# Emissions intensity targets

What do the Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025, say? Why are they needed, how will these targets help India's carbon credit trading market and the country's wider climate goals?

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NEW DELHI, APRIL 28

THE GOVERNMENT has notified draft Rules introducing targets for the reduction of greenhouse gas (GHG) emissions by "obligated entities" in energy-intensive sectors and industries.

The Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025, notified by the Ministry of Environment, Forest and Climate Change on April 16, puts in place a compliance mechanism for the Carbon Credit Trading Scheme, 2023 (CCTS).

The CCTS was launched to create a framework for the trading of carbon credits, to facilitate the reduction of emissions in energy intensive industries, and to support India's climate commitments under the Paris Climate Agreement of 2015.

The draft Rules are open for objections and suggestions in a 60-day window from the date of their notification.

**What is meant by greenhouse gases emissions intensity (GEI)?**

GHGs are gases that trap heat in the atmosphere and contribute to the "greenhouse effect" that raises surface temperature on Earth.

The five most abundant GHGs in the atmosphere are water vapour, carbon dioxide, methane, nitrous oxide, and ozone. Other GHGs include synthetic fluorinated gases such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs).

GHG emissions intensity, or GEI, is the amount of GHGs that are emitted per unit of product output — the amount of GHGs that are released in the production of, say, 1 tonne of cement, aluminium, or paper, etc.

The draft Rules define GEI as "greenhouse gases emission intensity in tCO2e/ equivalent output or product". tCO2e, or tonnes of carbon dioxide equivalent, is the standard unit used to measure the impact of all GHGs, not just CO2, based on their potential to warm the planet.

**So what do the draft GEI target Rules say?**

The Rules set forth baseline emissions for 2023-24 and define gradual reduction targets for the years 2025-26 and 2026-27 as part of the mechanism to make India's Carbon Credits Trading Scheme, 2023, operational.

GHG intensity reduction targets and benchmarks have been set for the highly energy-intensive aluminium, chlor-alkali, pulp and paper, and cement industries.

These targets, for a two-year period starting 2025-26, cover 282 entities or industrial units in these industries — 13 aluminium plants, 186 cement plants, 53 pulp and paper plants, and 30 chlor-alkali plants.

Among the large corporations that have been assigned targets under the Rules are Vedanta, Hindalco, Bharat Aluminium, JSW Cement, Ultratech, Nalco, JK Cement, Dalmia Cement, Shree Cement, Grasim Industries, and JK Paper.

The Rules also lay down the mechanism for industries to comply with these targets, and specify penalties for their failure to do so.

## Carbon dioxide, the principal GHG

*Illustrative photo, The NYT*


India's GHG emissions composition: India's Fourth Biennial Update Report to UNFCCC, December 2024. Data from 2020

## CCTS, 2023 BUILDS ON THE 'PAT' SCHEME WHICH BEGAN IN 2012

**PAT** notified energy consumption reduction targets to select energy-intensive industries. Companies would receive energy savings certificates for excess savings, which they could trade with those falling short of their reduction target.

**CCTS** is far more ambitious in terms of targets, as well as scope of industries and the carbon trading market. It looks at GHG emissions intensity as a whole instead of only energy intensity, and has an annual compliance cycle, instead of PAT's three-year cycle.

**Why is it important to have the targets?**

The introduction of industry-specific targets is crucial to meet India's climate goals. The ultimate objective is to push industries towards a low-carbon growth trajectory through reduction, removal or avoidance of GHG emissions.

A cement plant can, for example, reduce its GEI by adopting cleaner and greener processes in the various stages of production. It could replace the use of coal with biomass, and adopt cleaner, more energy-efficient kilns.

More importantly, the Rules aim to help India meet a key commitment made under the Paris Agreement — to reduce the emissions intensity of its gross domestic product (the amount of energy used per unit of GDP) by 45% by 2030 compared to 2005 levels.

An overall objective of the Rules is "to promote the adoption of sustainable, cutting-edge technologies across traditionally high-emission industries, for addressing climate change".

Not all of this is entirely new. While targets have been set for the reduction of GHG emissions intensity for the first time, a scheme to improve energy efficiency, known as PAT — Perform, Achieve, Trade — has been running since 2012.

**And how do these draft Rules tie into India's carbon credit trading scheme?**

The CCTS established a framework for generating, trading, and using carbon credit certificates.

Under Article 17 of the Kyoto Protocol, the international treaty that committed industrialised countries and economies in transition to limit and reduce GHG emissions in accordance with agreed individual targets, countries that have emission units to spare — permitted but "unused" — were allowed to sell this excess capacity to countries that were over their targets.

Since carbon dioxide is the principal greenhouse gas, this trade is spoken of as trading in carbon in the "carbon market".

With the introduction of the GEI targets, industries will know what exactly to achieve in order to earn carbon credits. They will also have to create action plans towards achieving those goals.

Industries will be issued carbon credits for cutting emissions intensity, which they can trade on India's carbon market. Industries that fail to meet their obligations under the carbon trading scheme would have to buy credits to meet their compliance shortfall, or be penalised by the Central Pollution Control Board, as per the Rules.

Carbon credits are traded through the Indian Carbon Market platform, with oversight of the Bureau of Energy Efficiency under the Union Ministry of Power.

The availability of credits provide industries with the incentive to decarbonise. Industries with resources to adopt clean technology can use their credits to earn profits, while those with fewer resources can make the shift gradually by buying carbon credits.

Similar carbon credit markets have been operational elsewhere in the world — in Europe and China since 2005 and 2021 respectively.