



BUHLE POWER

# Flywheel Energy Storage in New York USA





## Overview

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What is a flywheel energy storage system?

The system can respond instantly, unlike battery storage. However on the downside, flywheel energy storage systems have low energy storage density per unit of weight and volume. Beacon Power operates a 25 kilowatt / 100 kilowatt-hour system in New York. The 200 flywheels reach 15,000 revolutions per minute at peak speed.

Who owns Stephentown – flywheel energy storage system?

The electro-mechanical energy storage project uses flywheel as its storage technology. The project was announced in 2007 and was commissioned in 2011. The Beacon Power Stephentown – Flywheel Energy Storage System was developed by Beacon Power. The project is owned by Rockland Capital Energy Investments (100%).

Do power utilities need a flywheel storage system?

Power utilities need innovative ways to store renewable wind and solar energy, during low demand periods, so they can release it after sunset when demand is high. Several innovative power utilities already use flywheel storage systems to maintain power grid frequency. Renewable energy is knocking on flywheel energy's door.

Can a flywheel energy storage system maintain power grid frequency?

Several innovative power utilities already use flywheel storage systems to maintain power grid frequency. Renewable energy is knocking on flywheel energy's door. The system can respond instantly, unlike battery storage. However on the downside, flywheel energy storage systems have low energy storage density per unit of weight and volume.



## Flywheel Energy Storage in New York USA



### [Grid-Scale Flywheel Energy Storage Plant](#)

Dec 7, 2012 · Flywheel systems are kinetic energy storage devices that react instantly when needed. By accelerating a cylindrical rotor (flywheel) to a very high speed and maintaining the ...

### [Beacon Power to receive \\$43m from US DOE for 20MW flywheel](#)

Aug 11, 2010 · The Stephentown plant's flywheel systems will provide frequency regulation services to help stabilize the performance of the New York power grid and enable greater use ...

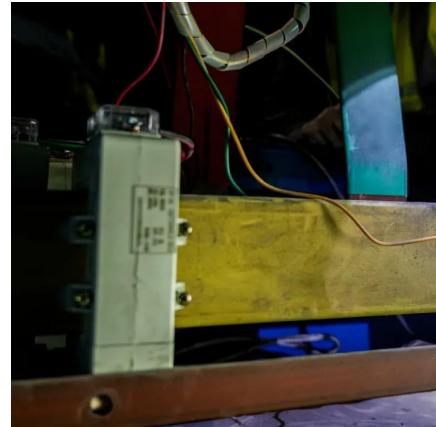


### [Flywheel Energy Storage System Basics](#)

Aug 13, 2025 · However on the downside, flywheel energy storage systems have low energy storage density per unit of weight and volume. Beacon Power operates a 25 kilowatt / 100 ...

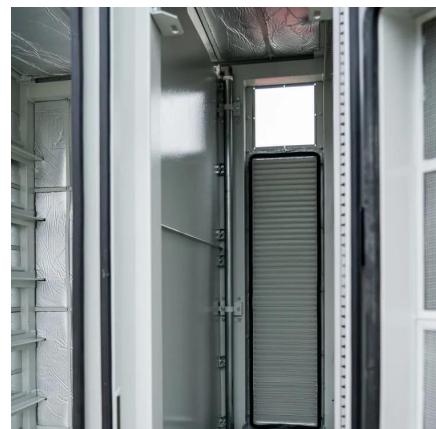
### [Flywheel Wayside Energy Storage for Electric Rail Systems](#)

In April of 2020, a Group including Independent Power and Renewable Energy LLC, Scout Economics and Beacon Power LLC, a developer, operator, and manufacturer of kinetic energy ...



### [Stephentown, New York](#)

Stephentown, New York is the site of Beacon Power's first 20 MW plant (40 MW overall range) and provides frequency regulation service to the NYISO. The facility includes 200 flywheels ...



### [World's Largest Flywheel Energy Storage ...](#)

May 17, 2020 · Beacon Power is building the world's largest flywheel energy storage system in Stephentown, New York. The 20-megawatt system marks a milestone in flywheel energy ...



## Technology

Technology Beacon Power is a pioneer and technology leader in the design, development, and commercial deployment of grid-scale flywheel energy storage. Beacon's proprietary designs ...



### [Flywheel energy storage makes 100% wind and solar possible](#)

Jul 11, 2011 · The new energy storage facility, due to be inaugurated during a ceremony in Stephentown on Tuesday, eliminates the need for 10 percent of New York's 200 megawatts of ...

### [Beacon Power Stephentown](#)

Aug 28, 2021 · The Beacon Power Stephentown - Flywheel Energy Storage System is a 20,000kW energy storage project located in Stephentown, New York, US. The electro ...



### [Beacon Power installs 20-MW energy storage system](#)

2 days ago · As part of the Smart Grid Program, NYSERDA supported Beacon Power, LLC's deployment of a 20-MW advanced flywheel-based energy storage system in Stephentown, ...



### Flywheel Energy Storage System Basics

Aug 13, 2025 · However on the downside, flywheel energy storage systems have low energy storage density per unit of weight and volume. Beacon ...



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