

# **Svalbard and Jan Mayen The latest methods of storing electricity**

Are Longyearbyen and Svalbard facing an energy transition?

Top image: Longyearbyen and Svalbard are facing an energy transition. This is the background for the cooperation agreement between UNIS, Store Norske and SINTEF. Photo: Graham Gilbert/UNIS. Longyearbyen and Svalbard are facing a huge energy transition.

How can Svalbard maintain a secure and sustainable supply?

Furthermore, the case found that the best long-term solution for Svalbard to maintain a secure and sustainable supply would be to integrate a mix of renewable energy technologies. Some of these technologies include: solar panels (PV), wind turbines, heat pumps connected to geothermal and both heat and electricity storage.

Can wind and solar power be used in Svalbard?

23) This approach is supported by an earlier case study prepared by The Nordic Council of Ministers (2018) titled 'De-carbonising Svalbard', 24) which suggests that wind and solar power used in combination with both electric boilers and heat pumps would provide ample electrical supply.

How has Norway diversified its activity in Svalbard?

Besides tourism, Norway has further diversified its activity on Svalbard by investing in high-level Arctic research. Norway has transformed the ex-mining town of Ny-Ålesund into an international Arctic research hub and established The University Centre in Svalbard (UNIS) in 1993.

How has Norway reinvented Svalbard's economy?

During this period, towns were built around commercial coal mining activity. Although coal mining is still present, activity is dwindling and Norway has reinvented Svalbard's economy by transitioning towards three main industries: scientific research, education and tourism. 2)

Why does Norway need a climate plan for Svalbard?

The Minister of Climate and Environment Sveinung Rotevatn outlines the necessity to protect Norway's commitment to the 2030 and 2050 climate goals whilst ensuring that the project is constructed in a way that does not majorly intervene in the vulnerable natural landscape of Svalbard.

Among the topics the parties will work closely on in the future are local energy production, with a focus on solar, wind and geothermal heat, future energy storage where batteries, thermal and renewable energy carriers are the focus areas, and management of hybrid energy solutions.

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Great uncertainty surrounds the energy supply on Svalbard and the scheduled transition to renewable energy for the Arctic archipelago. Researcher Tiril Vold believes the process has been affected by a contest over symbolic capital and prestige.

Energy Storage provides a unique platform for innovative research results and findings in all areas of energy storage, including the various methods of energy storage and their incorporation into and integration with both conventional and renewable energy systems. The journal welcomes contributions related to thermal, chemical, physical and ...

With uncertainty as to the future of energy storage, a range of storage options beyond conventional batteries have been developed, each with their own advantages and drawbacks. From pumped hydroelectric storage to redox flow batteries, these innovative processes could make or break the world's energy storage goals.

The race to develop it is well under way, and several companies are working on building ever bigger, more efficient electricity storage methods. From pumping water up mountains to turning air into liquid, here are the emerging storage technologies (and some incumbent ones) shaping the storage landscape:

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AT SEA, SVALBARD AND JAN MAYEN - JULY 11: Participants of the 4th National Arctic Scientific Research Expedition conduct research studies At Sea off Svalbard and Jan Mayen on July 11, 2024.

A recent study carried out by SINTEF has shown that shipping surplus energy to Svalbard in the form of liquid hydrogen rather than via a cable could mean annual savings of more than NOK 100 million (USD 11.5 million).

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