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Assessment of Hydrogen Energy Industry Chain Based on Hydrogen Production Methods, Storage, and Utilization

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To reach climate neutrality by 2050, a goal that the European Union set itself, it is necessary to change and modify the whole EU's energy system through deep decarbonization and reduction of greenhouse-gas emissions. The study presents a current insight into the global energy-transition pathway based on the hydrogen energy industry chain. The paper provides a critical analysis of the role of clean hydrogen based on renewable energy sources (green hydrogen) and fossil-fuels-based hydrogen (blue hydrogen) in the development of a new hydrogen-based economy and the reduction of greenhouse-gas emissions. The actual status, costs, future directions, and recommendations for low-carbon hydrogen development and commercial deployment are addressed. Additionally, the integration of hydrogen production with CCUS technologies is presented.

Metryczka

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