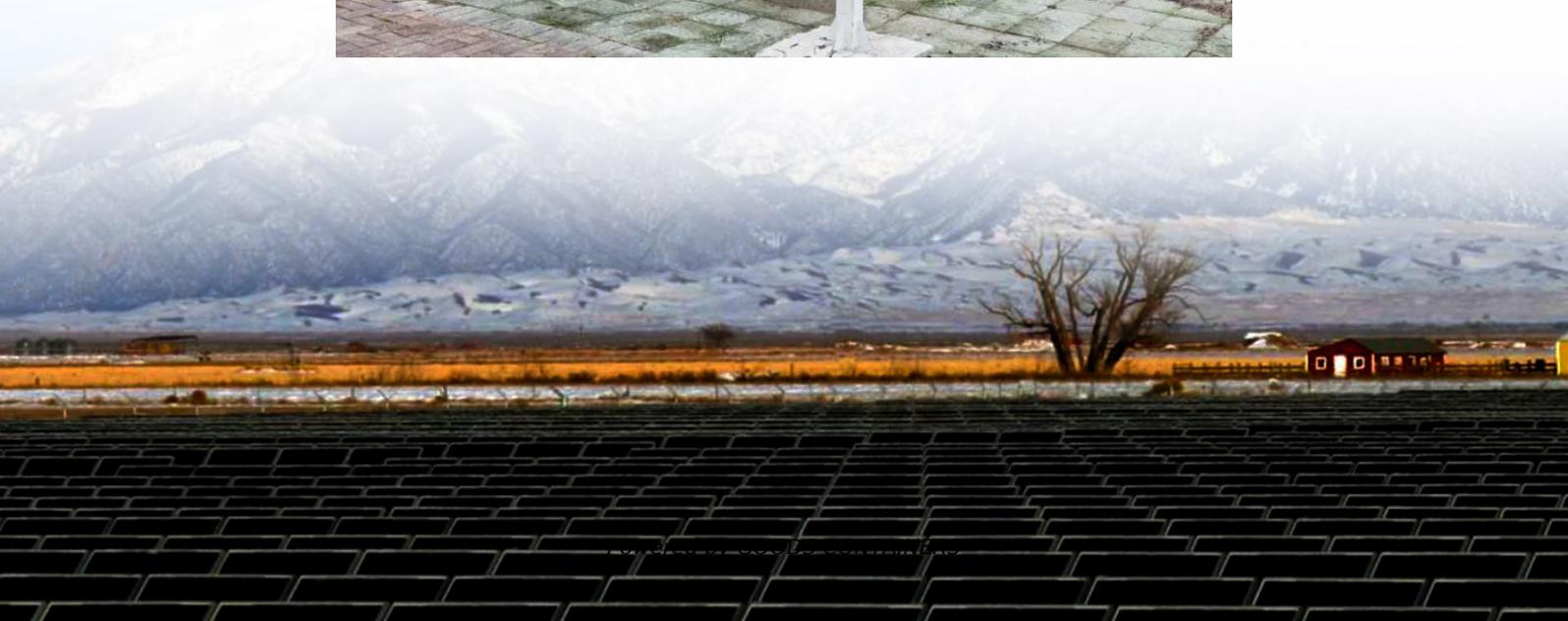


# Wind power flywheel energy storage





## Overview

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What is flywheel energy storage?

Since flywheel energy storage is used for power smoothing in wind power systems, the charging and discharging of flywheel energy storage and the fluctuating state of wind power are shown in the two-dimensional plane.

How a flywheel energy storage system can improve wind power quality?

The flywheel energy storage system can improve the quality of the grid by smoothing the high-frequency wind power output of wind power. The use of the MPC control system can realize the smoothing of wind power fluctuations on a short time scale. MPC combined with flywheel energy storage system can improve the power quality of wind power output.

How MPC and Flywheel energy storage system can improve wind power output?

MPC combined with flywheel energy storage system can improve the power quality of wind power output. The use of energy storage systems to improve the fluctuation of wind power generation has garnered significant in the development of wind power.

How fast is a flywheel energy storage device for a 30 MW wind farm?

The high-frequency component of the wind power output power data accounts for less than 10 % of the total energy. Therefore, this study selects a 100 MJ/0.3 MW flywheel energy storage device for a 30 MW wind farm, and the rated speed of the flywheel is 4000 r/min. 2.2. Energy storage systems



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