

# Finland s energy storage solution







#### **Overview**

Finland has unveiled the world's largest sand battery, a groundbreaking energy storage system designed to capture surplus power from renewable sources such as wind and solar. Standing 13 metres tall in the southern municipality of Pornainen, the facility can hold up to 100 megawatt-hours of energy. Where is the largest battery energy storage system in Finland?

SEB Nordic Energy's portfolio company Locus Energy, in collaboration with Ingrid Capacity, proudly announces the groundbreaking of one of Finland's largest battery energy storage system (BESS) in Nivala Municipality, Northern Ostrobothnia.

Does Finland have energy storage?

This paper has provided a comprehensive review of the current status and developments of energy storage in Finland, and this information could prove useful in future modeling studies of the Finnish energy system that incorporate energy storages.

Is energy storage a viable solution for the Finnish energy system?

This development forebodes a significant transition in the Finnish energy system, requiring new flexibility mechanisms to cope with this large share of generation from variable renewable energy sources. Energy storage is one solution that can provide this flexibility and is therefore expected to grow.

Are energy storage systems a solution to Finland's energy transition?

Energy storage systems offer a solution. "This groundbreaking is an important moment for Finland's energy transition and a concrete step toward a more flexible, resilient, and decarbonized energy system," said Jussi Jyrinsalo, Senior Vice President at Fingrid.

Which energy storage technologies are being commissioned in Finland?

Currently, utility-scale energy storage technologies that have been



commissioned in Finland are limited to BESS (lithium-ion batteries) and TES, mainly TTES and Cavern Thermal Energy Storages (CTES) connected to DH systems.

How will a new battery energy storage system help the Finnish grid?

After the start of commercial operations in 2026, the project will contribute an important balancing function to the Finnish grid, supporting the Finnish renewable energy expansion. The groundbreaking ceremony took place in the afternoon on Monday the 26th of May on the site near Nivala where the battery energy storage system will be built.



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# The Role of Energy Storage Solutions in a 100% Renewable Finnish Energy

A 100% renewable energy scenario was developed for Finland in 2050 using the EnergyPLAN modelling tool to find a suitable, least-cost configuration. Hourly data analysis ...

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# Finland activates world's largest sand battery to store renewable ...

Finland has launched the world's largest operational sand battery in the municipality of Pornainen. The facility stores renewable energy

#### Groundbreaking ceremony marks commencement of one of Finland's ...

SEB Nordic Energy's portfolio company Locus Energy, in collaboration with Ingrid Capacity, proudly announces the groundbreaking of one of Finland's largest battery energy ...

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

A review of the current status of energy storage in Fi This is an electronic reprint of the original article. This reprint may differ from the original in pagination and typographic detail.

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as heat and supplies thermal ...

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#### A scalding hot 'sand battery' is now heating a small Finnish town

Engineers create a sand battery that they say will slash the carbon emissions in Pornainen, Finland, by 70% -- it uses renewables to heat the sand to almost 850 degrees ...

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

This paper has provided a comprehensive review of the current status and developments of energy storage in Finland, and this information could prove useful in future ...

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# World's largest sand battery switches on in huge boost to clean energy

The world's largest sand battery has been inaugurated in Finland, capable of storing vast amounts of energy generated from renewable sources like solar and wind. The 13 ...

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#### Insider information: Merus Power wins 13-million-euro energy storage

Merus Power has signed an agreement with Skip Wind 5 Oy (the Finnish holding company of Ardian Clean Energy Evergreen Fund (ACEEF)) to deliver a large energy storage ...

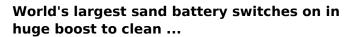
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### **60MWh Battery Storage Project to Support** Finland's Renewable Energy

Sungrow, the global PV inverter and energy storage system provider, has announced the deployment of the 60 MWh battery storage project in Simo, Finland. The ...

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The world's largest sand battery has been inaugurated in Finland, capable of storing vast amounts of energy generated from renewable sources like solar and wind. The 13 ...

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#### Finland to host 240 MWh of new BESS projects

The 70 MW/140 MWh BESS project will be located in Nivala, northern Finland. Set to go online in 2026, the facility will enhance grid stability, energy resilience and accelerate ...

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#### Powering the Nordics: Merus Power's endto-end turnkey battery energy

Powering the Nordics: Merus Power's end-to-end turnkey battery energy storage solutions As the Nordic region accelerates its renewable energy transition, the need for reliable and efficient ...

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# Sand Batteries: Finland's Renewable Energy Revolution Explained.

Finland is leading a quiet yet powerful energy revolution--using sand as a thermal battery to store renewable energy. This innovation offers a sustainable, cost-effective solution ...

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#### Giant Sand Battery Powers Up in Breakthrough for Clean Energy

Finland has unveiled the world's largest sand battery, a groundbreaking energy storage system designed to capture surplus power from renewable sources such as wind and solar. Standing ...

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