BACKGROUNDERS
Press Information Bureau
Government of India

Carbon Pricing in India

Market Mechanisms for Climate Leadership

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Introduction

Carbon pricing is a policy tool that puts a financial cost on greenhouse gas emissions, primarily carbon dioxide, to incentivize reductions in pollution and promote a shift towards cleaner energy sources. It works by making emitters pay for the environmental damage caused by their pollution, encouraging them to reduce emissions.

India is rapidly advancing toward a **structured and regulated carbon pricing ecosystem** as part of its broader climate and sustainable development agenda. Against the backdrop of increasing global emphasis on carbon markets and emissions trading, India is now actively developing a **rate-based Emissions Trading System (ETS)** and associated **voluntary carbon crediting mechanisms**. The **World Bank's "State and Trends of Carbon Pricing 2025"** report has recognized India's growing role among emerging economies in shaping global climate finance and carbon pricing frameworks.

Rate-based ETS refers to a system where total emissions are not capped but individual entities are allocated a performance benchmark that serves as a limit on their net emissions. Rate-based ETSs offer additional flexibility in managing future growth uncertainty as well as international competitiveness concerns.

India's Position in Global Carbon Pricing Landscape

- India is among the **key middle income and emerging economies** making significant strides in carbon pricing implementation alongside Brazil and Türkiye.
- India is moving towards a **rate-based Emissions Trading System (ETS)** with the adoption of the **Carbon Credit Trading Scheme (CCTS)** in **July 2024**.
- The national ETS will initially cover **nine energy-intensive industrial sectors**.
- The scheme focuses on **emissions intensity**, not absolute emissions caps.
- **Credit Certificates** will be issued to facilities that **outperform benchmark emissions intensity levels**.

The Carbon Credit Trading Scheme (CCTS) in India is a mechanism designed to reduce greenhouse gas (GHG) emissions through carbon pricing. It involves two key elements: a compliance mechanism for obligated entities (primarily industrial sectors) and an offset mechanism for voluntary participation. The CCTS aims to incentivize and support entities in their efforts to decarbonize the Indian economy. CCTS laid the foundation for the Indian Carbon Market (ICM) by establishing the institutional framework.

On **March 28, 2025**, India's **Ministry of Power** approved **8 crediting methodologies** for generating

voluntary carbon credits including:

- Renewable Energy
- Green Hydrogen Production
- Industrial Energy Efficiency
- Mangrove Afforestation and Reforestation

The gradual transition from the current market-based energy efficiency program Perform, Achieve, and Trade scheme to these new programs is set to occur in 2025.

Comparison with Other Emerging Economies

Country	ETS Type	Coverage Sectors	Operational Status
India	Rate-based	9 industrial sectors	Regulatory stage
China	Rate-based	Power, cement, steel, aluminum	Operational
Brazil	Cap-based	All sectors except agriculture	Law passed in Dec 2024
Indonesia	Rate-based	Sectors expanded in 2024 to include Grid-connected coal/gas power plants	Operational

Development of a Domestic Voluntary Carbon Market

- India is developing a voluntary crediting mechanism alongside its ETS.
- Targeted at non-ETS sectors like agriculture, afforestation, clean cooking, etc.
- Aims to mobilize private capital for climate-positive projects.

Domestic Policy Backing

- Energy Conservation (Amendment) Act, 2022:
  - Provided the legal basis for India's carbon market.
  - Empowers the central government to issue carbon credit certificates.
- National Green Hydrogen Mission:
  - Supported by carbon credit methodologies approved in March 2025.
  - Targets production of 5 MMT of green hydrogen per annum by 2030.
- Perform, Achieve, and Trade (PAT):
  - Implemented by the Bureau of Energy Efficiency (BEE) since 2012.
  - Reduced emissions intensity in designated sectors by 15–25% over its lifecycle.
- Renewable Energy Targets:
  - India aims to install 500 GW of non-fossil fuel-based capacity by 2030.

Government Steps to Strengthen Carbon Market Readiness

As highlighted during the COP 27, India balances its developmental needs with lower carbon emissions through Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) principles. India's efforts include:

- Mission LiFE and the Green Credit Program to promote a sustainable lifestyle.
- Creation of National Steering Committee for the Indian Carbon Market (NSCICM) and the Bureau of Energy Efficiency (BEE) under Ministry of Power.
- Incentives for private sector participation.

Mission LiFE

1. **What is Mission LiFE?:** A global movement launched by India to promote sustainable living through

mindful, eco-friendly daily habits, encouraging individuals to become "Pro-Planet People."

2. **What does it do?:** It nudges behavioural change (like saving energy, reducing plastic, and composting), influences markets, and drives policy reforms to support environmental sustainability.
3. **What are its goals?** To mobilize **1 billion** people globally to take individual and collective action for protecting and conserving the environment by **2028**, transform **80%** of Indian villages and urban bodies into green communities, and drive measurable climate impact.

Green Credit Program

1. What is GCP?: The Green Credit Rules, notified on **October 12, 2023** under the **Environment Protection Act, 1986,** establish a voluntary, market-based mechanism to incentivize tree plantation on degraded forest lands, issuing Green Credits to participants, all managed via a digital portal and registry.

2. How it works:

- **Land bank & selection:** Forest departments register degraded forest parcels into a dynamic "land bank" on the GCP portal, from which participants choose plantation blocks.
- **Who can join:** Government bodies, PSUs, NGOs, companies, philanthropies, societies, and individuals registered on the portal can participate.
- **Plantation & credits:** After planting within two years—and maintaining for 10 years—credits are awarded based on planted trees, verified through digital tracking, field monitoring, and third-party audits.

3. Objectives: Key goals: Expand India's forest/tree cover, build a comprehensive inventory of degraded land, and reward voluntary "pro-planet" actions via Green Credits.

National Steering Committee for the Indian Carbon Market (NSCICM)

1. Governance & Oversight: The NSC-ICM brings together representatives from various ministries, state governments, and industry experts. It serves as the highest authority overseeing the establishment and functioning of India's carbon market .

2. Core Functions: The Committee provides recommendations to the Bureau of Energy Efficiency on:

- Institutionalizing the carbon market (procedures, rules, and regulations)
- Formulating GHG emission intensity targets for obligated entities
- Setting guidelines for credit issuance, validity, renewal, and international trading
- Constituting working groups and monitoring market operations

Bureau of Energy Efficiency (BEE)

1. Purpose & Mandate: Established in 2002 under India's **Energy Conservation Act (2001)**, BEE is a quasi-regulatory body mandated to spearhead national energy efficiency efforts. It develops policies, sets standards, monitors performance, and enforces compliance across key sectors—including industry, buildings, transport, and agriculture—to reduce energy intensity and greenhouse gas emissions.

2. Core Functions & Strategies: As a "systems operator," BEE uses a mix of market-based and regulatory tools to promote energy conservation. Its principal strategies include:

- Standards & labelling for appliances and equipment
- Energy codes for buildings
- Efficiency norms for industries
- Public awareness and capacity-building programs

Conclusion

India's push toward a regulated carbon pricing mechanism, led by the Carbon Credit Trading Scheme and supported by the Energy Conservation Act and voluntary crediting initiatives, marks a crucial shift

in its climate policy architecture. As global markets evolve and instruments like CBAM create external pressures, India is aligning its policies to maintain competitiveness while achieving climate goals. By focusing on emissions intensity rather than absolute caps, India's rate-based ETS offers a pragmatic and flexible path forward, particularly for an economy balancing development with decarbonization. With robust domestic backing and a clear policy roadmap, India is well-positioned to emerge as a regional leader in carbon markets and contribute significantly to the global net-zero transition.

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