



Merchant BESS in India 2026: Revenue Stacks, Tolling Deals and Bankability

By Sudarshan Karweer · 13 September 2026 · growthifye.com

A practitioner guide to merchant BESS in India: revenue stacking, tolling structures, tariffs, dispatch maths and lender concerns in 2026.

India's battery-storage conversation has largely been framed around VGF-backed tenders, ancillary services, co-located renewable projects and FDRE bids. A different opportunity is now taking shape in 2026: merchant and quasi-merchant BESS, where a project earns from market-linked spreads, capacity-style fixed payments through tolling, and selected grid or balancing services rather than relying only on a single long-term tariff.

For Indian developers, C&I buyers, utilities and lenders, this is the next hard question: can standalone BESS work without full revenue certainty, and if yes, under what structure? The answer is not a simple yes or no. Merchant BESS can be viable in India, but only where dispatch rights, charging source, point of interconnection, degradation budget, trading access and counterparty design are engineered upfront. In most cases, pure merchant exposure remains difficult to finance on a non-recourse basis. However, tolling-style contracts, partial floor revenues and mixed market participation are becoming more credible.

This article focuses on that gap: the commercial architecture of merchant BESS in India in 2026, the revenue stack that is actually financeable, and the practical issues that decide whether a project survives diligence.

Why merchant BESS is now a live topic in India

Three market changes have made merchant storage worth serious attention.

First, storage capex has moderated from the peaks seen during supply-chain stress, even though pricing remains chemistry-, warranty- and supplier-dependent. For utility-scale four-hour systems in India in 2026, all-in EPC pricing can still vary widely by configuration, duty impact, thermal design, augmentation philosophy and SCADA/protection scope, but many bidders are underwriting meaningfully lower installed cost than what was common in 2023–24. That does not make every project viable, but it improves optionality.

Second, India's power-market design is slowly creating more opportunities for flexible assets. Day-ahead market, real-time market, deviation-related balancing value, and specific utility balancing requirements are all making fast-response storage more relevant. Storage also benefits from increasing intraday volatility as more solar and wind enter state and inter-state grids.

Third, not every buyer wants to own the battery risk. Several C&I consumers, renewable developers and even distribution utilities are exploring tolling or availability-linked structures where they reserve storage capacity without taking technology-performance responsibility themselves. That creates a middle path between fully contracted BESS and fully merchant BESS.

In practice, 2026 is not the year of unlimited merchant storage. It is the year of structured merchant storage.

The revenue stack: what is real, what is overstated

A credible merchant BESS model in India should separate bankable revenue from optional upside.

The bankable layer is the portion a lender or conservative equity investor can actually underwrite. The upside layer is revenue that may improve returns but should not be the sole basis of debt sizing.



Typical revenue sources include:

- Energy arbitrage between low-price and high-price market intervals
- Tolling or storage-availability payments from a utility, trader or C&I buyer
- Renewable firming or imbalance reduction for a wind/solar portfolio
- Ancillary or balancing services where market access and settlement are operationally clear
- Network-support or congestion-relief value under utility-specific arrangements
- Capacity reservation by open-access consumers facing demand charges or schedule-management issues

Among these, pure arbitrage is the most discussed and the most frequently overstated.

A four-hour BESS that charges in low-price blocks and discharges in evening peaks does not simply earn the gross spread seen in market price charts. The real value depends on round-trip efficiency, auxiliary consumption, charging losses, degradation cost per cycle, transmission and wheeling charges where applicable, market fees, scheduling accuracy and the number of usable cycles that remain within warranty conditions.

For example, suppose a project charges at an effective landed cost of Rs 3.2/kWh and discharges into a realised net sale price of Rs 6.8/kWh. At first glance, the spread looks like Rs 3.6/kWh. But if round-trip efficiency is 86–88%, auxiliary consumption is included, and cycling-related degradation cost is treated properly, the economic spread shrinks materially. If the battery is over-cycled chasing shallow intraday opportunities, project IRR can fall even if gross revenue looks attractive.

That is why serious underwriting in 2026 increasingly uses a dispatch stack that prioritises:

- Fixed tolling income first

n- High-confidence arbitrage windows second

- Portfolio-balancing value third
- Ancillary or other optional revenue last

If a project relies on all revenue buckets performing at the top end simultaneously, it is not being modelled conservatively.

Tolling is becoming India's most practical bridge to bankability

In the Indian context, tolling is emerging as the most workable structure for standalone storage that wants some merchant upside without taking full price risk.

Under a typical tolling arrangement, the offtaker pays the BESS owner a fixed capacity reservation charge for defined MW or MWh availability, while retaining or sharing dispatch rights. The offtaker may be a discom, a power trader, a renewable developer needing shaping support, or a large open-access consumer with a volatile load curve.

There are several variants:

- Fixed monthly capacity charge plus passthrough of charging energy by the offtaker
- Fixed availability payment plus variable dispatch fee linked to actual utilisation
- Minimum guaranteed payment with upside sharing from market arbitrage
- Capacity reservation for peak-hour support with limited annual cycle commitment



- Renewable-firming contract where the battery owner is paid for schedule compliance and evening delivery support

This model is attractive because it allocates risk more rationally.

The BESS owner manages asset performance, warranty compliance, augmentation planning and operational reliability.

The tolling counterparty manages dispatch optimisation, market participation strategy and energy procurement risk, if it has that capability.

For lenders, the key question is whether the fixed-payment leg is strong enough to support debt service even under weak merchant conditions. In most current discussions, a project becomes materially more financeable when 50–70% of annual base-case revenue comes from contracted or quasi-contracted payments rather than pure merchant arbitrage.

Contract design matters heavily. Lenders will review:

- Guaranteed annual availability and outage definitions
- Capacity testing protocol and degradation adjustment mechanism
- Treatment of augmentation capex over life
- Charging-energy responsibility and metering arrangement
- Dispatch rights and minimum notice period
- Curtailment, force majeure and grid-unavailability clauses
- Change-in-law allocation
- Payment security, LC support and termination compensation

Poorly drafted tolling contracts can leave the owner carrying hidden energy-price risk or open-ended cycling obligations that accelerate degradation without adequate compensation.

Dispatch maths that actually decides project returns

The commercial case for merchant or quasi-merchant BESS is won in dispatch modelling, not in headline capex claims.

A credible 2026 model for India should at minimum simulate 15-minute or finer interval dispatch, depending on the market and scheduling construct being evaluated. Hourly averages are often too blunt for revenue estimation, especially for assets targeting evening ramps, solar spill capture or real-time balancing value.

Key modelling inputs include:

- Battery usable energy, inverter loading ratio and C-rate
- AC round-trip efficiency across partial-load conditions
- State-of-charge limits and reserve margins
- Temperature effects and HVAC parasitic load
- Cycle life and calendar degradation
- Augmentation schedule and replacement pricing assumptions
- Charging-source economics: grid, co-located RE or third-party supply
- ISTS/intra-state transmission and wheeling implications



- Market participation rules and gate-closure timing
- Curtailment and interconnection constraints

Many merchant models fail because they assume every day offers one neat low-price charging block and one neat high-price discharge block. Real operation is messier. During monsoon periods, shoulder-month solar conditions, state-level congestion events, or low evening demand, spreads can compress sharply. The battery may then face a choice between under-utilisation and uneconomic cycling.

Developers should also avoid modelling every cycle at full depth of discharge. In actual operation, some of the most frequent dispatches will be partial cycles. That can be helpful for life, but it changes revenue density and can complicate toll-settlement formulas if contracts were written around simplistic full-cycle assumptions.

For a four-hour BESS, annual economic cycles may vary significantly by use case. A project that underwrites 330–365 full-equivalent cycles purely from arbitrage should be stress-tested aggressively. A project that combines 180–250 strong-value cycles with fixed availability income may prove more resilient.

Bankability: what lenders will challenge in 2026

The biggest misconception in merchant storage is that falling battery prices automatically solve financing. They do not. Lower capex helps, but lenders still need revenue durability, operational clarity and downside protection.

In India, the core diligence questions for merchant BESS now include:

- Is there a contracted floor revenue through tolling, portfolio support or minimum offtake?
- What share of revenue depends on historically volatile market spreads?
- Who controls dispatch, and do they have demonstrated optimisation capability?
- How is degradation priced into dispatch and into the financial model?
- Does the project have robust grid-interconnection approvals and evacuation certainty?
- What is the charging-energy arrangement, and what is the landed charging cost under different seasons?
- Are warranty terms aligned with the proposed cycling profile?
- Is augmentation mandatory to maintain contracted capacity, and who funds it?
- What happens if ancillary or balancing revenues underperform or market rules change?

Debt sizing for pure merchant revenue is still likely to be conservative. Higher DSCR expectations, lower leverage, cash sweeps, reserve accounts and tighter distribution tests are all common outcomes when market-linked revenue dominates.

For this reason, developers seeking competitive capital should consider hybrid structures such as:

- 7–10 year tolling contract for part capacity plus merchant dispatch on the balance
- Utility or C&I floor payment with market upside sharing
- Portfolio-level storage supporting a contracted RE book and a merchant trading book together
- Phased project development where initial capacity is contracted before expansion into more merchant exposure

Counterparty quality remains decisive. A weaker offtaker with an aggressive tolling proposal may still be less financeable than a smaller but creditworthy contracted payment from a stronger buyer.



Where Indian C&I buyers and utilities fit into the merchant BESS story

Merchant storage is not only a developer-and-trader theme. It has growing relevance for two buyer groups in India.

The first is large C&I consumers under open access. Many of these buyers now have substantial solar procurement, exposure to time-varying power prices, and operational reasons to reduce evening procurement risk. Few want to own battery technology and performance obligations directly. A storage-reservation or tolling structure can give them peak support, schedule shaping and outage resilience with lower execution complexity.

The second is utilities and load-serving entities that need flexible capacity but do not want every storage procurement to follow a one-size-fits-all long-term tariff format. In states with high renewable penetration and steep evening ramps, a BESS contracted on availability and dispatch rights may deliver more system value than a flat energy-based arrangement.

For both groups, the practical question is whether the storage contract clearly defines the service being bought. Is the buyer paying for MW availability, MWh shifting, ramping response, imbalance reduction, evening peak delivery, or all of the above? If that service definition is vague, disputes over underperformance become likely.

A good contract should specify:

- Contracted power and usable energy at the AC delivery point
- Time windows for reserved dispatch rights
- Expected response time and ramp rate
- Charging-energy source and cost treatment
- Annual cycle budget and compensation beyond threshold use
- Capacity fade treatment over tenure
- KPIs for availability and delivered performance

What developers should do before taking a merchant BESS to market

Before launching land acquisition, interconnection applications or debt conversations, developers should complete five pieces of work.

- Revenue-stack screening by node and state, not just national price assumptions
- Charging-cost analysis including open-access, network and banking implications where relevant
- Degradation-linked dispatch modelling with augmentation economics
- Contract architecture comparing tolling, floor-plus-upside and pure merchant cases
- Financing strategy aligned to actual risk allocation, not aspirational revenue assumptions

Developers should also be realistic about where merchant BESS works best in 2026. Assets located near volatile price nodes, strong evening demand centres, congested renewable pockets with curtailment risk, or portfolios needing firming support may have a clearer path than generic standalone projects with no strategic offtake relationship.

The winners in this segment will not necessarily be those with the lowest quoted battery price. They will be the teams that integrate market modelling, warranty strategy, grid access, dispatch control and contract design into one bankable structure.



India's merchant BESS market is opening, but it is opening selectively. Pure arbitrage remains hard to finance. Structured tolling, partial floor revenues and portfolio-linked optimisation offer a more credible route. For C&I buyers, utilities, lenders and developers, the central task in 2026 is not proving that storage has value. It is proving exactly who captures that value, under what dispatch rights, and with what downside protection.

If you are evaluating a merchant or tolling-based BESS opportunity, contact Growthifye's advisory desk for project structuring, commercial diligence and bankability assessment.

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