

Finland s first energy storage power station goes into operation





Overview

The energy storage facility delivered by Merus Power to Lappeenranta, Finland, has been completed and put into market use on 15 May 2025. The energy storage facility is owned by a joint venture between Ardian's Clean Energy Evergreen Fund and the local energy provider Lappeenranta Energia. How does Finland's new sand battery work?

Finland's new sand battery in Pornainen cuts emissions by 70% and stores 100 MWh, revolutionizing renewable energy storage and heating.

Does HT Finland have a sand battery?

HT Finland has activated the world's largest sand battery in Pornainen, storing excess renewable energy as heat to power an entire town's heating needs. The system cuts heating emissions by nearly 70%, using soapstone as a low-cost, long-duration thermal storage medium.

How much energy can a solar power plant store?

It can deliver one megawatt of thermal power and store up to 100 megawatt-hours of energy. This capacity makes it ten times larger than the company's previous pilot facility in Kankaanpää, introduced in 2022. The system captures surplus energy generated from renewable sources, such as solar and wind, and stores it in the form of heat.



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Applications



The worlds first 600 r/min pumped storage unit was ...

SHANGHAI, CHINA. Voith Hydro provides two complete power units (5 and 6) to the Changlongshan pumped storage plant in Eastern China. ...

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'A very Finnish thing': Big sand battery starts storing

In May 2022, Polar Night Energy rigged a smaller design to a power station in Kankaanpää town. Launched just as Russia cut off gas ...

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World's largest Sand Battery now in operation in Finland

Electronics Production , July 01, 2025 World's largest Sand Battery now in operation in Finland The Sand Battery, developed by Finnish company Polar Night Energy, is a high ...

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Europe: World's largest sand battery goes live, cuts ...

The installation, developed by Finnish startup Polar Night Energy, is now reportedly fully operational in the small municipality of Pornainen and ...



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Olkiluoto Nuclear Power Plant, Olkiluoto Island, Finland

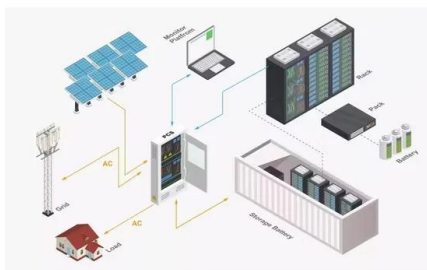
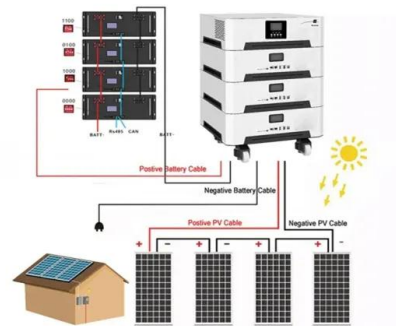
Olkiluoto is one of the two nuclear power plants operational in Finland. It is owned and operated by Teollisuuden Voima Oyj (TVO).

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Europe: World's largest sand battery goes live, cuts 70% CO2 ...

The installation, developed by Finnish startup Polar Night Energy, is now reportedly fully operational in the small municipality of Pornainen and represents a significant ...

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One of Finland's largest energy storage facilities

TAMPERE, Finland, July 03, 2025 (GLOBE NEWSWIRE) -- The energy storage facility delivered by Merus Power to Lappeenranta, Finland, has been completed and put into market use on 15 ...

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One of Finland's largest energy storage facilities commissioned in

TAMPERE, Finland, July 03, 2025 (GLOBE NEWSWIRE) -- The energy storage facility delivered by Merus Power to Lappeenranta, Finland, has been completed and put into ...

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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 as heat and supplies thermal ...

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World's Biggest Sand Battery Begins Operation in Finland

Sand Battery is a high-temperature thermal energy storage technology that stores electricity as heat in sand or similar solid materials. Finnish startup Polar Night Energy has ...

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Finnish City Inaugurates 1 MW/100 MWh Sand Battery

A 1 MW/100 MWh sand battery is now in operation in southern Finland where it is supporting the local district heating system.

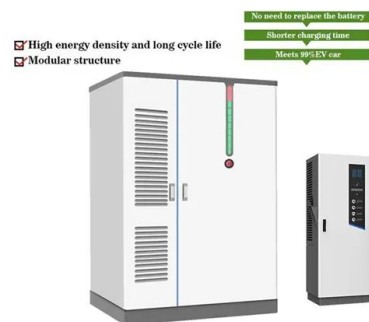
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One of Finland's largest energy storage facilities commissioned in

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100MWh 'Sand Battery' goes into commercial operation in Finland

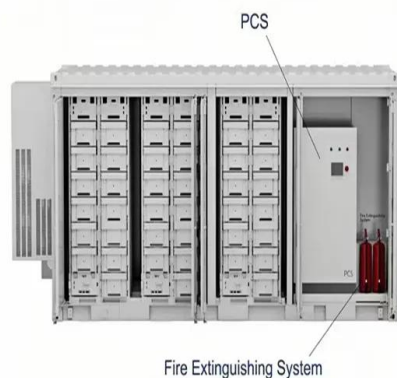
Hindustan Times Finland has just switched on the world's largest sand battery, and it's already making waves in the energy world. The concept is refreshingly straightforward: ...

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Storing Clean Energy: Ilmatar's First Battery Energy Storage ...

Ilmatar's newly developed Ainola Battery Energy Storage System (BESS) has been commissioned at the Piiparinmäki wind farm in North Ostrobothnia. It is one of the largest ...

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Finland: World's First Large-Scale 'Sand Battery' ...

The first commercial sand-based thermal energy storage system in the world has started operating in Finland, developed by Polar Night Energy. ...

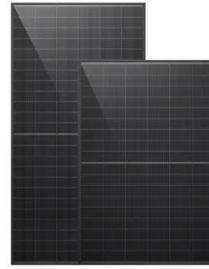
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Finland: World's First Large-Scale 'Sand Battery' Went Into Operation

The first commercial sand-based thermal energy storage system in the world has started operating in Finland, developed by Polar Night Energy. Polar Night Energy's system, ...

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World's Largest 1 MW/100 MWh Sand Battery Commissioned in Finland

The facility, now operational as of June 2025, is the world's largest sand-based, high-temperature thermal storage system, delivering 1 MW of thermal power and 100 MWh of ...

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Finland unveils world's largest sand battery for heating

Finland has inaugurated an industrial-scale sand battery this week in the southern town of Pornainen, where it'll take over heating duties from an old woodchip power plant for ...

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Finland sand battery stores 100MW energy with 2,000 ...

Finland's 100MW sand battery turns 2,000 tons of fireplace waste into power In terms of size, this unique battery will have a height of about 13 ...

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✓ TELECOM CABINET

✓ BRAND NEW ORIGINAL

✓ HIGH-EFFICIENCY



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Pumped storage power plant project advances to EIA

The planned pumped storage power plant's purpose is to act as an energy storage facility, balancing and ensuring the equilibrium between electricity demand and supply. The ...

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Olkiluoto 3 Nuclear Power Plant, Finland

Finland's power market and importance of nuclear energy As OL3 continues to produce power regularly, Finland's clean electricity self ...

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'Sand Battery' goes into commercial operation in Finland

A district network heating operator in Finland has commissioned a 1MW/100MWh thermal energy storage project using novel 'Sand Battery' technology from Polar Night Energy.

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Case Finland: Proving the operational value of the ...

The key to harnessing that power and unleashing its full potential lies in the development of storage capacity and innovative systems for its management. ...

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Kymijarvi power station

Kymijarvi power station is an operating power station of at least 171-megawatts (MW) in Kymijarvi, Päijät-Häme, Finland with multiple units, some of which are not currently operating. It is also ...

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World's Largest 1 MW/100 MWh Sand Battery Commissioned in Finland

Finnish startup Polar Night Energy has successfully commissioned its industrial-scale sand battery in Pornainen, southern Finland, in partnership with district heating company ...

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[Finland energy storage power station](#)

Finland's energy demand has fluctuated between 1 007 PJ and 1 114 PJ between 2005 and 2021, most The electric boiler and energy storage solutions built at the Vaskiluoto power plant site ...

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