

# Can solar power be generated on rooftops in the United States



## Overview

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Solar power includes solar farms as well as local distributed generation, mostly on rooftops and increasingly from community solar arrays. In 2025, utility-scale solar power generated 295.7 terawatt-hours (TWh) in the United States. Rooftop potential is not equivalent to the economic or market potential for rooftop solar-it doesn't consider availability or cost. Senior Director, Campaign for 100% Renewable Energy, Environment America Research & Policy Center BOSTON - In 2022, small-scale rooftop solar produced enough energy to power 5. That's according to Rooftop Solar on the Rise, a . Solar energy in the United States has exploded over the past decade. Among the leading sources of electricity, solar has the unique advantage of being able to be installed in a distributed fashion, integrating it with . Electricity produced at or near the point where it is used is called Distributed Generation (DG).

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### Rooftop Solar

Environment America modeled the viable technical potential for rooftop solar in the United States, finding that it can serve 45% of U.S. electricity

### Rooftop Solar - SEIA

Distributed solar energy can be located on rooftops or ground-mounted, and is typically connected to the local utility distribution grid. There are a wide variety of policies at the state and local level that impact



### [Rooftop solar has technical potential to meet 45% of U.S. electricity](#)

Environment America modeled the viable technical potential for rooftop solar in the United States, finding that it can serve 45% of U.S. electricity demand based on 2022 levels.

### Solar power in the United States

Solar power includes solar farms as well as local distributed generation, mostly on rooftops and increasingly from community solar arrays. In 2025, utility-scale solar power generated 295.7 terawatt



### Solar Rooftop Potential



## [America's Rooftop Solar Potential Still Remains Largely Untapped](#)

Cities like St. Louis, Mo. and Topeka, Kan., have tremendous rooftop solar potential, but the upper Midwest also has prime real estate for solar installations. Chicago roofs, for example, could



## [Current status and future potential of rooftop solar adoption in the](#)

There remains large untapped potential for further solar penetration in the U.S., particularly for rooftop systems that do not occupy land that could be used for other purposes.



According to National Renewable Energy Laboratory (NREL) analysis in 2016, there are over 8 billion square meters of rooftops on which solar panels could be installed in the United States, representing



## **New report: Rooftop solar delivers 10 times more power than a**

Rooftop solar has the potential to generate about 45% of the electricity the U.S. uses. In 2022, rooftop solar generated about 1.5% of all the electricity the U.S. used.



## **Rooftop Solar**

Rooftop solar has increasingly become an option for many households across the country. Many areas offer attractive Renewable Energy Credits (RECs) that, when coupled with federal and local

## Rooftop PV could serve 45% of US electricity demand, says

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## The Complete Guide to Rooftop Solar Power in 2025

This comprehensive guide will walk you through everything you need to know about rooftop solar power, from understanding the technology to calculating your potential savings and

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