



WALMER ENERGY

Outdoor orchard solar power generation system





Overview

How does a solar orchard work?

The orchard runs a 160 kW solar PV system paired with 300 kWh of battery storage. It's the beating heart of their operation, fueling: Orchard management — Fully electric 40 hp tractor (driver-optional), electric mowers, and platforms. Irrigation — Electric pumps powered directly by solar during daytime.

Are agrivoltaic nets redundant in orcharding?

Hail protection nets in orcharding become redundant with an agrivoltaic system. The agricultural sector is facing new challenges. In the wake of climate change, strategies must be developed to avoid negative impacts on harvests.

Why did Forest Lodge set up a solar Orchard?

Forest Lodge co-founder Mike Casey says the orchard's solar set up not just as a technical achievement — it was also about setting the farm up for the future. "We're in a remote location. Getting diesel deliveries in winter isn't guaranteed.

Does Forest Lodge have a solar farm?

Euan White, orchard manager and co-owner. Forest Lodge hasn't just adopted solar technology — the team has built an entire farming operation around it. The transformation started not with ambition, but necessity. "We had a diesel water pump explode in our first season," says Euan White, orchard manager and co-owner.



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APV-Obstbau (Orcharding) - Agrivoltaics as ...

For this purpose, the Agri-PV orchard will be examined in particular with regards to light management, plant design, landscape aesthetics, its ...

Innovative solar panels enhance apple ...

Jan 14, 2025 · In an innovative move to enhance agricultural productivity, a unique solar panel project is being implemented at a Washington State ...

Harvesting sun and soil: the promise of agri-pv in Dutch ...

In a quiet Dutch orchard, rows of pear trees grow beneath solar panels -- and beneath those panels, the future of farming is quietly taking shape. As climate, land, and energy pressures ...

Innovative solar panels enhance apple orchard productivity

Jan 14, 2025 · In an innovative move to enhance agricultural productivity, a unique solar panel project is being implemented at a Washington State University (WSU) research orchard near ...

Forest Lodge Orchard - harvesting the power of the sun , EECA

This Central Otago cherry farm's solar PV and battery system powers the world's first fully electrified orchard -- showcasing scalable clean energy innovation.

Solar Panels in Orchards - research from the Tatura SmartFarm

Solar panels above orchard trees not only generate electricity for things like irrigation and post-harvest storage, but sunburn and hail damage impacts can be reduced significantly under ...

APV-Obstbau (Orcharding) - Agrivoltaics as Resilience ...

For this purpose, the Agri-PV orchard will be examined in particular with regards to light management, plant design, landscape aesthetics, its economic efficiency, social compatibility ...

Current trends and challenges of agrivoltaic systems towards

Jun 1, 2025 · This review explores the complex interplay between orchard protection and solar energy generation, highlighting the benefits, challenges, and limitations of integrating ...

3D modelling of light-sharing agrivoltaic systems for ...

Nov 13, 2023 · ABSTRACT: This study focuses on the modelling and simulating of agrivoltaic (Agri-PV) systems, where solar photovoltaic (PV) and agriculture coexist. Systems aimed at ...

Design and evaluation of an agrivoltaic system for a pear orchard

Jan 1, 2024 · Agrivoltaic systems are mostly deployed on arable farm land. An interesting application of agrivoltaics for permanent farming such as pear orchards, is in replacing the ...



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Forest Lodge Orchard - harvesting the power ...

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