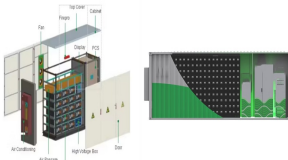
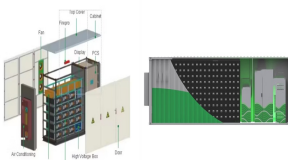


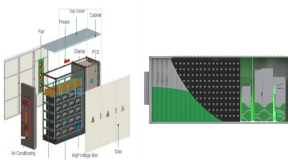
SWEDISH ENERGY STORAGE PROJECT SCALE



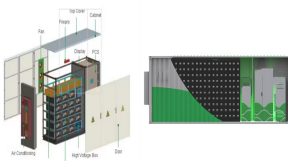
How many large-scale battery storage systems are there in Sweden?
14 large-scale battery storage systems (BESS) have come online in Sweden to deploy 211 MW /211 MWh into the region. Developer and optimiser Ingrid Capacity and energy storage owner-operator BW ESS have been working in partnership to deliver 14 large-scale BESS projects throughout Sweden's grid, situated in electricity price areas SE3 and SE4.



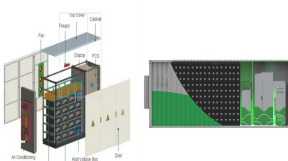
How many MW is a new energy storage facility in Sweden? Within the coming nine months, the company will also begin the construction of facilities with an additional output of 300 MW. Together, this is a historic expansion of energy storage in Sweden.



What is Sweden's largest energy storage investment? Sweden's largest energy storage investment, totaling 211 MW, goes live, combining 14 sites. 14 large-scale battery storage systems (BESS) have come online in Sweden to deploy 211 MW /211 MWh into the region.

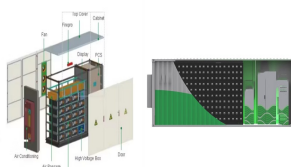


Does Ingrid capacity help Sweden catch up with energy storage? In several countries near Sweden, the expansion of energy storage has therefore already been underway for some time. Ingrid Capacity now ensures that Sweden catches up, says Karin Lindberg Salevid, Chief Operations Officer of Ingrid Capacity.

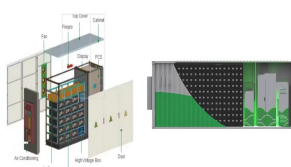


How does energy storage work in Sweden? Together, this is a historic expansion of energy storage in Sweden. Energy storage allows us to store electricity when demand is low, and then reinsert it into the system when demand is high. In order for electrification to take place in a cost-efficient manner, a focus on optimized solutions is required.

SWEDISH ENERGY STORAGE PROJECT SCALE



Which Swedish energy storages are being built in 2024? 13 February 2024 SWEDEN ??? The energy storages are being built in Falköping (16 MW), Karlskrona (16 MW), Katrineholm (20 MW), Mjölby (8 MW), Sandviken (20 MW), Vaggeryd (11 MW), Värnamo (20 MW) and Västervik (11 MW). A storage with a power of 20 MW correlates to what a Swedish town with 40,000 inhabitants on average consumes during peak hours.



Swedish energy company Ellevio is expanding its scope to help industries and businesses become fossil-free through electrification. Its first project ??? Sweden's largest grid scale battery ??? includes Alfen's 10 MW modular energy storage system, TheBattery Elements TM, which enables optimal use of renewable energy and stability in the power grid.



Intermittency is growing on the Swedish grid as more renewable energy sources come online, and the capacity of the country's existing large pumped hydro energy storage (PHES) portfolio to balance this is being exhausted. Battery storage projects are being launched to make up the shortfall as the country seeks net zero by 2045.



A battery storage subsidiary of maritime company BW Group has committed to investing in Swedish energy storage developer Ingrid Capacity. Ingrid Capacity said this morning it had secured "around SEK1 billion (US\$96.7 million)" of investment from Singapore-headquartered shipping and maritime player BW Group's BW Energy Storage Systems (BW



New event highlights the business opportunities associated with accelerating Sweden's energy transition. ROTTERDAM, THE NETHERLANDS - 10 NOVEMBER 2023 - At the 1st edition of the Solarplaza Summit Sweden & Energy Storage - hosted on 21 March 2024 in Stockholm - industry professionals will convene to gain the critical knowledge and connections ???

SWEDISH ENERGY STORAGE PROJECT SCALE



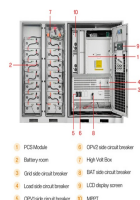
The firm started with electric vehicle (EV) chargepoints and quickly grew to 1,000 chargepoints, which it got pre-qualified for Sweden's ancillary services market. Today, the portfolio comprises chargepoints, solar, wind, hydro and data centres but the bulk is large-scale battery energy storage systems (BESS), accounting for 95% of its trading activity. "We ???



First owned BESS project for Flower, first BESS sale for OX2 . For Flower, it is the company's first large-scale owned BESS project, something CEO John Diklev told Energy-Storage.news the firm was considering in order to prove its "long-term" optimisation and asset management model in an interview earlier this year (Premium).



Their large-scale energy storage solution uses retired mines or quarries and turns them into circular energy storage facilities. The company has investigated the mine in Vintj?rn which could become a 30 MWh mine storage. With 30MWh energy in a single charging cycle, Vintj?rn could become a valuable contribution to the regional energy system.



Benefits with battery storage . Building electricity grids takes time and a long-term work with long permit processes before the process can start. Battery storage is faster to build and is one of several solutions to be used until the electricity grid is supplemented. The project is run by Vattenfall Eldistribution and Vattenfall Network



MW of grid-scale BESS is set to come online in Sweden this year according to Flextools, including a 20MW project deployed by Alfen at a wind farm operated by Vasa Vind, announced last week. Energy-Storage.news" publisher Solar Media will host the 9th annual Energy Storage Summit EU in London, 20-21 February 2024. This year it is

SWEDISH ENERGY STORAGE PROJECT SCALE



SSAB, LKAB and Vattenfall have commenced building a rock cavern storage facility for fossil-free hydrogen gas on a pilot scale next to HYBRIT's pilot facility for direct reduction in Luleå, North of Sweden. This is an important step in the development of a fossil-free value chain for fossil-free steel. The investment cost of just over SEK 250 million is divided ???



The Role of Energy Storage in the Energy Transition . Since 2023, Ingrid Capacity has partnered with BW ESS to develop 14 large-scale battery storage projects at strategically selected locations throughout Sweden's electricity grid, situated in the electricity price areas SE3 and SE4.



ADS-TEC Energy (NASDAQ: ADSE), a global leader in battery-buffered, ultra-fast charging technology and large-scale storage, today announced that it has installed eight large-scale storage



- improve storage capacity with novel storage technologies, - optimize storage control strategy through real case studies, - minimize subcooling, - avoid phase separation, - reduce cost of the store. A prototype of 15kWh storage with 50kWh/m³ storage density will be commissioned and evaluated by the end of the project time frame.



Ingrid Capacity ??? which builds energy storage at critical locations in the electricity grid ??? is now entering the final stage for six facilities at different locations in Sweden, with a total

SWEDISH ENERGY STORAGE PROJECT SCALE



Northvolt Selects ABB for Electrification at Swedish Battery Recycling Plant. Many large-scale energy users such as Fortune 500 companies, and mission-critical users such as military bases, universities, healthcare facilities, public safety and data centers, shifting their energy priorities to reach net-zero carbon goals within the coming



Interestingly, the decision to both own and optimise a BESS project was also taken by another major player in the Swedish energy storage market, but that example was the reverse of Ingrid. Optimiser Flower has recently moved into owning its own grid-scale BESS projects, with two 40MW acquisitions in April and September, aiming to prove its



The Swedish grid-scale market has picked up in the last few years. This BESS co-located with a solar PV farm was deployed by Soltech last year for developer Alight. Image: Alight. Developer SENS has secured a 30-year land lease for a 40MW battery energy storage project in Södermanland, Sweden.

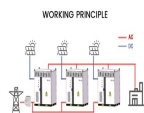


Sweden's large-scale BESS market. Diklev says the market kicked off with "exceptional" prices in the ancillary services market in early 2021, of ???70-80 per MW per hour, as well as an energy reservoirs pilot programme by Sweden's transmission system operator (TSO) that allowed continuous trading in energy markets with shorter activation periods.



The HYBRIT initiative by Swedish utility Vattenfall, steel company SSAB and mining firm LKAB has presented the results of six years of research in a final report to the Swedish Energy Agency, and said the project will now continue to be implemented on an industrial scale.

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The Swedish Energy Agency (Energimyndigheten) has announced that it has granted the HYBRIT (Hydrogen Breakthrough Ironmaking Technology) project, a joint venture initiative with mining and ore producer LKAB, steelmaker SSAB and energy major Vattenfall, a total of SEK 528 million (??? EUR 51.3 million), the largest funding in the history of the Agency.



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Uniper is collaborating with, among others, Aachen University to develop M5BAT, a large-scale battery storage system. The project is gathering valuable information about the aging, reliability and service life of batteries, which will be important to the development of this storage technology in the future. Furthermore, the Swedish Energy



Pumped hydro has been used for centuries and is thereby the most mature technology for large-scale energy storage with grid balancing effects. With a lifespan of 60 years and a round efficiency of 70-80 per cent mine storage is the best large-scale storage solution at the lowest cost.



Today, Sweden's largest CO₂ capture test plant starts at Preem's refinery in Lysekil, with support from CLIMIT and Swedish energy authorities. The goal is for the tests to form the basis for a full-scale CCS plant and send CO₂ for storage in Norway.. Preem's project leader Faraj Tammo and site manager Kai Arne Saetre from Aker Solutions" in front of the mobile test ???

SWEDISH ENERGY STORAGE PROJECT SCALE



Report from Innovation Norway, Business Finland, Business Sweden and the Swedish Energy Agency Conducted by Business Sweden Published: February 2023 FULL REPORT The Nordic Battery Value Chain - Market drivers, the Nordic value proposition, and ???



Ingrid Capacity and BW ESS ??? who jointly build energy storage at critical locations in the electricity grid ??? is now entering the final stage for six facilities at different ???