# Solar energy in house Bhutan



#### Is solar a reliable energy source in Bhutan?

The pilot grid-tied solar project at the UN House will demonstrate solar as a reliable energy sourceand serve as a key driver of energy source diversification in Bhutan. The UN House in Thimphu inaugurated its 83 KW grid connected rooftop solar, a first of its kind in Bhutan, and the 20 KW solar-thermal space heating projects on 8 March 2021.

### Why should Bhutan invest in solar power?

Like hydropower, sun is a bountiful resource Bhutan can tap into for producing renewable energyin 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

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 sourcein the face of soaring domestic demand and climate change.

#### How much does solar energy cost in Bhutan?

The UN House in Thimphu inaugurated its 83 KW grid connected rooftop solar, a first of its kind in Bhutan, and the 20 KW solar-thermal space heating projects on 8 March 2021. Built at a total cost of USD 99,000, the investment works out to USD 1192/KW installed capacity and is comparable to the costs of other conventional energy sources.

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 securitythrough a diversified and sustainable energy supply mix. The project particularly demonstrates viability of solar power plants on a utility scale.

#### How many solar panels does Bhutan have?

With 464 solar panels, the 180kW plant will produce 263,000 units of energy a year, which is adequate to meet the electricity supply demands for around 90 households. Director of the Department of Renewable Energy (DRE), Phuntsho Namgyal, said that Bhutan was endowed with 12,000 megawatts (MW) of solar power potential.

According to the Renewable Energy Management Master Plan 2016, Bhutan has the potential to produce 12 gigawatts of solar power and 760 megawatts of wind energy. Jongmi Son said that distributed solar photovoltaic systems could be deployed quickly, offering a faster solution to meet growing energy demands, while hydropower projects typically ...



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Home energy audits: A home energy audit can help you understand where your home is losing energy and what steps to take to improve the efficiency of your home.; Appliances and electronics: Use your appliances and electronics more efficiently, or consider investing in highly efficient products.; Lighting: Switch to energy efficient lighting, such as LED light bulbs.

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On average the solar panels have generated 897.8 units of energy in a month which is enough to power eight rural residential consumers, 10 highlander consumers, and three urban consumers in a month, considering ...

Bhutan Solar Initiative Project (BSIP) aims towards achieving a sustainable energy supply for Bhutan through alternative renewable energy sources of solar grid integration. About 60 De-suups have been actively involved in th is six-month long project and have gained practical knowledge of installing solar PV systems through hands-on experience.

The DSP Solar Initiative aims to enhance Bhutan's energy security, showcase the country's leadership in environmental conservation, prove the technical and economic feasibility of solar power, and encourage its adoption by both public and private sectors.

In the next two years, Bhutan plans to harness 300 megawatts of solar energy, Minister for Economic Affairs Lokhnath Sharma has told The Third Pole. Currently, the country's installed renewables capacity (excluding hydropower) is about 9 MW.

Solar energy in Bhutan has received direct investment from domestic and international sources. In 2010, Asian Development Bank provided a grant of over USD21 million for electrification of rural homes, aiming to provide power both on-grid and off-grid. [1] [51] ...

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 hydropower, wind, and solar. However, 78 percent of the country's energy consumption is supplied by fossil fuels, largely for transportation purposes.

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demand and climate ...

99% of Bhutan's energy mix (Department of Energy, 2010). Bhutan recognizes the need to diversify their electricity production and wants to achieve this with renewable energy sources (Department of Energy, 2010). The largest energy consumer in Bhutan is the residential sector representing around 47% of the

Bhutan, the land of Gross National Happiness, is creating renewable energy from animal waste, while reducing air pollution and increasing agricultural outputs, as it also reduces the labor necessary to power

With limited roof space available, the selection of the most suitable solar energy systems to meet hot water and electricity demands for a household in a cost-effective way is always a challenge.

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The project in Aja Ney includes two decentralized distributed generation solar power plants. The first, a 25 kW plant, serves 14 households, a guest house and a medicinal hot stone bath facility, and the Pema Yangdzong monastery. The second, a 5 kW plant, serves an additional five homes and the local Dungkarchoeling temple.

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