India's INDC for transport and 2 C stabilization target

Transport sector accounted for 13% of India's energy-related CO2 emissions. India's Intended Nationally Determined Contributions (INDC) specify an economy wide decarbonization target of 33 to 35% between 2005 and 2030 and includes announcements for urban transport, intercity transportation infrastructures, sustainable logistics and inland waterways to achieve these reductions. The Paris agreement that followed the announcement of the INDC increased the global ambition to stabilize the greenhouse gases so that maximum temperature rise is limited to 2°C with an enhanced ambition for 1.5°C. The paper analyses how far INDC will reduce the emissions from transport and to what extent a 2°C temperature stabilization goal will decarbonize the transport sector. The analysis is carried out using ANSWER MARKAL model for evaluating the energy system in combination with a transport demand module to model future scenarios for India till year 2050. Three scenarios are explored in this paper: i) a business-As-usual scenario ii) an INDC scenario iii) implementation of INDC in a strong climate regime aiming for the 2°C target. The assessment shows that CO2 reductions from transport would happen through a wide portfolio of options. The highest mitigation is achieved through sustainable mobility strategies, followed by fuel economy standards. Electric vehicles offer significant mitigation benefits, however these are more significant post 2030.

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