



RE-Led Scope 2 Decarbonisation in India 2026: Open Access, RTC and Storage

By Sudarshan Karweer · 29 August 2026 · growthifye.com

A 2026 practitioner guide to cutting Scope 2 in India using open access RE, RTC structures, storage, tariffs and audit-ready accounting.

India Inc. can no longer treat Scope 2 emissions as a simple annual disclosure line. In 2026, purchased electricity is a cost issue, a competitiveness issue and, increasingly, an export-readiness issue. For large commercial and industrial consumers, the question is no longer whether renewable electricity should be part of the decarbonisation mix. The real question is how to structure renewable procurement so that it reduces emissions credibly, protects landed power cost and stands up to investor, customer and assurance scrutiny.

This is especially relevant for companies preparing BRSR Core disclosures, internal net-zero pathways and customer-facing decarbonisation commitments. Scope 2 often represents the fastest visible emissions reduction lever for businesses with substantial purchased electricity use, but poor procurement design can create three problems at once: weak accounting claims, tariff surprises and operational mismatch between renewable supply and plant demand.

This article focuses on a clearly practical angle: how Indian C&I buyers can use open access renewable power, round-the-clock structures, banking, firming and storage in 2026 to reduce Scope 2 emissions in a way that is economic, auditable and operationally workable.

Why Scope 2 strategy in India looks different in 2026

India's power market has matured beyond the old binary of captive solar versus discom supply. Large buyers now have multiple pathways:

- onsite solar
- offsite open access solar, wind or hybrid
- group captive structures
- third-party open access PPAs
- exchange-based green power procurement
- hybrid renewable with storage or external firming
- discom green tariff products in selected states

But more options do not automatically mean better outcomes. In practice, a procurement strategy must address four linked questions:

- What is the delivered landed tariff versus current and projected grid supply cost?
- What fraction of annual and hourly load can renewable supply realistically cover?
- What emission reduction claim is supportable under chosen accounting boundaries and reporting frameworks?
- What policy, scheduling and settlement risks sit in the contract structure?

For many Indian manufacturers, commercial complexes, data-led businesses and process industries, average grid tariffs in 2026 still often fall in a broad range of Rs 6.5-10.0 per kWh depending on state, voltage level, demand profile, cross-subsidy burden and time-of-day implications. By contrast, plain vanilla open



access solar and wind supply can look cheaper on an energy-only basis, but after transmission charges, wheeling, banking limits, standby provisions, scheduling deviations and state-specific surcharges, the effective savings may compress sharply if the structure is not matched to the load.

That is why Scope 2 decarbonisation should not be reduced to a headline PPA tariff comparison. It requires an integrated commercial and emissions view.

Start with the accounting outcome, not the PPA brochure

Many buyers still begin with a developer pitch and only later ask whether the resulting electricity can be translated into a defensible Scope 2 reduction claim. That sequence is backwards.

A serious Scope 2 plan should first map the reporting objective:

- statutory and investor disclosures
- BRSR Core readiness
- internal target tracking
- customer questionnaires and supply-chain requests
- lender diligence
- alignment with net-zero target architecture

The next step is to determine how location-based and market-based Scope 2 accounting will be managed internally. Even where a company reports under multiple frameworks, the governance principle should be simple: avoid overclaiming, document instruments clearly and keep plant-level energy data consistent with invoices, schedules and settlement records.

This is where [Carbon accounting & disclosure]([coreservices/netzerodecarbonisation/carbonaccountinganddisclosure]) becomes operational rather than theoretical. A company buying 50 GWh per year through one open access solar PPA, 20 GWh through discom supply and 10 GWh from rooftop systems needs a clean data hierarchy covering:

- source-wise electricity volumes
- meter and invoice reconciliation
- contract tenure and delivery point
- renewable attributes and retirements where applicable
- residual grid draw by plant and month
- treatment of curtailed or banked energy

Without this, even a commercially successful procurement can become a weak disclosure story.

Open access RE in 2026: where the economics still work

For most large Indian C&I consumers, open access remains the most scalable lever for Scope 2 reduction beyond onsite capacity constraints. The key is to assess landed cost, not just generator tariff.

A 2026 open access evaluation typically includes:

- generator tariff: often roughly Rs 2.6-4.2 per kWh depending on technology, tenor, CUF assumptions and state
- interstate or intrastate transmission charges where applicable



- wheeling charges and losses
- cross-subsidy surcharge, if not exempt
- additional surcharge, if applicable
- SLDC and scheduling charges
- banking charges and banking restrictions
- standby or balancing charges
- deviation settlement exposure

The viability differs materially by state. In some states, group captive remains attractive because surcharge exemptions preserve competitiveness. In others, policy uncertainty around banking or open access approvals can weaken project bankability and buyer confidence. Buyers should model at least three scenarios:

- current policy continuation
- moderate surcharge escalation
- banking reduction or less favourable settlement

For a day-shift manufacturing load with stable daytime demand, solar open access can still provide immediate Scope 2 reduction at competitive cost. For plants with strong night load or continuous operations, wind, wind-solar hybrid or renewable-plus-firming structures may be more suitable even if their nominal tariff is higher. The wrong product can force excess banking, spillover or high residual grid dependency, reducing both savings and annual emissions benefit.

A practical rule: a lower PPA tariff is not automatically the better decarbonisation choice if its generation profile matches only a small share of the plant's real load curve.

The real frontier is hourly matching, RTC logic and storage

As buyers become more sophisticated, annual renewable matching is giving way to tougher internal questions: how much of my hourly load is actually served by renewable electricity, and what does that mean for my decarbonisation claim?

In India, true 24x7 carbon-free electricity procurement is still an emerging practice rather than a standard market product. But the building blocks are now visible:

- wind-solar hybrid PPAs
- renewable energy combined with battery energy storage systems
- market purchases for balancing
- portfolio aggregation across multiple sites
- demand flexibility and process rescheduling

Battery costs remain project-specific, but 2026 commercial structures for front-of-the-meter and behind-the-meter storage are becoming more realistic for high-tariff C&I users, especially where they can stack multiple benefits:

- reducing peak import during expensive time blocks
- improving renewable self-consumption
- supporting demand charge optimisation



- reducing diesel genset runtime during outages or peak constraints
- enabling firmer renewable procurement claims

For many buyers, the right question is not whether storage can replace grid dependency completely. It is whether a limited-duration battery, often 1-2 hours in early C&I applications, can improve the economics and credibility of an RE-led Scope 2 strategy enough to justify the premium.

Example approach for a 20 MW average-load industrial site consuming about 175 GWh annually:

- 60-80 GWh per year from solar open access may provide low-cost daytime coverage
- 40-60 GWh from wind or hybrid can improve evening and monsoon performance
- a smaller battery may shift excess solar or shave evening peaks
- the residual load stays on grid, but the annual Scope 2 intensity drops materially

This is exactly where [RE-led decarbonisation](/coreservices/netzerodecarbonisation/releddecarbonisation) must be integrated with load analytics, tariff modelling and contract design rather than handled as a generic renewable purchase.

Industrial load shape matters more than sustainability slogans

Different sectors need different Scope 2 playbooks.

For commercial real estate, IT campuses and daytime-heavy facilities, onsite plus offsite solar can still deliver a large share of annual consumption economically, especially when paired with energy efficiency and thermal load optimisation.

For auto, engineering, pharma and electronics plants running multi-shift operations, hybrid procurement is usually more resilient than solar-only contracting.

For cement grinding units, chemicals, textiles, food processing and other process-led users, the procurement design should reflect:

- baseload versus variable load ratio
- thermal-electrical substitution potential
- outage sensitivity
- demand charge structure
- seasonal production swings
- future electrification of process loads

This last point is underappreciated. If a company plans boiler electrification, electric furnaces, heat pumps, electric mobility or other electrification measures over 3-7 years, its Scope 2 load may rise even while total emissions fall. Procurement planning must therefore be forward-looking. A 2026 contract strategy should not only address current electricity demand but likely post-electrification demand.

That is why many boardrooms are now combining Industrial efficiency & electrification assessments with renewable sourcing studies. Decarbonisation is no longer a silo exercise.

Key procurement structures Indian buyers should compare in 2026

No single model is universally best. Buyers should compare structures on emissions impact, tariff resilience, operational fit and accounting clarity.



- Onsite solar
- Best for facilities with available roof or land and strong daytime load.
- Limited by space and sometimes by internal capex priorities.
- Good visibility and straightforward metering.
- Group captive open access
- Can remain highly effective where equity participation and compliance are manageable.
- Often attractive because of surcharge treatment, but corporate governance and shareholding requirements must be maintained carefully.
- Third-party open access PPA
- Lower complexity for some buyers than captive participation.
- Must be evaluated carefully for state-level surcharge and approval risk.
- Wind-solar hybrid
- Better load matching for multi-shift and higher annual renewable share.
- Usually preferable to solar-only structures for plants seeking stronger Scope 2 reduction across more hours.
- Renewable plus storage or balancing arrangement
- Useful where time-of-day tariffs, reliability and hourly matching matter.
- Requires more sophisticated modelling and contract drafting.
- Discom green tariff product
- Worth reviewing where available and credible, particularly for buyers prioritising simplicity over maximal savings.
- Requires close review of tariff premium, attribute treatment and disclosure quality.

In all cases, lenders and corporate approvers should insist on a downside case. If policy changes alter banking or surcharge treatment, does the project still preserve an acceptable delivered tariff relative to projected discom supply?

Common mistakes in Scope 2 decarbonisation programmes

Several recurring issues weaken otherwise sensible renewable strategies.

- Using annual energy percentages without checking hourly or seasonal mismatch.
- Assuming every renewable procurement route produces the same quality of emissions claim.
- Ignoring curtailment, outages, scheduling deviations and banking losses in emissions planning.
- Treating state policy as static over a 12-20 year contract life.
- Running sustainability, power procurement and finance teams on separate spreadsheets with inconsistent assumptions.
- Failing to document how renewable purchases map to plant-level disclosures and assurance requirements.

Another common mistake is to frame Scope 2 reduction as the full decarbonisation strategy. For many hard-to-abate sectors, it is only the first leg. Once low-cost electricity decarbonisation is underway, the next questions usually involve heat, fuels, process emissions and future carbon-cost exposure. That broader pathway belongs inside [Net-zero roadmaps &



MACC](/coreservices/netzerodecarbonisation/netzeroroadmapsandmacc), where renewable procurement is ranked alongside efficiency, electrification, fuel switching and emerging options.

A 2026 decision framework for boards and plant teams

A disciplined Scope 2 decision process should answer the following:

- What is the current plant-wise electricity baseline in GWh, tariff and emissions intensity terms?
- Which loads are best served by onsite solar, open access solar, wind, hybrid or discom green supply?
- What is the expected landed tariff under base, conservative and adverse policy scenarios?
- What annual renewable share is realistic after banking rules, curtailment and load mismatch?
- What is the internal accounting treatment for market-based and location-based reporting?
- How will the data be audited and traced contract-to-meter-to-disclosure?
- How does the plan evolve if electricity demand rises due to electrification?

The strongest programmes are those that join energy procurement, reporting and decarbonisation strategy into one operating model. That means plant teams, procurement, finance, sustainability and legal all working off a single fact base.

In 2026, Indian industry does not need more renewable rhetoric. It needs tariff-aware, policy-literate and audit-ready Scope 2 execution. Open access RE, hybrid procurement and selective storage can materially cut purchased-power emissions, but only when matched to actual load, state regulation and reporting requirements.

For companies under pressure from customers, lenders and boards to show measurable progress, a well-designed Scope 2 plan remains one of the fastest and most bankable decarbonisation moves available. The winners will be those who treat electricity procurement as both an energy decision and a carbon architecture decision.

If your business is evaluating open access, hybrid renewable procurement, storage integration or audit-ready Scope 2 accounting, contact Growthifye's advisory desk to build a practical decarbonisation plan grounded in tariffs, regulation and execution.

Explore Growthifye's related capabilities

This analysis connects directly to our advisory practice: [Carbon accounting & disclosure](/coreservices/netzerodecarbonisation/carbonaccountinganddisclosure) · [Net-zero roadmaps & MACC](/coreservices/netzerodecarbonisation/netzeroroadmapsandmacc) · [RE-led decarbonisation](/coreservices/netzerodecarbonisation/releddecarbonisation) · [Industrial efficiency & electrification](/coreservices/netzerodecarbonisation/industrialefficiencyandelectrification).

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