

## Global PV Storage Insights

# Expected ROI of domestic energy storage project in Indonesia 2025



## Overview

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Are energy storage systems a major challenge in developing solar energy in Indonesia?

Energy storage systems (ESS) are a major challenge in developing solar energy in Indonesia. ESS plays a vital role in overcoming the problem of intermittency or instability, which is often a major obstacle for renewable energy plants such as solar and wind power plants.

What is Indonesia doing with its energy storage capacity?

Indonesia is currently building on its storage capacity through the planned/ongoing installation of 5 MW battery energy storage systems (BESS), linked to PLN's renewable sites. Indonesia is also building its first utility-scale integrated solar and energy storage project in Nusantara.

Does Indonesia need a solar energy storage system?

Jakarta – According to the Institute for Essential Services Reform (IESR), accelerating the adoption of solar energy will not be effective without an adequate energy storage system. According to IESR, Indonesia's solar energy development lags far behind the target despite its vast potential.

How much solar energy investment in Indonesia has doubled in 2021?

Alvin Putra Sidwinugraha, Lead Author of ISEO 2025 and IESR's Electricity and Renewable Energy Analyst, revealed that solar energy investment in Indonesia has doubled, from USD 68 million in 2021 to USD 134 million in 2023.

How can IESR accelerate the growth of Indonesia's electricity system?

IESR emphasized that a solid understanding and strong commitment from policymakers and energy planners regarding the potential and benefits of solar energy and ESS are essential prerequisites for accelerating their growth in Indonesia's electricity system.

## What is Indonesia's Solar Energy Outlook 2025?

The Indonesia Solar Energy Outlook (ISEO) 2025 report highlights that solar energy growth in Indonesia has been slow compared to the targets outlined in PLN's National Energy General Plan and Electricity Supply Business Plan, with a total installed capacity of 718 MW as of August 2024.

## Expected ROI of domestic energy storage project in Indonesia 2025



### Indonesia to Offer Energy Projects Worth \$40 Billion ...

Indonesia also plans to increase its fuel storage capacity and build a refinery with capacity of 500,000 barrels per day to ensure energy security, Bahlil said. Investment for the new refinery is estimated at \$12.5 billion, the ...

### Energy storage safety and growth outlook in 2025

Looking ahead: Keys to success Several factors will define the energy storage market in 2025: the continued dominance of LFP chemistry and its downward impact on pricing, increased utility demand for integrated ...

#### ESS



### World Bank Predicts Indonesia Economic Growth in 2025

The World Bank projects Indonesia's economic growth at 5.1% in 2025. "Positive risk potential includes a stronger-than-expected recovery among key trading partners ...

### Indonesia's green powerhouse promise: Ten bold moves

For example, the annual average investment in renewables over the past five years has been \$1.62 billion, which represents only 20.2 percent of the annual spend required for Indonesia to

reach its 2025 goal. 77 The funding ...



## Energy Storage in 2025: What's Hot and What's Next?

The energy storage landscape is changing quickly as scientists work to create better and longer-lasting storage solutions. Experts are focused on improving smart grids to ensure that electricity systems work well and are.

## Opportunities in Indonesia's Renewable Energy Sector

Advancements in energy storage, smart grids, and hybrid renewable systems are shaping the future of Indonesia's energy landscape. For example, integrating battery storage with solar and wind projects is expected ...



## Indonesia plans to invest 40bn USD in energy projects ...

Indonesia, the largest economy in Southeast Asia, has revealed its intention to invest 40 billion dollars (38.1 billion euros) in 2025 in 21 major energy projects.



## China Energy Transition Review 2025

In the first half of 2025, investment in key national energy projects - including offshore wind and grid upgrades - rose by 22% year-on-year, and new-type energy storage jumped 69%.



## **2025 Energy Predictions: Battery Costs Fall, Energy Storage ...**

Experts predict what 2025 holds for U.S. energy policy: EV battery costs fall, energy storage demand surges, carbon removal hits scale, permitting reform in D.C.

## **Industrial Development Plan in Indonesia 2025: ...**

Indonesia's industrial development plan emphasizes growth in sectors with high potential for domestic and international impact. Manufacturing: Investments in automotive, electronics, and pharmaceuticals aim to make ...



## **Energy Storage in 2025: What's Hot and What's Next?**

The energy storage landscape is changing quickly as scientists work to create better and longer-lasting storage solutions. Experts are focused on improving smart grids to ...

## World Bank Predicts Indonesia Economic Growth in ...

The World Bank projects Indonesia's economic growth at 5.1% in 2025. "Positive risk potential includes a stronger-than-expected recovery among key trading partners and rising prices of major commodities," stated the ...



## RUPTL 2025-2034: Indonesia's Green Energy Blueprint

The first five years will focus on building 27,9 GW from renewable energy, gas, and nearly completed coal power plants. The following five years will be dominated by renewable energy and energy storage systems, which are ...

## Indonesia plans \$40 billion energy projects in 2025: ...

Indonesia plans more than 20 energy projects worth around \$40 billion this year, its energy minister said Tuesday, as it tries to increase domestic refining capacity.



## India's Energy Storage to Grow 5X by 2032, Driven by INR4.79

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The India Energy Storage Alliance (IESA) projects a fivefold growth in the sector between 2026 and 2032, with investments expected to reach INR4.79 lakh crore by 2032.

## Understanding the Return of Investment (ROI) of Energy Storage ...

Several key factors influence the ROI of a BESS. In order to assess the ROI of a battery energy storage system, we need to understand that there are two types of factors to keep in mind: ...



## TotalEnergies And RGE Team Up To Build Solar And Battery Storage

TotalEnergies and RGE, through their equally-owned joint venture Singa Renewables (Singa), have entered into a Co-Investment Agreement to jointly develop, ...

## Global Energy Storage to Hit 94 GW in 2025, Says BNEF

The global energy storage sector is on track for another record year in 2025 as utility-scale projects expand into new regions. BloombergNEF (BNEF) forecasts that ...



## Grid Side Energy Storage Market in Indonesia

The grid side energy storage market is expected to grow with a CAGR of 8.5% from 2025 to 2031. The grid side energy storage market in Indonesia is also forecasted to witness strong growth ...

## Indonesia targets 28 percent increase in renewable energy investment

Director General of New, Renewable Energy and Energy Conservation (EBTKE) at the Ministry of Energy and Mineral Resources (ESDM), Eniya Listiani Dewi, said the ...



## Opportunities for Increased Adoption of Solar Energy and Energy ...

Institute for Essential Services Reform (IESR), a leading energy and environment think tank, has released two new studies on solar energy development and an ...

## Energy Outlook 2025: Energy Storage

Significant investment is also occurring in the UK, where work is set to begin on the world's first commercial liquid air energy storage project in 2025, in addition to a number of ...



## [EN] Indonesia RUKN 2025

Dody Setiawan The electricity master plan reveals Indonesia's intent to increase its coal capacity by 26.8 GW in seven years. Captive coal is the main driver of this coal expansion, representing ...

## Anza Renewables on tariffs and successful energy storage projects

We're definitely seeing increased domestic manufacturing in energy storage. Some manufacturers have always focused on energy storage, while others, traditionally ...



## U.S. energy storage installations grow 33% year-over-year

Image: Wood Mackenzie / ACP Grid-scale storage deployments alone are expected to reach 13.3 GW in 2025. Across all segments, Wood Mackenzie expects 15 GW of ...

## Indonesia Industrial Growth in 2025: Key Trends to ...

Key Drivers of Indonesia's Industrial Growth in 2025 Indonesia's industrial growth is driven by favorable government policies, increasing investments, and evolving global market demands. These factors are creating ...



## The Future Of Renewable Energy In Indonesia: 2025 ...

Understanding the true cost of renewable energy In theory, renewable energy is cheaper to produce than fossil fuels, but the way total energy costs are calculated is complex and involves an understanding of upfront investment, operating ...

## PRESS RELEASE RGE and TotalEnergies Ink Co ...

Solar Power and Battery Energy Storage Project in Indonesia Imelda Tanoto, Managing Director at RGE (right) and Helle Kristoffersen, President Asia and Member of the Executive Committee ...



## Indonesia's expansion of clean power can spur growth ...

This report analyses Indonesia's Electricity Supply Business Plan (RUPTL) 2021-2030 and the Just Energy Transition Partnership (JETP) investment plan (CIPP).

## Maximizing reciprocal benefits from Indonesia's green ...

Renewable electricity imports from Indonesia are expected to help Singapore achieve its emission targets. However, Indonesia would like to understand the reciprocal benefits that would be offered before issuing a green ...



### Applications



## Energy Outlook 2025: Energy Storage

Significant investment is also occurring in the UK, where work is set to begin on the world's first commercial liquid air energy storage project in 2025, in addition to a number of BESS, pumped hydro storage, hydrogen ...

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