

# **Bhutan solar energy storage power generation system**





## Overview

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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. How can Bhutan improve its energy security?

To improve Bhutan's energy security while strengthening resilience to water variation and climate change, it is required to diversify power generation sources and types, including (i) solar farms, rooftop and floating solar, and agrivoltaics; and (ii) storage and pumped storage hydropower and small hydropower. 4 H. Nagai et al. 2017.

Who owns the energy sector in Bhutan?

Bhutan's energy sector operations have separate commercial management and ownership from the government. The state-owned Druk Green Power Corporation (DGPC) owns and operates power plants while the Bhutan Power Corporation, also state-owned, performs transmission and distribution.

How much energy can a rooftop solar system generate in Bhutan?

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).<sup>5</sup> In Thimphu alone, there are 1,521 government buildings suitable for rooftop solar installations, with an estimated capacity of 50 MW.

What is the main energy source in Bhutan?

On-grid hydropower is the country's main energy source. Bhutan operates four major hydroelectric facilities, several small and mini hydroelectric generators, and has a handful of further sites in development. Many of the small and mini hydropower plants in Bhutan serve remote villages that remain disconnected from the power grid.



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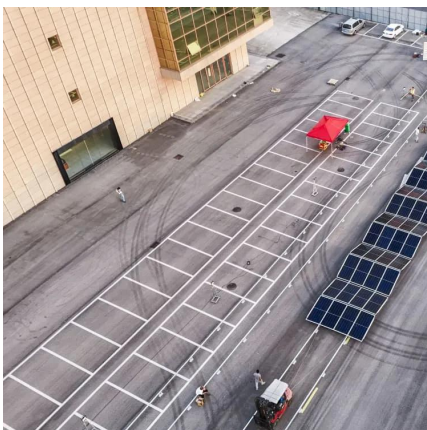
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