



Open Access PPA Charges in India 2026: CFA, Wheeling, CSS and Landed Cost

By Sudarshan Karweer · 18 September 2026 · growthifye.com

A practical 2026 guide to open access PPA charges in India: CFA, wheeling, CSS, AS, losses and landed cost modelling for C&I buyers.

India's open access market in 2026 is no longer about finding the lowest quoted solar or wind tariff. For commercial and industrial consumers, the decisive question is simpler and harder: what is the all-in landed cost at the meter after every regulated charge, loss factor and settlement rule is applied?

That distinction matters because many procurement decisions still get anchored to a developer's quoted PPA price of, say, Rs 3.10-3.70/kWh for solar or Rs 3.40-4.10/kWh for hybrid supply, while the buyer's actual delivered economics may move by Rs 0.80-2.50/kWh depending on state, voltage level, utility category, banking design, cross-subsidy surcharge treatment and scheduling pattern. In several states, a superficially attractive open access tariff becomes unviable after charges. In others, careful structuring still creates savings of 10-30 percent versus grid supply.

This article focuses on a different angle from typical third-party versus group captive discussions: the charge stack itself. Specifically, how C&I buyers, developers, lenders and policymakers should evaluate transmission and wheeling charges, cross-subsidy surcharge, additional surcharge, system losses, SLDC fees and other levies under 2026 open access frameworks, and how these components shape landed cost and project bankability.

Why charge mapping matters more than headline PPA tariff

Open access procurement economics are determined by two moving parts:

- The supply-side tariff under the renewable PPA
- The network and regulatory charge stack imposed between generator and consumer

In practice, buyers often spend disproportionate time negotiating the first and insufficient time stress-testing the second. That is a mistake for at least five reasons.

- Charges are state-specific and often revised annually or mid-cycle.
- Exemptions may depend on project type, COD date, consumer category, voltage level or captive status.
- Certain charges are fixed in Rs/kWh, others in Rs/kW/month, and others as percentage losses.
- Settlement differs for same-state, inter-state and cross-state transactions.
- Distribution companies increasingly seek surcharge recovery where high-paying C&I consumers migrate to open access.

A 20 paise/kWh improvement in PPA tariff looks meaningful in a negotiation, but a 60 paise/kWh change in cross-subsidy surcharge or a 2 percent increase in loss assumptions can outweigh it immediately. That is why robust Landed-cost management and [PPA structuring & negotiation](/coreservices/greenenergyppa/ppastructuringandnegotiation) should begin with charge diagnostics, not end there.

The 2026 open access charge stack: what buyers actually pay



While terminology varies by state and transaction path, the core landed cost components usually include the following.

- Generator tariff under the PPA
- State transmission charges, where applicable
- State transmission losses
- Wheeling charges for use of distribution network
- Wheeling losses
- Cross-subsidy surcharge, or CSS
- Additional surcharge, or AS
- SLDC scheduling and system operation charges
- Metering charges and application or processing fees
- Banking charges, if banking is permitted and used
- Deviation-related costs in specific settlement frameworks
- Applicable electricity duty or taxes, depending on state treatment

For inter-state open access, the stack may also include:

- ISTS charges, unless exempted under prevailing waiver conditions for eligible renewable projects
- ISTS losses
- Point-of-connection or related transmission usage charges where relevant to the transaction structure

The practical implication is that a buyer should never ask only, “What is your tariff?” The right question is, “What is my monthly delivered cost under my actual load curve, delivery point, voltage level, policy category and settlement pattern?”

CFA, wheeling, CSS and AS: the four charges that usually decide viability

For many C&I consumers, four components drive most of the economics: transmission-related charges, wheeling charges, cross-subsidy surcharge and additional surcharge. Some market participants loosely refer to the network access layer as CFA or connectivity/facilitation-related access charges in commercial discussions, but the exact regulatory nomenclature will differ by state and utility. What matters is mapping each approved tariff-order component precisely.

1) Transmission and wheeling charges

These recover the cost of using the grid network. In same-state open access, the buyer may pay state transmission charges plus wheeling charges if power travels through both state transmission and distribution systems. Charges may be levied in:

- Rs/kWh
- Rs/kW/month
- A mix of demand-linked and energy-linked components

In 2026, state wheeling charges for HT consumers in some favourable markets may still sit in a broad band of around Rs 0.20-0.80/kWh equivalent, while in less favourable structures the effective burden can move above Re 1/kWh after adding losses and related fees. EHT-connected consumers sometimes fare better because they avoid part of the lower-voltage wheeling chain.



2) Cross-subsidy surcharge

CSS remains one of the biggest determinants of open access competitiveness. Its policy purpose is to compensate the discom when a paying consumer exits bundled supply but continues to use the network. In some states and categories, CSS can be modest enough to preserve open access savings. In others, it can sharply compress or eliminate the business case.

A practical 2026 range seen across markets is roughly Rs 0.20 to above Rs 2.00/kWh depending on tariff category, voltage, state methodology and whether the consumer qualifies for captive exemptions. For many third-party PPAs, CSS is the single largest non-tariff cost item.

3) Additional surcharge

AS is imposed to recover stranded fixed costs of the distribution licensee where regulators determine such recovery is justified. This charge is especially important because some buyers underestimate its recurrence and assume it will be temporary or immaterial. In reality, AS can range from nil in some contexts to around Rs 0.30-1.20/kWh or more in others.

4) System losses

Losses are not a billed surcharge in the same way, but they directly affect delivered cost. If the buyer must schedule 1.06 units at injection to receive 1.00 unit at drawal after cumulative transmission and wheeling losses, then a Rs 3.50/kWh PPA effectively becomes Rs 3.71/kWh even before cash charges are added.

For example:

- PPA tariff: Rs 3.50/kWh
- Combined losses: 6%
- Effective energy cost after losses: $\text{Rs } 3.50 / 0.94 = \text{Rs } 3.72/\text{kWh}$

If you then add:

- Transmission and wheeling: Rs 0.55/kWh
- CSS: Rs 0.85/kWh
- AS: Rs 0.45/kWh
- SLDC and misc.: Rs 0.05/kWh

The landed cost becomes roughly Rs 5.62/kWh.

If the consumer's effective grid landed tariff is Rs 7.20/kWh, the saving is still meaningful. If grid supply is Rs 5.90/kWh, the margin is too thin to justify policy and operational complexity unless there are strategic decarbonisation benefits or expected tariff escalation advantages.

A practical landed-cost model for C&I buyers in 2026

Open access evaluation should be done monthly, not annually in a simplistic average. The reason is straightforward: renewable generation, load pattern, time-of-day pricing, banking availability and demand charges interact unevenly over the year.

A workable landed-cost model should include the following inputs.

- Contracted annual energy and monthly profile
- Consumer 15-minute load curve and seasonal variability
- ToD grid tariff by time block



- Voltage level and sanctioned demand
- State-specific charge schedule by category
- Captive or third-party status
- Injection and drawal losses by path
- Banking rules, caps, expiry and charges, if applicable
- Must-run and curtailment assumptions where relevant
- RPO treatment and EAC or REC value assumptions, if any
- Demand charge effects from residual grid drawal

Consider a sample 2026 same-state solar open access case for an HT manufacturing consumer:

- Annual consumption: 24 GWh
- Daytime load alignment with solar: 68%
- Solar PPA tariff: Rs 3.25/kWh
- Transmission plus wheeling charges: Rs 0.48/kWh equivalent
- CSS: Rs 1.05/kWh
- AS: Rs 0.42/kWh
- SLDC and metering: Rs 0.04/kWh
- Total losses: 5.5%

Delivered energy cost before considering residual grid optimisation:

- $\text{Rs } 3.25 / 0.945 = \text{Rs } 3.44/\text{kWh}$
- Add charges of Rs 1.99/kWh
- Landed open access energy cost = Rs 5.43/kWh

If the consumer's weighted grid energy rate is Rs 7.05/kWh, gross energy saving is Rs 1.62/kWh. On 24 GWh, that implies about Rs 3.9 crore annual gross saving before transaction overheads and any balancing-premium impacts.

Now test a less favourable state:

- Same PPA tariff: Rs 3.25/kWh
- Network charges: Rs 0.70/kWh
- CSS: Rs 1.65/kWh
- AS: Rs 0.75/kWh
- SLDC: Rs 0.05/kWh
- Losses: 7%

Delivered energy cost:

- $\text{Rs } 3.25 / 0.93 = \text{Rs } 3.49/\text{kWh}$
- Add charges of Rs 3.15/kWh
- Landed cost = Rs 6.64/kWh

Against a grid tariff of Rs 7.05/kWh, annual savings may fall below the threshold required to justify procurement effort, counterparty risk and regulatory volatility. That is why two projects with identical PPA



tariffs can produce very different board-level decisions.

This is exactly where [Demand & ToD analysis](/coreservices/greenenergyppa/demandandtodanalysis) and [Sourcing strategy](/coreservices/greenenergyppa/sourcingstrategy) become commercially decisive. In many cases, the answer is not simply whether to do open access, but what product mix, quantum, contract tenure and state structure to adopt.

How buyers can improve landed cost without relying on tariff alone

Many C&I buyers assume they have little influence over regulated charges. While the charge order itself is outside their control, transaction design can materially improve economics.

Optimise voltage and delivery architecture

Higher-voltage connectivity can reduce wheeling exposure or improve charge treatment in some states. For large campuses or industrial parks, evaluating delivery architecture early can produce durable savings over the contract life.

Evaluate captive pathways rigorously

Where group captive compliance is feasible, exemption from CSS is often the most powerful economic lever. However, captive structures must be evaluated carefully for equity participation, proportional consumption, compliance monitoring and lender acceptance.

Match procurement to load shape

If a buyer procures too much renewable energy in low-value hours and remains exposed to expensive grid drawal in peak periods, the blended landed cost underperforms despite a low PPA tariff. Shaping the quantum to actual consumption and ToD tariff windows is essential.

Use hybrid or complementary portfolios selectively

Although hybrid economics are a separate topic, from a charges perspective better profile matching can reduce costly imbalances, improve self-consumption and lower effective dependence on banking.

Negotiate charge change treatment clearly

Even where charges are pass-through by regulation or contract, the allocation of change risk, notice obligations, renegotiation triggers and termination rights should be clearly documented. Weak drafting can turn a manageable regulatory change into a commercial dispute.

Build scenario bands, not a single base case

At minimum, buyers and lenders should model:

- Base-case approved charges
- Moderate increase in CSS and AS
- Higher loss assumption
- Reduced banking utility
- Partial curtailment or settlement inefficiency

A project that only works in one optimistic spreadsheet is not bankable.

What developers, lenders and policymakers should watch in 2026

For developers



Developers should stop overselling savings based on nominal PPA tariff comparisons. Sophisticated buyers now expect transparent landed-cost modelling. Winning bids increasingly depend on explaining:

- Exact charge assumptions used
- Consumer-category sensitivity
- Captive versus third-party alternatives
- Monthly generation-load matching
- State-risk allocation in the PPA

Developers who provide credible charge analytics improve closure rates and reduce post-award disputes.

For lenders

Lenders should underwrite open access projects using stressed landed-cost scenarios, not just contracted tariff and CUF assumptions. Key diligence areas include:

- Historical state treatment of CSS and AS
- Timing and frequency of tariff-order changes
- Captive compliance durability where exemptions are assumed
- Consumer credit strength if savings compress
- PPA pass-through enforceability for regulatory charges

The wrong charge assumption can impair DSCR faster than modest resource underperformance.

For policymakers and regulators

The 2026 policy challenge is balancing open access growth with discom revenue stability. Excessive surcharges may protect short-term utility recovery but suppress industrial competitiveness, renewable uptake and private capital formation. Predictable, transparent and formula-based charge frameworks are better than ad hoc revisions.

Three policy improvements would materially help the market:

- Multi-year visibility on surcharge trajectories
- Clear treatment of renewable open access by voltage and consumer category
- Harmonised publication of effective landed-cost components for standard transaction types

A more transparent charge regime reduces litigation, improves investment quality and enables C&I consumers to plan decarbonisation with confidence.

The bottom line: open access viability is a charge-management exercise

In 2026, the open access market rewards buyers who understand that delivered economics are built charge by charge. A PPA tariff may open the conversation, but CSS, AS, transmission and wheeling charges, losses, SLDC fees and settlement rules determine the real answer.

For Indian C&I consumers, the smartest procurement process is not the one that secures the lowest quoted tariff. It is the one that identifies the most resilient landed cost over the contract term, under realistic regulatory scenarios and actual operating conditions. For developers and lenders, that same discipline is the difference between a financeable opportunity and a stranded proposal.

If your team is evaluating same-state or cross-state open access, third-party versus captive pathways, or a multi-site C&I renewable sourcing plan, contact Growthifye's advisory desk for a practical review of charge



exposure, landed-cost economics and transaction strategy.

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