

Is solar energy a sustainable technology in Sweden?

The Swedish solar cell market is still limited, with solar energy accounting for around 1 per cent of the total energy generated. In the transition to a sustainable society, wave power may be an important technology in the future, but it is still relatively undeveloped - both in Sweden and abroad.

Can solar PV help Sweden achieve its climate goals?

If enabled by energy storage technologies, solar PV may become a helpful component for Sweden to achieve its climate goals. The mention of Sweden however is not because of its climate policy but rather for its geographical and environmental context making it an interesting topic for study when it comes to solar energy.

Does solar PV contribute to Sweden's energy supply?

Despite this potential, solar PV's contribution to Sweden's 508 TWh/yr energy supply is today minimal, accounting for only 0.2 % (1 TWh/yr) of the total energy supply. For Sweden to further tap into this vast supply of energy, some challenges are apparent.

What percentage of Sweden's electricity comes from renewable sources?

In 2022, more than 60 per cent of Sweden's electricity came from renewable sources. 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 - is one example.

Can seasonal energy storage be used in the Swedish energy mix?

Seasonal energy storage can be used to address the decrease in electricity production from solar PVs during the Swedish winter, which could eventually enable increased utilization of solar PVs in the Swedish energy mix.

Can seasonal hydrogen storage increase solar PV Diffusion in Sweden?

In conclusion, the idea of seasonal hydrogen storage for electricity might not be the ultimate path to increasing solar PV diffusion in Sweden. However, the storage of energy in the more general sense in the form of hydrogen might very well be a driver that can facilitate an increase in solar PV capacity in Sweden.

NOTE: This blog was originally published in April 2023, it was updated in August 2024 to reflect the latest information. Even the most ardent solar evangelists can agree on one limitation solar panels have: they only produce electricity when ...

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These systems store excess solar power generated during sunny days for use during night or cloudy days. This setup ensures you have enough energy to power your home, reducing reliance on the grid and lowering your ...

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