

Govt nod to set up Centre of Excellence in Green Hydrogen at IIT-BHU

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THE UTTAR Pradesh government has approved the establishment of a Centre of Excellence in Green Hydrogen at the Indian Institute of Technology (BHU), Varanasi, under the Uttar Pradesh Green Hydrogen Policy-2024.

It will be jointly developed by the IIT-BHU and the Madan Mohan Malaviya University of Technology (MMMUT), Gorakhpur. The Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA) has formally granted the approval to promote research, technology development, capacity building and industrial applications of green hydrogen in the state.

A key feature of the initiative is the proposed launch of a hydrogen-powered train between Varanasi and Gorakhpur in collaboration with the Ministry of Railways. The project is expected to facilitate testing of hydrogen storage, transportation, operational performance and various end-use applications. The Uttar Pradesh State Road Transport Corporation (UPSRTC) also plans to introduce green hydrogen-fuelled buses on the same corridor, positioning the region at the forefront of clean mobility. Nearly 50 per cent of the project infrastructure will be developed at MMMUT, strengthening the technology ecosystem in eastern Uttar Pradesh.

IIT (BHU) will serve as the lead institution, guiding strategic planning, research, and technical mentoring.

Preetam Singh, coordinator and associate professor, Department of Ceramic Energy, said hydrogen can be produced through biomass-based and electrolyser-based routes. With abundant biomass available in UP, biomass-based hydrogen production is both feasible and cost-effective, he said. The Centre will prioritise biomass-based technologies while advancing research across other emerging hydrogen domains.

He added the Centre will also set up an incubation hub to support innovation and entrepreneurship in green hydrogen and clean energy, helping build a strong startup ecosystem in the sector. Under a hub-and-spoke model, nearby technical institutes will be developed as spokes and will receive curriculum support, training and faculty development, and mentoring.