

Renewable Energy as a Key to Sustainable Development

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Abstract

With less than five years remaining to achieve the United Nations Sustainable Development Goals (SDGs), the transition to renewable energy has become a critical priority. The continued reliance on fossil fuels is driving climate change, increasing economic inequality, and exacerbating energy insecurity, creating significant barriers to sustainable development. Renewable energy—solar, wind, hydro, geothermal, and bioenergy—offers a viable solution by reducing environmental degradation, promoting economic stability, and improving energy access, particularly in developing regions.

This study employs a policy-oriented and data-driven approach to assess the effectiveness of renewable energy adoption. It examines national strategies that have successfully accelerated the energy transition, focusing on case studies from Germany, Denmark, and India. A comparative analysis highlights key policy measures, regulatory frameworks, and the challenges associated with large-scale renewable energy implementation. Additionally, statistical data is reviewed to evaluate progress toward SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), and SDG 13 (Climate Action).

Findings reveal that despite advancements, the current rate of renewable energy adoption remains insufficient to meet the 2030 targets. Strengthening policy support, increasing financial investment, and leveraging technological innovation are essential to accelerating this transition. The study concludes with actionable recommendations for policymakers, industry leaders, and stakeholders to enhance the scalability and accessibility of renewable energy solutions. Immediate and coordinated action is necessary to ensure a sustainable and resilient energy future

Keywords: Renewable Energy, Sustainable Development, Climate Action, Energy Transition, Policy Frameworks, Economic Growth, Clean Energy