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A summary of green hydrogen as an upcoming energy storage technology

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The increasing renewable energy production trend poses concerns about energy dispatchability. The intermittency of renewable energy requires compensating reliable and suitable energy storage technologies. An upcoming energy storage technology is green hydrogen. Green hydrogen has received both extremes of praise and criticism from the energy industry. This study aims to dispel misconceptions about green hydrogen. Green hydrogen and its applications are thoroughly yet concisely described, together with its suitability in power systems. The advantages and disadvantages of green hydrogen are discussed. It was found that green hydrogen has significant benefits of longterm energy storage and strong suitability in heavy industries. Despite green hydrogen decreasing in cost, it is still comparatively expensive and suffers from significant logistical constraints. Green hydrogen remains an important factor in the renewable energy transition and forms an integral component of the energy storage of the future. This study is useful for policy makers, system operators, renewable energy developers and financial institutions that would like an improved understanding of green hydrogen and its integration.