



RTC Renewable Supply for C&I in India 2026: OA, Hybrid PPAs and Storage

By Sudarshan Karweer · 28 August 2026 · growthifye.com

A 2026 practitioner guide to RTC renewable supply for Indian C&I buyers using open access, hybrid PPAs and storage economics.

Corporate renewable procurement in India is entering a new phase. For many commercial and industrial buyers, the first generation of savings came from plain-vanilla daytime solar open access. In 2026, the harder question is different: how do you increase renewable share in your load curve beyond solar hours, reduce exposure to evening grid tariffs, and move toward firmer supply without turning the power bill uneconomic?

That is where round-the-clock (RTC), near-RTC and firm renewable structures are becoming relevant. These arrangements combine solar, wind, storage, market purchases and portfolio balancing to serve a buyer across more hours of the day than a single-source open access solar PPA can manage.

For Indian C&I consumers, the issue is not marketing language. It is about hourly mismatch, open-access charges, banking restrictions, scheduling discipline, state-specific rules and the real landed cost of a more shaped renewable product. For developers and lenders, it is about resource complementarity, portfolio design, contract enforceability and payment security.

This article explains how RTC and near-RTC renewable supply is being structured for Indian C&I buyers in 2026, where open access still works, where it does not, and what CFOs should test before signing.

Why plain solar open access is no longer enough for many C&I buyers

A typical industrial consumer in India does not consume electricity in a neat solar-shaped pattern. Base-load plants in chemicals, metals, textiles, food processing, data-driven manufacturing and auto ancillaries often run across two or three shifts. Even when the average monthly renewable penetration from a solar open access PPA looks attractive, the hourly reality is different.

- Solar output is concentrated between roughly 9 am and 5 pm
- Peak industrial tariff exposure often shifts to evening and early night hours
- State banking rules have tightened in many markets
- Time-of-day tariffs are becoming sharper for HT consumers
- Demand charges and contract demand optimisation now matter more than just energy charges

In practice, many buyers that adopted open access solar between 2021 and 2025 now face one of three problems:

- They have exhausted easy daytime substitution and want a higher renewable share
- Their banking framework no longer supports monthly balancing as it once did
- Their internal sustainability targets require higher annual renewable consumption matching

RTC or near-RTC procurement is an attempt to solve that gap.

What RTC and near-RTC actually mean in the Indian market

In the Indian C&I context, the terminology is often used loosely. Buyers should define it contractually rather than rely on sales labels.



A practical way to classify products in 2026 is:

- Solar open access: daytime supply only, usually as-generated
- Hybrid supply: a mix of solar and wind, with better spread across hours and seasons
- Near-RTC supply: renewable supply shaped to meet a defined percentage of hourly consumption, such as 60% to 90%, with allowable shortfalls
- RTC supply: very high availability commitment, often backed by storage, excess portfolio capacity and market purchases for balancing
- Firm and dispatchable renewable supply: scheduled output delivery against a committed profile, with deviation responsibilities allocated clearly

For most C&I consumers, near-RTC is more realistic than true RTC. A 70% to 85% hourly match product may produce better economics than trying to replicate conventional baseload through renewables plus heavy storage.

This distinction matters because the cost curve is not linear. Moving from plain solar to solar-wind hybrid can add a moderate premium. Moving from hybrid to a highly firmed hourly supply can increase cost sharply, depending on storage duration, balancing obligations and state-level open access treatment.

Building blocks of a firmer renewable supply product

A workable RTC-type product for a C&I buyer is usually built from multiple components rather than a single asset.

1. Solar generation

Solar remains the cheapest component in most portfolios. Utility-scale open access solar in strong irradiation states can still anchor competitive energy costs in 2026. Delivered economics depend on state charges, voltage level, loss factors and project location, but solar remains the low-cost daytime block.

2. Wind generation

Wind helps in two important ways:

- It produces outside solar hours, especially in evening, night and early morning windows
- In several corridors, wind seasonality partly offsets monsoon-era grid and solar variability issues

For buyers with flatter load curves, adding wind can materially improve hourly renewable matching without immediate dependence on large battery systems.

3. Battery energy storage

Storage is the expensive but increasingly strategic component. In C&I structures, batteries are being considered for:

- Solar shifting from afternoon to evening peak
- Firming committed schedules
- Reducing drawal during high ToD tariff slots
- Managing intra-day deviations

Battery costs have continued to improve, but four-hour storage remains capital intensive when stacked purely on an energy-arbitrage basis under open access. In many cases, one- to two-hour storage targeted at evening shaping can make more sense than designing for a fully flat 24x7 profile.



4. Market purchases for balancing

A number of RTC-style products rely on short-term exchange or bilateral market procurement to cover residual shortfalls. This creates a hybrid commercial structure: part long-term renewable PPA, part balancing energy procurement.

Buyers should ask a basic question: who bears balancing price risk? If the seller is promising an annual or monthly shaped supply but retains the right to pass through balancing purchases at variable prices, the product may not deliver the expected budget certainty.

5. Demand-side shaping at the consumer end

Not every RTC strategy needs more generation. Some need better load management.

This is where [Demand & ToD analysis](/coreservices/greenenergyppa/demandandtodanalysis) becomes critical. A plant that can shift chillers, compressed-air loads, pumping, thermal storage, EV charging or selected process loads by two to four hours may avoid expensive storage or balancing procurement. In several cases, the cheapest RTC solution is part procurement design and part operational flexibility.

How open access rules affect RTC feasibility

Open access remains central to corporate procurement, but RTC-style structures are much more sensitive to regulatory detail than simple solar PPAs.

Banking restrictions are the first constraint

In many states, the old assumption of generous monthly banking is no longer valid. Banking may be:

- Disallowed for certain categories
- Allowed only for captive or specific technologies
- Subject to time-block restrictions
- Subject to banking charges or lower settlement values
- Restricted to same-month or non-peak-hour use

Without usable banking, solar-heavy products need either wind complementarity, storage or active balancing procurement. This is one reason hybridisation is gaining traction.

Charges can erode the value of shaping

Additional renewable hours are useful only if delivered power remains below alternative grid or market cost. RTC products can be undermined by the cumulative effect of:

- Wheeling charges

n- Transmission charges

- Cross-subsidy surcharge for third-party sale where applicable
- Additional surcharge where applicable
- State load dispatch and scheduling charges
- Reactive energy or deviation-related liabilities
- Losses at transmission and distribution levels

For third-party structures, cross-subsidy surcharge and additional surcharge can materially reduce headroom for storage-backed or balancing-intensive products. Group captive can improve economics, but only if ownership and consumption tests are met and monitored rigorously.



Scheduling and forecasting discipline becomes non-negotiable

A basic solar open access buyer may tolerate some generation variability if overall savings are healthy. A near-RTC or firm supply product cannot rely on that tolerance. Hourly commitments require stronger forecasting, nomination discipline and deviation management.

This raises operating complexity for both seller and buyer. Plants with variable demand, frequent shutdowns or unpredictable shift changes need tighter internal coordination if they want a shaped supply contract to work in practice.

Cost benchmarks and economics in 2026

The right benchmark for RTC procurement is not the quoted renewable tariff alone. It is the avoided cost of power in the hours being substituted.

For many HT industrial consumers in 2026, average landed grid power may sit in a broad range of about Rs 7 to Rs 10.5 per kWh depending on state, voltage level, utility tariff category, fixed-charge allocation and ToD profile. Evening and peak-slot marginal power can be significantly higher than the blended monthly average.

That means a near-RTC renewable product should be tested against at least three comparators:

- Blended current landed power cost
- Marginal power cost during evening and high-ToD slots
- Alternative portfolio option of plain solar plus residual grid procurement

In current market conditions, broad directional economics are often as follows, though state and structure matter more than generic numbers:

- Plain solar open access remains the lowest-cost renewable procurement option
- Solar-wind hybrid may command a premium of roughly Rs 0.40 to Rs 1.20 per kWh over plain solar landed economics depending on profile quality and state charges
- Battery-shaped renewable supply can add another meaningful premium, especially as storage duration increases
- Fully firm 24x7 products may look attractive for sustainability reporting but can become uneconomic if contracted without hourly avoided-cost analysis

A CFO should therefore avoid asking, “What is the RTC tariff?” and instead ask, “What is the landed cost by hour, what share of my load does it cover, and what cost does it avoid?”

This is where [Sourcing strategy](/coreservices/greenenergyppa/sourcingstrategy) and [Landed-cost management](/coreservices/greenenergyppa/landedcostmanagement) matter more than generic procurement templates. The objective is not to maximise renewable complexity. It is to minimise all-in electricity cost while improving supply quality and renewable share.

Contracting issues buyers should settle before signing

RTC and near-RTC PPAs fail when commercial labels outrun legal drafting. The following items need precise treatment.

Define the delivery obligation clearly

The contract should specify whether the seller is providing:

- As-generated hybrid energy



- A minimum monthly CUF-style volume
- Hourly scheduled energy against a profile
- A percentage of consumer load in each block
- A firm annual quantum with shortfall makeup rules

If hourly shaping is promised, identify measurement point, baseline methodology, nomination process and settlement frequency.

Allocate balancing risk explicitly

If market purchases are used for shortfall coverage, determine:

- Who procures balancing power
- Whether balancing cost is fixed, indexed or pass-through
- Whether there is a cap on balancing charges
- Whether exceptional market events trigger change-in-law or force-majeure treatment

Check change-in-law protection

RTC structures are more exposed to regulatory shifts because they rely on multiple levers at once: banking, scheduling, open-access charges, storage treatment and market access. Change-in-law language should cover not just base PPA charges but also balancing framework changes that alter the economics materially.

Clarify green attribute treatment

If a buyer is paying a premium for a shaped renewable product, the treatment of environmental attributes, emissions accounting and any applicable certificates should not be left ambiguous. Internal sustainability teams and auditors will ask the question later even if procurement teams do not ask it now.

Align tenor with asset mix

A seller using solar, wind and storage may seek a longer tenor than a plain open access solar deal. Buyers should test whether the premium paid for shaping is justified over the full tenor, and whether reopeners are needed if storage or balancing costs structurally fall.

Who should consider RTC or near-RTC now

Not every consumer should rush into firm renewable procurement in 2026. The best-fit buyers usually have one or more of the following traits:

- High evening or night consumption with expensive ToD exposure
- Multi-shift operations and a relatively stable base load
- Limited value left in incremental daytime solar substitution
- Internal decarbonisation targets requiring deeper renewable penetration
- Ability to support more sophisticated scheduling and energy management
- Sufficient credit quality for a multi-component long-term contract

On the supply side, the most credible sellers are usually those with diversified portfolios, dispatch capability and strong operating systems rather than a single-asset development mindset.

For lenders, the core diligence questions are straightforward:

- Is the hourly supply promise technically realistic for the contracted resource mix?



- Are balancing obligations financeable or overly open-ended?
- Does the offtaker's load shape support the contracted profile?
- Are state-level open access rules stable enough to support the economics?

The practical takeaway for 2026

The next evolution of corporate renewable procurement in India is not simply “more solar.” It is better matching between renewable generation and actual industrial consumption.

For some buyers, the answer will be hybrid open access. For others, it will be solar plus selective storage. For a smaller subset, a near-RTC or firmed supply product will make commercial sense. But the decision should be built from hourly economics, regulatory reality and contract discipline, not headline tariff claims.

In 2026, the winners in this market will be the buyers who evaluate RTC procurement as a portfolio problem rather than a standalone PPA purchase. That means understanding their load shape, ToD exposure, banking value, residual grid dependence and risk appetite before entering the market.

If your organisation is evaluating hybrid, near-RTC or firm renewable supply under open access, contact Growthifye's advisory desk. We help C&I buyers and developers assess load shape, structure procurement options, compare landed cost pathways and take projects through bankable commercial execution.

Explore Growthifye's related capabilities

This analysis connects directly to our advisory practice: [\[Demand & ToD analysis\]\(/coreservices/greenenergyppa/demandandtodanalysis\)](#) · [\[Sourcing strategy\]\(/coreservices/greenenergyppa/sourcingstrategy\)](#) · [\[Competitive developer selection\]\(/coreservices/greenenergyppa/competitivedeveloperselection\)](#) · [\[PPA structuring & negotiation\]\(/coreservices/greenenergyppa/ppastructuringandnegotiation\)](#).

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