INDIA'S CARBON MARKET INITIATIVE - ECONOMY

News: India is set to establish a carbon market, which aims to control and reduce emissions. This market will be based on the **Carbon Credit Trading Scheme (CCTS),** announced in June 2023, and is expected to be operational by 2026.

What's in the news?

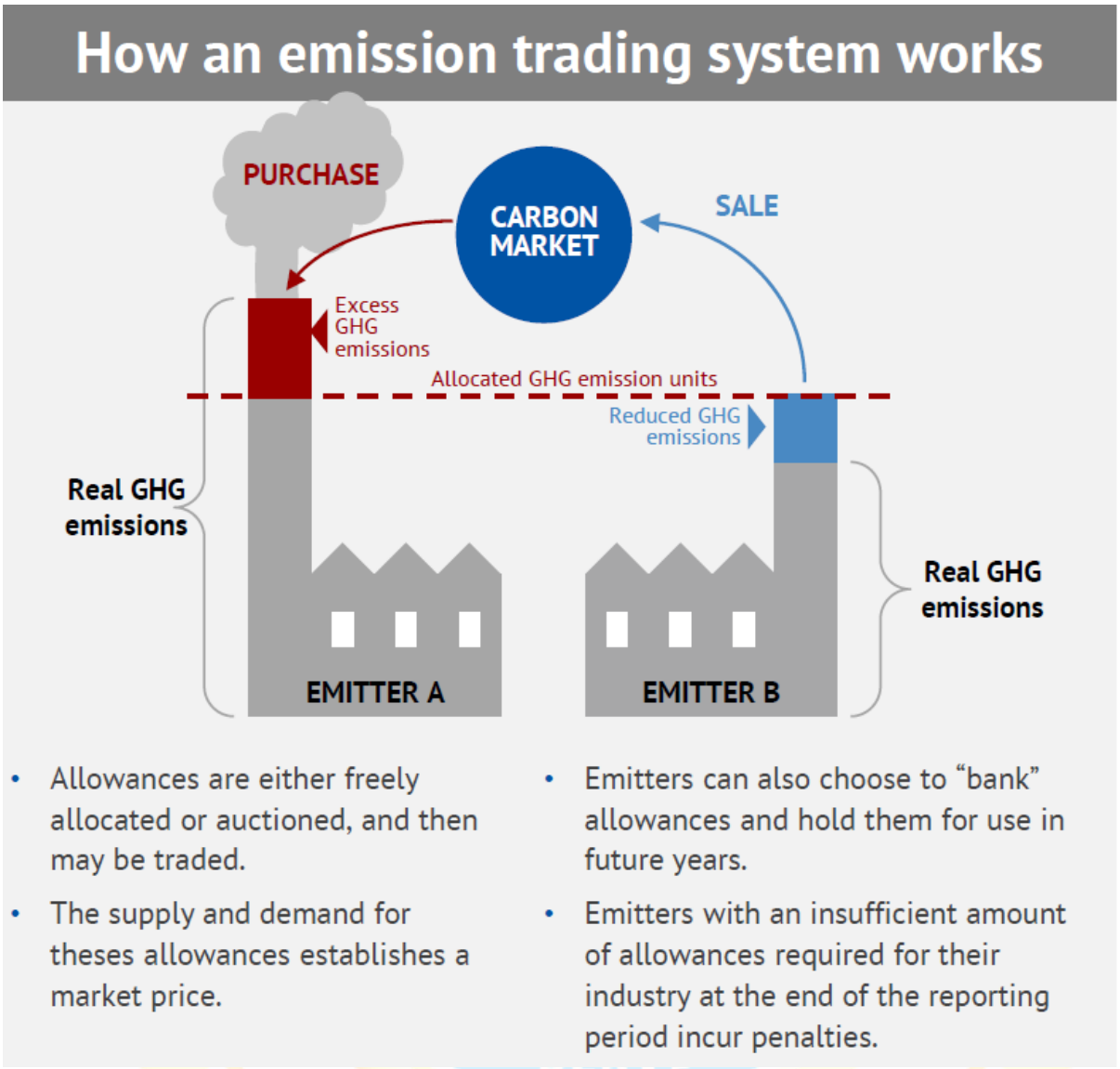
How it Works?

- Carbon markets, also known as **emissions trading mechanisms**, are trading systems in which **carbon credits** are sold and bought.
- It is a mechanism that internalises the cost of **greenhouse gas (GHG) emissions** in goods and services.
- Companies or individuals can use carbon markets to compensate for their greenhouse gas emissions by purchasing carbon credits from entities that remove or reduce greenhouse gas emissions.
- There are broadly two types of carbon markets:
    - **Compliance markets** are created as a result of any national, regional and/or international policy or regulatory requirement.
    - **Voluntary carbon markets** (national and international) refer to the issuance, buying and selling of carbon credits, on a voluntary basis.
- **Emission Targets:** The carbon market will set emissions targets for companies. Those who exceed their targets (emit less than their allowance) can sell their extra emission cuts to companies that do not meet their targets.
- **Compliance Procedure**: In August 2024, the **Bureau of Energy Efficiency (BEE),** responsible for implementing CCTS, released the scheme's compliance procedures. However, specific emission targets are still to be announced.

What is the purpose of a Carbon Market in India?

- In the short to medium term, the purpose is to increase energy efficiency and reduce emissions per unit of output, while continuing to drive economic expansion (which will result in increased emissions.)
- The goal is to move towards a more efficient use of energy, switching from fossil fuels to renewable energy as power generation increases.
- **Nationally Determined Contributions (NDCs):** This scheme is part of India's commitment under the Paris Agreement to reduce emissions intensity by 45% from 2005 levels by 2030.
- **Net-Zero Target:** India has also pledged to become a **net-zero emitter** by 2070.

- India is the **world's third-largest carbon emitter**, contributing 3%to the global greenhouse gas emissions in 2021.



Driving Factors:

- **Global Influence**: The introduction of the Carbon Border Adjustment Mechanism (CBAM) by the European Union in 2026, which will impose additional tariffs on imports based on their greenhouse gas emissions, is likely pushing India toward this scheme.
- **International Trends**: Other developing countries, such as China and Indonesia, are also developing carbon markets, influencing India's move.

Current State of Carbon Markets in India

- Globally, there are **over 28 emissiontrading systems** in existence, and plans are in place for more than 21 additional national and sub-national emission trading markets. Meanwhile, India is actively developing a framework for its domestic carbon market.
- India currently operates two market-based emission reduction schemes: **the Perform, Achieve and Trade (PAT) scheme and the Renewable Energy Certificates (REC) system.**
    - **PAT scheme** targets energy-intensive industries such as **aluminium, cement, chlor-alkali, fertiliser, iron and steel, paper and pulp, railways, thermal power and textil** Under this scheme, the government sets energy reduction goals, known as **specific energy consumption (SEC),** for companies in particular sectors. If a company uses less energy per unit of production than the established targets, it can earn certificates (ESCerts) as a reward for saving energy. The earned ESCerts can be traded on Power Exchanges and purchased by other units participating in the PAT scheme to fulfill their compliance needs.
    - **REC system** operates under the **Renewable Purchase Obligation (RPO)**, which mandates electricity generators to produce a certain percentage of their total power from renewable sources like solar and wind, etc. These certificatescan be traded and are intended to promote the use of renewable energy sources.

Challenges and Issues:

- **Oversupply of Credits:** For instance, the EU Emissions Trading System faced issues with credit oversupply, leading to fluctuating prices.
- **Carbon Leakage**: The EU's Carbon Border Adjustment Mechanism (CBAM) addresses concerns of companies moving operations to countries with lax regulations.
- **Offset Projects:** The effectiveness of carbon offset projects (like tree planting) is questioned due to difficulties in measuring their carbon absorption potential.