Open Access PPA Landed Cost Model India 2026: Charges, Captive Rules, CFO Decisions

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A 2026 practitioner guide to open access PPA landed-cost modelling in India: captive tests, charges, banking, RPO and CFO decision rules.

Open Access PPA Landed Cost Model in India 2026: What CFOs Must Compare Beyond Tariff

Indian C&I power buyers still often compare open-access offers on a single number: quoted solar or hybrid tariff in Rs/kWh. In 2026, that is the fastest way to make the wrong decision.

For most industrial and commercial consumers, the correct comparison is landed cost at the meter, month by month, after adjusting for cross-subsidy surcharge, additional surcharge, wheeling and transmission charges, banking terms, losses, scheduling deviations, standby dependence, captive-compliance risk, and the residual grid bill that remains after open-access procurement. The choice between third-party and group captive is no longer just a legal or procurement preference. It directly changes project bankability, accounting treatment, savings certainty, and downside exposure.

This article lays out a practical landed-cost framework for 2026 for Indian open access and corporate PPAs, with a specific focus on how CFOs, energy heads, developers, lenders and policymakers should evaluate third-party versus group captive structures. It does not repeat approval timelines or generic policy summaries. Instead, it focuses on decision-grade economics.

Why tariff-only comparisons fail in 2026

A quoted open-access tariff can differ from actual delivered cost by Rs 1.00-3.50/kWh depending on state, voltage level, procurement structure, banking treatment and time-of-day profile.

A buyer receiving a third-party solar quote at Rs 3.35/kWh may assume savings versus a grid tariff of Rs 8.20/kWh are obvious. But if the consumer is in a state with high cross-subsidy surcharge, additional surcharge, wheeling charge, wheeling loss, restrictive banking and unfavourable settlement of surplus energy, actual delivered cost can move to Rs 5.30-6.40/kWh. If the same load is instead eligible under a valid group captive structure with exemption from cross-subsidy surcharge and additional surcharge, landed cost may fall to Rs 4.10-5.00/kWh despite a slightly higher generator-side tariff or equity commitment.

Equally, captive is not automatically cheaper. If the consumer's annual offtake is volatile, if multiple users cannot reliably meet the 51% consumption rule, if the project is over-sized, or if the legal and compliance architecture is weak, the risk-adjusted captive cost can exceed third-party procurement once compliance failure scenarios are modelled.

In 2026, procurement teams should stop asking only, "What is the PPA tariff?" and start asking, "What is our 12-month and 25-year risk-adjusted landed cost under each structure?"

The 10-line landed-cost equation every C&I buyer should build

A practical open-access model should calculate landed cost as follows:

- Generator tariff under the PPA

- Transmission charges, if applicable
- Transmission losses, if applicable
- Wheeling charges
- Wheeling losses
- Cross-subsidy surcharge
- Additional surcharge
- SLDC fees and open-access operating charges
- Banking charges, carry-forward losses and settlement haircut
- Deviation, forecasting and balancing cost
- Less: value of avoided grid energy charge
- Plus: residual demand charge, fixed charge and minimum billing impact on the grid bill
- Plus: captive equity carry cost and compliance administration cost, where relevant

For many consumers, the residual DISCOM bill is where models go wrong. Open access does not eliminate all components of the utility invoice. Demand charges, fixed charges, reactive penalties, time-of-day slabs, contract demand conditions and minimum monthly billing can materially dilute apparent savings.

This is why serious buyers increasingly start with [Demand & ToD analysis](/coreservices/greenenergyppa/demandandtodanalysis) before they float an RfP. If a facility's load is concentrated in evening hours, a plain solar PPA may underdeliver savings even if the contracted tariff looks attractive. If weekend load collapses, banking and surplus-settlement assumptions become critical. If the plant has sharp ramping, imbalance and standby exposure can erode the economics.

Third-party vs group captive: the real economic trade-off

The conventional summary is simple: third-party is operationally easier, while group captive is often cheaper because cross-subsidy surcharge and additional surcharge are generally not payable where captive conditions are met. In practice, 2026 decisions need a more careful lens.

Third-party model: typical considerations

- No equity contribution by the consumer in the generating SPV
- Simpler treasury and governance compared with captive shareholding
- Usually exposed to cross-subsidy surcharge unless a specific exemption applies
- May also face additional surcharge depending on state rules and circumstances
- Lower internal compliance burden for the consumer
- Easier entry and exit in some contracting situations
- Better fit for smaller buyers that cannot efficiently hold equity or monitor captive conditions

Group captive model: typical considerations

- Consumer(s) must collectively hold at least 26% equity in the captive generating company/SPV
- Captive users must consume at least 51% of the electricity generated on an annual basis, in proportion to shareholding norms as interpreted in applicable rules and case law
- Major economic advantage is typically exemption from CSS and AS when compliant
- Lower delivered cost can outweigh equity-lock-in and legal structuring cost

- Higher compliance discipline required across metering, offtake allocation, annual consumption and shareholder arrangement
- Default risk includes retrospective liability if captive status is challenged or lost

In several states in 2026, CSS alone can range broadly from around Rs 0.80/kWh to above Rs 2.50/kWh for HT consumers, with additional surcharge in some cases adding another roughly Rs 0.40-1.50/kWh or more depending on consumer category and utility orders. That is why captive often dominates pure price comparisons.

But the right answer depends on load shape and governance capacity. A single large plant with stable baseload demand and strong internal controls is often a strong captive candidate. A diversified corporate group with changing plant utilisation, M&A uncertainty, or weak monthly energy governance may be better served by third-party procurement, even at a higher nominal landed cost, because compliance slippage can destroy expected savings.

A worked 2026 example: same project, two structures

Consider a 33 kV industrial consumer with annual consumption of 60 GWh in a high-tariff state. Current effective grid energy cost for the relevant consumption block is Rs 8.10/kWh, excluding taxes. The company is evaluating 70% daytime replacement through an intra-state solar open-access arrangement.

Assumptions for a third-party structure:

- PPA tariff: Rs 3.30/kWh
- Wheeling charge: Rs 0.55/kWh
- Wheeling loss: 6%
- SLDC and OA operating charges: Rs 0.08/kWh
- CSS: Rs 1.65/kWh
- Additional surcharge: Rs 0.72/kWh
- Banking allowed monthly with 8% charge-equivalent impact and end-period settlement at 75% of APPC-equivalent value, translating to an effective net cost of Rs 0.28/kWh on banked units
- Forecasting/deviation/balancing cost: Rs 0.10/kWh

Indicative delivered-cost build-up:

- Base PPA tariff: Rs 3.30
- Gross-up for 6% wheeling loss: about Rs 0.21
- Wheeling charge: Rs 0.55
- SLDC/OA charges: Rs 0.08
- CSS: Rs 1.65
- Additional surcharge: Rs 0.72
- Banking impact: Rs 0.28
- Balancing/deviation cost: Rs 0.10

Indicative landed cost: around Rs 6.89/kWh

Now assume a group captive structure for the same physical project:

- Generator-side tariff slightly higher at Rs 3.45/kWh because of transaction architecture and return expectations
- Wheeling charge: Rs 0.55/kWh
- Wheeling loss: 6%
- SLDC and OA operating charges: Rs 0.08/kWh
- CSS: nil, subject to valid captive compliance
- Additional surcharge: nil, subject to valid captive compliance
- Banking impact: Rs 0.28/kWh
- Captive compliance administration and equity carry cost allocated to energy: Rs 0.18/kWh
- Forecasting/deviation/balancing cost: Rs 0.10/kWh

Indicative delivered-cost build-up:

- Base tariff: Rs 3.45
- Gross-up for wheeling loss: about Rs 0.22
- Wheeling charge: Rs 0.55
- SLDC/OA charges: Rs 0.08
- Banking impact: Rs 0.28
- Compliance and equity carry cost: Rs 0.18
- Balancing/deviation cost: Rs 0.10

Indicative landed cost: around Rs 4.86/kWh

This Rs 2.03/kWh difference is material. At 42 GWh annual open-access drawal, that is about Rs 8.5 crore per year of savings differential.

However, the model is incomplete unless one tests downside scenarios. If captive status fails and CSS plus AS become retrospectively payable for even one annual cycle, the apparent savings can collapse. That is why legal structuring, shareholder discipline and monthly monitoring are not administrative footnotes. They are core to the commercial case.

The five risks that should sit beside the landed-cost model

1) Captive rule failure risk

The 26% ownership and 51% consumption tests are not box-ticking items. Multi-buyer captive projects need tight allocation logic, shareholder agreements, energy accounting and annual true-up monitoring. If one consumer materially under-draws, the entire economics can change depending on project structure and interpretation.

Questions to test:

- Is annual generation likely to overshoot aggregate user demand?
- Are users' production plans stable enough to maintain proportional consumption?
- Is there a clear replacement mechanism if a user exits?
- Who bears retrospective surcharge exposure in the contract stack?

2) Banking value erosion

Many 2026 bids still assume ideal banking economics that no longer exist in several states. Banking windows may be monthly rather than annual, banking charges may apply, and surplus settlement may be at APPC or another discounted mechanism. For consumers with holiday-heavy operations, textile loads, commercial campuses or seasonal demand, poor banking economics can raise landed cost sharply.

3) Residual grid-bill trap

Even after migrating substantial units to open access, consumers may continue paying significant demand/fixed charges to the DISCOM. If contract demand is not re-optimised, or if process reliability requires high standby dependence, savings can disappoint. This is where [Sourcing strategy](/coreservices/greenenergyppa/sourcingstrategy) must be paired with tariff engineering, not just renewable procurement.

4) Time-of-day mismatch

A solar-only PPA that offsets low-value daytime slabs but leaves expensive evening purchase untouched may save less than a slightly costlier hybrid or firmed supply product. ToD analysis matters more in 2026 because many states have sharper time-differentiated tariff signals for HT consumers.

5) Counterparty and curtailment allocation

Not all “delivered energy” assumptions are equally financeable. Curtailment treatment, deemed generation clauses, change-in-law pass-through, and metering hierarchy materially affect realized savings and lender comfort.

How lenders and developers should read the same model

Lenders should not underwrite open-access projects purely on stated PPA tariff and historical CUF assumptions. They should underwrite offtaker economics after state-specific charges, losses, banking and residual grid exposure. A borrower serving a consumer with thin post-charge savings is inherently weaker than one serving a consumer with a robust landed-cost gap of Rs 2.00/kWh or more.

Developers, meanwhile, should avoid over-selling simple “25-40% savings” claims. Sophisticated buyers in 2026 want transparent cost waterfalls. The winning bid is often not the lowest tariff; it is the offer with the most credible all-in landed-cost outcome, clean captive structuring where relevant, and clear risk allocation.

In competitive situations, developers that support [PPA structuring & negotiation](/coreservices/greenenergyppa/ppastructuringandnegotiation) and Open-access approvals from the outset usually gain an advantage because they reduce decision friction for the buyer. The buyer is not purchasing modules and inverters. The buyer is purchasing certainty of savings over the term.

A boardroom checklist for 2026 procurement decisions

Before selecting third-party or group captive, C&I buyers should require a state-specific model covering at least the following:

- Current DISCOM tariff breakup by energy, demand, fixed and ToD components
- Monthly 15-minute load profile for at least 12 months
- Open-access charge stack under current regulatory orders
- Loss assumptions by voltage level and route
- Banking rule, charge and settlement logic
- Surplus-energy value assumption

- Residual grid-bill projection after OA migration
- Captive-compliance stress test under low-demand and user-exit scenarios
- Change-in-law sensitivity for CSS/AS and banking
- Curtailment and scheduling cost assumptions
- Security package and payment terms under each structure
- Exit rights, replacement rights and damage regime

A simple decision rule can help.

- Choose third-party where buyer scale is smaller, compliance appetite is low, ownership in SPV is impractical, and post-charge savings remain acceptable under conservative assumptions.
- Choose group captive where annual demand is stable, savings from surcharge exemption are material, governance discipline exists, and the project can be structured with strong compliance controls.
- Revisit product choice entirely where the load profile suggests hybrid, storage-linked, or partial-tenor procurement could outperform a plain daytime solar contract.

The best procurement programmes in 2026 are not procurement-only exercises. They combine tariff analytics, legal design, regulatory interpretation and operating discipline. That is the difference between a quoted cheap PPA and a genuinely bankable low landed-cost outcome.

The policy implication for regulators and utilities

For policymakers, the landed-cost lens also matters. Corporate renewable adoption accelerates when charges are predictable, banking is transparent, and captive compliance standards are enforceable but not arbitrary. Frequent uncertainty around surcharge applicability, changing banking terms or delayed approvals raises risk premiums and ultimately slows capacity addition.

Utilities, too, benefit from a more rational framework. If C&I migration is inevitable, better-designed open-access rules can reduce litigation, improve scheduling discipline and create clearer signals for standby, network cost recovery and distributed-system planning. The market does not need artificially low headline tariffs. It needs transparent all-in economics.

In 2026, the winning open-access strategy in India is the one that treats tariff as only line one of the spreadsheet. The real answer lies in the full landed-cost stack, structure-specific risk allocation, and monthly operating reality.

If your organisation is evaluating third-party versus group captive open access, contact Growthifye's advisory desk for a state-specific landed-cost model, risk review and transaction support.

Explore Growthifye's related capabilities

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