

Research on Evaluation of Renewable Energy Technology Innovation Strategy Based on PMC Index Model

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Abstract : Renewable energy technology innovation is an important way to realize the energy transformation. Our government has issued a series of policies to guide and support the development of renewable energy. The implementation of these policies will affect the further development, utilization and technological innovation of renewable energy. In this context, it is of great significance to systematically sort out and evaluate the renewable energy technology innovation policy for improving the existing policy system. Taking the 190 renewable energy technology innovation policies issued during 2005-2021 as a sample, from the perspectives of policy issuing departments and policy keywords, it uses text mining and content analysis methods to analyze the current situation of the policies and conduct a semantic network analysis to identify the core issuing departments and core policy topic words; A PMC (Policy Modeling Consistency) index model is built to quantitatively evaluate the selected policies, analyze the overall pros and cons of the policy through its PMC index, and reflect the PMC value of the model's secondary index. The core departments publish policies and the performance of each dimension of the policies related to the core topic headings. The research results show that Renewable energy technology innovation policies focus on synergy between multiple departments, while the distribution of the issuers is uneven in terms of promulgation time; policies related to different topics have their own emphasis in terms of policy types, fields, functions, and support measures, but It still needs to be improved, such as the lack of policy forecasting and supervision functions, the lack of attention to product promotion, and the relatively single support measures. Finally, this research puts forward policy optimization suggestions in terms of promoting joint policy release, strengthening policy coherence and timeliness, enhancing the comprehensiveness of policy functions, and enriching incentive measures for renewable energy technology innovation.

Keywords : renewable energy technology innovation, content analysis, policy evaluation, PMC index model

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