

SolarInvert Energy Solutions

Bhutan Solar Power Generation System



Overview

To ensure efficient grid planning and solar integration, Bhutan's power generator, Druk Green Power Corporation, and the transmission and distribution utility, Bhutan Power Corporation, are partnering with the South Asia Group for Energy (SAGE) to develop their solar capabilities, integrate solar energy into the grid, and strengthen Bhutan's energy infrastructure and efficiency. Can solar power plants help Bhutan achieve energy security?

The solar plant in Rubesa is one such initiative which takes Bhutan a step closer to achieving energy security through a diversified and sustainable energy supply mix. The project particularly demonstrates viability of solar power plants on a utility scale.

Can solar power diversify Bhutan's energy sources?

The 180 kW grid-tied solar PV plant, the first of its kind in the country, demonstrates viability of solar power to diversify Bhutan's energy sources
Photo: Department of Renewable Energy, Ministry of Economic Affairs.

Is grid-tied solar a viable alternative energy source in Bhutan?

The commissioning and inauguration of the 180kW grid-tied ground mounted solar photo-voltaic power plant marks the start of Bhutan's investment in grid-tied solar energy as a viable alternative energy source in the face of soaring domestic demand and climate change.

Why should Bhutan invest in solar power?

Like hydropower, sun is a bountiful resource Bhutan can tap into for producing renewable energy in keeping with our carbon neutrality commitments and also for enhancing energy security through diversification of energy sources. The commissioning and inauguration of the 180kW grid-tied ground mounted solar photo-voltaic power plant.

How is Bhutan achieving energy security?

Bhutan is undertaking various initiatives to broaden its energy mix by exploring other clean, renewable energy sources. The solar plant in Rubesa is one such initiative which takes Bhutan a step closer to achieving energy security through a diversified and sustainable energy supply mix.

How is electricity generated in Bhutan?

Electricity in Bhutan is generated mostly from hydropower, an energy source which is renewable unlike fossil-fuel driven power plants that are major contributors to carbon dioxide emissions worldwide.

Bhutan Solar Power Generation System



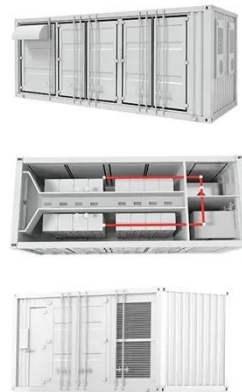
Bhutan Trust Fund

Jun 14, 2024 · The DSP Solar Initiative aims to enhance Bhutan's energy security, showcase the country's leadership in environmental conservation, prove the technical and economic ...

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Promoting renewable energy for a clean and sustainable future

Apr 9, 2021 · The pilot grid-tied solar project at the UN House will demonstrate solar as a reliable energy source and serve as a key driver of energy source diversification in Bhutan. The UN ...



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Distributed Solar for Public Infrastructure Project: Sector ...

Oct 21, 2024 · Bhutan has an installed capacity of 2,460 megawatts (MW) for hydropower generation. However, during the dry season (December-March), the total generation output ...

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Rooftop PV , Solar Energy Potential , Thimphu ...

Assessment of solar energy generation potential in Western Bhutan - A case study of 12 kWp grid-tied rooftop solar photovoltaic system

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Harnessing Bhutan's solar potential with market-driven ...

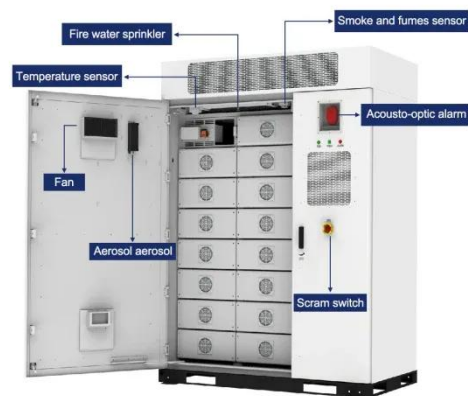
May 12, 2025 · Nearly all of Bhutan's electricity comes from its glacier-fed hydropower plants. In a first major step towards diversifying its energy mix, the Himalayan Kingdom initiated a 180-kW ...

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NATIONAL ENERGY POLICY 2025

Jun 30, 2025 · Associated Transmission System Alternative Renewable Energy Battery Energy Storage System Bhutan Power Corporation Ltd. Concession Agreement Commercial ...

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Bhutan commissions first utility-scale solar plant

Jul 31, 2025 · Bhutan's Ministry of Energy and Natural Resources has inaugurated



the country's first utility-scale solar power plant. The Sephu solar project, located in the town of Wangdue ...

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Rooftop PV , Solar Energy Potential , Thimphu ...

Bhutan faces a growing electricity supply-demand gap, making solar energy a viable solution for energy diversification and security. My recent study ...

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Bhutan : Distributed Solar for Public Infrastructure Project

Feb 1, 2024 · ADB and the Government of Bhutan have signed a \$30 million loan agreement for the Distributed Solar for Public Infrastructure Project. The project aims to generate up to 35 ...

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Delivering Clean and Sustainable Energy through Solar Power in Bhutan

Nov 18, 2024 · A solar photovoltaic (PV) power plant will be constructed and will

add 22 to 23 megawatts of clean energy to Bhutan's power grid. The solar PV power plant will complement hydropower in forming a more diversified electricity generation system and create resilience to the ...

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Bhutan is tapping into solar energy with its first ...

Electricity in Bhutan is mostly generated from hydropower, a renewable energy source, unlike fossil-fuel driven power plants that are major contributors to ...

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Bhutan Power Corporation Limited

Apr 17, 2024 · EXECUTIVE Thimphu : Bhutan SUMMARY Bhutan Power Corporation (BPC) is pleased to publish the 'Power Data Book (PDB) 2023', which presents yearly statistics on ...

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Distributed Solar for Public Infrastructure Project: Sector ...

Oct 21, 2024 · Bhutan's estimated total energy generation potential from rooftop



solar system is 3,586 MW, including specific estimates for Thimphu (789 MW) and Paro (206 MW).5 In ...

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Analyzing the Integration of 17.38 MW Sephu Solar PV ...

Abstract This report involves integrating Sephu Solar PV system's distributed generation into Bhutan's Western grid to examine and assess how the grid performs. Renewable En-ergy ...



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Solar PV - Druk Green Power Corporation Limited

To address above challenges and to reduce the country's dependence on imported power, there is a need to add to the domestic generation capacity while diversifying the source of power ...

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Bhutan , Green Hydrogen Organisation

Hydrogen will transform Bhutan's energy system, serving as a seasonal energy storage solution to balance hydropower

generation, particularly during lean seasons, and enhancing grid stability.

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Press Release

Jul 12, 2023 · It is historic, as we lay foundations for the construction of the 17.38MW Sephu Solar PV Project (SSP) today- Bhutan's first large-scale, ...

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National Energy Policy Target 25,000 MW by 2040

Jul 14, 2025 · Bhutan Charts Unprecedented Energy Growth with 25,000 MW Goal by 2040 TIL BDR GHALLEY Thimphu The Ministry of Energy & Natural Resources (MoENR) has unveiled ...

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Bhutan launches its first grid-tied solar power plant

Oct 4, 2021 · The commissioning and inauguration of the 180kW grid-tied

ground mounted solar photo-voltaic
power plant marks the start of Bhutan's
...



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Project on Power System Master Plan 2040 in Bhutan ...

Jan 15, 2020 · Kingdom of Bhutan
Ministry of Economic Affairs (MOEA)
Department of Hydropower & Power
Systems (DHPS)

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Druk Green Power Corporation Launches Major ...

According to Passang Dorji, the
Associate Director at DGPC overseeing
the project, rooftop solar systems
provide a scalable and practical solution
to Bhutan's energy challenges,
especially ...

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Bhutan pv power plant

One imminent project is the construction
of Bhutan's first mega solar power
plant, a 17MW plant in Sephu, Wangdue.

Today,all of Bhutan's electricity generation is from renewables such as ...

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Analyzing the Integration of 17.38 MW Sephu Solar PV ...

This report involves integrating Sephu Solar PV system's distributed generation into Bhutan's Western grid to examine and assess how the grid performs. Renewable En-ergy source ...

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Bhutan's Biggest Solar Project Yet: A Giant Leap Toward Energy ...

Bhutan inaugurated its first-ever utility-scale solar photovoltaic (PV) power plant on July 19 in Yongtru village, Sephu Gewog (Village Block), in Wangdue Phodrang in central part of Bhutan ...

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South Asia Group for Energy-Bhutan

Apr 5, 2024 · To ensure efficient grid



planning and solar integration, Bhutan's power generator, Druk Green Power Corporation, and the transmission and distribution utility, Bhutan Power ...

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Rooftop solar PV in Bhutan: A systemic analysis of feed-in ...

Dec 1, 2024 · From the field data assessment, it was found that the low existing energy tariff has a cybernetic effect on user acceptability and the financial sustainability of the solar PV feed-in ...

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Assessment of solar energy generation potential in ...

Apr 5, 2025 · Assessment of solar energy generation potential in Western Bhutan - A case study of 12 kWp grid-tied rooftop solar photovoltaic system Sonam Darjay a, Ephraim Bonah ...

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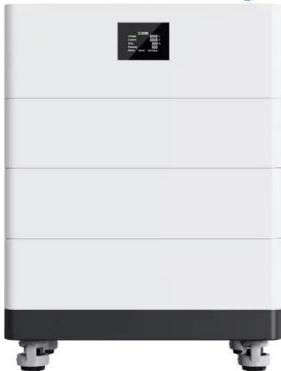
A Comprehensive Review of Bhutan's National Energy Policy ...

Jul 31, 2025 · Explore Bhutan's transformative National Energy Policy 2025 (approved June 2025): how it consolidates previous energy frameworks into one cohesive NEP, opens ...

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High Voltage Solar Battery



PRESS RELEASE

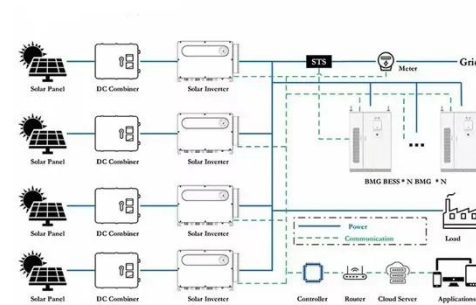
Apr 19, 2024 · Solar power in Bhutan has a complimentary annual power generation profile to hydropower enabling climate adaptation by diversifying the power generation portfolio, ...

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Assessment of Solar Energy Generation Potential in Western Bhutan ...

Feb 1, 2025 · Photovoltaic (PV) systems contribute significantly to renewable energy generation, but their efficiency and reliability are often hindered by environmental conditions, thermal ...

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As hydro wanes Bhutan plans 308 MW of Solar ...

Dec 25, 2021 · The solar energy generation in Bhutan is still in its infancy

and if Bhutan could fully utilize that, it could provide considerable source of revenue. ...

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Bhutan : Renewable Energy for Climate Resilience Project

Oct 18, 2022 · The project will finance the construction of one solar photovoltaic (PV) power plant located in central-west Bhutan with a minimum total capacity of 17.38 megawatt peak (MWp). ...

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Contributing To Energy Security

May 17, 2021 · The project is innovative and transformational, and will contribute towards enhancing Bhutan's energy security, help generate green services ...

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Assessment of solar energy generation potential in Western Bhutan ...

Feb 18, 2025 · To address the growing

electricity demand in the country, solar energy can be a diversification of Bhutan's renewable energy to address domestic energy security and global ...

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First phase of Bhutan's Utility-Scale Solar Project ...

Sep 4, 2024 · The first phase of Bhutan's first utility-scale solar power project at Sephu in Wangdue Phodrang is set for completion by March next year. A ...

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