

## A-Core Container

# Finland uses solar power to generate electricity for home use



## Overview

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According to Statistics Finland's preliminary data, 95 per cent of Finland's electricity production in 2024 came from fossil-free energy sources, that is, nuclear, wind, hydro and solar power, and renewable fuels. Does Finland have solar energy?

Contrary to popular belief, Finland's solar energy potential doesn't fall short of that of Central Europe. In the summer, the long days and nearly round-the-clock sunlight compensate for the dark winters. This article's Finnish version was first published in February 2019 and has been updated in June 2023.

Can solar power improve the profitability of buildings in Finland?

LUT University has investigated how the profitability of solar electricity could be improved in different types of buildings in Finland. Researchers have debunked myths related to the orientation and dimensioning of solar photovoltaic systems and sales of surplus electricity.

How much power does Finland produce a year?

Unconnected capacity totalled approximately 23 MW. At the end of last year, Finland's grid-connected power production capacity was approximately 23,000 MW. Solar power accounted for around 4% of the grid-connected capacity. The production of solar power accounted for approximately 0.8% of the total power production in Finland in 2023.

How much solar energy will Finland produce by 2050?

LUT has modeled an emission-free energy system and demonstrated that the share of solar energy in Finnish energy production should rise to 10 percent by 2050. That would mean a leap from the current 635 megawatts to 35 000. The rooftop potential of all Finnish buildings (residential, administrative, industrial) is about 34 000 megawatts.

How much electricity does Finland use in 2024?

According to preliminary data of Statistics Finland and Finnish Energy, total electricity consumption rose by three per cent in 2024 and amounted to 82.7 TWh. Fossil-free electricity, that is, nuclear, wind, hydro and solar power and renewable fuels covered 95 per cent of electricity production in 2024.

What is Finland's solar power production capacity?

At the end of 2023, Finland's installed solar power production capacity was approximately 1,000 MW, most of which was micro-generation. The total capacity increased by more than 300 MW over the year.

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