ANALYSING THE EMISSIONS GAP ON THE ROAD TO NET ZERO GOALS IN SELECTED INDIAN SECTORS

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ABSTRACT

The peak of carbon emissions has drawn attention from academics and politicians worldwide since the Kyoto Protocol was introduced. As one of the biggest carbon emitters, India is dedicated to meeting Prime Minister Shri Narendra Modi's announcement of the Net Zero emission target by 2070. Every sector must work toward this ambitious national goal, especially the carbon-intensive ones. Estimating the sectoral peaks under current initiatives and comprehending the factors that have influenced variations in carbon emissions in previous years are crucial in directing the nation's future resource allocation. As a result, this analysis determines the factors that influence the variations in carbon emissions from the three major carbon pillar sectors—the electricity and heat, Industrial and transportation sectors—and projects their peaks. The Carbon Kuznets curve (CKC), as the theoretical model for forecasting the peaks, was proposed in this work. It is possible to relate the national peak's lateness to the notable lateness of the peaks of three pillar sectors, which is happening in 2054 for the electricity and heat sector, 2033 for Industry and 2003 for the Transport sector. Additionally, the findings indicate that rising economic production is a major driver of carbon emissions, while falling energy intensity is a hindrance. In the three sectors, however, just a little shift in the energy structure is relevant.

Keywords: carbon emissions, sectoral peak, CKC hypothesis

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