

Is solar energy a viable energy source in Iraq?

Solar energy potential for 14 different areas in Iraq was estimated, and it was in range of (2200-3300 kWh). The wind speed at 10 m above ground level for many regions in Iraq is also suitable for electricity generation. The environmental impacts of the energy production based on the current scenario were compared with renewable and natural gas.

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.

How much does hydrogen cost in Iraq?

In 2020, the cost of gray hydrogen in Iraq was estimated at \$1.4 /kg, and green hydrogen, which is produced through electrolysis powered by renewable energy sources, had a higher production cost of \$5.2/kg. The projections indicate a downward trend in hydrogen production costs by 2025 for green hydrogen is expected to range between 3 to 4 \$/kg.

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.

Why is Iraq's energy system vulnerable?

However the capacity to capture and process this gas has not kept pace. The inability to utilise its gas riches means that the country's gas deficit has grown, and Iraq now relies on imports from Iran to meet increasing demand. This has introduced a number of vulnerabilities to Iraq's energy system.

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.

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This has introduced a number of vulnerabilities to Iraq's energy system. For example, payment issues last summer led to Iran cutting exports, significantly exacerbating electricity shortages in Iraq during peak seasonal demand.

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There are a number of pathways available for the future of electricity supply in Iraq but the most affordable, reliable and sustainable path requires cutting network losses by half at least, strengthening regional interconnections, ...

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