

India's Climate Strategy — Need for Emissions Control



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With the world waking up to climate emergency, most countries are looking at controlling emissions, including a reduction in Greenhouse Gases (GHG). Most mitigation measures take the command and control approach that relies on use of standards to achieve a change in emissions. These measures often take the form of environmental standards (such as National Standards for Effluents and Emission), and performance standards (such as Standards & Labeling Programme). In India, such measures are implemented as mandatory efficiency standards for appliances and buildings to improve energy efficiency, and thereby reduce energy demand; emissions reduction is a co-benefit.



Another route to limiting GHGs is through market-based instruments (MBI). MBIs refer to policy instruments that use the markets to create a tradable commodity and introduce profit as an incentive for good performance. India's Perform, Achieve and Trade (PAT) scheme and Renewable Energy Credit (REC) trading system are examples of such mechanisms.

Looking Beyond PAT

While the PAT scheme improves energy efficiency (EE), it is *agnostic* to the type of fuel used and GHGs emitted. However, EE offers substantial low-cost opportunities to indirectly reduce CO₂ emissions. But, steeper targets combined with increasing costs diminish the low-cost opportunities to reduce GHGs through EE. Additionally, with its focus on EE, PAT provides little incentive for Designated Consumers to switch to cleaner fuels or technologies. This is further compounded by India's projected increase in GHG-intensive industrial outputs, such as iron and steel, and cement. Moreover, the Nationally Determined Contributions (NDCs) of India (and several other countries) fall short of complying with the 1.5 °C pathway necessary to reduce the effects of the changing global climate.

Why Emissions Trading Scheme (ETS)?

Introducing MBIs that put an explicit price on carbon emissions, could encourage businesses to find cost-effective ways to reduce emissions. An ETS is a MBI to control emissions by providing economic incentives for reducing emissions. Though the Indian government is yet to come up with such a national mechanism, several industries (43 entities) are proactively setting an internal price on carbon. This is a significant shift from business-as-usual. Allocating a monetary value to emissions also helps companies adapt better to future risks and forms a vital part of emission-reduction strategies.

ETS allows firms to decide the course of action to reduce emissions, while incentivising them for pursuing low-carbon pathways. Further, a national ETS can be linked to global markets such as the European Union ETS and Korea ETS, enabling countries to do more than what they could individually. Studies indicate that carbon markets could achieve nearly double the emissions reductions compared to commitments under the Paris agreement with no additional costs. Thus, a well-designed ETS can be an important tool to reduce emissions in sectors such as power generation and industrial

processes, that contributed an overwhelming majority (up to 70%) of total GHG emissions in India in 2015.

ETS in India

Gujarat launched a pilot ETS in the industrial city of Surat in 2019 — to reduce particulate matter (PM) emissions. The project banks on continuous emissions monitoring systems (CEMS), which report live data on particulate emissions from fossil fuel-burning factories. This is a shift from the existing command-and-control approach of regulating a unit based on how dirty its emissions are (regardless of the quantity of emissions). While the effectiveness of this ETS on the PM levels in Surat are yet to be fully evaluated, the fact that it incentivises industrial units in helping the state meet the National Ambient Air Quality standards is, indeed, laudatory.

While the future PAT cycles envisage a higher energy saving, and, therefore, GHG savings, this is only possible with increased access to capital and clean technologies. In this context, the potential for additional finance can be explored through carbon offsets and linking the PAT mechanism with an ETS. However, the difference in regulatory mechanisms and value addition in terms of enhanced emissions reduction need to be carefully evaluated while linking the two MBIs.

Transitioning towards a national ETS

While the voluntary carbon market is gaining acceptance in India (with private industries leading the way), the need for government support cannot be stressed enough in encouraging larger participation of domestic industry. This has to begin with ramping up capacity for monitoring and reporting emissions reduction. It is also critical for State Action Plan for Climate Change (SAPCCs) to focus on improving institutional capacities, as states are the primary implementers for climate-change-mitigation actions at the subnational level.

However, before linking the PAT scheme to an ETS or transitioning from PAT should begin with establishment of an equivalence between GHG reduction and energy savings certificates. It is also necessary to establish emission baselines and caps; develop institutional frameworks, trading platforms, and registry systems. Though implementation of PAT and Gujarat ETS has provided the readiness for a future ETS, an ETS for GHGs in India remains politically uncertain given its developmental imperatives. Additionally, transitioning from existing MBIs — focused on energy

efficiency (PAT) and renewable energy (REC) — into a national ETS requires a shift in policy focus from energy towards absolute emissions reduction. MBIs focused on emissions mitigation as the mainstay rather than a co-benefit are critical for India's eventual transition towards a low-carbon society.

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