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WORKING PAPER

# Recent Approaches for Decarbonisation of India's Iron and Steel Sector

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# Recent Approaches for Decarbonisation of India's Iron and Steel Sector

*Anjali Tandon\**

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*Abstract: India has progressively strengthened its emission reduction commitments through its declaration of the Nationally Determined Contributions to be achieved by 2030, and the additional Net Zero Emission target by 2070, and the more recent approval of more ambitious climate targets for 2035. Achieving these medium-and long-term goals necessitates a transition to a low-carbon pathway, with industrial decarbonisation emerging as a crucial pillar. The transition is particularly challenging in the hard-to-abate industries with a characteristic high energy intensity and limited alternatives due to the nature of their input/material requirements. Among the hard-to-abate sectors, the iron and steel sector leads with more than one-third of the industrial emissions due to fuel use. There are also constraints due to the high cost of emerging green technologies in steelmaking. Given India's position as the second-largest producer of steel globally, and the wide use of the industry output for infrastructure and development purposes, accelerating the low-carbon transition of the steel industry has significance both for India and the world.*

*Against this backdrop, the present paper examines various policy measures introduced in India to support decarbonisation in the iron and steel sector. By observing the temporal progression of decarbonisation policies and a classification of the policy approaches, the paper provides valuable insights into India's decarbonisation strategy, which places strong emphasis on developing and strengthening institutional frameworks and regulatory instruments compared to relying on direct financial incentives. This approach reflects a deliberate policy orientation that seeks to steer industrial actors toward transparent and well-defined low-carbon pathways. The evolving mix of institutional and regulatory measures thus demonstrates lessons for other developing countries to address the relatively constrained access to financial and subsidy-based mechanisms available in the advanced economies.*

*Keywords: Iron and steel; industrial decarbonisation; low-carbon transition; policy-mix approaches; India*

*JEL Classification: L61, O25, Q38, Q48*

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