

# Pulse energy storage device





## Overview

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How has the energy storage device impacted the fusion power supply?

The introduction of the energy storage device has effectively reduced the grid's power impact from the fusion power supply from 260 MW to below 90 MW.

What is a dual-system energy storage system?

By utilizing a combination of strategically located lithium-ion batteries and supercapacitors within the power supply structure, a dual-system configuration is introduced: the grid provides stable power, while the energy storage units supply pulse power, effectively mitigating grid impact and reducing transformer capacity requirements.

How to optimize energy storage capacity?

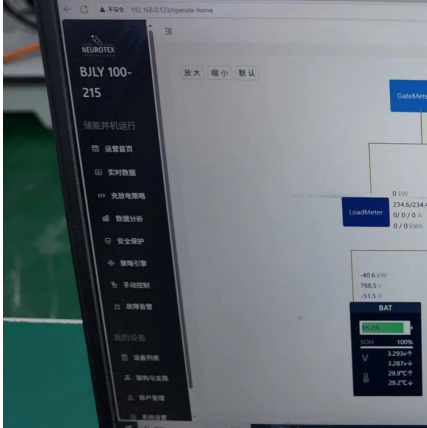
This hybrid configuration optimizes energy storage capability by leveraging the strengths of lithium-ion batteries for energy output and supercapacitors for pulse power output. To optimize the capacity configuration of the energy storage devices, a method utilizing an improved MOGWO was proposed.

Are energy harvesting storage hybrid devices self-rechargeable?

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Insulated-gate bipolar transistors (IGBTs) are used to discharge the energy storage device and control both the pulse duration and repetition rate.



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