

India's First Off-Grid Green Hydrogen Pilot Plant

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Green Hydrogen Pilot Plant Latest News

- Adani Group recently commissioned India's first off-grid 5-megawatt green hydrogen pilot plant in Kutch, Gujarat.

About India's First Off-Grid Green Hydrogen Pilot Plant

- **Location: Kutch, Gujarat**
- It is a **5 MW** green hydrogen plant developed by **Adani New Industries Limited (ANIL)**, the clean energy arm of Adani Enterprises Ltd.
 - An **off-grid green hydrogen plant** is a facility that **produces hydrogen using electrolysis powered by renewable energy sources**, such as solar or wind, and is **not connected to the main electrical grid**.
 - This means the plant relies entirely on its own renewable energy generation for the hydrogen production process.

- The ANIL plant is **fully powered by solar energy** and **works with a Battery Energy Storage System (BESS)**, which **enables it to operate completely off-grid**.
- It features a **fully automated and controlled electrolyser system**, which is designed to **respond to real-time renewable energy inputs**.
 - This provision, also **known as a closed-loop system**, aids in flexibility of operations, particularly in **addressing the shifting nature of solar power**, while ensuring efficiency, safety, and performance.
- The initiative is **aligned with the National Green Hydrogen Mission (NGHM)**, a flagship Government of India programme that aims to reduce import dependence, improve energy self-sufficiency, and ramp up decarbonisation of energy-intensive industries, all in fulfilment of India's Atmanirbhar Bharat.

Source: TH

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