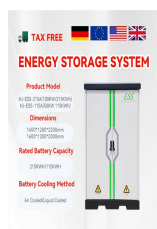


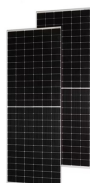
# MOLDOVA VATTENFALL BESS



Vattenfall entered the market and can be clearly seen in the view of the evolution of trading behaviour for the 10:00 product. They entered the market after declaring their power station UMMs.



With the ever increasing climate change awareness and the global shift towards GHG emission-free technology, companies and enterprises around the world are increasingly investing into renewable energy projects (particularly solar and wind ??? both offshore and onshore) and also battery electric storage systems (BESS). To this end, Vattenfall has several MW of ???



While Norway once aimed to be the "battery of Europe" it has since been overtaken other Nordic countries Sweden and Finland for BESS deployments. Research firm LCP Delta's Jon Ferris explores the region's ???

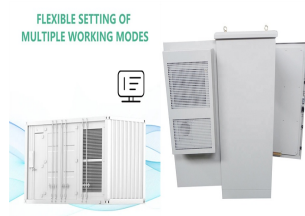


Vattenfall operates large battery storage systems in combination with wind and solar parks at several locations in Europe. These combined systems, also known as hybrid parks, balance the feed-in for greater stability of the power grid. ???



Vattenfall said the pilot facility in Luleå is the first in the world to test the technology with repeated filling and emptying of hydrogen gas. (DNO) in the Southeast European country of Montenegro, is looking to add 300MW of BESS to its grid. US solar and storage project progress for Pine Gate, Avantis, Arevon in Western states.

# MOLDOVA VATTENFALL BESS



The firm is one of Sweden's three main DNOs along with division of state-owned power company Vattenfall and Germany-based international utility E.ON. Vattenfall made an earlier move in the battery ???



Vattenfall InCharge data show that on average, an electric car charges to the desired capacity within 40 percent of the time it is plugged in. This means that, during the remaining time, the car is left plugged in unnecessarily. In addition, recharging usually takes place between 6 pm and 11 pm, a peak period for both grid load and energy price



Currently, the largest BESS project underway in Sweden is a 5MW system in Uppsala, which is being installed by utility Vattenfall. In megawatt terms, the project in Grum ??? which will be deployed by Alfen's local subsidiary Alfen Elkamo ??? will be twice as big, although the Uppsala project is planned as a 20MWh system.



The largest operational BESS facilities in Europe are both in the UK, both owned by developer-operator Harmony Energy totalling 99MW/198MWh each. The Alfeld project is Kyon's second large-scale BESS project approval in the space of a few weeks, after a 58MW/116MWh system was given the green light by regulators at the end of October .



Vattenfall said the pilot facility in Lule? is the first in the world to test the technology with repeated filling and emptying of hydrogen gas. (DNO) in the Southeast European country of Montenegro, is looking to add 300MW ???



About Vattenfall. Vattenfall is a European energy company with approximately 19,000 employees. For more than 100 years we have electrified industries, supplied energy to people's homes and modernised our way of living through innovation and cooperation. We are working for

# MOLDOVA VATTENFALL BESS

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fossil freedom. More about Vattenfall

# MOLDOVA VATTENFALL BESS



The NorthFlex Project objective is to introduce to the market, and scale-up the deployment of, an innovative battery system technology. The project entails development, design, and manufacturing of a scalable battery energy storage system (BESS) as well as the expansion of Northvolt's battery systems manufacturing capabilities in Gdansk, Poland.



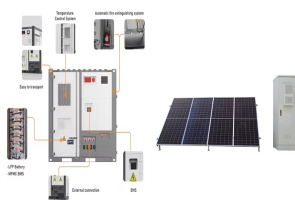
The 30MWh Lappeenranta BESS looks set to be the largest such system in the Nordic countries so far. Energy-Storage.news has reported on a handful of other grid-scale projects, such as Vattenfall's plan to develop a 1MWh lithium-ion pilot project to come online this year in Sweden.



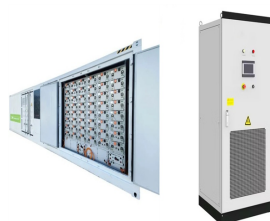
2. Relative strength in BESS revenues??? but tough Q1 2024. Strong fundamentals are important, but investors also need a robust BESS revenue stack to earn a viable return on capital. Chart 2 shows a backtest of ???



Vattenfall is a European energy company with approximately 20,000 employees. For more than 100 years we have electrified industries, supplied energy to people's homes and modernised our way of living through innovation and cooperation. Thesis - Data Acquisition Solutions (DAS) in Battery Energy Storage Systems (BESS) about 2 hours ago. Full



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Northvolt has launched a new battery energy storage solution, Voltpack Mobile System??? a rugged, highly modular lithium-ion battery solution envisioned as a zero-emission alternative to replace diesel generators. Vattenfall has supported the design of the system and will test and

# MOLDOVA VATTENFALL BESS

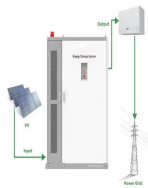
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validate Voltpack Mobile System and its functionality prior to the market introduction.

# MOLDOVA VATTENFALL BESS



Vattenfall Elanläggningar ??? en del av Vattenfall Network Solutions ??? bygger, driftar och förvaltar batterilagret som är ett pilotprojekt som kommer att tas i drift hösten 2020. Det handlar om ett av flera initiativ för att lösa kapacitetsbristen i Uppsala, inom kort kommer ytterligare initiativ presenteras.



The Energypark Haringvliet in the Netherlands. Image: Vattenfall. Swedish public utility Vattenfall has opened its Energypark Haringvliet in the Netherlands, which combines wind, solar and a 12MWh battery energy storage system (BESS). The project, located 20km south of Rotterdam, features six wind turbines, 115,000 solar panels and a BESS with 12MWh of ???



2. Relative strength in BESS revenues??? but tough Q1 2024. Strong fundamentals are important, but investors also need a robust BESS revenue stack to earn a viable return on capital. Chart 2 shows a backtest of historical German BESS revenue stack capture for a 2hr asset, using Timera's BESS dispatch optimisation model.



The market for BESS offtake contracts in Europe is still relatively nascent and illiquid relative to the mature RES PPA market. However conditions are improving quickly as BESS growth gathers pace. A key theme in BESS ???



The US will provide US\$85 million in foreign aid to the Republic of Moldova for battery energy storage system (BESS) projects, as well as high voltage transmission line upgrades, secretary of state Anthony Blinken said ???

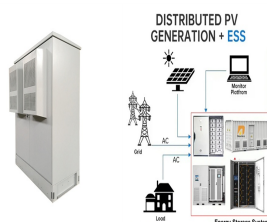
# MOLDOVA VATTENFALL BESS



Vattenfall has added a 20MW, 2-hour Battery Energy Storage System (BESS) near the Ray Wind Farm in northeastern England. The Ray Wind Farm, in operation for over 6 years, contributes approximately 10% of Northumberland's energy requirements.



In December 2023, Vattenfall agreed to sell its Norfolk, UK, offshore wind zone to RWE for an enterprise value of ?963m (\$1.2bn). The transaction enables the continued development of three wind farms with a combined capacity of 4.2GW, sufficient to power four million British homes.



Pen y Cymoedd Wind Farm Community Interest Company (an Independent Body set up by Vattenfall) manage the ?1.8 million per annum Community Fund. Facts. Country. United Kingdom Electricity Capacity. 228 MWe. Turbines. 76 Onshore / Offshore. Onshore Supplier. Siemens Vattenfall ownership share. 100 % Status. In Operation



4 ? PIB No. 24.104 Procurement of Battery Energy Storage System (BESS)/Moldova/Tetra Tech. Publication Date. Tue, 12/17/2024. Attachments. RFP-MESA-2024-028\_BEES\_short ???



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Swedish state-owned energy company Vattenfall has commissioned a green hydrogen storage pilot facility within a 100GWh capacity cavern. Wind-solar-storage hybrid project with 12MWh BESS online in Netherlands. March 23, 2022. Swedish public utility Vattenfall has opened

# MOLDOVA VATTENFALL BESS

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its Energypark Haringvliet in the Netherlands, which combines wind



# MOLDOVA VATTENFALL BESS

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The market for BESS offtake contracts in Europe is still relatively nascent and illiquid relative to the mature RES PPA market. However conditions are improving quickly as BESS growth gathers pace. A key theme in BESS offtake contract evolution across Europe is an increased focus on downside protection after 2023-24 revenue decline.