

National Institute of Solar Energy
(An Autonomous Institute under Ministry of New and Renewable
Energy) Gwal Pahari, Gurugram-Faridabad Road, Gurugram,
Haryana – 122003

Date: 07-05-2026

**Three Days Training Programme on Hydrogen Energy: Production,
Storage and Utilization**

**Venue: Usha Hall, NISE, 19th Milestone, Institutional Area Gurugram, Faridabad
Road, Gwal-Phari, Gurugram**

Day 1:				
S. No.	Timing	Module Name	Course Content	Remarks
1.1	10:00-10:30	Welcome/ NISE facility and Overview activities	Introduction to the training module, NISE facility and activities	
1.2	10:30-11:30	Renewable Energy Development in India & Industry Trends	Concept of Renewable Energy and Solar Resources; India's and Global RE scenarios	
1.3	11:30-13:00	Introduction to Hydrogen Energy- An Overview	Hydrogen Production Methods and Technologies	
Lunch (13:00-14:00)				
1.4	14:00-16:00	Solar Photovoltaic Technology, inverter and other BOM of PV power plant	Types of PV power plant, Details of BOM, Basic working of Solar PV, Types of PV technology, Inverter and other BOM. System Performance Parameters.	
1.5	16:00-17:30	Hands-on training on Photovoltaic Modules	Measurement of Solar Module Parameter, Visit to Module Lab Facility, Indoor module testing	

Day 2:				
S. No.	Timing	Module Name	Course Content	Remarks
2.1	10:00-11:30	Process Flow of a Green Hydrogen Plant	Steps for Design, Installation, Commissioning, O&M of Green Hydrogen Plant	
2.2	11:30-13:00	Green Hydrogen Plant Operation, Instrumentation and Controls	Operation and troubleshooting of hydrogen plants	
Lunch (13:00-14:00)				
2.3	14:00-16:00	Green Hydrogen Plant Operation and Instrumentation	Overview of control systems and monitoring tools during an internal hydrogen station visit	

Day 3:					
S. No.	Timing	Module Name	Course Content	Remarks	
3.1	10:00-11:30	Introduction to Renewable PtX	Green Hydrogen and PtX Economics		
3.2	11:30-13:00	Demand Markets for Renewable PtX	Clean hydrogen demand, outlook for the green hydrogen, green methanol and green ammonia market		
Lunch (13:00-14:00)					
3.3	14:00-16:00	Green Hydrogen Applications	Key technologies, Application of green hydrogen in mobility-stationary power generation and other portable application.		
3.4	16:00 - 17:30	Assessment & feedback Valedictory and Certification			
