Expected ROI of solar diesel hybrid storage project in Indonesia 2025

Overview

Financial analysis confirms the project's viability, with a Net Present Value (NPV) of Rp 11,392,864,224, an Internal Rate of Return (IRR) of 30.52%, a Payback Period of 3.8 years, and a Return on Investment (ROI) of 231.8%.How much solar energy investment in Indonesia has doubled in 2021?

Alvin Putra Sisdwinugraha, 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.

Will Indonesia deploy 100 GW of solar?

The Indonesian government has revealed a new initiative aiming to deploy 100 GW of solar. The distributed solar for energy self-sufficiency program encompasses 80 GW of solar that will be deployed as 1 MW solar arrays with 4 MWh of accompanying battery energy storage systems (BESS).

Can a hybrid power generation system be implemented on kerayaan Island?

Email: hidayah.cahyani@pln.co.id Abstract. This study investigates the feasibility of implementing a hybrid power generation system combining solar power (PLTS) and diesel generators (PLTD) on Kerayaan Island as a solution to provide 24-hour electricity, reduce fuel consumption, and lower greenhouse gas (GHG) emissions.

What is Indonesia's potential for solar energy?

Indonesia’s technical potential for solar ranges from 3,300 GW to 20,000 GW, according to IESR estimates, while the country’s long-term energy policy targets up to 108.7 GW of solar by 2060. If implemented effectively, the program could redefine Indonesia’s energy landscape and serve as a global benchmark for large-scale distributed renewables.

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.

Is solar-plus-Bess cheaper than diesel power plants in Indonesia?

Fabby Tumiwa, Chief Executive Officer of the Jakarta-based Institute for Essential Services Reform (IESR), told pv magazine that solar-plus-BESS generates cheaper electricity than the diesel power plants that power villages and remote islands in Indonesia.

Expected ROI of solar diesel hybrid storage project in Indonesia 202

Hybrid Power System Market Size & YoY Growth Rate, 2025-2032

To learn more about this report, Request sample copy Key Takeaways By Type, the solar-diesel hybrid segment is projected to dominate the global hybrid power system ...

Full Summary of Indonesia's RUPTL 2025-2034

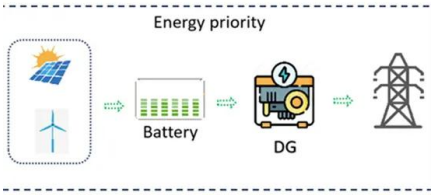
The government targets 76% of new power generation capacity to come from renewable energy in the RUPTL PLN 2025-2034. Read the full breakdown here.

Indonesia Hybrid Battery Energy Storage System Market Size ...

In Indonesia Hybrid Battery Energy Storage System Market is projected to grow from USD 1.4 billion in 2025 to USD 5.2 billion by 2031, at a CAGR of 24.1%

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 ...



Renewable Energy in Indonesia: Current ...

Conclusion Indonesia's renewable energy sector is undergoing a period of transformation as the country seeks to diversify its energy mix and reduce its reliance on fossil fuels. Solar, wind, geothermal, bioenergy, and ...

Estimating the cost of producing grid-connected solar PV in ...

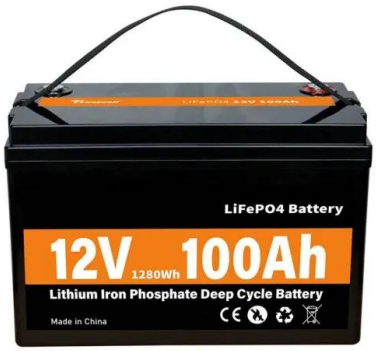
In order to explore the incentives faced by investors in Solar PV in Indonesia, we have constructed a simple tool which calculates the cash flow of a typical project, and then ...

Powering Indonesia's Sustainable Future: The Diesel ...

GEAPP welcomes Indonesia's Diesel Replacement Program to reshape the country's energy landscape. We see a great alignment of this program to our focus in pushing the adoption of Distributed Renewable Energy ...

Our Story

Solar & Storage Live Indonesia 2025, the latest addition to the world's largest portfolio of clean energy events, will be a forward-thinking, dynamic, and innovative exhibition that showcasesthe cutting-edge technologies driving ...



Opportunities for Increased Adoption of Solar Energy and Energy Storage

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Indonesia-Singapore: TotalEnergies and RGE Reach New ...

TotalEnergies and RGE have joined forces in a solar and battery project in Indonesia Today, the project was awarded a conditional licence by Singapore's Energy Market Authority to import 1 ...

LONGi Launches Strategic Solar Panel Manufacturing Project in Indonesia

The project is set to commence manufacturing preparation by June 2025, significantly boosting Indonesia's domestic solar PV production capabilities.

Solar PV still has significant potential in Indonesia

As outlined in the RUEN, by 2050, rooftop solar PV is expected to cover at least 30% of government buildings and 25% of upscale residential complexes and apartments, further contributing to renewable energy practices. ...

Indonesia's PLN to add 200 MW of solar to replace diesel ...

Indonesian state-owned utility Perusahaan Listrik Negara (PLN) aims to install 200 MW of solar photovoltaic (PV) capacity as it tries to replace diesel power generators and lower its carbon ...

Indonesia Solar Energy Outlook 2025

Indonesia Solar Energy Outlook 2025 highlights the crucial role of solar power in improving Indonesia's energy security. The report analyzes how solar PV can help reduce dependence on fossil energy, improve the reliability of electricity ...

Photovoltaic (PV) solar power plants in Indonesia

The progress in solar power development in Indonesia has been significant, especially considering the country's previous reliance on conventional energy sources. Recent ...

Feasibility Study of a Hybrid Power Plant (Solar and Diesel ...

This study investigates the feasibility of implementing a hybrid power generation system combining solar power (PLTS) and diesel generators (PLTD) on Kerayaan Island as a solution ...

Overview RUPTL 2021-2030 Pengembangan EBT

The Solar Power development plan in PLN is carried out by developing usual land based Solar power on grid, utilizing on ex-mining area, floating solar power, and hybrid solar power in ...

Photovoltaic (PV) solar power plants in Indonesia

The progress in solar power development in Indonesia has been significant, especially considering the country's previous reliance on conventional energy sources. Recent projects illustrate the government's commitment to ...

ib vogt Wins Contract for Solar and Battery Storage for Indonesia...

International solar developer ib vogt has secured a significant milestone, being awarded a cluster of 48 projects as part of Pt PLN (Persero)'s Diesel Replacement Program in ...

(PDF) Hybrid PV/Diesel Energy System for Power

Therefore, this article analyzes a case study of a hybrid photovoltaic-diesel system installed in the Tapajós-Arapiuns Extractive Reserve in the Brazilian Amazon region.

How Afore's Energy Storage Inverter Transformed a Home in ...

13 ????· Discover how Afore's AF6K-SLP hybrid energy storage inverter enabled an Italian home to achieve energy independence, lower bills, and boost sustainability.

Role of ESS Bintang 230627.pptx

The estimated total power capacity of the global ESS is more than 160 GW by the end of 2021 and is expected to continue to grow along with the increasing commitment of several countries ...

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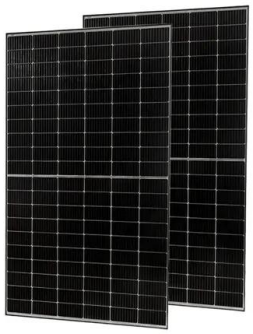
TotalEnergies, RGE Plan 1 GW Solar Plus Storage In ...

TotalEnergies and RGE signed a co-investment agreement for their solar and storage project in Riau during French President Emmanuel Macron's state visit to Indonesia recently.



Powering Indonesia's Sustainable Future: The Diesel ...

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Scaling Up Solar in Indonesia

Solar in particular can make a significant contribution. The technology's quick development time and declining costs could enable Indonesia to meet its 23% renewable energy target by 2025 ...

Solar & Storage Live Indonesia 2025

Solar & Storage Live Indonesia 2025, the latest addition to the world's largest portfolio of clean energy events, will be a forward-thinking, dynamic, and innovative exhibition that showcases ...

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Indonesia's installed solar capacity surpasses 700 MW

The Institute for Essential Services Reform says Indonesia's solar industry has faced a downturn over the past two years, but policy reforms should accelerate solar deployment in the coming

Indonesia: A Nation Rich in Unrealized Solar Energy ...

Indonesia is rich in solar power potential (~207 gigawatts' worth), but there're many facets of challenges needed to be addressed by different parties.

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