

Indian State Owned Enterprises and Climate Change Mitigation

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COLUMBIA | SIPA

Center on Global Energy Policy, New York

 **SCOPE** Standing Conference
of Public Enterprises

Atul Sobti, Director General

SCOPE, INDIA

SCOPE – Standing Conference of Public Enterprises

An Apex Organization of Indian State Owned Enterprises(SOEs)

striving to make its member organizations globally competitive through proactive approach and conducive policy environment.



Policy Advocacy

- ✓ Providing an interface to SOEs with statutory bodies and international forums
- ✓ Providing platform for inter-SOEs interaction for benchmarks and best practices
- ✓ Conducting Studies and Research



Programs & Workshops

- ✓ Corporate Governance and professionalization of Boards
- ✓ Climate Change and Mitigation
- ✓ Labour reforms
- ✓ Arbitration
- ✓ HR Summit
- ✓ Corporate Communications




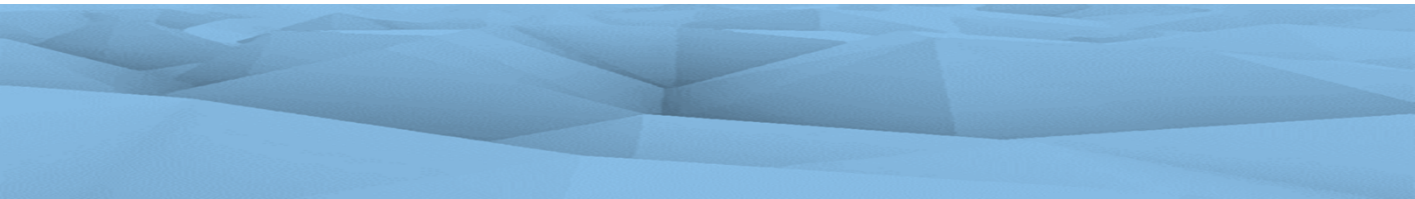
Capacity Building & Skill Development

- ✓ Leadership and Management Development
- ✓ Academy of Public Sector Enterprises
- ✓ SCOPE Forum for Conciliation & Arbitration (SFCA)
- ✓ Network of Champions for women empowerment



Brand Building

- ✓ SCOPE Awards to recognize significant achievements of SOEs
- ✓ Given by Hon'ble President of India / Hon'ble Prime Minister of India
- ✓ SCOPE's monthly magazine dedicated to SOEs



Indian State Owned Enterprises (SOEs)- Pillars to Modern Growth

Indian Economy and SOEs

RISING INDIAN ECONOMY

GDP 2018-19
USD 3.2 Trillion

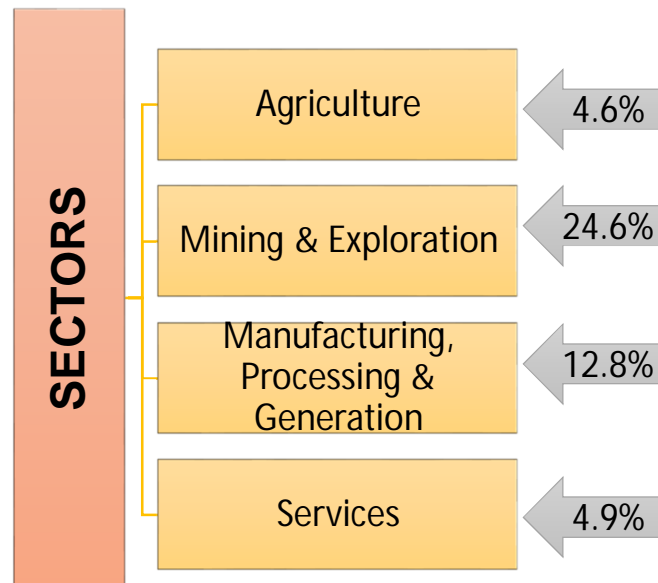
GDP Global Ranking
5th (nominal GDP)

Ease of business:
63rd (190 economies)

Global Innovation:
52nd (129 economies)

PRESENCE ACROSS 20 SUB SECTORS

Healthy return on capital employed



PERFORMANCE AT A GLANCE (FY'19)

Journey from 5 to 348 SOEs

Contribution to Indian GDP
Over 13%

Foreign Exchange Earnings
USD 20 billion

Gross Revenue
USD 364 billion

Contribution to Central Exchequer
USD 53 billion

Net Profit
USD 20 billion

CSR Expenditure
USD 553 million

Employment
1.5 million

Return on Investment
8.5%

Indian SOEs strategic to driving Indian Economy

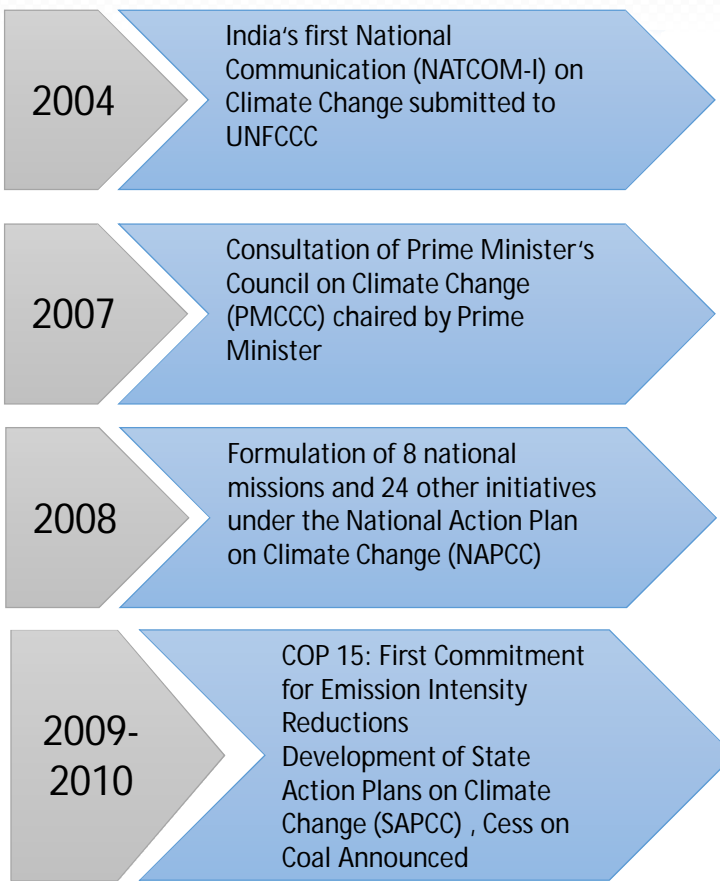


India and Commitment to Climate Change

India's Policy Landscape or Climate Change

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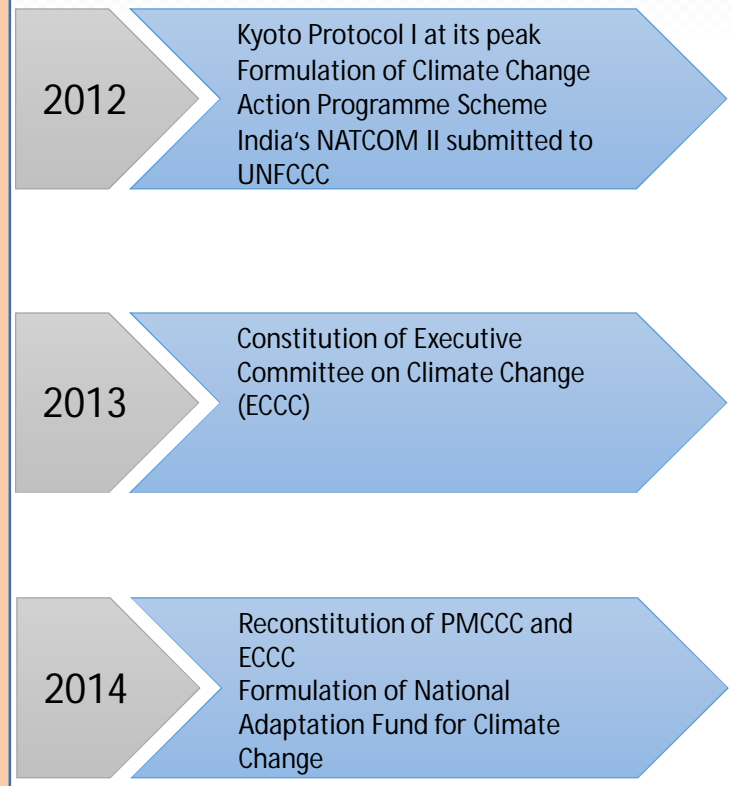
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LANDMARKS

2015:
India's Intended Nationally Determined Contribution (NDC) submitted to UNFCCC

2016:
India ratified Paris Agreement (COP 21)
India's 1st Biennial Update Report submitted to UNFCCC

2017:
India ratified Kyoto Protocol II

2018-19:
India's 2nd Biennial Update Report on Climate Change submitted to UNFCCC

India making concerted efforts on climate change

India's efforts on climate change

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8 Nationally Determined Contributions (NDCs) for 2021-30

- ✓ Reduce **emissions intensity of GDP by 33-35 %** by 2030 over 2005 levels
 - ✓ **40 % cumulative electric power installed capacity** from non-fossil fuel sources
 - ✓ Additional **carbon sink of 2.5 - 3 billion tonnes of CO₂**
 - ✓ **Sustainable lifestyle**
 - ✓ **Climate friendly growth path**
 - ✓ **Climate change adaptation**
 - ✓ **Climate change finance**
 - ✓ **Capacity building and technology**
- COMPLIANT WITH PARIS AGREEMENT**

Policy Framework for achieving NDCs

- National Action Plan on Climate Change (NAPCC): 8 missions
- State Action Plan on Climate Change: 33 states have developed SAPCCs
- Climate Change Action Plan: Build and support capacity at Central & State levels to assess climate change, formulate adequate response measures and implement relevant activities
- National Adaptation Fund: \$121 million
- USD 64 million utilized for 30 approved projects

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Mission	Objective
Solar Power	100 GW by 2022
Enhanced Energy Efficiency	10,000 MW of energy efficiency savings by 2022
Sustainable Habitat	Energy efficiency in residential and commercial buildings, public transport and solid waste management
Water	Water conservation, river basin management
Himalyan Ecosystem	Conservation and adaptation practices with focus on glacial monitoring
Green India	Increase and improve quality of forest/tree cover
Sustainable Agriculture	Drought proofing, risk management, agricultural research for adaptation
Strategic knowledge of climate change	Vulnerability assessment, Research & data management

National action plan on climate change – objective and measurable

Focus on Climate Change – Indian Union Budget 2020 (1st February 2020)

USD 628 million

National Clean Air Program

29 plants identified, 11 already closed

Closure of old polluting thermal power plants

Over USD 3 billion

Renewable Energy Sector

Climate Change Adaptation

Coalition for Disaster Resilient Infrastructure

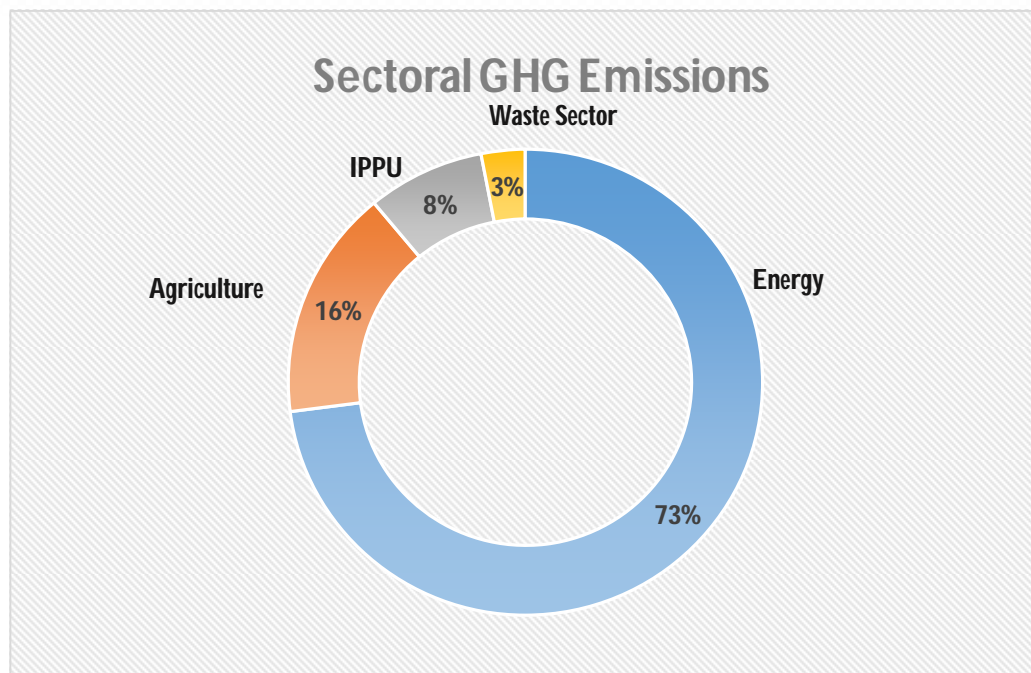
- ✓ Focus on developing renewable sources of energy especially solar
- ✓ Use of barren agricultural land for solar panels
- ✓ Rooftop solar panels
- ✓ Expanding gas grids to connect solar panels for power connection
- ✓ National clean air programme for controlling air pollution

Enhanced financial commitment to climate change



Indian SOEs and Role in achieving climate change mitigation

Sectoral Distribution of GHG emissions and Indian SOEs presence thereof



- Energy sector: power, oil and gas sectors
- Industrial Processes and Product Use (IPPU): chemicals, mineral, electronics, metal and non-energy sectors.

Sectoral presence of Indian SOEs

Sector	Indian SOEs
Coal	92%
Gas	83%
Crude Oil	71%
Installed Power Capacity	54%
Fertilisers	37%
Steel	17%
Transportations (Railways, Metros, Public Buses)	Predominant

**Significant presence of SOEs in strategic sectors :
Engagement of SOEs key for Emissions reduction**

Power Sector Mitigation Action at National level and SOEs role

National Mitigation Targets

40% installed power capacity from non-fossil fuels

Achieve energy efficiency

Clean Coal Technology

175GW of renewable energy capacity by 2022

Status of Mitigation targets

Over 37% achieved (Jan 2020)

- ✓ UJALA Scheme: 362 million LED bulbs distributed, reduction of emissions 38 MtCO₂ emissions per annum
- ✓ 7.2 million Energy Efficient Tubelights distributed, reduction of 0.26 MtCO₂ emissions per annum

66 supercritical units installed reducing emissions by 7 MtCO₂

- ✓ 83 MW operational
- ✓ 29 MW under installation
- ✓ 30 MW under bidding

Roles of Indian SOEs

- ✓ Indian SOEs actively engaged in reducing emissions and adopting non-conventional sources to generate power
- ✓ In last 2 years SOEs have added 710 MW of hydro power
- ✓ Focussing on expanding grid storage capacities for renewable sources of power generation
- ✓ To reduce coal usage in power production, NTPC using agro-residue based pallets for co-firing along with coal
- ✓ Aggressive shift of thermal utilities to renewables
- ✓ UJALA scheme spearheaded by SOEs – EESL
- ✓ **Clean Coal Technology:** SOEs consortium developing highly efficient Advanced Ultra Super Critical Technology (AUSC) technology- first of its kind in the world
 - Research phase completion in final stages
 - Pre –project activities initiated

Transport Sector Mitigation Action at National level and SOEs role

National Mitigation Targets

Auto Fuels Policy 2003

Increase share of alternative fuels

National Electric Mobility Mission Plan 2020

Electrification of Railways

Status of Mitigation targets

- ✓ BS VI Standards for emission by 2020
- ✓ Average fuel consumption standards for cars specified
- ✓ Fuel efficiency standards specified

- ✓ Increase in CNG taxis by 20 times in 10 years
- ✓ Policy on biofuels to promote biofuels in transport sector
- ✓ Blending of 20% ethanol with 5% biodiesel proposed by 2030

- ✓ 6-7 million e-vehicles/ hybrid vehicles by 2020
- ✓ Reduction in emissions and import cost

35% railway network electrified by 2016

Roles of Indian SOEs

- ✓ SOEs sole operators in railways, metro and public buses
- ✓ Railways:
 - Ministry of railways committed to be a net-zero carbon emitter by 2030
 - 100% electrification of railways by 2024
 - Solar Plants being set up along railway tracks to electrify railways
 - Technology developed for regenerative braking system – old AC Locos being revamped
- ✓ Metro
 - Regenerative braking systems used thereby reducing carbon emissions by over 30%
 - Many clean development mechanism initiatives
- ✓ E mobility:
 - SOEs setting charging infrastructure
 - SOEs developing technologies for e-vehicles
 - SOEs exploring manufacturing of e-vehicles, batteries

Action by SOEs for climate change

OIL & GAS

- ✓ SOEs setting up voluntary emission targets – GAIL to reduce emissions by 33% and specific emissions by 5%
- ✓ IOCL developing breakthrough technology to commercially produce oil from plastic wastes – key to Government mission of eliminating one time plastics by 2022
- ✓ Clean Development Mechanism: ONGC registered 15 CDM projects with UNFCCC leading to reduction of carbon emissions of 2.1 million per annum (approx.)
- ✓ Oil marketing companies (OMCs) promoting bio gas plants
- ✓ Low carbon products- GAIL undertook pilot study on valorization of carbon monoxide
- ✓ Mass awareness program by SOE Oil companies to engage citizens in petroleum conservation drive
- ✓ Reducing flaring and fuel consumption by developing flare gas recovery systems

STEEL

- ✓ Adoption of Corporate Environment Policy by most of the SOEs in the sector
- ✓ SAIL, a dominant player in the steel sector reduced carbon emissions by 11% in last decade
- ✓ Greener technologies adopted for heat recovery, use of regenerative burners
- ✓ Capacity initiatives undertaken to create sensitivity towards climate change

COAL

- ✓ Coal India Limited key player in the coal sector and the largest SOE in the sector
- ✓ Adopted Environmental Policy Statement to address climate change with inclusive growth
- ✓ Projects on extraction of methane from Coal Bed, Coal Mine, Abandoned Mine and utilization of renewable energy to reduce GHG emissions.

**SOEs major providers of low carbon alternatives:
Green initiatives gaining momentum in all sectors**

Opportunities to SOEs for climate change



Greener Pathways- Pull factor for SOEs

Climate Change & SCOPE

SCOPE: creating awareness, building capacities, fostering collaborations for climate change mitigation

SCOPE and GIZ, Germany jointly working towards Climate Change Initiatives in SOEs

Creating Awareness : 2019

- ✓ National Seminar on '**Climate Change Mitigation & Adaptation: Role of Public Sector Enterprises**'
- ✓ Seminar addressed by senior officials from Government of India, GIZ Germany, ILO, TERI, SOEs etc.
- ✓ Attended by major SOEs - Power, Oil & Gas, steel, Logistics and Transportation etc.
- ✓ Discussions: mitigating climate change, climate finance, climate funding, technological developments etc.

Capacity Building: 2020

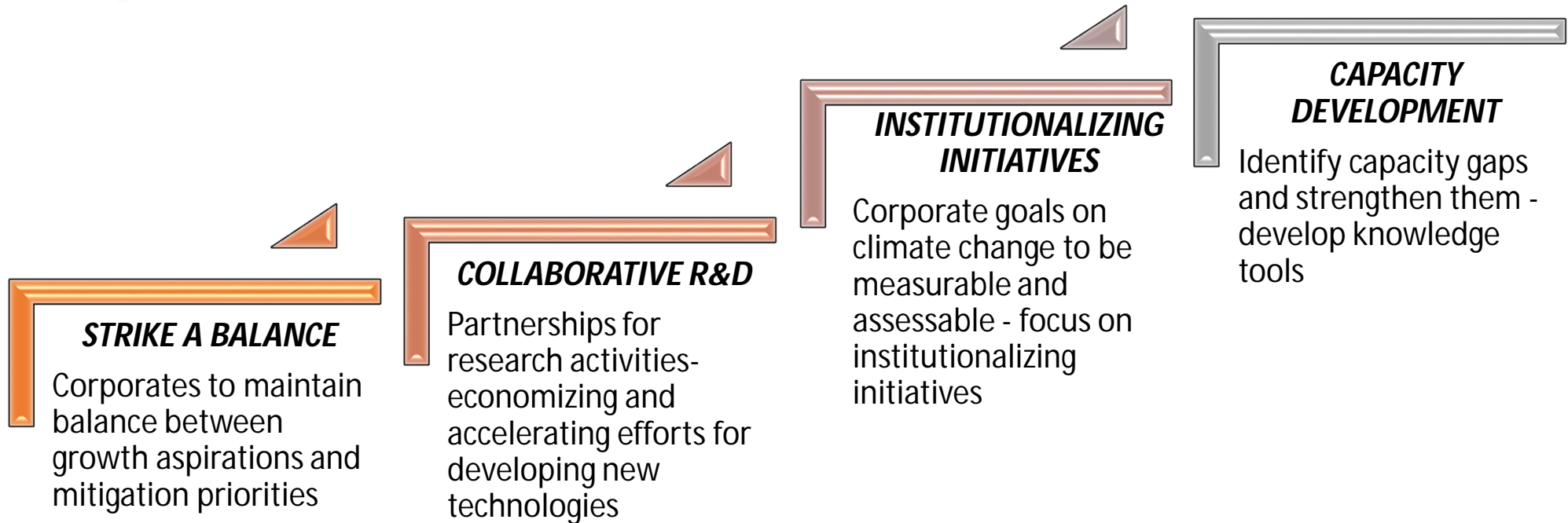
- ✓ Identify capacity gaps in SOEs for addressing climate change mitigation
- ✓ Develop an online and offline platform for exchange, experience sharing
- ✓ SCOPE and GIZ to conduct training needs assessment of the SOEs to develop training manuals on climate change, carbon pricing, carbon markets etc.

Handholding of SOEs: 2020-21

- ✓ Training Calendar
- ✓ National and regional events
- ✓ Help SOEs establish processes
 - Modify inefficient processes
 - Develop new processes
 - Align corporate strategies with climate change goal
 - Climate change mitigation strategies to be made measurable
 - Fostering collaboration and partnerships amongst SOEs and other stakeholders

SCOPE WELCOMES ALL PARTNERS TO COLLABORATE FOR CLIMATE CHANGE MITIGATION

Way forward to a better climate – Considerations for SOEs



Mantra for SOEs:

WHAT IS GOOD FOR CLIMATE IS GOOD FOR BUSINESS

Thank You

Standing Conference of Public Enterprises

Core 8 First Floor, SCOPE Complex
Lodhi Road

New Delhi -11 00 03

+11 2436 0101, +11 2436 2604

scopedg@yahoo.com

www.scopeonline.in