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Energy• Storage

India’s ₹17,314 Crore Battery Bet

Why 92 GWh of Grid Storage and Domestic Lithium–Nickel Processing Could Reshape the Power Sector

India's energy transition is shifting beyond solar and wind expansion towards energy storage and grid stability. The Union Cabinet has approved two schemes to strengthen renewable energy infrastructure. The first allocates ₹14,500 crore to develop 92 GWh of grid-scale energy storage, while the second provides ₹2,814 crore for domestic lithium and nickel processing facilities. Together, these initiatives aim to improve renewable energy reliability, manage peak demand and reduce import dependence.



Together, the two schemes provide ₹17,314 crore in government support to strengthen India's battery ecosystem. The storage scheme will boost demand for batteries and related technologies, while the mineral-processing scheme aims to reduce reliance on imported materials. The 92 GWh storage programme is expected to attract approximately ₹97,600 crore in investment. It includes 30 GWh of battery energy storage, 60 GWh of pumped-hydro storage and 2 GWh of emerging technologies. Battery projects must also meet a minimum 40% domestic-content requirement, supporting local manufacturing and supply-chain development.

However, the opportunity comes with significant risks. Battery prices have begun rising again, several previously awarded storage projects may struggle to earn acceptable returns, pumped-hydro projects face long construction and approval periods, and India will continue to depend on imported mineral feedstock even after domestic processing plants are established.

What's Happening?

On November 4, 2026, the government approved a viability-gap funding scheme for grid-scale energy storage covering FY2026-27 to FY2030-31.

The scheme consists of:

- 30 GWh of battery energy storage systems, or BESS.
- 60 GWh of hydro pumped-storage projects.
- 2 GWh of alternative or emerging storage technologies.
- Total government support of ₹14,500 crore.
- Estimated project investment of ₹97,600 crore.
- Allocation of capacity through tariff-based competitive bidding.
- A minimum domestic-content requirement of 40% for BESS projects.

Public- and private-sector distribution companies will be eligible to procure supported battery and pumped-storage capacity. Emerging storage projects can be developed by public or private entities.

The government says that the 92 GWh addition is equivalent to approximately 170% of India's present grid-scale storage capacity. This implies an existing grid-storage base of roughly 54 GWh, including batteries and pumped hydro.

If the complete scheme is commissioned, the supported projects would take the comparable storage base to approximately 146 GWh, before accounting for other projects being developed separately. However, India is estimated to require around 411 GWh of storage by FY2031-32. Therefore, even the full 92 GWh programme represents only about 22% of the final requirement.

The Cabinet simultaneously approved a ₹2,814 crore capital-support programme for critical-mineral processing. It will offer a 30% capital subsidy for two lithium processing and two nickel-processing plants. The programme is expected to mobilise approximately ₹10,000 crore of investment.

Why Has Storage Become the Next Power-Sector Bottleneck?

As of September 2026, India had approximately 308 GW of non-fossil electricitygeneration capacity. The country added more than 55 GW of non-fossil capacity during FY2025-26 alone, including 44.6 GW of solar and approximately 6 GW of wind.

India's peak electricity demand has also risen rapidly. The national grid met an all-time peak requirement of around 270.8 GW in May 2026. At first glance, having more than 300 GW of non-fossil capacity against peak demand of around 271 GW may appear sufficient. But installed capacity and available electricity are not the same.

Solar plants generate most of their electricity during the day, often between late morning and afternoon. Household and commercial demand can remain high after sunset, precisely when solar production falls to zero. Wind generation depends on seasonal and regional weather patterns, while hydroelectric output depends on water availability.

Storage allows electricity generated at one time to be used at another. A battery can absorb excess solar power during the afternoon and discharge it during the evening peak. Pumped storage can use surplus electricity to pump water into an upper reservoir and later release it through turbines when demand rises. Without adequate storage, the electricity system must rely more heavily on coal, gas, hydro generation or expensive short-term power purchases to balance renewable fluctuations. In some cases, renewable power may have to be curtailed even when solar or wind plants are technically capable of producing electricity.

India's storage requirement is therefore rising much faster than its current operational base. The Central Electricity Authority estimates that the country will require 47.24 GW—or approximately 236 GWh—of battery storage by FY2031-32. Pumped-storage requirements are projected at 26.69 GW, equivalent to approximately 175 GWh.

The Financial Mathematics of the New Scheme

The government is providing ₹14,500 crore of support against estimated investment of ₹97,600 crore. This means public support is expected to cover approximately 14.9% of the total project investment. Every rupee of viability-gap funding is therefore expected to mobilise approximately ₹6.73 of total investment. On a blended basis, the investment works out to approximately ₹1,061 crore per GWh of storage, while government support averages around ₹158 crore per GWh. These are only broad averages because batteries, pumped hydro and emerging technologies have very different construction costs and operating characteristics. The viability-gap funding is intended to close the difference between the cost of building storage and the tariff that electricity buyers can afford.

This is important because a storage project does not produce electricity. It purchases or receives electricity, stores it and later supplies it back to the grid after accounting for energy losses. The project's revenue must therefore cover:

- The cost of the battery or storage facility.
- Financing expenses.
- Land and grid-connection costs.
- Charging-energy expenses.
- Operating and maintenance costs.
- Battery degradation or equipment replacement.
- The developer's required return.
- Energy lost during charging and discharging.

If storage tariffs become too high, distribution companies may hesitate to sign contracts. If tariffs are pushed too low through aggressive auctions, developers may win projects that later become financially unviable.

The VGF programme attempts to reduce this tension by absorbing part of the initial capital cost.

Processing in India Does Not Eliminate Raw-Material Dependence

Domestic processing and domestic mining are different. India can establish lithiumconversion and nickel-refining facilities, but these plants will still require ores, concentrates or intermediate materials. Unless domestic mines provide sufficient material, processors will have to secure long-term supplies from countries such as Australia, Argentina, Chile, Indonesia or other resource-rich regions.

India's National Critical Mineral Mission is attempting to address this problem through exploration, overseas acquisitions, processing parks and recycling. The mission has an outlay of ₹16,300 crore, including ₹2,600 crore of budgetary support. India's overseas mineral company, KABIL, has secured lithium exploration rights in Argentina. A separate ₹1,500 crore recycling incentive programme has attracted proposed capacity substantially
exceeding its initial target.

The logical value chain is therefore:

Mineral security → overseas or domestic feedstock → Indian processing → cathode and anode materials → cell manufacturing → battery packs → grid-storage projects → recycling and material recovery.

The latest schemes strengthen the processing and deployment stages, but India still needs reliable feedstock, technology, skilled personnel and recycling capacity.



Why Lithium and Nickel Have Become Strategic?

Global mineral processing is more geographically concentrated than oil production. The International Energy Agency estimates that, excluding rare earths, the leading refining country controlled an average of approximately 72% of refined supply in 2025. China dominates the processing of several major energy minerals, while Indonesia is the leading source of refined nickel growth.

Lithium prices more than doubled by early 2026, while cobalt prices rose approximately 130%, highlighting supply-chain risks. India's lithium-ion battery demand is projected to grow from 16 GWh in 2023 to 248 GWh by 2035, at 26% annually. By 2035, electric mobility could account for 63% of demand, energy storage 29%, and consumer electronics just 8%.

One important distinction is that not every battery needs nickel. LFP batteries, increasingly popular for grid storage, use lithium, iron and phosphate but no nickel or cobalt.

Nickel processing remains relevant because nickel-rich battery chemistries can provide higher energy density for passenger vehicles and specialised applications. Nickel is also strategically important for stainless and speciality steel, defence and industrial manufacturing. The two mineral-processing plants should therefore not be viewed only as suppliers to grid-storage projects. They are intended to support a broader battery, electric-vehicle and industrial ecosystem.

What Does This Mean for Investors?

The storage opportunity extends far beyond battery manufacturers.

Renewable-Energy and Storage Developers

Power producers and specialised storage developers can build assets backed by long-term capacity agreements. Storage also allows renewable companies to offer firm, dispatchable and round-the-clock power rather than selling only intermittent solar or wind electricity.

However, investors should examine the tariff, VGF support, charging arrangements, debt costs and battery-replacement assumptions for each project. A large order book is not valuable if projects were won at uneconomic tariffs.

Battery Cells, Packs and System Integrators

The 40% domestic-content requirement creates opportunities for companies manufacturing cells, modules, packs, enclosures and battery-management systems.

System integration is particularly important. Grid batteries require cooling, fire protection, digital monitoring, power conversion and coordination with grid operators. Companies with proven safety records and operating experience may have an advantage over businesses offering only low-cost assembly.

Power Electronics and Electrical Equipment

Every BESS project requires inverters, power-conversion systems, transformers, switchgear, cables, control equipment and grid connections.

This creates a potentially broader and less technology-specific opportunity than batterycell manufacturing. Even if battery chemistry changes, storage projects will continue to require electrical balance-of-system equipment.

Pumped-Hydro and Infrastructure Companies

The 60 GWh pumped-storage allocation can generate orders for civil-construction companies, turbine manufacturers, hydroelectric-equipment suppliers and transmission contractors.

The opportunity is substantial, but revenue recognition may be slow. Investors should monitor environmental approvals, land acquisition, geological studies and project financing before assigning value to announced capacity.

Ports, Logistics and Shipping

Critical-Mineral Processors and Recyclers

The mineral scheme creates an opportunity for metallurgical companies capable of processing lithium and nickel intermediates into high-purity products.

But this is not a simple commodity business. Battery-grade materials require consistent purity, specialised technology, customer qualification and secure feedstock contracts.

Recycling may eventually become equally important. As batteries reach the end of theirlives, recovery of lithium, nickel, cobalt, copper and graphite can reduce import dependence and create a more circular supply chain.

Distribution Companies and Industrial Consumers

Storage can help distribution companies reduce expensive peak-power purchases, manage renewable obligations and improve supply reliability.

Commercial and industrial consumers can use batteries to avoid peak tariffs, reduce diesel-generator dependence and combine renewable power with more reliable supply.

The benefit will depend on whether the savings from lower peak costs exceed the storage tariff and charging losses.

Conclusion

India's ₹17,314 crore battery and storage push represents an important change in the country's clean-energy strategy. The first stage of the transition focused primarily on installing solar and wind capacity. The next stage is about making that renewable power dependable, dispatchable and available after sunset. This requires batteries, pumped hydro, grid equipment, processed minerals, domestic manufacturing and long-term financing.

The ₹14,500 crore viability-gap funding programme could mobilise nearly ₹97,600 crore of investment and add 92 GWh of storage. The ₹2,814 crore mineral-processing scheme could support approximately ₹10,000 crore of investment while establishing India's first meaningful commercial-scale lithium and nickel processing base.

For investors, the opportunity is spread across renewable developers, battery integrators, electrical-equipment manufacturers, hydro contractors, mineral processors, recyclers and trade-finance providers. But the theme should not be approached as a simple batterymanufacturing story. Project tariffs, mineral prices, domestic-value addition, technology, safety and execution will determine which companies actually create value.

India has now started building the middle of its energy-transition value chain—the infrastructure between renewable generation and reliable electricity supply. If the schemes are implemented effectively, storage could become one of the country's largest power-sector investment themes over the next decade. If tariffs are set too aggressively or domestic manufacturing remains limited to assembly, the country could create large capacity while continuing to depend heavily on imported technology and materials.



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