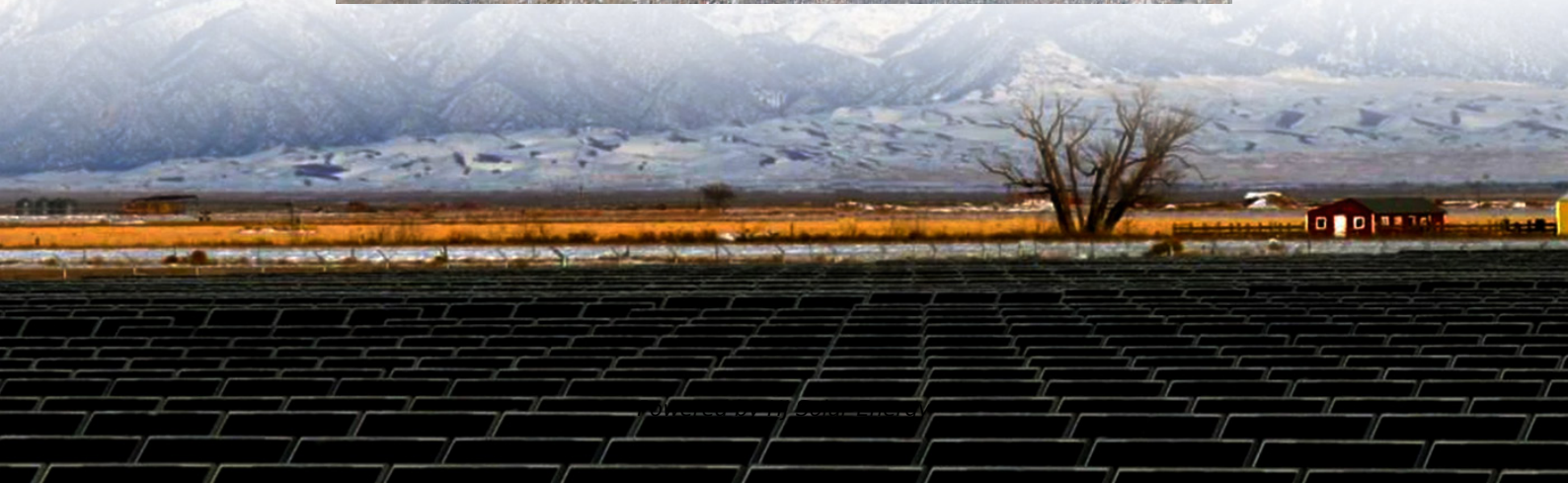
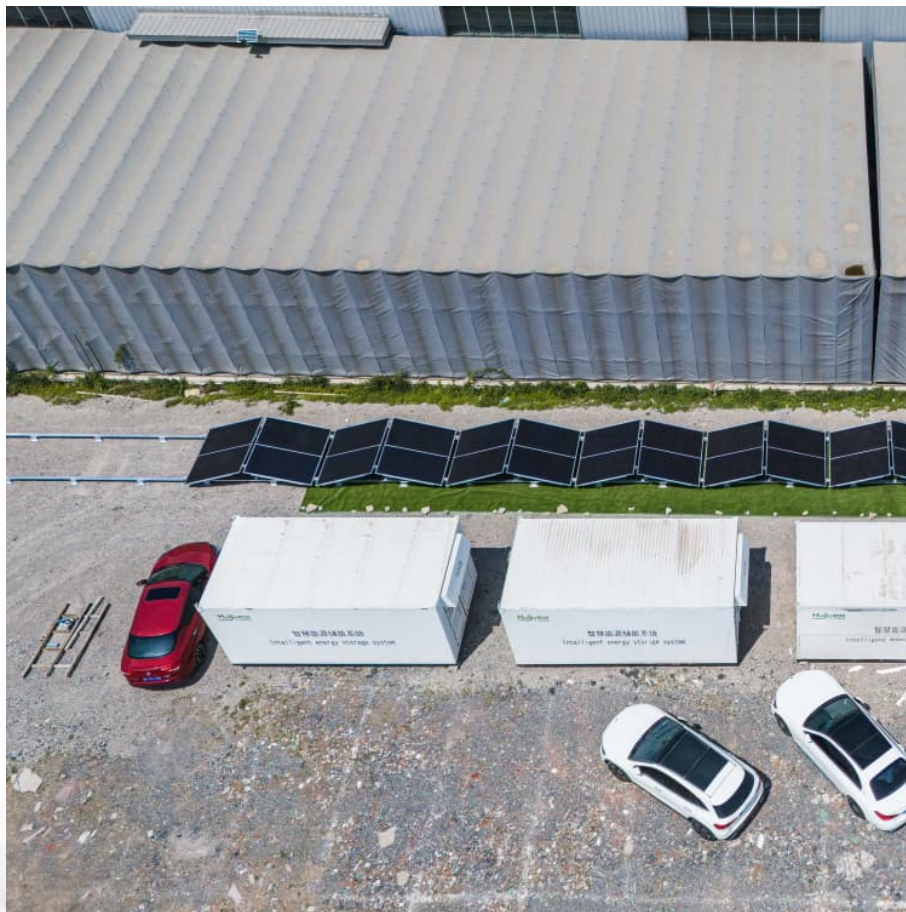


# **Industrial energy storage project financing options in India 2025**





## Overview

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A key government initiative includes the viability gap funding (VGF) scheme for battery energy storage systems, alongside the development of a pumped hydro storage policy announced in the FY25 budget.

A key government initiative includes the viability gap funding (VGF) scheme for battery energy storage systems, alongside the development of a pumped hydro storage policy announced in the FY25 budget.

India was also the world's largest recipient of development finance (DFI) funding in 2024, receiving around USD 2.4 billion in project-type interventions in clean energy generation. This helped bring the share of non-fossil power generation capacity to 44% in 2024, approaching India's target of 50%.

The Central Electricity Authority projects an energy storage requirement of 60.6 GW/341.2 GWh by 2030, which can be met via Battery Energy Storage Systems (BESS) or Pumped Storage Projects (PSP). There has been a policy push to promote the construction of PSPs at the national and state levels to

ems (Standalone ESS) emerging as a key enabler. As the country rapidly scales up variable renewable energy (VRE), Standalone ESS offers a dispatchable solution to address the intermittency of renewables, su andalone ESS functions as an independent asset. Utilities, grid operators or third-party.

The Indian Battery Energy Storage System (BESS) market stands at the cusp of extraordinary growth, with projections indicating an expansion from ₹650 billion (USD 7.8 billion) in 2024 to a remarkable ₹2.67 trillion (USD 32 billion) by 2030. This represents a robust Compound Annual Growth Rate.

Utility-scale ground-mounted projects have been driven India's installations, and market demand will likely rise further in 2024 and 2025 under government-led tenders. Meanwhile, India's energy storage demand is also picking up. According to the NEP 2023, India's storage demand is projected to

Energy storage projects will become central in the renewable energy sector



with more green capacity, supportive policies, financial incentives, lower battery prices, and rising demand. Battery prices are decreasing, and India is working on battery energy and pumped hydro storage policies. By 2032. What is the status of pumped storage projects in India?

The status of pumped storage projects in India Energy storage is critical towards ensuring grid reliability, security, and cost optimisation given India's growing share of renewable energy in its power purchase mix.

Is India a leader in battery energy storage & pumped hydro storage?

Battery prices are decreasing, and India is working on battery energy and pumped hydro storage policies. By 2032, India aims to be a market leader in the energy storage sector. A total of 178 MWh of battery energy storage projects were commissioned in 2024, while 29 GWh worth of such capacity moved to the execution phase.

Will India get a battery storage system by 2025?

"We foresee an acceleration phase for the deployment of battery storage systems for renewables in India by 2025," said Debi Prasad Dash, president, India Energy Storage Alliance (IESA). "Many Indian companies have evolved, and numerous global companies have entered the Indian market this year."

Will India achieve a 365 GW PV generation capacity by 2023?

According to the National Energy Plan (NEP) 2023, India aims to achieve a PV installed capacity of 186 GW by 2026-2027 and to reach 365 GW by 2032. Such a vast PV generation capacity will require corresponding energy storage systems to maintain grid stability, making storage technology a crucial element in the current energy transition.

Will India become a market leader in battery energy storage?

IESA expects a cumulative market potential of around 250 GWh of battery energy storage requirements by 2032. "We believe that over the next seven years, India will become a market leader in this sector, alongside the US, Australia, Europe, and China," IESA's Dash said. (You can now subscribe to our Economic Times WhatsApp channel).

Can solar-plus-storage transform India's energy landscape?

As a long-term renewable energy partner in India, we recognize the immense



potential of solar-plus-storage in transforming the country's energy landscape. We are actively exploring co-located solar and storage as well as standalone BESS projects to support energy security, grid reliability, and sustainable economic growth.



## Industrial energy storage project financing options in India 2025

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### India's challenges and opportunities for PV, energy storage cells ...

As India's renewable energy grows, demand for energy storage is increasing, driving various technologies forward. PSH and lithium-ion battery energy storage systems (Li ...

### [Financing Models for Battery Energy Storage Projects](#)

This represents a robust Compound Annual Growth Rate (CAGR) of 27% during the 2025-2030 period, creating unprecedented opportunities for investors, developers, and financial ...



### India's Renewable Energy Sector

India's renewable energy sector stands out as the most interesting and transformative industry in the country's economic landscape. This visual report highlights why this sector deserves ...

### [India - World Energy Investment 2025 - Analysis](#)

In 2024, 83% of power sector investment went to clean energy. India was also the world's largest recipient of development finance (DFI) funding in 2024, receiving around USD 2.4 billion in project-



type interventions in clean energy generation.

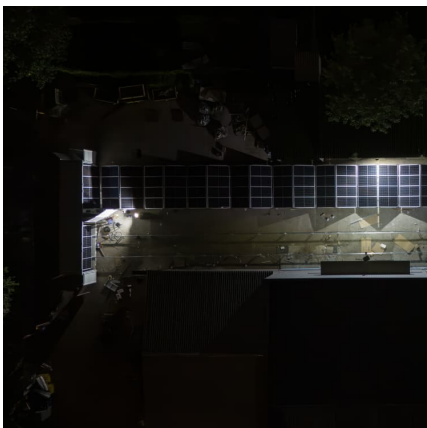


### [The Standalone Energy Storage Market in India 1](#)

Key Findings Standalone Energy Storage Systems (ESS) are rapidly emerging as a key market, with 6.1 gigawatts of tenders issued in the first quarter of 2025 alone, accounting for 64% of the ...

### [Solar Funding in India: A Complete Guide for ...](#)

5. Conclusion The solar energy industry in India is poised for tremendous growth, but accessing the right funding is essential for startups aiming to scale. Whether through equity financing, government subsidies, or ...



### [Unlocking India's Energy Transition: Addressing Grid ...](#)

However, policy volatility, high open access charges, and distribution companies hurdles persist. Unlocking India's energy future hinges on regulatory stability, stronger financial de-risking ...



### [Energy financing and funding - World Energy ...](#)

State-backed finance is also important for electricity storage outside of batteries - in 2019, two sovereign wealth funds - GIC in Singapore and the Abu Dhabi Investment Authority - provided equity for a pumped-hydro project taking final ...



### [Gap Analysis for Deployment of Grid-Scale Storage ...](#)

Commercial and Industrial (C& I) Energy Storage: Commercial and industrial energy storage systems are often implemented by firms, industrial facilities, and universities to ...

### [Energy sector trends & outlook for the future . EY](#)

What is the outlook for 2025? Energy security and imports With crude oil import dependency at approximately 85%, energy security in India remains one of the top priorities for India to support economic activity. The government is ...



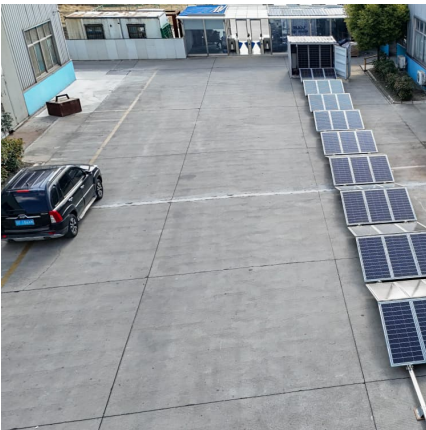
### [DOE Announces \\$289.7 Million Loan Guarantee to](#)

As part of the Biden-Harris Administration's Investing in America agenda, the U.S. Department of Energy (DOE) Loan Programs Office (LPO) today announced the closing of a \$289.7 million loan guarantee to Sunwealth ...



### Financing the Energy Transition: Meeting a Rapidly Evolving ...

ature rise to 1.5°C above pre-industrial levels, has significantly increased. According to Bloomberg New Energy Finance (BNEF), investments in energy transition projects - including power grids, ...



### [How to finance battery energy storage , World ...](#)

Battery energy storage systems can address the challenge of intermittent renewable energy. But innovative financial models are needed to encourage deployment.

### [Renewable Energy Financing Landscape in India](#)

Renewable Energy Financing Landscape in India The Journey So Far and the Need of the Hour Executive Summary The Indian renewable energy sector has witnessed unprecedented growth ...



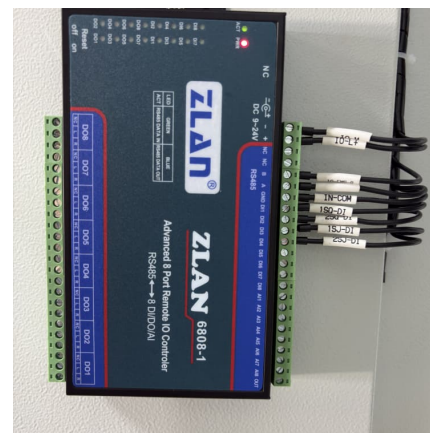


### "Battery energy storage market in India is on the cusp ...

The next five years will witness a transformative shift in India's energy landscape, positioning the country as a global leader in energy storage innovation, says Saurabh Kumar, vice president-India, GEAPP (Global Energy ...

### Smart Solar Finance Options in India , Low-Interest ...

Compare solar financing in India--low-interest loans, subsidies, EMIs, leasing & PPAs for all. Save more on your solar investment.



### Enhancing Financing Availability is Crucial for ...

A state-owned renewable energy sector InvIT can be a viable option for investing in clean energy projects and attracting DII capital. With a slew of credible renewable energy projects in India's pipeline, the next step for the ...

### **The age of storage: Batteries primed for India's power markets**

The age of storage: Batteries primed for India's power markets Extreme price swings in wholesale electricity markets and growing concerns around grid instability are ...



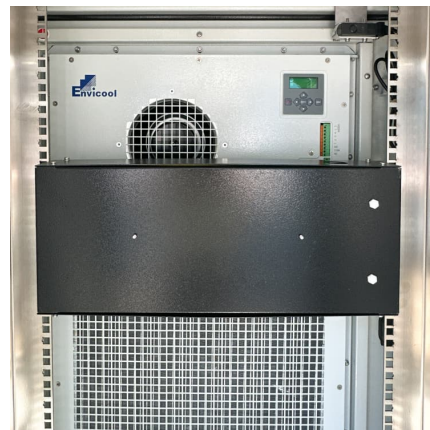
### Energy Storage Grand Challenge Energy Storage Market ...

Foreword As part of the U.S. Department of Energy's (DOE's) Energy Storage Grand Challenge (ESGC), DOE intends to synthesize and disseminate best-available energy storage data, ...



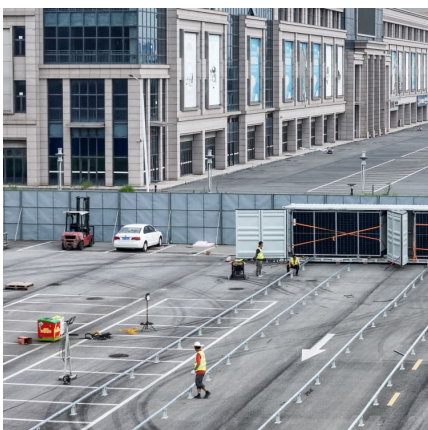
### [What's holding India back in its renewable energy ...](#)

The ISTS waiver exempts renewable energy projects commissioned up to 30 June 2025 from transmission charges, making them cost-effective. Though the Ministry of Power has extended this waiver to green ...



### Flooded with options? The status of pumped storage projects ...

In light of India's larger ambitions to meet a growing portion of its energy requirements from RE sources, storage investments become critical to ensure reliability and cost-optimisation.





## Powering up renewables with battery energy storage systems

India's battery energy storage systems (BESS) market is poised for significant expansion, driven by ambitious renewable energy (RE) targets and an increasing need for grid ...



## [The Standalone Energy Storage Market in India 1](#)

Key Findings Standalone Energy Storage Systems (ESS) are rapidly emerging as a key market, with 6.1 gigawatts of tenders issued in the first quarter of 2025 alone, accounting for 64% of the ...

## [The Standalone Energy Storage Market in India 1](#)

Standalone Energy Storage Systems (ESS) are rapidly emerging as a key market, with 6.1 gigawatts of tenders issued in the first quarter of 2025 alone, accounting for 64% of the total ...



## [PUMPED STORAGE PLANTS - ESSENTIAL FOR INDIA'S ...](#)

Ministry of Power has, in April 2023, notified the guidelines to promote pumped storage projects. The Report on "Pumped Storage Plants - essential for India's Energy Transition" recommends ...



### [Accelerating pumped storage development in India](#)

A white paper by EDF outlines the key challenges hindering pumped storage project (PSP) growth as planned by Government of India and provides strategic recommendations to improve project viability, attract private ...



### **Energy Storage Financing: Project and Portfolio Valuation**

The difference is that energy storage projects have many more design and operational variables to incorporate, and the governing market rules that control these variables are still evolving. ...

### **Battery Energy Storage Systems**

Industry Overview India is deeply committed to its transition away from traditional fossil fuels and building its non fossil fuel capacity to at least 500 GW by 2030. The country's cumulative ...





### Energy Storage Projects to Take Center Stage in India's ...

The need for energy storage solutions has become more evident as India seeks to increase its share of renewable energy. Storage is essential for addressing ...

### India's Energy Storage to Grow 5X by 2032, Driven by INR4.79 ...

India is rapidly emerging as a global hub for energy storage, driven by strong government support and a vision to achieve climate resilience and grid stability.



### India's Energy Storage to Grow 5X by 2032, Driven by INR4.79 ...

The Stationary Energy Storage India (SESI) 2025 conference brought together 200+ global leaders, signaling robust policy, investment, and innovation momentum. With ...

### [Scaling Clean Energy in India: Financing the Transition](#)

Public markets remained active despite broader volatility, with 10 major clean energy and e-mobility firms going public in 2024 and more in the pipeline. As complex projects such as solar-wind-storage hybrids proliferate, ...



### **Storage projects in green energy sector to be focus area in 2025**

Energy storage projects will become central in the renewable energy sector with more green capacity, supportive policies, financial incentives, lower battery prices, and ...

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