

# Elevated photovoltaic panels on Japanese farmland

Can agrivoltaic be a substitute for mega-solar PV plants in Japan?

In Japan, the bottleneck for developing mega-solar PV plants is securing the land. Developers have therefore been eyeing the agrivoltaic market as a substitute. The commissioning of solar PV plants on agricultural land is a sensitive topic in Japan.

How many agrivoltaic projects are there in Japan?

By the end of FY2019, there were 2,695 agrivoltaic projects, approximately 670MW, covering 742 hectares of agricultural land in Japan. This had increased to 3,474 projects on 872.7 hectares by FY2020. These projects have been commissioned under the feed-in-tariff program. The government budgeted a 1.4 billion JPY to support agrivoltaic in FY2020.

How efficient is Japan's solar power system?

Importantly, the rice also met Japan's highest grain quality standards. At the same time, the PV panels generated nearly 44,000 kilowatt-hours of electricity annually--an efficiency (961.4 kWh/kW) that compares favorably with similar systems in Europe.

Can agrivoltaic revive abandoned land in Japan?

On the one hand, Japan has a low self-sufficiency rate for food production, and any policy that would decrease farmland yield is sure to be scrutinized by the government. On the other hand, agricultural land area has decreased by 28% since 1958, and agrivoltaic could bring an economical solution to revive some abandoned land.

As reported in the Journal of Photonics for Energy, the research team installed a dual-axis sun-tracking photovoltaic (PV) system over a rice paddy in Miyada-mura, Nagano Prefecture. ...

Importantly, the rice also met Japan's highest grain quality standards, the scientists said. Meanwhile, the PV panels generated nearly 44,000 kilowatt-hours of electricity annually, with an ...

In an effort to boost solar power capacity, Japan is looking to install more solar panels on farmland. While efforts go back more than a decade, widespread development has been slow to ...

ASHIKAGA, Tochigi Prefecture--Vertical solar panels, while now a rare sight on farmland in Japan, in this case a rice paddy, look set to transform the nation's landscape in years to come.

Developers have therefore been eyeing the agrivoltaic market as a substitute. The commissioning of solar PV plants on agricultural land is a sensitive topic in Japan. On the one hand, ...

Scientists teamed up with rice farmers in Japan to harvest a new kind of crop from their fields -- solar power. According to Interesting Engineering, University of Tokyo researchers helped ...

# Elevated photovoltaic panels on Japanese farmland

Agrivoltaics plays an essential role in decarbonizing the power system Rooftop PV Ground mounted PV Wind  
2020 2050 Electricity generation from solar significantly exceeds load

The panels' ability to tilt and track the sun's position dynamically, both daily and seasonally, introduces an innovative form of adaptive shading, which is key to balancing the ...

Solar panels above rice paddies generate power while preserving crop yields Sun-tracking PV arrays hover three meters above Japanese rice fields.

Web: <https://www.inalaaccelerator.co.za>