

# Farmland solar power generation



## Overview

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Agrivoltaics refers to the simultaneous use of land for both solar photovoltaic (PV) power generation and agriculture. By elevating solar panels above crops or integrating them into fields with sufficient spacing, sunlight can be shared efficiently between energy production and plant . energy sources (Lazard 2023). Operating solar facilities do not produce pollution, greenhouse gas emissions, odors, smoke clouds, or vapo that lead to poor air quality. The 21-GW solar farm initiative will "create thousands of construction and long-term jobs, and help California meet its statewide renewable energy goals. Getty Images A new initiative in California will repurpose farmland that is no longer able to sustain . As the world looks for ways to produce more with less, agrivoltaics offers a fresh approach: combining solar panels and agriculture on the same land. By generating renewable energy while supporting crops and livestock, this dual-use system can boost farm productivity, strengthen local economies . Solar energy, which converts energy from the sun into thermal or electrical power, is rapidly expanding across America and the world. In the United States, up to 83% of new solar development by 2040 is forecast to occur on farmland and ranchland, according to the American Farmland Trust.

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### **Agrivoltaics: double the farming on a global scale**

The term refers to the combined use of land for agriculture and electricity generation. PV systems are mounted at a certain height on agricultural land, and crop production or animal

### The Impact of Solar and Wind Projects on Agricultural Land: Key

As renewable energy expands, concerns about its impact on farmland have grown. With solar farms and wind turbines increasingly being built in rural areas, questions have emerged about



### **Solar Power Depletes Farmlands of Rich Soil**

Solar energy is depleting farmlands of their rich soils in the U.S. Midwest. The solar industry is moving into the U.S. Midwest, drawn by cheaper land rents, access to electric

### **Agrivoltaics: Farming And Solar Energy Integration**

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## [California's dry farmland to be repurposed for 21 GW of solar power](#)

A new initiative in California will repurpose farmland that is no longer able to sustain agriculture. The arid land will be used to build large solar farms, providing renewable energy to the

## [Expansion of Large-Scale Solar Power Generation on Farmland Is](#)

Understanding that productive soil is a limited resource, Winter hopes a meaningful portion of utility-scale solar projects will be dual use, enabling high-quality farmland to remain in food



## **Solar Energy Expansion in Rural Communities , Focus on Ag**

Solar energy is leading the way, with much of the new development occurring on farmland and in rural communities. It has the potential to be a financial opportunity for landowners, yet it can

## [American Farmland Trust makes policy recommendations for agrivoltaics](#)

Solar and farming in the same land area can retain functional use of farmland while adding emissions-free power generation. In the United States, up to 83% of new solar development by 2040



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## Solar Energy & Farmland - F

The co-location of solar PV and agriculture can provide agricultural enterprises with diversified revenue sources and ecological benefits, while reducing land use competition and siting restrictions.



## Farmer's Guide to Going Solar

If you are an agricultural land owner and are considering your options to go solar, here are some resources to help you decide what's best for you.

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