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Ensuring a just transition: The Socioeconomic Implications of India's Transition to Renewable Energy

Author: Nisit Kumar Parida and Raj B. Bharati

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Abstract:

India's expanding energy demand, along with the need to address climate change, requires a quick transition to a renewable energy system. This report provides a detailed assessment of India's potential for and present trends of sustainable energy consumption. It examines the historical evolution of India's energy mix, emphasising the growing importance of solar and wind power as renewable sources. The efficacy of national and state policies in encouraging renewable energy growth is thoroughly evaluated, while admitting implementation obstacles.

The research investigates the technological problems posed by the intermittent nature of solar and wind generating, highlighting the need for system modernization and energy storage solutions. Furthermore, it looks at the odds of fulfilling India's renewable energy goals, the probable socioeconomic consequences, and the need of ensuring an equitable transition away from fossil fuels. This paper emphasises persistent challenges and underlines the significance of continued policy innovation, technological advancements, and financial resources for India's successful sustainable energy transition.

Keywords: Renewable energy, climate change, sustainable development, energy policy, and mitigation

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