

India's Carbon Market: A Strategic Shift toward Sustainable Growth

As the world's third-largest emitter, India faces the dual challenge of meeting its climate objectives while sustaining its developmental aspirations. The recent announcement by the Finance Minister to shift "hard to abate" industries from energy efficiency targets to emission targets marks a pivotal change in policy. This shift recognizes the limitations of the existing Perform, Achieve, and Trade (PAT) scheme, which has primarily focused on relative energy efficiency.

The move towards establishing an Indian Carbon Market offers a significant opportunity. Although India is not obligated to mandatory emission reductions under its Nationally Determined Contributions (NDCs), this step signals a strong commitment to exploring market-based solutions for curbing emissions. However, crafting a carbon market that effectively aligns with India's development priorities while ensuring substantial emission reductions will require strategic and nuanced planning.

What is the Carbon Market?

Carbon markets are market-based mechanisms designed to reduce greenhouse gas emissions by creating a financial incentive for individuals and organizations to reduce their carbon footprint. They operate on the principle of cap-and-trade, where a government or regulatory body sets a cap on the total amount of greenhouse gas emissions allowed within a specific jurisdiction.

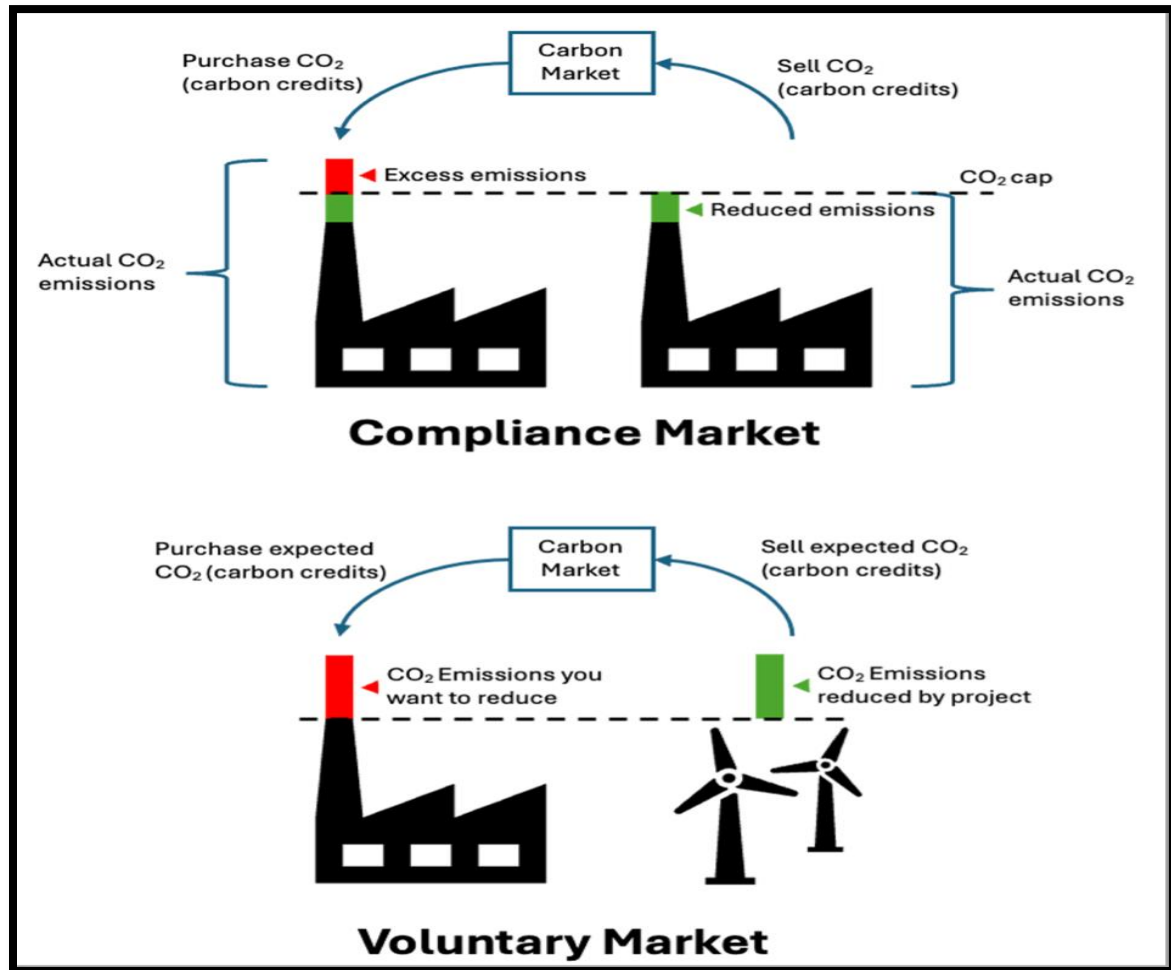
Types of Carbon Markets:

1. **Compliance Markets:** These markets are mandatory, requiring regulated entities to purchase carbon credits to offset their emissions. Often, these entities are large industrial polluters.
2. **Voluntary Markets:** These markets are voluntary, allowing individuals, businesses, and organizations to purchase carbon credits to offset their emissions beyond regulatory requirements.

India is a significant exporter of carbon credits into the decentralized voluntary market, with its credits worth between USD 200-300 billion per year and accounting for 17% of the global supply in 2022.

Carbon Credits: These represent a reduction in greenhouse gas emissions that can be traded. One carbon credit equates to one ton of carbon dioxide equivalent (tCO₂e) reduced or avoided. Carbon credits can be generated through various activities, such as implementing energy-efficient technologies, reducing waste, or transitioning to renewable

energy sources, as well as preventing deforestation or promoting reforestation.



Carbon Taxes: These are direct levies on the emission of greenhouse gases, meaning polluters pay a tax based on the amount of greenhouse gases they emit. Carbon taxes generate revenue for the government, which can be used to fund climate mitigation and adaptation projects or reduce other taxes.

Global Trends in Carbon Markets:

As of August 2023, 74 carbon pricing mechanisms have been identified worldwide, in either the form of carbon taxes or emissions trading schemes (ETS). In 2023, carbon pricing revenues reached a record USD 104 billion, according to the World Bank's annual "State and Trends of Carbon Pricing 2024" report.

Advantages of Implementing a Carbon Tax:

1. Incentivizing Green Innovation: A carbon tax creates a strong financial incentive for businesses to reduce their carbon footprint, spurring innovation in clean

technologies. In India, where the renewable energy sector is growing rapidly, a carbon tax could accelerate this trend.

2. **Revenue Generation for Climate Adaptation:** Carbon taxes can generate substantial revenue for governments to invest in climate adaptation and mitigation efforts. In India, where climate change impacts are already severe, this could be crucial.
3. **Improving Public Health:** By reducing fossil fuel consumption, a carbon tax can significantly improve air quality and public health. This is particularly relevant for India, where air pollution is a major concern.
4. **Consumption Consciousness:** Carbon taxes can play a crucial role in raising awareness about the carbon footprint of different products and services, thereby influencing consumer behavior.

Challenges Related to Carbon Taxation in India:

1. **Economic Impact on Industries:** Implementing a carbon tax could significantly impact India's industrial sector, particularly energy-intensive industries like steel, cement, and textiles.
2. **Regressive Nature:** Carbon taxes can disproportionately affect lower-income groups who spend a larger proportion of their income on energy.
3. **Limited Scope:** Carbon taxes have a limited scope and may not adequately address other significant greenhouse gases like methane.
4. **The Informal Sector Conundrum:** India's large informal sector poses significant challenges for carbon tax implementation.
5. **Inter-State Disparities:** India's federal structure adds complexity to carbon taxation, with different states having varying levels of industrialization, energy mix, and fiscal capacities.
6. **Carbon Leakage:** Carbon leakage, where emissions-intensive industries relocate to jurisdictions with laxer environmental regulations, is a significant concern.
7. **International Trade Implications:** India's exports could face challenges in markets with stricter environmental standards.

Measures for Effective Establishment of Carbon Market in India:

1. **Phased Implementation:** India could adopt a phased approach to carbon taxation, starting with a low rate and gradually increasing it over time.
2. **Border Carbon Adjustments:** To address carbon leakage concerns, India could implement border carbon adjustments (BCAs).
3. **Technology Transfer Incentives:** The carbon tax could be coupled with strong incentives for technology transfer and adoption of clean technologies.
4. **Green Lanes for Carbon-Conscious Industries:** Implement a tiered regulatory system that offers expedited approvals and incentives for industries demonstrating significant carbon reduction efforts.

5. Carbon Credit Cooperative for SMEs: Establish a cooperative framework enabling small and medium enterprises (SMEs) to collectively participate in the carbon market.
6. Carbon Tech Incubators for Homegrown Solutions: Launch a network of specialized incubators focused on developing indigenous carbon reduction technologies.
7. Green Finance Revolution: Establish a robust green finance ecosystem to support India's carbon market.
8. Integration with Existing Schemes: Integrate the new carbon market with existing schemes like PAT and REC for policy coherence.

Conclusion:

India is at a pivotal moment, where establishing a carbon market can effectively balance its climate goals with economic development. By strategically designing this market, integrating existing schemes, and encouraging innovation, India can position itself as a global leader in sustainable growth. As India moves towards a low-carbon future, now is the time to act decisively and lead the way in creating a resilient, climate-conscious economy.

Reference:

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