SIX NOTIFICATIONS | 22 MAR 2006 → 1 APR 2026

CEA (Installation and Operation of Meters) Regulations, 2006 — Twenty Years of Regulatory Evolution to 2026

From basic interface/consumer metering to Advanced Metering Infrastructure, smart prepayment meters, and a 650V open-access threshold

Principal + 5 Amendments (2010, 2014, 2019, 2022, 2026)

POWERPPT.COM

Regulatory Evolution — Six Notifications

Principal Regulations, 2006 + five amendments

2006	2010	2014	2019	2022	2026
Principal Regulations	**Amendment**	**Amendment**	**Amendment**	**Amendment**	**Amendment**
Base framework: interface, consumer & energy-accounting metering	Recast Reg. 7 & meter-location arrangements	Renewable Energy Meter framework (feed-in / net-metering)	Smart meters, revised check, standby and interface concepts, cyber security	AMI + AMI Service Provider; prepayment & feeder/DT reading	650V open-access threshold; AMI interoperability mandatory

Reading This Flipbook

- Consolidates six source notifications into one navigable digest — principal Regulations plus five amendments, each amending the same base framework rather than replacing it
- The 2026 amendment (notified 1 April 2026) is the most recent and most consequential for open-access consumers

WHY IT MATTERS: This is a genuinely continuous 20-year regulatory thread — every amendment builds on Regulation 4, 6 or 7 of the 2006 principal text, so compliance teams need the consolidated view, not any single notification in isolation.

Change-at-a-Glance Matrix

How five key themes evolved from the 2006 baseline

Theme	2006 Baseline	Key Later Change
Consumer metering	Licensee-owned; BIS compliance, testing/sealing	2019 smart+prepayment direction; 2022 AMI; 2026 further smart/prepayment provisions
Interface metering	Main/check/standby architecture, defined locations	2019 refined definitions + remote reading; 2026 open-access treatment incl. ≤650V
Renewable energy	No separate RE-meter framework	2014 introduced RE Meter + feed-in/net-metering locations
AMI	Not separately defined	2022 formally defines AMI & AMI Service Provider; 2026 mandates interoperability
Energy accounting	Generation/transmission/distribution locations & periodic audit	2010 expanded locations; 2022 added remote-reading + quarterly DT-level upload

WHY IT MATTERS: AMI and consumer metering are the two fastest-moving themes — both have changed in three of the last four amendments (2019, 2022, 2026).

Notification & Timeline

F. No. 502/70/CEA/DP&D · 22 March 2006 (Gazette No. 40) · five amendments through 2026

2006	**Principal Regulations notified**	17 Mar 2006 · in force from Gazette publication (22 Mar 2006)
2010	**Amendment — Meter Location (Reg. 7)**	4 Jun 2010 · No. 502/6/2009/DP&D/D-I
2014	**Amendment — Renewable Energy Meter**	26 Nov 2014 · No. 23/47/2014-R&R(Vol.III)
2019	**Amendment — Smart Meter Mandate**	23 Dec 2019 · No. CEA-GO-13-15/3/2019-DPR
2022	**Amendment — AMI / AMISP Framework**	28 Feb 2022 · No. CEA-GO-13-15(12)/1/2022-DPR
2026	**Amendment + Corrigendum (current)**	1 Apr 2026, corrected 10 Apr 2026 · No. 1/12/CEA/DPM/Regulations/2025

Scope, Applicability & Meter Categories

Regulation 3 — made under Section 55(1) and Section 177(2)(e) of the Electricity Act, 2003

Applies to every generating company and licensee engaged in generation, transmission, trading, distribution or supply of electricity — for all meters they install, and to all categories of consumers. Once in force, the corresponding provisions of the Indian Electricity Rules, 1956 cease to apply.

Interface Meter

Used for energy accounting/billing at the connection point between a generating company, licensee, and consumer systems on the inter-State or intra-State transmission system, or a system permitted open access.

Consumer Meter

The meter used to record and bill the electricity supplied to — or drawn by — a consumer, excluding consumers who fall under Interface Meters.

Energy Accounting & Audit Meter

Deployed across the electricity system for energy accounting and audit, to determine consumption and losses over a defined period.

Key Definitions — Regulation 2

Check Meter

A meter connected to the same instrument-transformer core as the Main Meter, used for energy accounting and billing if the Main Meter fails.

Standby Meter

Connected via a separate instrument transformer to the Main and Check Meters; used for accounting/billing only if both the Main and Check Meters fail.

Standard Meter

A meter conforming to the standards specified in the Schedule to these regulations.

Instrument Transformer

A Current Transformer (CT), Voltage Transformer (VT), or Capacitor Voltage Transformer (CVT) used with a meter.

Meter

Equipment suitable for measurement, display and recording of electricity or a related quantity — including instrument transformers needed for that purpose.

Smart Meter (added 2019)

A meter conforming to IS 16444, as amended from time to time — the basis for the prepaid, remotely-read metering mandate.

2006 — Principal Regulations

Notified 22 March 2006 (No. 40, Notification 502/70/CEA/DP&D)

Core Meter Categories

- Main meter, check meter, standby meter — the base interface-metering architecture
- Interface meter — at the point of interconnection between generating company, licensee and consumer systems
- Consumer meter — for billing electricity supplied to/by a consumer
- Energy accounting & audit meter — at generation, transmission and distribution points

Framework Established

- Meter ownership rules (generally licensee-owned for consumer meters)
- Meter locations across generation, transmission, distribution and interface points
- Meter reading, records and seal-handling responsibilities
- Failure/discrepancy handling and anti-tampering provisions
- Quality assurance and BIS-standard compliance requirements

WHY IT MATTERS: Every later amendment (2010–2026) modifies clauses within this same base framework — none of it has been repealed, so the 2006 text remains the reference point for meter ownership, location and quality-assurance obligations today.

2010 Amendment — Regulation 7 Rewritten

4 June 2010 · No. 502/6/2009/DP&D/D-I — replaced Regulation 7 in full with a new location Table-1

Stage	Main Meter	Check Meter	Standby Meter
Generating station	All outgoing feeders	All outgoing feeders	HV side of generator/station-auxiliary transformers
Transmission – Distribution boundary	One end, by mutual agreement	—	Other licensee's meter serves as standby
Interconnecting transformer	HV side	—	LV side
Inter-/intra-State transmission, ABT consumers with open access	As fixed by the Appropriate Commission	—	—

2014 Amendment — The Renewable Energy Meter

26 November 2014 · No. 23/47/2014-R&R(Volume III) — applies to all grid-interactive renewable energy plants

Applicability

- **415 V and below:** all grid-interactive RE plants seeking connectivity, at that voltage class.
- **Above 415 V:** RE plants follow the same metering arrangements as generating stations under the 2006 Regulations; the 'Consumer Meter' clauses also apply to Renewable Energy Meters unless stated otherwise.

Feed-in Tariff Metering

The RE plant is connected to the grid to inject its entire generated output. The Renewable Energy Meter sits on the outgoing feeder from the plant.

Net Metering

The RE plant is primarily connected to the owner's own load, with any surplus injected into the grid. The Renewable Energy Meter is installed at the point of first connection to the consumer's load, and replaces the existing consumer meter.

Note: for net-metering, battery-backed RE plants may supply the consumer's load during a grid outage — a separate automatic isolation arrangement is required to island the load from the grid.

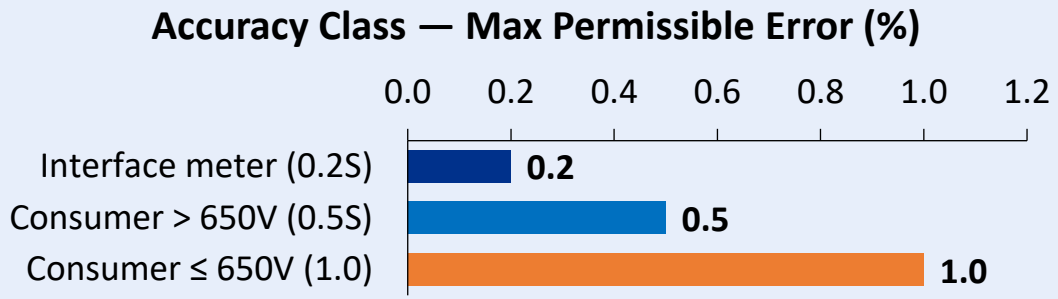
WHY IT MATTERS: 2014 is the amendment that first gave renewable generators their own metering category — before this, RE plants were metered under the same generic rules as any other generating station.

2019 Amendment — Definitions & Accuracy Classes

Notified 23 December 2019

Redefined Meter Concepts

- Check meter, consumer meter, standby meter and interface meter definitions all revised
- ‘Smart meter’ formally defined by reference to IS 16444
- Instrument transformer definition clarified (CT / CT+CVT / CT+IVT)
- New Regulation 21 (Cyber Security) and Regulation 22 (Power to Relax) inserted



Accuracy Class Table (Schedule)

- Interface meter: Class 0.2S
- Consumer meter ≤650V direct-connected: Class 1.0
- Consumer meter ≤650V CT-connected: Class 0.5S (or 1.0 for long-current-range meters)
- Consumer meter >650V up to 33kV: Class 0.5S
- Consumer meter >33kV: Class 0.2S
- Energy accounting/audit meters at generation: ≥0.2S (RE plants: inverter AC output); others ≥1.0S
- Transmission system meters: ≥0.2S; Distribution (CT-connected): ≥0.5S

WHY IT MATTERS: The accuracy-class schedule from 2019 is still the reference table cited by the 2026 amendment (which specifically calls out 1.0/0.5S smart meters for open-access interface use) — read the two together.

2019 Amendment — The Smart Meter Mandate

23 December 2019 · No. CEA-GO-13-15/3/2019-DPR Division — the definitional overhaul that introduced Smart Meters

1. **New definition: Smart Meter**
   A meter conforming to IS 16444, as amended from time to time — the first time the term appears in these regulations.

2. **All new Interface & Energy Accounting/Audit Meters**
   Must be static type, with automatic remote meter-reading capability.

3. **Definitions re-cast**
   Check Meter, Consumer Meter, Standard Meter, Instrument Transformer and Interface Meter all redrafted for clarity; ‘Net Metering’/‘Feed-in Tariff’ clauses from 2014 removed as standalone definitions.

4. **Standards updated (Reg. 5)**
   Meters must conform to Bureau of Indian Standards (BIS); where no BIS standard exists, relevant IEC standards apply, adapted to Indian frequency and voltage norms.

2019 Amendment — Prepaid Consumer Meters

Regulation 4(1) rewritten — every new consumer connection becomes a prepayment Smart Meter

1

All new consumer meters

must be prepayment-enabled Smart Meters from the outset.

→

2

Existing meters

are replaced with prepayment Smart Meters within the timeline set by the Central Government.

→

3

Consumer purchase option (Reg. 6(2)(b))

a consumer may buy their own meter to the licensee's technical spec; the licensee still tests, installs and seals it. Ownership vests with the consumer only once permanently removed from the licensee's system.

2022 Amendment — AMI Introduced

Notified 28 February 2022 (F.No. CEA-GO-13-15(12)/1/2022-DPR)

New Definitions

- Advanced Metering Infrastructure (AMI) — integrated system of smart meters, communication networks and data management, enabling two-way utility–meter communication (head-end system, WAN, NAN, data concentrator unit, HAN)
- AMI Service Provider — appointed by the distribution licensee to own/operate/maintain AMI (or part of it) until transfer to the licensee

What else changed

• **Reg. 4(1)(b):** communication-network areas get prepayment Smart Meters within a Central-Government timeline; high-capacity connections get auto-remote-reading or Smart Meters; non-communication areas allow State Commission-approved prepayment meters.

• **Reg. 6(2)(a):** consumer meters are normally licensee-owned, but where an AMISP is contracted, ownership of the meter sits with the AMISP for the contract term.

Operational Changes

- All consumers in communication-network areas: prepayment-mode Smart Meters within Central Government timelines
- Meter ownership can stay with the AMI Service Provider during the contract period
- All incoming/outgoing feeders (3.3kV+) and DT-level accounting points get remote-reading meters or Smart Meters per Central Government timelines
- Distribution licensees must upload DT-level energy-accounting data quarterly to the National Power Portal, per BEE (Energy Audit) Regulations, 2021

WHY IT MATTERS: The AMI Service Provider concept is what let discoms outsource metering ownership/operation to specialised AMI vendors during rollout — a structural enabler for India's national smart-meter programme.

2026 Amendment — the 650V Open-Access Threshold

Notified 1 April 2026 (F.No. 1/12/CEA/DPM/Regulations/2025) | Effective on Gazette publication

Regulation 4(1)(b) — Smart Metering

- All consumers in communication-network areas: Smart Meters per relevant IS, within Central Government timelines
- High-current consumer connections beyond IS limits: automatic remote-reading meters or Smart Meters
- Non-network areas: State Commission may allow prepayment meters conforming to relevant IS
- All AMI must include prepayment functionality and be interoperable per Authority guidelines
- Smart Meter with accuracy class 1.0/0.5S acts as the Interface Meter for open-access consumers at voltage ≤650V

Regulation 7 — New Table-1 Categories

- Sl. No. 4 — Consumer on inter-/intra-State transmission or distribution system with open access >650V: Main & Check meter at consumer premises; Standby meter on a separate instrument transformer at consumer premises, or at the licensee's substation as mutually agreed
- Sl. No. 5 — Consumer with open access ≤650V: Main & Check meter at consumer premises; no standby meter required

WHY IT MATTERS: This is the amendment that finally draws a bright line at 650V for open-access metering architecture — confirm which side of that threshold any open-access consumer or generator you advise on falls before designing their metering scheme.

Practical Implications by Stakeholder

Operational synthesis — not a substitute for the Gazette text

Large Consumers / Open Access

- Metering config now tied to digital/remote-read capability, smart/prepayment function and voltage level
- 2026 specifically addresses open-access consumers at and below 650V

DISCOMs / Licensees

- Architecture progressively shifts to smart meters, AMI, remote reading and feeder/DT-level energy accounting

Generators / RE Projects

- 2014 established a dedicated RE Meter framework with feed-in and net-metering locations

AMI / Metering Service Providers

- 2022 recognises AMI Service Providers and permits contract-period meter ownership in an AMI project area

Compliance Teams

- The 2006 framework carries detailed responsibilities on meter reading, records, seals, failure/discrepancy handling, anti-tampering and quality assurance
- Every later amendment should be read as modifying this same base framework, not replacing it — always verify the current consolidated text against any amendments issued after this flipbook's cut-off

WHY IT MATTERS: Five different stakeholder groups are affected simultaneously by this one regulatory thread — useful framing when briefing cross-functional teams (regulatory, metering ops, RE business development) on a single amendment.

Source Set & Suggested Actions

Six source notifications consolidated in this flipbook

Confirmed Source Dates

- 22 Mar 2006 — Principal Regulations
- 4 Jun 2010 (Gazette 26 Jun 2010) — 2010 Amendment
- 26 Nov 2014 (Gazette 3 Dec 2014) — 2014 Amendment
- 23 Dec 2019 — 2019 Amendment
- 28 Feb 2022 — 2022 Amendment
- 1 Apr 2026 — 2026 Amendment (draft published 23 Feb 2026)

Suggested Compliance Actions

- Map any open-access consumer or generator against the new 650V threshold (Reg. 7, Table-1, Sl. 4 vs Sl. 5) to confirm standby-meter requirements
- Cross-check AMI rollout plans against the 2026 interoperability + mandatory prepayment-functionality requirement
- Verify metering specifications against the 2019 accuracy-class schedule, still the operative reference
- Flag DT-level quarterly upload obligations (2022) in O&M/compliance calendars

WHY IT MATTERS: This flipbook is a source-derived synthesis for navigation — for legal interpretation, always verify the operative consolidated text and any amendments/orders issued after 1 April 2026.

2026 Amendment — Regulation 4(1)(b) Rewritten

1 April 2026 · No. 1/12/CEA/DPM/Regulations/2025 — refines the Smart Meter rollout proviso once more

Communication-network areas	All consumers get Smart Meters conforming to relevant IS, within Central Government timelines (unchanged principle from 2022).
High current-carrying connections	Beyond the IS-specified threshold: automatic remote meter reading or Smart Meters, as per relevant IS.
Non-communication areas	Prepayment meters conforming to relevant IS, as allowed by the respective State Electricity Regulatory Commission.
New — AMI interoperability + prepayment	All Advanced Metering Infrastructure must now include prepayment functionality and be interoperable, per Authority guidelines.
New — Interface Meter for open access ≤ 650 V	A Smart Meter of accuracy class 1.0/0.5S (per relevant IS) now doubles as the Interface Meter for consumers permitted open access at or below 650 V.

Applicability & Compliance Checklist

Applicability

• Amends the CEA (Installation and Operation of Meters) Regulations, 2006 (Gazette No. 40, 22 Mar 2006), as last amended 28 Feb 2022.
• In force from the date of Gazette publication of the 2026 Amendment (1 April 2026); the 10 April 2026 corrigendum makes no change to this commencement date.

Suggested actions

Distribution licensees / AMISPs
Confirm AMI rollout plans include prepayment functionality and interoperability per Authority guidelines, in every communication-network area.

Open-access consumers ≤ 650 V
Check whether your existing interface metering already meets the 1.0/0.5S accuracy class — or plan the Smart Meter upgrade that now doubles as your Interface Meter.

Open-access consumers > 650 V
Confirm Main/Check Meter placement against the revised Table-1 Sl. No. 4 — particularly where a Check Meter sits at a licensee's substation by mutual agreement.

Compliance / regulatory teams
Update internal metering SOPs to reflect five amendments' worth of drift from the 2006 baseline — 2010 (location), 2014 (RE meters), 2019 (Smart Meters), 2022 (AMI/AMISP), 2026 (this amendment).

Thanks for using PowerPPT's Presentation!

Excite your officer/staff with the stunning presentations at Powerppt.COM

