



The Macroeconomic implications of climate action

Peterson Institute for International Economics

Session -7 Panel discussion on Implications for global economy

Suman Bery

Vice Chairman, NITI Aayog

New Delhi, India

June 6, 2023

India: Decoupling economic growth from emissions

Ambitious climate agenda

- Emissions Intensity reduction by 45 per cent from 2005 and achieve 50% cumulative electric power installed capacity from non-fossil By 2030
- Mass movement for 'LIFE'—'Lifestyle for Environment'
- Net zero by 2070.

Low carbon foot-print

- India has contributed only about 4% of the global cumulative greenhouse gas emissions between 1850 and 2019.
- India's per-capita emissions stand at half of global average, 1/4th of China and 1/8th of USA (BP Stats).
- India's fair share of global carbon budget is 441 Gt Co₂ (1.5° C) and 574 Gt (2° C) (LT-LEDS).

Robust Climate Change Performance: India amongst top 5 best performing countries in Climate Change Performance Index (CCPI 2023) and is best among G-20 countries.

Market leader in RE policies: Fourth highest renewable capacity in the world after US, China and Germany.

Leading member of various international alliances i) International Solar Alliance ii) Coalition for Disaster Resilient Infrastructure (CDRI) iii) Leadership Group for Industry Transition (LeadIT)

Managing “Energy Trilemma” efficiently

Energy access:

- Almost all of the households are connected to the electricity grid (M/o Power)
- 96 million households in mostly rural India have been provided LPG connections under Pradhan Mantri Ujjawala Yojana (MoPNG).

Energy sustainability:

- India’s renewable capacity stands at 40%
- India’s emission intensity of GDP has reduced by 24 per cent between 2005 and 2016. Latest number is under release
- Various energy efficiency measures have led to mitigation of about 267 million tonnes of CO2 annually and monetary savings worth INR 1.5 lakh crores (BEE).

Energy security:

- Achieved 11.6% Ethanol blending in petrol in 2022. Target of 20% ethanol blending in Petrol by 2025.
- Green Hydrogen Mission announced with target of producing 5 MMT of Green Hydrogen by 2030
- Production Linked Incentive schemes in 14 sectors to strengthen India’s position in Global Value Chains (GVCs)
- Increase the penetration of nuclear energy from current level of 3% (current share in US & EU-20%).
- Reduce import dependency on fossil fuels which is 89% in case of oil, 50 % in case of Gas through alternative substitutions

Investment requirements: Various research studies put investment requirements for net-zero in the range of USD 10-18 trillion by 2070 (annual requirement: >7% of GDP) in comparison to current investment rate of <1% of GDP per annum, leaving a significant financing gap. Addressing the gap may entail:

- **Mobilizing domestic savings** for climate action will impact the other developmental priorities of the country and increase the Fiscal Deficit. Current savings is sufficient only to mobilize investment for maintaining current growth but certainly not for enhanced climate ambitions.
- **Mobilizing foreign capital** may lead to higher CAD.

Fossil revenues: Coal, oil and gas together account for almost 19% of total revenue receipts of Central government. Average thermal ageing fleet is younger in emerging economies compared to developed nation may result in higher stranded costs.

High cost of finance for private institutions: Sovereign Government debt share in total government debt is small (4.9%). Private institutions borrow at higher cost due to lower credit profile and higher currency risks. Therefore, availability of low cost finance especially from multilateral development banks (MDBs) by deploying innovative instruments is must.

IRA & CBAM

- It is a concern that IRA will pull investments away from other countries particularly on the clauses of local content requirements.
- Increase in compliance costs due to monitoring, calculate, report, and verify emissions under CBAM.
- Risks to India's export share till shifted to green products.

Critical minerals supply chain

- Heavy dependence on China for critical minerals such as graphite and rare earths and Australia for lithium. Shift towards clean energy may increase the further dependence on strategic and critical minerals.
- Lack of domestic capacity may result in higher import bills.

Climate Club

- G7 Countries have set-up Climate Club to support rapid and ambitious implementation of the Paris Agreement.
- Unilateral enforcement of standards/measures may impact developing countries negatively.
- Therefore, standards set up by Climate Club needs to be sensitive to the circumstances of emerging economies and should not result in carbon leakage or protectionist measures.

What international support can assist India in its energy transition?

Climate finance

- Enhanced outlay for low cost finance from MDBs to developing economies should be one of the priorities (G20 priority).
- Mobilization of innovative private financial resources through mix of concessional and non-concessional loans, equity participation, guarantees, dedicated trust funds, and blended finance.

Reforms in sovereign credit rating system : Impeccable credit record. Global ratings system may need guidance to support increased private investment flows for green goals.

Technology gaps in CCUS, Green Hydrogen, High Efficiency Solar Cells, Advanced Chemistry Cell and Small Modular Nuclear Reactors. These are also priority areas of discussions under India's G20 Presidency. Many of these technologies are under development and need technology-transfer/collaboration and finance

Collaborative partnerships: Emergence of new collaborative arrangements such as Climate Club, Mineral Security Partnership etc. should be sensitive to the needs of emerging economies.

Rule based architecture: Need for rule-based architecture in the trading of RE and RE-based products through the publication of harmonized standards.



सत्यमेव जयते

NITI Aayog

Thank You