

Abstract

The growth of renewable energy in Germany since the 1980s has been supported through history by a unique combination of economic policies from the state and the European Union, market reform, and historical events including the COVID-19 pandemic and the war in Ukraine. Hydrogen power and fuel cell utilization specifically have received extra support in Germany through EU and state funding, contributing to added increase in the market share of green energy, although Germany still faces challenges in cost reduction and infrastructure and technology growth. This research uses library resources from the University of North Carolina at Chapel Hill to map the growth, finance, and sustainability of hydrogen power in Germany between the end of the 20th century through the first two decades of the 21st century. This research suggests that the utilization of liquid hydrogen and electrolysis opens doors for greener approaches to hydrogen production through integration into systems with multiple sources, scales, and uses, and promotes green energy in the market. Hydrogen energy continues to be a promising field in the German renewable energy sector and as a path to reduce and eliminate carbon emissions from fossil fuels.