

## Concept Note: WSDS 2021 Plenary Session

### *“Zero carbon future makes business sense”*

The Paris Agreement in 2015 observed 186 countries committed to limit implications of global warming well below 2°C by submitting their Nationally Determined Contributions (NDCs), signalling the need to transition towards low carbon economies. According to Climate Action Tracker, India continues to be only country among the G20 whose Paris Pledges and actions are well placed on track to below 2°C global warming scenario. However, this trajectory is not sufficient as India is one of the vulnerable nations to the impacts of climate change. After global pandemic, implementing India's ambitious NDCs targets require robust policy framework, comprehensive roadmap for sustainable economic recovery and integrating efforts from all stakeholders.

Industries accounting for approximately one-fourth of India's GHG emissions can play a significant role in country's NDC's commitment to reduce its emission intensity by 33-35% by 2030 from 2005 levels. For example, 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 as per India's India's Biennial Update Report, submitted in December 2018.

After the global pandemic in 2020, businesses have realised that they are not immune to the climate risks and sustainable economic models are the only way forward. Many businesses have announced their carbon neutrality targets aligning with their goals with Paris Agreement and showcasing their solidarity with global climate change campaign. However, realising these ambitious targets requires new and unique solutions, innovation and cross-sectoral collaborations.

Leading market players from Indian Industry have also come together to sign an '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. Presently, TERI's Industry Charter has 17 signatories with signatories representing from cement, energy, oil and gas, automobiles, IT and other sectors.

The corporate climate actions for near zero emissions by 2050 also present an opportunity for the Indian Businesses to unlock their full potential and integrate low carbon pathways in their operations. Some of the key areas of interventions are following:

### **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. Exploring the Potential of Unconventional Fuels: 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<sub>2</sub> 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<sub>2</sub> emissions and 8% and 2% reduction in energy consumption from three and four wheeler segments respectively.

Additionally, there are several decarbonisation pathways that have promising possibilities for replication and scale if adopted by Indian Industry, for instance low carbon solutions across supply chains, technology transformations and novel business models which can not only aid in building resilience and future proofing businesses to climate risks but also contribute in implementing the India's Paris agreement targets.

The Plenary Track of WSDS 2021 titled **“Implementing the Paris Agreement with Business Justified Actions”** discusses the role of corporates climate actions in future preparedness of India’s climate strategies and and implementing the Paris goals:

- 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?