

# Average photovoltaic ESS price per 150MW in Indonesia





## Overview

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How much does solar PV cost in Indonesia?

Similar to wind, current installed solar PV capacity in Indonesia is only 90 MW, with the capital cost still ranges from 700 to 1200 USD/ kW, higher than capital costs in Europe, China and India which mostly below 1000 USD/kW (IRENA, 2019). The cost in leading markets even reaches below 500 USD/kW in 2019 (Vartiainen, et. al, 2019).

Which solar panels should I buy in Indonesia?

Most solar installers in Indonesia usually recommend panels made by “Tier 1” solar panel manufacturers. The Bloomberg New Energy Finance uses this tiering system as a measure of a manufacturer’s reliability and consistency. The prices of “Tier 1” solar panels vary based on where they are manufactured, their efficiency and warranty durations.

What is the local content of solar energy projects in Indonesia?

According to MEMR Decree No 5/2017, the local content for energy projects in Indonesia was a minimum of 40% in 2017 and will be gradually increased up to 60% in 2019. Due to the relatively small scale of solar manufacturing in Indonesia, it is unlikely that local production can be competitive against international prices.

Is solar a good source of electricity in Indonesia?

Despite the global trend, in Indonesia, renewables are still cited as expensive sources of electricity. For example, according to NREL studies, the average LCOE of solar in Indonesia is the highest among ASEAN member state, reaching 165 USD/MWh and far below Burma with an average of 79 USD/MWh (Lee, et al., 2019).

How much solar energy does Indonesia have in 2021?

According to the Presidential Regulation 22 of 2017 in the National Energy



Plan, the potential capacity of solar energy in Indonesia is up to 207,898 MW. However, the amount of installed capacity accounted for only 211 MW, or 1.89 %, of the total installed capacity of renewable energy sources in 2021 .

How much does electricity cost in Indonesia?

The Indonesian utility company PLN provides electricity at a basic rate of 9.72 cents/kWh to customers who subscribe to a maximum power of 10 A (2200 VA). Fig. 5 compares the electricity price of the LCOE of the considered rooftop PV system.



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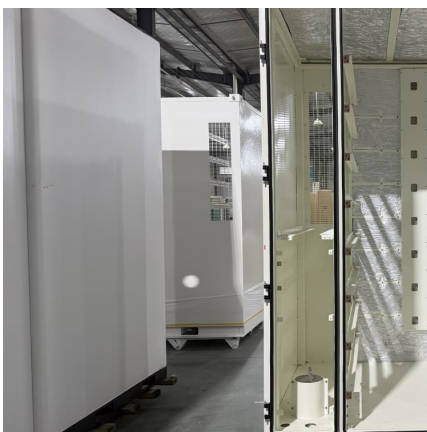


### Solar Installed System Cost Analysis , Solar Market Research

Solar Installed System Cost Analysis NREL analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility ...

### [U.S. Solar Photovoltaic System and Energy Storage Cost](#)

U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks, With Minimum Sustainable Price Analysis: Q1 2022 Vignesh Ramasamy,<sup>1</sup> Jarett Zuboy,<sup>1</sup> Eric ...



### [Solar Panel Price in Indonesia - YOURSUN](#)

The overall average price of TOPCon modules is USD 90 per 1000 watt. HJT modules are priced at USD 90 to USD 110 per 1000 watt. PERC modules are priced at USD 65 to USD 80 per 1000 watt. Finally, the ...

### [Annual Solar Photovoltaic Module Shipments Report](#)

Overview This report includes summary data for the photovoltaic industry from annual and monthly respondents. Data include



manufacturing, imports, and exports of modules  
...



### Average levelised cost of electricity for new utility-scale solar PV

Average levelised cost of electricity for new utility-scale solar PV commissioned in Indonesia, 2019 versus benchmark - Chart and data by the International Energy Agency.

### Global Solar Atlas

The Global Solar Atlas provides a summary of solar power potential and solar resources globally. It is provided by the World Bank Group as a free service to governments, developers and the ...



### [Solar Installed System Cost Analysis . Solar Market ...](#)

Solar Installed System Cost Analysis NREL analyzes the total costs associated with installing photovoltaic (PV) systems for residential rooftop, commercial rooftop, and utility-scale ground-mount systems. This work has ...



## PVWatts Calculator

NREL's PVWatts ® Calculator Estimates the energy production of grid-connected photovoltaic (PV) energy systems throughout the world. It allows homeowners, small building owners, ...



## [What Does Green Energy Storage Cost in 2025?](#)

In 2025, you're looking at an average cost of about \$152 per kilowatt-hour (kWh) for lithium-ion battery packs, which represents a 7% increase since 2021. Energy storage systems (ESS) for four-hour durations exceed \$300/kWh, marking the ...

## [Photovoltaic \(PV\) solar power plants in Indonesia](#)

Indonesia straddles the equator, making it an ideal location for solar energy generation. The country receives an average solar radiation of about 4.5 to 5.5 kWh/m<sup>2</sup>/day throughout the year (Mulyadi, 2020). This geographical ...



## [\(PDF\) Indonesia's Vast Solar Energy Potential](#)

Abstract and Figures In this paper, we conclude that Indonesia has vast potential for generating and balancing solar photovoltaic (PV) energy to meet future energy needs at a ...



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

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 ...



### BESS Costs Analysis: Understanding the True Costs of Battery ...

Battery Energy Storage Systems (BESS) are becoming essential in the shift towards renewable energy, providing solutions for grid stability, energy management, and ...



### Cost of Living in Indonesia. Prices in Indonesia. Updated Sep ...

Average prices of more than 40 products and services in Indonesia. Prices of restaurants, food, transportation, utilities and housing are included.





[Breaking down solar farm costs: Free template inside](#)

How to properly understand and efficiently allocate the costs of your solar plant project. Bonus track included: a PV plant bill of quantities.

**Model of Operation and Maintenance Costs for Photovoltaic ...**

Costs to operate and maintain PV systems have been reported in terms of average annual cost on a per-unit basis, in units PV array capacity (direct current) of \$/kW/year (Castillo-Ramírez et ...



[What Does Green Energy Storage Cost in 2025?](#)

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[59 Solar PV Power Calculations With Examples Provided](#)

Learn the 59 essential solar calculations and examples for PV design, from system sizing to performance analysis. Empower your solar planning or education with SolarPlanSets

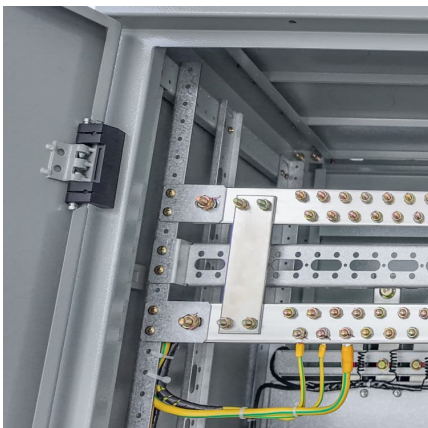


### Solar Energy Potentials and Opportunity of Floating Solar PV in Indonesia

In this paper, we conclude that Indonesia has vast potential for generating and balancing solar photovoltaic (PV) energy to meet future energy needs at a competitive cost.

### Indonesia

Specifically for Indonesia, country factsheet has been elaborated, including the information on solar resource and PV power potential country statistics, seasonal electricity generation variations, LCOE estimates and cross-correlation with the ...



### [Indonesia Solar Panel Manufacturing Report, Market](#)

Explore Indonesia solar panel manufacturing landscape through detailed market analysis, production statistics, and industry insights. Comprehensive data on capacity, costs, and growth.



## Solar Panel Indonesia

On average Indonesia receives between 1500 kWh and 2200 kWh per m<sup>2</sup> of annual solar energy on a horizontal surface (Global Horizontal Irradiance, GHI). Java, Sulawesi, Bali, and East and ...



## [Solar Panel Price in Indonesia - YOURSUN](#)

The overall average price of TOPCon modules is USD 90 per 1000 watt. HJT modules are priced at USD 90 to USD 110 per 1000 watt. PERC modules are priced at USD 65 ...

## Economic Analysis

Economic Analysis - A 150 MW Power Facility Section Introduction This section is an economic analysis of the 150 MW power facility based on a photovoltaic system using polycrystalline silicon cells. There will be a discussion of the ...



## [Solar Energy Potentials and Opportunity of Floating ...](#)

In this paper, we conclude that Indonesia has vast potential for generating and balancing solar photovoltaic (PV) energy to meet future energy needs at a competitive cost.



### Indonesia: Deploy 5.7GW of rooftop photovoltaic power stations ...

Indonesia's Ministry of Energy and Mineral Resources has set a quota for the state-owned power company PLN to develop rooftop solar energy between 2024 and 2028 to ...



### ESS Prices Plummet to Historic Lows

The average price of a 280Ah/0.5C storage battery hovered around 0.38 yuan/Wh in March 2024. According to our data, the average winning price for a 2-hour ESS is approximately 0.63 yuan/Wh, resulting in a price gap ...

### [India wraps up 1.2 GW solar, storage tender at ...](#)

From pv magazine India SECI has concluded its latest tender for 1.2 GW of solar with 600 MW/1.2 GWh of storage capacity at a final average price of INR 3.42/kWh.





### Solar Photovoltaic System Cost Benchmarks

The U.S. Department of Energy's solar office and its national laboratory partners analyze cost data for U.S. solar photovoltaic systems to develop cost benchmarks to measure progress towards goals and guide research and development ...

### LEVELIZED COST OF ELECTRICITY IN INDONESIA

Taking solar PV as an example, despite the low local labour and land cost, the local module prices in Indonesia are significantly higher compared to the global market due to higher margin.



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