Concept Note: WSDS 2021 Plenary Session

"Zero carbon future makes business sense"

The Climate Action Tracker reveals that India continues to be the only country among the G20 nations whose Paris Pledges and actions are well placed on track to below 2°C global warming scenarios. However, India is faced with a formidable challenge of maintaining rapid and inclusive growth but through clean and sustainable forms of energy. When one juxtaposes this primary objective with India's commitments under the Paris Agreement, the challenges become evident. TERI's analysis suggests that the scale of transformation is very ambitious and would entail a path that has never before been followed by other countries.

Progressive Indian businesses are the key to the country's transition towards low carbon development. Accounting for approximately one-fourth of India's GHG emissions, industries can play a significant role in country's NDC's commitment to reduce its emission intensity by 33-35% by 2030 from 2005 levels. India's Biennial Update Report (2018).observes that manufacturing industries and construction sector account for 18.4% of total emissions from the energy sector in 2014; the Energy and Industrial Processes and Product Use (IPPU) sectors in India accounting for 8% of GHG emissions; and Commercial & Industrial customers also consume more than 50% of electricity in India.

In India whether it is on the energy efficiency side or the renewable energy side, all interventions will have to attract an increasing amount of private sector investments. Even today, almost 100 per cent of the investments in energy efficiency and renewable energy are ultimately made by the private sector. The challenge that remains in both energy efficiency and renewable energy is how to make the process certain enough and low risk enough for private sector investments to flow.

In order to accomplish the zero carbon targets and ambitions, the role of cross-sectoral collaborations amongst the industry assume significant importance. These collaborations would foster exchange of solutions, best practices and innovative business models. Towards this endeavour, TERI has convened leading market players from Indian industry for the 'Industry Charter for Near Zero Emissions Ambition by 2050'. Under this voluntary pledge, companies have committed to pursue a set of vigorous decarbonisation measures, both at the company level and collectively, to set an example for industry peers to contribute in meeting the objectives of the Paris Agreement.

The key areas of interventions of the Charter are:

1. **Opportunities for Greening the Grid and Clean Energy Deployment**

India has launched a plethora of initiatives to expand the share of renewables and integrate clean energy technologies in the power mix. India has surpassed more than 50% of its target to reach 175 GW of renewable energy by 2022. India has an even more ambitious target of 450 gigawatts of renewable energy capacity by 2030. Achieving this mammoth target, precedes various technical challenges of integrating a vast amount of variable renewable energy capacities (VRE) into the grid. TERI's analysis present the key ingredients required to take the share of VRE to levels greater than 30% of generation by 2030 and share of zero carbon generation (i.e. VRE plus nuclear, biomass, and hydro) to greater than 40%. If this is achieved,

then electricity sector would be on a pathway to a very low emission by 2050. Some of the key recommendations of TERI to integrate Variable Renewable Energy (VRE) and optimise the load profiles into the grid include promotion of battery storage technologies, ramping up hydro capacities for balancing, comprehensive grid planning and addressing the challenges of DISCOMS.

2. Expanding the adoption of Green Hydrogen

The prospects of hydrogen as a fuel is gathering momentum and is becoming realistic due to rising concerns of climate change and technology innovation in generating electricity from zero-carbon renewables. The demand for hydrogen could increase 5 –fold from 6 Mt per annum to 28 Mt per annum by 2050 through cost reductions in key technologies and growing consensus to decarbonize the energy systems., Hydrogen as a fuel has enormous potential to reduce energy imports. By 2050, annual energy imports could be reduced by around 120 Mtoe (around 20% of today's final consumption), reducing import costs by around Rs. 150,000 Cr ($20bn) each year. As per TERI's research on potential of green hydrogen, the cost of hydrogen is expected to fall by more than 50% by 2030 and will start to compete with hydrogen produced from fossil fuels.

3. Transition to Sustainable Mobility

The transport sector accounts for 23% of total energy related CO_2 emissions and 28% of global energy demand (IPCC, 2019). In India, small/ light commercial vehicles (SCVs) ply mainly on diesel and are key GHG contributors. Several measures have been adopted in the transport sector by the Government signalling the need for transition to sustainable mobility going forward. As per TERI's analysis, increase in share of electric vehicles in alternate energy scenario, could achieve 10% and 4% reduction in CO_2 emissions and 8% and 2% reduction in energy consumption from three and four wheeler segments respectively.

The Track of WSDS 2021 titled **"Zero Carbon Future makes business sense"** shall witness presence of signatory CEOs of TERI's Charter of Action. The CEOs shall deliberate on why zero carbon future makes business sense and the role of corporates to accomplish India's commitments under the Paris Agreement.

- How can corporates contribute in balancing climate ambitions with sustainable recovery of India? How can corporate successfully establish a business case for low carbon solutions?
- What are the asks from the corporate sector/industry from COP 26?
- Will technological innovation and financing solutions accelerate the transition towards adopting a low carbon development trajectory?
- What kind of policy announcements can aid in accelerating corporate climate actions in alignment with Paris agreement goals?