

Renewable Consumption Obligation (RCO)

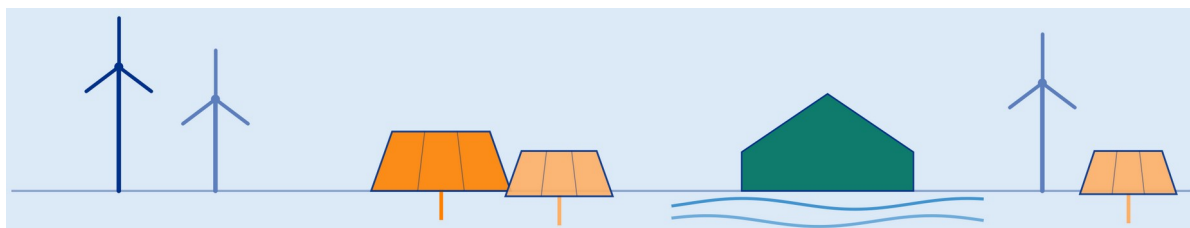
Implementation Toolkit

Institutional architecture, worked example, procurement strategy, documentation controls, key risks and a 90-day compliance playbook for designated consumers and DISCOMs.

Regulatory position reviewed as at 27 August 2026

Companion reference to the powerppt.com Sector Insights article on RCO/RPO

Sources: MoP RCO Notification (27 Sep 2025) • BEE Operational Guidelines v1.2 • CERC Buyout Order (18 Feb 2026)



Executive takeaway

RCO is not merely an RPO rename. It is a statutory compliance framework under the Energy Conservation Act, with BEE-led monitoring, defined eligible sources and exclusions, audit and verification, multiple compliance routes, and a CERC-determined buyout mechanism.

Correction to older RCO/RPO material

Older material describing RCO and RPO as running in parallel is superseded. BEE's current Operational Guidelines (v1.2) state that for designated consumers covered by RCO, no additional RPO applies under the Electricity Act, and State-level RPO targets are subsumed within the notified RCO targets.

1. Institutional Architecture & Reporting Cycle

Seven institutions share responsibility for RCO notification, monitoring, verification and price determination. Knowing which body owns which decision is the first step in building a defensible compliance process.

Institution	Primary RCO role
Ministry of Power	Notify/amend the RCO trajectory and framework
BEE	Compliance monitoring, guidelines, formats, portal, reporting and enforcement initiation
SDA (State Designated Agency)	State-level verification, reconciliation and reporting
SLDC	Verification/data support, including DISCOM compliance
CERC	REC regulations and RCO buyout-price determination
Grid India / REC Registry	REC issuance, redemption and data support
Empanelled AEA	Annual verification for obligated DCs other than DISCOMs, as applicable
SERC / JERC	Electricity-sector regulation; relevant to State arrangements and the historical RPO framework

Annual reporting cycle

1. Define DC applicability and the target year.
2. Compile the annual energy account and supporting data.
3. Verify renewable generation/consumption and exclusions.
4. Reconcile REC purchase/redemption data.
5. Complete AEA/SDA/SLDC verification as applicable.
6. Use the permitted assessment-year window for REC/buyout closure of any shortfall.
7. Submit prescribed declarations/forms and retain the complete evidence pack.

2. Worked Example — FY 2026-27

Core planning formula

RCO requirement (MWh) = Applicable RCO % × correct RCO denominator (MWh).
Compliance gap = requirement – recognised eligible renewable/non-fossil consumption
– eligible certificate/other permitted compliance.

Illustration for an open-access designated consumer in FY 2026-27 (35.95% total RCO):

Item	Illustrative value
OA consumption at point of drawal	100,000 MWh
FY 2026-27 RCO	35.95%
RCO requirement	35,950 MWh
Eligible renewable consumption	22,000 MWh
Initial gap	13,950 MWh

The example is illustrative only. The actual denominator and recognised numerator must be calculated using the applicable BEE methodology, exclusions, metering and source evidence — not sanctioned load or contract demand.

Do not use sanctioned load or contract demand as the legal test

A 1,200 kW connection may be commercially significant but does not, by itself, establish RCO applicability. Verify the legal entity, sector classification and annual energy-consumption threshold under the Energy Conservation Act / DC notifications.

Compliance routes

Route	What it means	Key control
Direct renewable consumption	Own generation or eligible renewable procurement actually consumed	Metering + contract + source evidence

ESS	Consume eligible non-fossil energy after storage	Only post-loss consumed energy counts
RECs	Purchase or self-retain eligible RECs	Registry and redemption reconciliation
VPPA-linked RECs	Use permitted RECs acquired under VPPA structures	Check current CERC framework
Buyout	Pay CERC-determined price for eligible shortfall	Use as backstop, not primary strategy

CERC-determined RCO buyout price

FY	₹ / MWh
2024-25	₹347
2025-26	₹347
2026-27	₹364
2027-28	₹382
2028-29	₹401
2029-30	₹421

Derived by CERC's 18 February 2026 order from the weighted average REC price for FY 2024-25 and FY 2025-26, with a 5% annual escalation thereafter, subject to review.

3. Notified Sectors & Energy-Consumption Thresholds

An industrial or commercial entity is an RCO-obligated designated consumer only if it falls within a notified sector and crosses the applicable annual energy-consumption threshold under the Energy Conservation Act. All electricity distribution licensees are designated consumers regardless of threshold. Thermal power plants are DCs in form but are not subject to RCO targets, since they generate for sale rather than for consumption.

Notified sector	Threshold (annual energy consumption)
Aluminium	7,500 MTOE
Integrated cement	30,000 MTOE
Cement grinding	10,000 MTOE
Hotels / airports	500 MTOE
Chlor-alkali	12,000 MTOE
Fertiliser	30,000 MTOE
Iron & steel	20,000 MTOE
Pulp & paper	75,000 MTOE
Petroleum refinery	90,000 MTOE
Petrochemical crackers	100,000 MTOE
Textiles	3,000 MTOE
Sugar	10,000 MTOE
Chemicals	3,000 MTOE
Ceramic	5,000 MTOE
Glass	10,000 MTOE
Zinc	20,000 MTOE
Copper	10,000 MTOE
Port Trust	500 MTOE
Dairy	2,500 MTOE
Automobile assembly	3,000 MTOE
Tyre / forging / foundry / refractories	7,000 / 1,500 / 5,000 / 3,000 MTOE

Source: BEE Operational Guidelines for RCO Compliance Mechanism, Version 1.2 (Section 4). Distribution licensees are designated consumers under the Act irrespective of threshold; RCO does not apply to thermal power plants notwithstanding their DC status.

4. RPO vs RCO — Full Comparison

Dimension	RPO	RCO
Legal foundation	Electricity Act, 2003; Section 86(1)(e)	Energy Conservation Act; Section 14(x)
Regulatory purpose	Promote/procure renewable electricity	Drive measurable renewable/non-fossil consumption
Entity test	Obligated entity under applicable RPO rules	Designated consumer + notified RCO applicability
DISCOM treatment	State trajectory/rules historically	National RCO trajectory with technology components
OA/CPP treatment	Depends on applicable RPO regulations	Total RCO for covered DCs
Compliance evidence	Procurement + RECs + energy accounting	Energy account + eligible consumption + RECs + verification
Enforcement route	Electricity regulatory framework	Energy Conservation Act enforcement
Current covered-DC relationship	Subsumed within RCO per BEE Operational Guidelines	Current operative framework

Practical rule

Keep separate internal ledgers for renewable procurement and statutory compliance, but do not automatically add an RPO percentage on top of the RCO percentage for a covered DC. Use the current BEE framework and any entity-specific regulatory direction.

5. Eligible Sources, Exclusions & Fungibility

Eligible non-fossil sources

- Renewable sources such as solar PV, wind, hydro, biomass, biofuel, urban/municipal waste, geothermal and eligible hybrid projects.
- Nuclear is non-fossil in the broad sense, but electricity consumed from nuclear sources is expressly excluded from RCO.
- Energy generated/procured from eligible non-fossil sources and consumed through an ESS can count; mere storage does not.

Important exclusions

- Nuclear electricity consumption is excluded.
- Qualifying waste-heat recovery and waste-energy recovery self-consumption receives specified exclusion treatment.
- For captive users, 50% of electricity generated and self-consumed from fossil-fuel-based cogeneration is excluded.
- CPP auxiliary consumption attributable to applicable generation is treated under the BEE methodology.
- Non-DC operations of a DC are not automatically excluded — BEE states total electrical consumption is included in the denominator.

Fungibility

- For DISCOMs, Wind, Hydro and Other renewable components are fungible.
- Surplus DRE can offset shortfalls in other components.
- DRE shortfall is restrictive — it must be met through DRE, relevant RECs/self-retention, or buyout as permitted.
- For OA/CPP DCs, the obligation is a single total RCO.

6. Procurement Strategy for an Industrial Consumer

8. Confirm DC status and the applicable RCO target.
9. Freeze the denominator before buying compliance instruments.
10. Map existing renewable supply: rooftop, captive, group captive, green OA, third-party OA and eligible ESS.
11. Document WHR/WER/cogen exclusions separately.
12. Forecast annual MWh demand and the RCO gap under production scenarios.
13. Cover the structural requirement with reliable renewable procurement where economic.
14. Use RECs as a balancing/contingency instrument.
15. Retain buyout as a last-resort backstop.
16. Run monthly compliance reconciliation instead of a year-end exercise.

This procurement mix is a strategy illustration, not a regulatory prescription. Economics depend on state OA rules, transmission/wheeling charges, CSS/AS, banking, losses, scheduling, renewable tariff and REC prices.

Illustrative portfolio layering

Portfolio layer	Illustrative role
On-site RE	Stable base coverage
Green OA / contracted RE	Primary structural coverage
ESS	Time-shifting and improved renewable utilisation
RECs	Balancing/contingency
Buyout	Residual shortfall backstop

7. Documentation & Audit Controls

- Use one master RCO ledger per obligated DC.
- Reconcile meter → invoice/energy account → RCO submission.
- Do not claim the same MWh twice through direct renewable consumption and certificates.

- Maintain a controlled register of meter IDs, settlement points, renewable source identifiers and REC identifiers.
- Lock the denominator before final procurement decisions.

Evidence pack — what to hold and why

Evidence	Purpose
Utility bills / energy account	Consumption denominator
OA invoices + meter data	Point-of-drawal consumption
CPP generation + APC data	Self-consumption and exclusions
Renewable meter data	Eligible renewable MWh
PPA / OA / group-captive agreements	Contractual source and entitlement
REC purchase/redemption records	Certificate-based compliance
REC Registry data	Independent reconciliation
ESS input/output meter records	Net eligible stored-energy consumption
WHR/WER/cogen technical evidence	Support exclusions
AEA/SDA/SLDC verification	Independent validation
Prescribed BEE forms/declarations	Regulatory submission

8. Corporate-Level Compliance

BEE's Operational Guidelines allow corporate-level compliance for eligible multiple obligated DC entities under common control, subject to prescribed conditions. Surplus in one eligible DC can offset shortfall in another.

Strategic opportunity

For multi-site groups, corporate pooling can reduce compliance cost and improve flexibility when renewable supply and load profiles differ across sites. Non-DC entities should not be casually included in the aggregation.

9. Key Risks & Controls

Risk	Control
Wrong DC classification	Annual legal applicability memo
Wrong denominator	Meter/invoice reconciliation
Double counting	Unique MWh and certificate ledger
DRE shortfall for DISCOM	Track DRE separately
Overstated WHR/WER/cogen exclusion	Engineering evidence + metering
REC evidence gap	REC Registry reconciliation
Late shortfall discovery	Monthly forecast
Use of obsolete RPO assumptions	Regulatory register with effective dates
Incorrect corporate pooling	Entity-level eligibility map

10. 90-Day Implementation Playbook

Period	Action	Output
Days 1-15	Confirm entity, DC status, target year	Applicability memo
Days 1-30	Compile energy/OA/CPP data	Validated baseline
Days 15-30	Map eligible RE and exclusions	Eligibility matrix
Days 20-45	Calculate requirement and gap	RCO model
Days 30-60	Evaluate RE/OA/CPP/ESS/REC options	Procurement plan
Days 45-70	Secure primary coverage + contingency	Approved closure plan
Days 60-80	Build audit evidence room	Evidence pack
Days 75-90	Mock verification	Corrective-action list

Bottom line

Treat RCO as a recurring energy-procurement and compliance programme, not a year-end certificate purchase. The strongest approach combines a defensible denominator, long-term renewable coverage, REC contingency, documented exclusions and audit-ready evidence.

Appendix A — Management Dashboard

KPI	Frequency	Question
RCO requirement (MWh)	Monthly	What is the current statutory requirement?
Eligible RE consumed (MWh)	Monthly	How much is covered?
RCO gap (MWh)	Monthly	What remains uncovered?
% coverage	Monthly	Are we on track?
REC inventory / contracted REC	Monthly	What is the contingency?
Buyout exposure (₹)	Monthly	What is the cost of the current gap?
DRE coverage	Monthly for DISCOMs	Is the non-fungible component secured?
Evidence completeness	Monthly/quarterly	Could an auditor reproduce the calculation?

Appendix B — RCO Compliance Checklist

- Confirm DC status and applicable target year.
- Confirm the correct denominator.
- Map all CPPs, OA arrangements and renewable assets.
- Identify WHR/WER/cogen exclusions.
- Reconcile meters with invoices/energy accounts.
- Calculate eligible renewable consumption month-wise.
- Track DRE separately where applicable.
- Reconcile REC purchases/redemptions with the Registry.
- Forecast the year-end shortfall.
- Decide procurement/REC/buyout closure strategy.
- Complete verification and prescribed submissions.
- Archive evidence and correspondence.

Source Hierarchy & References

This toolkit reconciles the user's supplied RCO/RPO material with current official BEE, MoP and CERC sources available as at 27 August 2026. Where an older statement conflicts with a later official operational position, the later position is used.

MoP RCO Notification, 27 Sep 2025 (S.O. 4421(E)) Gazette notification superseding the 20 Oct 2023 RCO notification

BEE — Operational Guidelines for RCO Compliance Mechanism, v1.2

<https://www.beeindia.gov.in/WriteReadData/L45218/9003437506971259.pdf>

BEE — RCO page https://www.beeindia.gov.in/show_content.php?lang=1&level=0&lid=14&ls_id=205

CERC — RCO Buyout Order, 18 Feb 2026 <https://cercind.gov.in/2026/Orders/12-SM-2085.pdf>

CERC — Current Regulations https://cercind.gov.in/current_reg.html

CERC — REC Regulations, 2022 <https://cercind.gov.in/regulations/REC-Regulations-2022.pdf>

CERC — REC First Amendment 2026 (Gazette) <https://egazette.gov.in/WriteReadData/2026/271576.pdf>