Competitiveness analysis of hydrogen production and storage sectors by DEA approach

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Hydrogen energy technology as an energy carrier is environmentally sound technology than conventional energy technologies since it doesn't emit carbon dioxide. Hydrogen can be a crucial role to cope with greenhouse gas emissions and sustainable development. A lot of advanced nations such as U.S, Japan, Germany, and China have been focusing hydrogen R&D programs. In this research, we focus on the hydrogen competitiveness analysis by using data envelopment analysis from the economic viewpoints. We select over 30 countries and make 5 key criteria, including numbers of SCI papers and patents, hydrogen technology infra, R&D human resources, and R&D budget, to assess the competitiveness of hydrogen production and storage sectors.