CEA (Flexible Operation of Coal based Thermal Power Generating Units) Regulations, 2023

Notified 25 January 2023 | Published 30 January 2023 (Gazette No. 61) | In force from date of final publication

APPLICABILITY

All coal-based thermal power generating units — owned or controlled by the Central Government, State Governments, or any private company — connected to the grid, and load despatch centres.

KEY DEFINITIONS

Flexible Operation: ability to generate power at specified levels per grid requirement. MCR: maximum continuous output (MW) guaranteed by the manufacturer. Minimum Power Level & Ramp Rate: expressed as % of MCR (sustained output / rate of change per minute).

MINIMUM POWER LEVEL (REG. 6)

Units must be capable of flexible operation down to 40% of MCR without oil support — the core regulatory target. Units unable to reach an interim 55% minimum power level must do so within 1 year of notification; the full 40% capability is phased in per the Authority's plan.

RAMP RATE CAPABILITIES (REG. 7)

70–100% MCR: minimum 3%/min. 55–70% MCR: minimum 2%/min (both bands: 1-year compliance deadline for non-compliant units). 40–55% MCR: minimum 1%/min, phased in per Regulation 5(2).

PHASED IMPLEMENTATION (REG. 5)

Units must be capable of flexible operation as per these regulations; the Authority specifies a phasing plan from time to time; load despatch centres schedule units under their jurisdiction considering these capabilities.

RELAXATION OF REGULATIONS (REG. 8)

The Authority may, by an order and for reasons recorded in writing, relax any provision of these regulations in respect of a matter referred to it — decided case by case.

MINIMUM POWER LEVEL — AT A GLANCE

- 100% – 55% MCR: normal operating range.
- 55% MCR: interim minimum power level target — achieve within 1 year of notification if not already capable.
- 40% MCR: full regulatory target for minimum power level — phased rollout per Authority plan.
- Below 40% MCR: sustained operation without oil support is not mandated.

RAMP RATE BANDS — AT A GLANCE

- 70% – 100% MCR: minimum ramp rate of 3% per minute.
- 55% – 70% MCR: minimum ramp rate of 2% per minute.
- 40% – 55% MCR: minimum ramp rate of 1% per minute (phased in).

GENERAL REQUIREMENTS (REGULATION 4)

- Units shall be designed or suitably retrofitted, if required, for the full range of ambient and environmental conditions prevailing at the site.
- All installed equipment and systems shall comply with applicable statutes, regulations and safety codes.