

Huifeng Village Photovoltaic Support

Does community management influence household adoption of rooftop solar photovoltaics in rural China?

This paper examines inequality in household adoption of rooftop solar photovoltaics in rural China through a qualitative study of three villages. The Chinese government promotes distributed solar to drive low-carbon development. However, community management and China's institutional system influence unequal access.

How much electricity does a village use a year?

The total electricity consumption of these buildings and outdoor facilities is about 71,000 kilowatt-hours a year, while around 80,000 kWh of electricity that can be generated through photovoltaic power facilities in the village. This way, there will be a surplus in power generation, added Tian.

Should village transformer capacity be increased?

In addition, the village transformer capacity puts limits on how many households can install panels and the system sizes. Usually, only about 30% of households can adopt PV. To increase that percentage, the village would need to expand transformer capacity. The costs of that expansion get divided up and paid by later adopters.

Can a village adopt a solar power system?

Usually, only about 30% of households can adopt PV. To increase that percentage, the village would need to expand transformer capacity. The costs of that expansion get divided up and paid by later adopters. This raises their construction costs and creates an obstacle to adoption. It is another form of injustice.

Do villagers have a role in photovoltaic negotiations?

From a procedural justice standpoint, the village committee acts as an agent negotiating with photovoltaic enterprises while villagers participate limitedly (e.g., voting at meetings). Regarding pricing roof resources and determining cooperation specifics, villagers' absence in negotiations diminishes the fairness of the process.

Do community-level support and household resources affect photovoltaic adoption?

We find that structural opportunities provided by communities and households' own resource endowments have an additive effect on adoption. This highlights the need to consider both community-level support and household resources when evaluating photovoltaic adoption and energy justice.

This study proposed a framework to explore the relationship among spatial form, socioeconomic factors, and comprehensive energy use and photovoltaic potential. Electricity use, ...

Decreasing the energy loss is one of the most feasible ways to improve the efficiencies of organic photovoltaic (OPV) cells. Recent studies have suggested that non-radiative energy loss ($E_{\text{non-rad loss}}$) is the dominant factor that ...

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Although significant improvements have been achieved for organic photovoltaic cells (OPVs), the top-performing devices still show power conversion efficiencies far behind those of ...

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This model accounts for only a tiny part of the installed distributed PV. The village photovoltaic policy support, with 45.5% under the "whole county photovoltaic" scheme.

Organic photovoltaic cells are potential candidates to drive low power consumption off-grid electronics for indoor applications. However, their power conversion efficiency is still limited by ...

Photovoltaic support is an indispensable and important part of the photovoltaic power generation system. Its main function is the special equipment designed and installed from the solar ...

The development of organic photoactive materials, especially the newly emerging non-fullerene electron acceptors (NFAs), has enabled rapid progress in organic photovoltaic (OPV) cells in ...

Trans-Reflective Structural Color Filters Assisting Multifunctional-Integrated Semitransparent Photovoltaic Window Advanced Materials (IF 27.4) Pub Date : 2023-03-17, DOI: ...

The emission spectra of indoor light sources are in the range of 400-700 nm (Fig. S1a).PBDB-TF:IT-M (Fig. 1 a) reported in previous studies [[30], [31], [32]] was employed ...

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