

## Green Growth and Energy Security in India Political Economy Transformation and Challenges

### BACKGROUNDER

#### Overcoming Environmental Challenges in Achieving Energy Security

During the past decade, rapid economic growth has brought many benefits to India; but the growth and economic benefits have come at a cost to the environment, exposing the population to serious challenges like resource scarcity, water and air pollution. According to the 2014 Environmental Performance Index (EPI), India ranks 155<sup>th</sup> out of 178 countries on overall environment quality<sup>1</sup> and almost last on air quality<sup>2</sup>. According to the EPI, India's environment quality is far below other BRICS countries. Another survey by WHO (Ambient (Outdoor) Air Pollution in Cities Database 2014), finds that 13 of the 20 most polluted cities of the world are in India.<sup>3</sup> A recent World Bank study claims that environmental degradation costed India US\$80 billion per year, about 5.7 percent of its economy in 2009.<sup>4</sup>

Reflecting the size and diversity of India, environmental risks in the country are wide ranging and are driven by both prosperity and poverty. Rapid industrialisation, driving the economic growth, has required aggressive extractive mining and overdependence on natural resources. On the other hand, prevalent poverty in the country has compelled the poor to overuse the limited resources available to them, creating a downward spiral of impoverishment and environmental degradation.

But does prosperity and economic/social development have to come at the price of environmental degradation? As India progresses along its projected growth trajectory, and if it continues with the business as usual approach, environmental sustainability would be the next major challenge. India needs to value its natural resources to ensure an environmentally sustainable future. Many studies claim that a low-polluting and resource efficient growth trajectory is desired and possible at a very low cost in terms of GDP.

While India's overall policy focus should be on meeting basic needs and escalating growth, it needs 'Green Growth' strategies to promote sustainable development to break the pattern of environmental degradation and natural resource depletion. Green growth can be defined as a trajectory of economic development that fully internalises environmental costs and that is based on sustainable use of non-renewable resources.

Given this backdrop, CUTS proposed initiative aims to analyse and deliberate on the challenges and opportunities for green growth in India, with a focus on energy security. While green growth is wider issue, we aim to focus on energy security as energy is a key driver of growth and current state of availability has been a hurdle to India's growth and development. The initiative will identify, analyse and deliberate on strategies to overcome the environmental challenges to energy security in India.

#### India's Energy Scenario

Despite India's thriving economic growth, and growing belief that it is emerging as a global superpower, the country remains vulnerable to occasional dysfunctions. Energy scarcity remains a major dysfunctional area - be it basic access to the population or reliability of supply for industrial activities.

<sup>1</sup> <http://epi.yale.edu/epi/country-profile/india>

<sup>2</sup> <http://epi.yale.edu/epi/issue-ranking/air-quality>

<sup>3</sup> [http://www.who.int/phe/health\\_topics/outdoorair/databases/cities/en/](http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/)

<sup>4</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/12065/wps6219.txt?sequence=2>

Although electricity generation capacity has tripled over last two decades, a quarter of population still lack access to electricity (potential demand) and the peak power deficit hovers around 3 percent.<sup>5</sup> At this pace, can India's energy sector continue to power its economy in the long term?

India is faced with this unique challenge of bridging the demand-supply gaps by providing an appropriate power generation backbone and revolutionising the power generation bases with a major share of renewables, simultaneously. With two-third of current power coming from fossil fuel sources, the country is placed between a rock and a hard place in its energy decision-making. The situation calls for new strategies to balance between developmental and environmental priorities. The government certainly recognises the need and have prioritised clean energy development, by promoting both renewable energy development and enhanced energy efficiency. At the same time, the country aims to gain from development of manufacturing industries for the clean energy technologies. However, whether current initiatives are adequate to address the challenge remains unclear.

## CUTS INTIATIVE

In this backdrop, the proposed initiative aims to explore the challenges and opportunities for clean energy promotion in India and its implications for the country's growth trajectory. The objective is to sensitise the policy community on need for a green growth approach and identify a coherent strategy towards the shared goal of sustainable energy development and growth, in consultation with relevant stakeholders. With that objective, we aim to explore following issues:

- While there is an eminent intent, does India offer right mix of policy pushes? Does the current policy framework for clean energy promotion offer policy certainty, implementation support and enabling environment?
- What are the challenges faced by the potential players in the industry? What are the existing opportunities and incentives?
- Considering the sector is investment intensive, what are the financing challenges faced by potential players? Will a 'fair-market pricing' fix the issues within the sector?
- How far the new technologies are cost-effective compared to conventional technologies? What is the implicit level of subsidy that is provided to the conventional energy and the social cost that is not accounted for while pricing conventional generation?
- Presence of multiple agencies and institutions requires effective communication between different stakeholders. To what extent the sector maintains transparency and access to information?
- What level of support are (financial incentives and regulatory easiness) being offered by the government and are they adequate? To what extent government has been proactive in promoting R&D?
- What are the key determinants of success? Key factors to look into state-business relations, private sector capacity and creative manoeuvres by the government. To what extent the private sector shares the state goals?
- How would a coherent green growth strategy look for meeting a sustainable energy security goal? What would be the role of existing institutions like Electricity Regulatory Commissions? And what form of institutions will be needed?

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<sup>5</sup> Central Electricity Authority, as of March 2015 [Http://www.cea.nic.in/reports/monthly/executive\\_rep/mar15.pdf](http://www.cea.nic.in/reports/monthly/executive_rep/mar15.pdf)