

Design of commercial solar power generation system in Surabaya Indonesia





Overview

Is a utility-scale solar photovoltaic power plant feasible in Indonesia?

To address this gap, this study investigates the feasibility of a utility-scale solar photovoltaic (PV) power plant in Indonesia, focusing on the newly implemented renewable energy tariffs based on Independent Power Producers (IPPs) and Indonesia's state-owned electricity company (PLN) perspectives.

What is the average solar energy output in Surabaya Indonesia?

Average 5.58kWh/day in Autumn. Average 5.62kWh/day in Winter. Average 5.88kWh/day in Spring. To maximize your solar PV system's energy output in Surabaya, Indonesia (Lat/Long -7.2484, 112.7419) throughout the year, you should tilt your panels at an angle of 8° North for fixed panel installations.

What is solar PV output in Indonesia?

Seasonal solar PV output for Latitude: -7.2484, Longitude: 112.7419 (Surabaya, Indonesia), based on our analysis of 8760 hourly intervals of solar and meteorological data (one whole year) retrieved for that set of coordinates/location from NASA POWER (The Prediction of Worldwide Energy Resources) API: Average 4.99kWh/day in Summer.

Can solar panels be installed in Surabaya?

The climate in Surabaya is tropical, with high temperatures and humidity throughout the year, making it quite suitable for solar PV installations. However, considering the dense urban development in Surabaya city itself, large-scale solar PV installations might be challenging due to space constraints.



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Solar Power Plant (Solar PV) Technology, Industry, Local

Sep 1, 2025 · The principle of photovoltaics is to convert photon energy from sunlight into electrical energy. Silicon-based solar modules and bifacial solar modules are the most ...

Simulation of the Floating PV System to Supply Electricity ...

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Solar PV Analysis of Surabaya, Indonesia

Mar 13, 2024 · Maximise annual solar PV output in Surabaya, Indonesia, by tilting solar panels 8degrees North. Surabaya, Indonesia, located in the tropics, is a very suitable location for ...

Design and Implementation of Real-Time ...

Jan 1, 2020 · Monitoring of the output parameters of solar power plants needs to be done to assess the performance and efficiency of a solar ...

Simulation of the Floating PV System to Supply

Feb 4, 2021 · This paper studies the possibility of implementation of the FPV system to supply electricity demand for the city of Surabaya, Indonesia. The studies include FPV reviews, PV ...

Unicharm Installed New Solar Power Generation System at ...

Aug 28, 2023 · Unicharm Corporation (CEO & President, Mr. Takahisa Takahara) announced that their subsidiary in Indonesia, PT Uni-Charm Indonesia Tbk (hereinafter as UCI) has installed a ...

Techno-economic feasibility study of solar photovoltaic power ...

Mar 27, 2024 · To address this gap, this study investigates the feasibility of a utility-scale solar photovoltaic (PV) power plant in Indonesia, focusing on the newly implemented renewable ...

Simulation of the Photovoltaic System Capacity to Power ...

Tropical regions, such as Surabaya, Indonesia, pose unique challenges for PV systems due to their specific climatic conditions. High temperatures and humidity can impact the efficiency and ...

Design and Implementation of Real-Time Monitoring System for Solar

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Design of commercial solar photovoltaic power generation system ...

Can a grid-connected PV system be installed in Surabaya? This work presents a techno-economic simulation of grid-connected PV system design as specifically applied to residential ...



Industrial Solar Photovoltaic Systems for Indonesia: ...

Oct 8, 2025 · Executive Summary Industrial solar photovoltaic systems represent proven technology for Indonesian manufacturing and commercial facilities pursuing electricity cost ...

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