

Can a green hydrogen-based energy system help Iraq achieve sustainable economic resilience?

The study investigates the potential of transitioning Iraq, a nation significantly dependent on fossil fuels, toward a green hydrogen-based energy system as a pathway to achieving sustainable economic resilience. As of 2022, Iraqi energy supply is over 90% reliant on hydrocarbons, which also account for 95% of the country foreign exchange earnings.

What is Iraq's energy supply like in 2022?

As of 2022, Iraqi energy supply is over 90% reliant on hydrocarbons, which also account for 95% of the country foreign exchange earnings. The global energy landscape is rapidly shifting towards cleaner alternatives, and the volatility of oil prices has made it imperative for the country to diversify its energy sources.

Does Iraq need a green hydrogen economy?

Iraq faces a unique set of obstacles that must be addressed to ensure a successful and sustainable shift towards a green hydrogen economy. One of the challenges for sustainable country transition to a green hydrogen economy lies in its energy infrastructure, which relies heavily on fossil fuels.

What is Iraq's projected hydrogen energy demand?

Figure 9 represents Iraqi projected hydrogen energy demand for the country using two model equations labelled as equations (1),(2) According to the simulated results, Iraq projected hydrogen energy demand shows a progressive increase over time. In 2025, the projected demand stands at 3.39 million tonnes per year.

We describe a pathway for the battery electrification of containerships within this decade that electrifies over 40% of global containership traffic, reduces CO<sub>2</sub> emissions by ...

The contrast between wind and solar energy availability throughout the day offers insights into how these renewable resources could complement each other in a mixed energy strategy for ...

A shift towards a sustainable energy system could help Iraq secure a reliable and affordable electricity supply, achieve cost savings and create long-term opportunities for economic development ...

In publication titles, the words/phrases "shipboard", "energy storage", "all-electric ship" are commonly used, while as far as keywords are concerned, "emissions", "energy ...

Mohammed, RK & Farzaneh, H 2024, " Investigating the impact of the future carbon market on the profitability of carbon capture, utilization, and storage (CCUS) projects; the case of oil ...

Solar energy has not been sufficiently utilized at present in Iraq. However, this energy source can play an

important role in energy production in Iraq, as the global solar radiation ranging from 2000 kWh/m<sup>2</sup> to a 2500 kWh/m<sup>2</sup> annual ...

Energy storage system (ESS) is a critical component in all-electric ships (AESs). However, an improper size and management of ESS will deteriorate the technical and economic ...

The energy storage system is an essential piece of equipment in a ship which can supply various kinds of shipboard loads. With the maturity of electric propulsion technology, all-electric ships ...

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