

## India

# Perform, Achieve and Trade

### OBJECTIVE

The Perform, Achieve and Trade (PAT) scheme aims to improve energy efficiency in the industry sector through a market-based trading mechanism. It sets energy efficiency improvement targets for selected energy-intensive industrial units, known as Designated Consumers. Entities that exceed their targets receive energy saving certificates (ESCerts), while those that fall short must purchase ESCerts or face statutory penalties, creating a market incentive for efficiency improvements.

### COUNTRY

India, 2012-ongoing

### SECTOR AND APPROACH

Industry; Regulation; Incentives

### SOURCE

[Perform, Achieve and Trade scheme](#)

### DESCRIPTION

Under PAT, Designated Consumers are assigned mandatory energy efficiency targets to be achieved over a three-year compliance cycle. The targets are expressed as reductions in specific energy consumption, i.e. energy use per unit of output, relative to a defined baseline year. Since its launch in 2012, seven PAT cycles have been notified, of which six cycles have been completed, covering an expanding set of energy-intensive sectors including iron and steel, cement, aluminium, fertilisers, pulp and paper, textiles, thermal power plants, petroleum refineries, and electricity distribution companies.

### UNIQUE ASPECTS OF THE PROGRAMME

PAT is implemented through successive three-year cycles, allowing gradual tightening of targets, expansion of sectoral coverage and refinement of methodologies over time. It is one of the largest industrial energy efficiency trading schemes globally and among the few that regulate energy intensity directly.

**India Perform, Achieve and Trade****RESULTS**

Based on the results available from the Bureau of Energy Efficiency (BEE), the PAT scheme has emerged as the largest contributor to national energy savings, accounting for nearly [half of the total savings](#) under various energy efficiency programmes in 2023-2024. This highlights the scheme's substantial role in reducing energy consumption in India's industrial sector, where efficiency improvements translated into [27 million tonnes of oil equivalent](#) of energy saved, avoiding around 115 million tonnes of carbon dioxide emissions annually. By driving the adoption of energy-efficient technologies and practices across energy-intensive industries, the scheme also contributes to economic benefits through cost savings, supporting industrial competitiveness, and advancing India's broader climate and sustainability goals.

**LESSONS LEARNED**

Enforcement and compliance are critical to the effective functioning of market-based mechanisms. In the absence of sufficiently stringent targets, the system risks an oversupply of ESCerts, which can undermine price signals. Clear, credible penalties for non-compliance are also essential to reinforce enforcement and maintain the price discovery function of the ESCerts market.

PAT continues to operate as an energy efficiency market mechanism and remains applicable particularly for some sectors such as thermal power plants, which are not initially included in the new [Carbon Credit Trading Scheme](#) compliance framework.

**ALIGNMENT WITH REGULATORY AND POLICY FRAMEWORKS**

The PAT scheme is a key part of India's energy efficiency strategy under the [National Mission on Enhanced Energy Efficiency](#) and supports national climate commitments, including India's target under the Nationally Determined Contribution to cut the emissions intensity of gross domestic product (GDP) by [45%](#) by 2030 from 2005 levels.

**IMPLEMENTATION AND ENFORCEMENT**

The BEE implements the PAT scheme under the [Energy Conservation Act, 2001](#), overseeing target setting, compliance and issuance of ESCerts. A standardised [measurement, reporting and verification framework](#), implemented through accredited energy auditors and ESCert trading on power exchanges, ensures transparent enforcement and market-based compliance.