

# Finnish energy storage batteries



## Overview

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A Finnish company is using the thermal properties of sand to create heat-storing batteries which could play a major part in meeting the world's energy needs. "My cofounder Markku Ylönen and I met at Tampere University of Technology," says Tommi Eronen, CEO of Polar Night Energy. Polar Night Energy is attracting worldwide attention for their innovative thermal sand battery. If you have ever walked barefoot along a beach at. The system converts renewable electricity into high-temperature sand storage to deliver industrial heat on demand. TheStorage The Finnish cleantech startup TheStorage officially commissioned its first industrial-scale thermal energy system at a local brewery in January 2026.

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### INTEGRATED DESIGN

EASY TO TRANSPORT AND INSTALL,  
FLEXIBLE DEPLOYMENT



## Finnish City Launches 1 MW/100 MWh Sand Battery for Innovative Energy

While conventional battery technology dominates the energy storage landscape, innovators are exploring alternative methods. These include utilizing materials like fire bricks for ...

## World's Largest Sand Battery Now in Operation

Polar Night Energy is a Finnish company developing high-temperature thermal energy storage systems for wind and solar power. Its patented Sand Battery technology enables a significant ...



## New 'sand-in-motion' battery offers 10x more heat transfer efficiency

Finland's sand battery offers 10x more heat transfer efficiency, cuts energy bills by 70% The architecture of the new technology supports high vertical and horizontal scalability.

## Finland's Sand Battery: Storing Green Energy Beneath the Surface

In the town of Kankaanpää, western Finland, engineers have built the world's first commercial-scale sand battery, using low-cost, abundant sand to store excess renewable energy as ...



## Finland's wild sand battery boosts heat efficiency 10x, slashes

Finland is turning one of the planet's most ordinary materials into a high impact climate tool, using hot sand to store vast amounts of energy and release it as heat when homes and factories

## Finnish startup launches its first industrial-scale sand-based heat

The Finnish start-up says its sand battery technology is scalable from 20 to 500 MWh with charging power from 1 to 20 MW, depending on industrial needs.



## A review of the current status of energy storage in Finland and ...

products and balancing capacity in the Finnish energy system are also studied and discussed. The review shows that in recent years, there has been a notable increase in the deployment of energy ...



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## Finnish company creates an innovative sand battery

Finnish company creates an innovative sand battery Polar Night Energy has developed a thermal energy storage system which supplements renewable energy sources and reduces our ...



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## A review of the current status of energy storage in Finland and future

Battery energy storage systems are currently the only utility-scale energy storages used to store electrical energy in Finland. BESSs are suitable for providing FCR and FFR services.



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## Finland to host 240 MWh of new BESS projects

Swedish flexible assets developer and

optimizer Ingrid Capacity has joined hands with SEB Nordic Energy's portfolio company Locus Energy to develop what is claimed to be Finland's ...



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