

# Study on the Impact of Green Finance on Clean Energy Production

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## **Abstract**

Developing clean energy and optimizing the structure of energy production is an important part of achieving high-quality economic growth and sustainable social development, and of promoting carbon peaking and carbon neutrality. Promoting the development of clean energy requires multifaceted efforts. Green finance boosts the development of clean energy in China by providing financial services to projects in the fields of environmental protection, energy conservation, clean energy, and green transportation. This paper focuses on the impact of the level of green financial development on clean energy production in China, and selects 30 provinces and cities in China as the research samples in 2001-2021 to empirically analyze the impact of the development of green finance on the production of clean energy and the mechanism of its role. It is found that: (1) green finance can directly promote the development of clean energy, and there are significant differences in this direct promotion between different regions; (2) green finance has a positive impact on clean energy production through the mediating effect of green technological innovation; and (3) in terms of regional heterogeneity, the northern region has a more significant positive promotion effect of green finance than the southern region. Based on the above conclusions, this paper argues that attention should be paid to the inter-regional heterogeneity of the level of green finance, and differentiated means should be adopted to promote the equalization of green finance development, to promote green technological innovation, and to promote the development of clean energy.

## **Keywords**

Green Finance, Clean Energy Production, Entropy Method, Heterogeneity Test