



## CSTEP Increasing energy efficiency in India

Research on market-based mechanisms by the *Center for Study of Science, Technology and Policy* (CSTEP) is helping India meet its increasing demand for energy more efficiently.

**SETTING THE SCENE** —Rapid economic growth in India has been accompanied by a surge in demand for energy that has increased greenhouse gas emissions and heightened concerns about adverse impacts on climate-sensitive sectors such as agriculture, water and forestry. In response, India drew up a *National Action Plan for Climate Change 2008-2017*. The plan includes eight National Missions, among them the National Mission for Enhanced Energy Efficiency, which includes four market-based mechanisms to unlock energy efficiency opportunities.

**“AS THE CEMENT INDUSTRY PLANS FOR THE PAT PROGRAM, CSTEP’S REPORT WOULD BE HELPFUL IN ASSESSING THE VIABILITY OF TECHNOLOGICAL INTERVENTIONS. I CONGRATULATE CSTEP ON THIS WORK.”**

DR. AJAY MATHUR, THEN DIRECTOR GENERAL, BUREAU OF ENERGY EFFICIENCY, GOVERNMENT OF INDIA

**WHAT CSTEP DID** —CSTEP worked with India’s Bureau of Energy Efficiency to design the *Perform, Achieve and Trade* (PAT) mecha-

nism, which promotes energy efficiency among large energy-intensive industries by allowing trade in Energy Saving Certificates. CSTEP worked particularly on developing energy consumption norms for the cement and iron and steel industries. As part of its research, CSTEP also conducted a study to re-assess the potential of wind energy. To conduct the research, CSTEP reached out directly to a multitude of stakeholders, including the government, manufacturers, industry associations, academics and nongovernmental organizations.

CSTEP augmented its research by facilitating meetings that it used to raise awareness about the PAT mechanism and to improve the proposed methodology for it. Those meetings, discussions and the briefs CSTEP prepared were crucial in establishing some of the goals set forth in the PAT framework. The organization also played an important role in communicating industry concerns to the government and in helping to address them.



**THE OUTCOME** —CSTEP’s research enabled the Government of India to design and implement PAT, the first market-based mechanism of its kind in India. The government is also planning to broaden the scope of the PAT mechanism by applying it to other sectors and industries. In addition, CSTEP’s research in wind energy led to the government’s announcement of the National Wind Mission, which is expected to promote wind energy generation.

CSTEP is currently in the process of developing a computation-intensive decision support platform that will enable modelling of energy scenarios to study their impact on India’s economy, environment and security. This platform is intended to aid policy-makers in exploring India’s long-term energy strategies and the feasibility of renewable energy. Its capabilities have been presented to India’s Planning Commission, which has expressed interest in using it to develop a national energy-forecasting model.

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For more information on CSTEP, visit [www.cstep.in](http://www.cstep.in)

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