

## **CEO Roundtable Meeting on Indian Industry Coalition**

12/06/2016

### **Introduction**

On June 12 2019, TERI organised a CEO Roundtable on Indian Industry Coalition in Mumbai. The Secretary Environment, Forest and Climate Change addressed the CEOs over video conference. TERI offers this structured summary of the discussion in order to capture the content and nature of the debate. The responsibility for this summary, and for the efforts at structuring it, is solely that of TERI, and it has been made under 'Chatham House rules' without attribution of the comments made.

### **Characterisation of the Energy Transition and Focus on Industry Transition**

The energy transition can be characterised according to three pillars of action: energy efficiency improvement, promotion of renewable energy and its integration into the national electricity grid, and transition in end-use sectors to zero carbon energy sources. Within the industry sectors, particularly certain heavy industrial sectors (so-called 'hard-to-abate sectors') a particular challenge arises from the lower level of technological readiness, higher incremental costs of zero carbon technologies, and concerns about consumer costs and international competitiveness of energy intensive sectors.

From the discussion, it emerged that:

- It is technically feasible to transition to net zero emissions from heavy industry sectors by mid-Century, although many of the solutions are presently at pre-commercial or pilot scale.
- For this, essentially fully decarbonized and abundant electricity is a pre-requisite.
- Decarbonization routes differ by industry sector, but require the substitution of fossil fuels and fossil feedstocks, for example with hydrogen based on zero-carbon electrolysis.
- Substantial innovation is required, for example to decrease the cost of electrolysers and development of technologies in iron & steel sectors based on hydrogen.
- The industry transition will have incremental costs, but these are not evenly distributed among different actors. At the macroeconomic level costs will be small; at the consumer level, costs will be negligible for most products, but appreciable for one or two products or services; at the producer level, costs will be substantial.
- There is need for global coordination to foster innovation and ensure a level playing field between cost-sensitive producers.

### **Current State of Play in India**

Indian industry is widely acknowledged to have made significant progress on the sustainability agenda. Many heavy industry sectors, such as cement, are now at the international frontier in terms of metrics like specific energy consumption or CO2 footprint. In addition to voluntary or commercial actions, the sustainability agenda has also been driven by a number of important policies of the Government of India, for example PAT scheme. Actions currently underway or considered include:

1. Further improvements in energy efficiency
2. Promotion of electric vehicles in the transport sector
3. Substitution of fossil fuels for renewable electricity, solar thermal, or biomass wherever feasible
4. Recycling, circular economy and dematerialisation, for example recycled aluminium or further clinker substitution.
5. R&D, pilots and demonstration of new technologies, such as the Hisarna steel, often together with international subsidiaries.

It was acknowledged that further actions on each of these items, particularly 1-4, are possible, and are actively planned for in companies' mid-term plans. For actions under 5, it was stressed that there is a need for international collaboration between companies and countries in terms of technology development and innovation in the harder-to-abate sectors like cement and steel.

It was acknowledged that effective partnership between industry, government and regulation/incentives is required. In this regard, a number of important framework conditions from government were mentioned:

1. Facilitating the use of renewable electricity in industry, including addressing balancing, wheeling charges, cost and reliability of grid power, and the role of captive renewable power (in place of coal based plants).
2. Providing incentives for the uptake of waste heat recovery in industrial sector;
3. Use of fiscal instruments such as landfill tax or other market instruments to support conversion of waste into fuel for cement or waste-to-energy plants
4. Addressing of cross-sectoral regulations and incentives to facilitate recycling & circular economy, for example infrastructure standards inhibiting the use of lower carbon blended cements in certain cases
5. Government procurement to create market volume and drive down costs.
6. Facilitation and partnership in industry-government initiatives, particularly with regards to innovation and road-mapping.