

Hydrogen Economy: Opportunities and Challenges

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A hydrogen economy is the long-term goal of many nations because it provides security, environmental, and economic benefits. The transition from a conventional energy system to a hydrogen economy involves many uncertainties. They include development of fuel cell technologies, hydrogen production and distribution infrastructure, and the response of petroleum markets. This study uses the U.S. MARKAL model to simulate the impacts of hydrogen technologies on the U.S. energy system and identify potential impediments to a successful transition to a hydrogen economy. Preliminary findings identify potential market barriers facing the hydrogen economy, as well as opportunities in new R&D and product markets.

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