

## **PDEOZE PowerContainer**

# **India s Household Energy Storage Policy**



## Overview

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This study, through comprehensive grid simulations, examines key aspects of energy storage in India, including required capacity, optimal locations, duration, technologies, costs, and policy framework, to meet growing electricity needs in a least-cost manner, while preventing the stranding of thermal assets. Can energy storage technology help India's energy transition?

Energy storage technologies, with their ability to provide grid management services, could play a critical role in India's energy transition. The government is also encouraging the growth of this sector through various policies and interventions. Energy storage systems framework a boost for power sector.

How can Indian policymakers broaden the role of energy storage?

If Indian policymakers want to broaden the role of energy storage in the power system, an important first step is to include energy storage in national energy policies and programs.

Why is energy storage important in India?

The technical system characteristics of the Indian power system are favorable for energy storage to reduce operating cost and improve system reliability. Storage can provide energy arbitrage, ancillary services, and potentially defer transmission investments, but existing policy and regulatory barriers may limit these opportunities.

Should energy storage be regulated in India?

India's existing regulations present a useful framework for enabling energy storage deployment; however, current regulations that explicitly restrict storage from providing services or earning revenue for those services present a barrier to maximizing the cost-effective value of storage investments.

Who handles energy storage in India?

The Ministry of Power and the Ministry of New and Renewable Energy are the

key ministries handling energy storage. NITI Aayog is the premier policy 'Think Tank' of the Government of India, providing directional and policy inputs.

Does India need a robust energy storage infrastructure?

With India projected to account for 40% of global energy demand growth by 2040 and targeting 50% electricity generation from renewables by 2030, the need for robust energy storage infrastructure is critical. IESA's recommendations span supply chain resilience, material security, grid integration, and regulatory reforms.

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