PROJECT BRIEF

Developing India's First Emissions Trading Scheme For Particulate Air Pollution

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Drastically reducing air pollution at a low cost to both government and industry and providing best practices for replicating trading schemes to other emissions.

The Research Question

The use of command-and-control approaches to pollution regulation in India has resulted in high levels of non-compliance, resulting largely from lack of high-quality information.

Real-time, online pollution monitoring systems attempt to close this gap by moving towards more efficient regulation built on sophisticated data. By incentivizing plants to ensure high-quality and continuous data transmission, permit trading systems aim to improve the sustainability of online monitoring as a tool to inform industrial pollution regulation.

Researchers are working with the Gujarat Pollution Control Board to evaluate the impact of India's first emissions trading market in Surat, Gujarat. The project builds on ongoing research aiming to understand the effect of continuous emissions monitoring systems on plant abatement choices, regulatory behaviour and pollution levels.

The Approach

An ETS, or "cap-and-trade" system, caps the amount of pollution allowed from regulated industries and allots permits to plants.

Plants that can inexpensively cut pollution can then make money by selling their permits to other factories. In this way, the system uses the power and flexibility of markets to deliver the win-win-win of simultaneously (i) reducing total cost of regulation, (ii) increasing firm profits, and (iii) protecting citizens from air pollution.

Preliminary Findings

The Gujarat Pollution Control Board launched India's first ETS—and the world's first cap and-trade market in particulate pollution—on July 15, 2019, in the form of a large-scale pilot programme in Surat, Gujarat. The Surat ETS began with two months of mock-trading to allow for intensive stakeholder capacity building before coming into full force on September 15, 2019, with the design of a sophisticated trading platform in partnership with the National Commodities and Derivatives Exchange.

Based on a survey that evaluated the benefits and costs of the ETS from each of the 158 plants that are participating in the pilot, projections have been made that pilot project in Surat will help reduce particulate emissions by 20-30% from the current levels. Researchers also believe that the ETS project is expected to lower the costs of reducing particulate emissions, increase average industry profits, relative to status quo regulations and increase every industry's profits, relative to status quo regulations.

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