

# STOCKHOLM HYDROPOWER STORAGE



Can pumped hydro storage plants be built in Sweden? Finnish clean energy company Fortum has initiated a two-year feasibility study to explore prerequisites for new pumped hydro storage plants in Sweden. The company has said it will examine commercial, technological, environmental and regulatory conditions for the new plants.



How important is hydropower in Sweden? Currently, hydropower accounts for 40% of generation capacity in Sweden with around 2000 plants operational. And while much of the recent focus has been on developing the country's wind power, AFRY's study shows hydropower has an increasingly important contribution to make in terms of baseload generation and balancing of intermittency.



How much power does Sweden have to unlock from existing hydropower assets? Earlier this month, advisory firm AFRY released the results of a study, conducted on behalf of the Swedish Association of Engineers, showing that Sweden has up to 4000MW of capacity to unlock from existing hydropower assets. Fortum has initiated a two-year feasibility study to explore prerequisites for new pumped hydro storage plants in Sweden.



Why do we need pumped storage hydropower? The increasing need for energy storage in the Swedish energy system due to the larger share of intermittent renewable energy sources has led to renewed interest in pumped storage hydropower, which can store power for several hours and add flexibility to the grid on operational and short timescales.



How much hydropower does Sweden produce a year? Sweden's hydropower production averages 65 Terawatt-hours (TWh)/year, with a dam energy storage capacity of 34 TWh, accounting for 25% of the country's annual electricity consumption. Hydropower is generated across approximately 2100 stations across the country (see Figure 1) with a combined installed capacity of 16.2 Gigawatts (GW).

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Could a Swedish hydropower plant increase capacity and balancing?  
Hydropower plant in Sweden. Image credit: Uniper Significant  
potential exists to increase capacity and balancing from existing Swedish  
hydropower plants, according to study findings from engineering advisory  
firm AFRY.



Sweden, Stockholm: The Swedish power utility Vattenfall has announced  
plans to expand four hydropower plants in Sweden, adding a capacity of  
up to 720 MW. A feasibility study is underway to restore the Juktan ???



Fortum has initiated a two-year feasibility study to explore potential for  
new pumped hydro storage facilities in Sweden. The feasibility study will  
focus on three areas: Lekstj?rnen, next to Fortum's hydropower plant in  
???



In a step on the path to zero emissions, Hydro Extrusion in Sweden starts  
onsite production of renewable energy. The end goal is a switch to 100  
percent locally produced energy from renewable sources for the operation  
???



Interdisciplinary research and innovative solutions strengthen Sweden's  
hydropower position and ability to meet new conditions in the energy  
system. The Swedish Hydropower Centre (SVC) was established in 2005  
and is from 2018 ???



Competitive energy storage must be cheap, have a high degree of  
efficiency and be able to respond quickly to changes in the electricity grid.  
It must also have a long life cycle, low environmental impact, and a long  
discharge ???

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Safe and Efficient Data Center in a High-Security, Hydropower-Powered Location Process large amounts of data safely and efficiently with our Data Center Piteå. Located in a high-security, high-latitude rural area and ???



A green electricity certification. The government's energy policies have also promoted the use of renewable energy. The Electricity Certificate System ??? a market-based support system for renewable electricity production ???



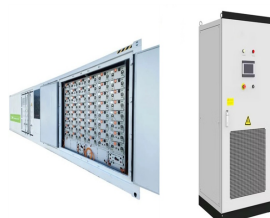
In terms of hydropower, we are the third-largest producer in Sweden. Our 74 wholly and jointly owned hydropower plants, distributed from Lycksele in the North to Kristianstad in the South, account for approximately 12% of ???



Pumped Hydro Storage Sweden AB är med som partners och vill skapa innovationshög i forumet. Pumpvattenkraft har använts för energilagring i över hundra år men ???



"Hydropower will play an increasingly important role as an energy resource providing regulation and storage in the fossil-free society of the future. We want to conduct research into safer, more efficient, more flexible and more ???



Forumet som nu bildas heter International Forum on Pumped Storage Hydropower och består av representanter från 11 olika regeringar och över 60 organisationer som alla ska ???

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Europe regional overview and outlook. Europe saw very little movement in the commissioning of new greenfield hydropower projects in 2023. The need for system flexibility across the region is paving the way for PSH, ???



Förretet Pumped Hydro Storage Sweden har hittat en möjlig lösning på problemet, genom att använda övergivna gruvor med hundratals meters fallhöjd. ??? Pumpvattenkraftverk är en välutvecklad teknik som fungerar så att vatten ???



Our largest hydro powerplants in Sweden . The following are two of the 74 hydro powerplants owned by Uniper in Sweden. Hjälta powerplant in Faxälvén . Commissioned: 1952; Number of generating units: 3 ; Installed ???



Michael Vann, Operations Director for Uniper's Swedish hydropower, says: "Hydropower today accounts for about 40% of Sweden's electricity production and also plays a crucial role in power regulation when wind power deliveries ???



Pumped Hydro Storage Sweden AB har blivit tillfrågade att gå med som partner i forumet för att bidra i utvecklingen av hållbar pumpvattenkraft, bland annat genom sin lösning ???