SolarInnovate Energy Solutions

Indian Energy Storage Consortium Frequency Regulation Project

Overview

Will India's first battery energy storage system be regulated in 2024?

New Delhi | 08 May 2024 — In a significant step forward for India’s energy transition, the Delhi Electricity Regulatory Commission (DERC) has granted regulatory approval of India’s first commercial standalone Battery Energy Storage System (BESS) project.

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.

Are battery energy storage systems the future of energy in India?

Harsh Shah, Managing Director, IndiGrid, said, “Battery Energy Storage Systems are central to the future of energy in India. They bridge the intermittency of renewables, reduce fossil fuel dependency, and unlock flexible, reliable power delivery.

Can energy storage accelerate India's energy transition?

Energy storage has the potential to meet these challenges and accelerate India's energy transition. The potential for storage to meet these needs depends on many factors, including physical characteristics of the power system and the policy and regulatory environments in which these investments would operate.

Will energy storage provide energy arbitrage & resource adequacy services in India?

Load factors in India have been declining and are projected to continue to do so, indicating a growing opportunity for energy storage to provide energy arbitrage or resource adequacy services. Over the 2016 to 2020 period,

India's load factor declined by 2%.

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.

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A comprehensive review of wind power integration and energy storage

May 15, 2024 · Integrating wind power with energy storage technologies is crucial for frequency regulation in modern power systems, ensuring the reliable and cost-effective operation of ...

India's Frequency Control Landscape and the Role of Battery Energy

Jun 29, 2025 · The Indian grid follows a multi-tiered frequency regulation framework managed by POSOCO, supported by State Load Despatch Centres (SLDCs) and Regional Load Despatch ...

Improving framework conditions for energy storage in India

Aug 14, 2025 · A consortium was founded under the project, consisting of the Fraunhofer Institute for Energy Economics and Energy System Technology (Fraunhofer IEE), the Indian Institute of ...

Applications of flywheel energy storage system on load frequency

Mar 1, 2024 · The coupling coordinated frequency regulation control strategy of thermal power unit-flywheel energy storage system is designed to give full play to the advantages of flywheel ...

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