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Analysis and prospect of global hydrogen energy policy and technology

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Abstract

Accelerating the development of hydrogen energy industry is an effective way to deal with climate change and achieve carbon neutrality. Hydrogen can reduce dependence on fossil energy and help to achieve deep decarbonization in transportation, industry, construction and other areas that are difficult to reduce emissions. Firstly, this paper provides an analysis of the current situation and development trends of hydrogen energy and points out challenges for the development of hydrogen energy by studying global hydrogen strategies from the perspective of strategic objectives, strategic layout and strategic stage planning. Secondly, key development directions of hydrogen in major countries including the US, Germany, Japan and China is analyzed according to their policies. Thirdly, this paper analyzes scientific research project data on the field of hydrogen over the past five years from national scientific research institution databases to uncover technological key layouts and development trends in major countries. Finally, global application fields of hydrogen projects are analyzed based on regional distribution, production scale, engineering types and so on. The development and key technologies of electric hydrogen coupling are prospected.

Note: This document will be opened to the participants on IERE website before the Workshop and opened to the public afterward.