SolarInnovate Energy Solutions

Distributed Energy Storage in Nepal

Overview

Why does Nepal have a decentralised power system?

The well-known cancellation of Arun III in 1995 and the availability of alternative models led to Nepal's decentralised power development. It matters that this distributed generation and storage of electricity is close to the point of use.

How many power plants are there in Nepal?

Six of the country’s seven provinces generate hydropower as their main energy source, while Madhes Province generates solar energy. While NEA (Nepal Electricity Authority) and its subsidiaries own and operate 20 generation stations, the remaining are owned and operated by Independent Power Producers (IPP).

What is the average size of a hydropower project in Nepal?

The average size of hydropower projects on Nepal’s grid is 15.5MW, while the average solar project is 4.2MW. The average size of projects under construction is larger -- 39.5MW for hydro and 6.9MW for solar respectively. For most hill and mountain districts, hydropower is easily the largest investment, private or public, in their history.

Why do we need high voltage transmission lines in Nepal?

Extending high voltage transmission lines to evacuate power from smaller local projects adds cost. However, every power plant and the transmission line to access it has aided Nepal in accelerating electrification and strengthening power infrastructure to the district where it is located.

Why did Nepal not invite India to build hydropower projects?

Donor funds could never be aggregated at the scale needed for the investments required, and the country was not attractive to the international private sector. Nepal opted not to invite India to construct its large

hydropower projects to supply the Indian market the way Bhutan did.

How did Arun III affect Nepal's decentralised power development?

In fact, its published strategy was to mobilise international aid for hydropower projects larger than Arun III. The well-known cancellation of Arun III in 1995 and the availability of alternative models led to Nepal's decentralised power development.

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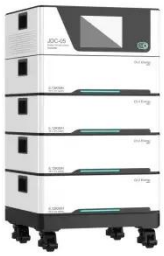

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