

## ContainerPower Energy Solutions

# Palestine Smart Energy Storage Battery



## Overview

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This work evaluates the integration of lithium-ion battery energy storage systems (BESS) into Palestine's fragmented power grid, focusing on environmental, technical, and economic dimensions. How is the electricity system in Palestine different from other countries?

And upgrade of the electricity grid to enable distribution of renewable energy, by 2030 . The electrical energy system in Palestine state is different from any other country, because Palestine imports its energy from three different sources; from Israel (85 %), Jordan (2 %) and Egypt (3 %).

What is Palestine's energy strategy?

Palestine's approach is to priorities high-emitting sectors such as, power generation (62 %), transport (15 %), and waste (23 %). The National Adaptation Plan is as: increase the share of renewable energy in electrical energy mix by 20–33 % by 2040, primarily from solar PV. Improve energy efficiency by 20 % across all sectors by 2030.

Is Palestine a good place for solar energy?

With 3,400 hours of sunlight per year and an average daily global solar radiation ranging from 6.15 to 8.27 kWh/m<sup>2</sup>, Palestine has a great potential for solar energy , . The capacity of rooftop solar systems to produce power in the WB and GS is 534 and 163 MW, respectively .

Does Palestine have a potential for PV power generation?

The System Advisor Model software (SAM) was used to predict the power potentials for a year. The results indicate that Palestine has a significant potential for PV power generation within 1,700 kWh/kWp.

Does Palestine use solar water heaters?

Even though solar water heaters are widely used in Palestine, solar thermal energy only accounts for 8 % of the country's total energy consumption . In

WB, 63.1 % of houses had solar water heaters in 2019, while the GS figure was 43.8 % and produced more than 600 GWh .

How much energy does Palestine need?

Palestine's current estimated average daily energy needs are 19.795 MWh. In a whisker plot, the monthly load profile is displayed (Fig. 21). The line at the top of the graph displays the monthly maximum value, while the line at the bottom displays the monthly average minimum value.

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