

## **STATES/UTs**

### **ANDHRA PRADESH**

#### **Hydrogen-based grid project in Vizag soon**

A standalone fuel-cell-based microgrid with hydrogen production using electrolyser will be set up in the NTPC guest house at Simhadri in Visakhapatnam. It is India's first green hydrogen-based energy storage project. It will be a precursor to large-scale hydrogen energy storage projects and useful to study and deploy multiple microgrids in various off-grid and strategic locations in the country. Hydrogen will be produced using the advanced 240 kW Solid Oxide Electrolyser by taking input power from the nearby floating solar project. The hydrogen produced during sunshine hours will be stored at high pressure and electrified using a 50 kW Solid Oxide Fuel Cell. The system will work in a standalone mode from 5 pm to 7 am. This unique project configuration is designed in-house by NTPC. It is a unique project for India and will open doors for decarbonising the far-off regions of the country like Ladakh, J&K, etc., hitherto dependent on diesel generators. The project is in-line with the vision of Prime Minister Narendra Modi for becoming carbon neutral by 2070 and making Ladakh a carbon-neutral territory. NTPC Simhadri has the distinction of having the 5 MW floating solar plant, which is the single largest floating plant in the country. The floating solar plant was set up on 75 acres of its reservoir spread over 150 acres. The ₹ 110 crore floating solar power project was executed by the Bharat Heavy Electricals Limited (BHEL) on an Engineering, Procurement and Construction (EPC) basis. The floating photovoltaic (PV) panels are tied with marine ropes from all corners and the project is considered to be an engineering marvel due to the challenges faced during the design and implementation of unique anchoring and mooring system.

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