Análisis de la Integración del Hidrógeno en Sistemas Híbridos de Energía Renovable en el marco de Escenarios Energéticos [

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text (article)

Analítica

Hydrogen as an energy vector can provide energy in applications from low to large scale and contributes to the promotion of renewable energies as low-carbon emission alternatives. This paper presents a literature review on hybrid green hydrogen systems. It was found that 23% of the articles review different methodologies and comparisons of hydrogen technologies, 15% present technical, economic and environmental analyses of hydrogen-based systems and projects. Fifty-three percent of the reviewed articles focus on artificial intelligence methodologies and use of commercial software for sizing, energy management and optimization of these models on hybrid renewable energy systems with a high focus on off-grid systems. The potential for simulation models to be developed on this topic is quite large because of the decarbonization brought by hydrogen. The models should consider additional aspects of the entire hydrogen value chain to have a complete vision of its development in Colombia, taking into account the development opportunities in the framework of different energy scenarios
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