

power-to-gas solutions. It also explores the technical, economic, and infrastructural challenges hindering large-scale deployment, including high production costs, storage and transport limitations, and efficiency concerns. Emphasizing innovation, policy support, and system integration, this topic highlights green hydrogen's pivotal role in decarbonizing sectors like industry, power, and transport, and in accelerating the transition toward a net-zero energy future.

• Topic of the Session includes, but are not limited to:

- Electrolysis technologies (PEM, alkaline, SOEC) for green hydrogen production
- Integration of solar, wind, and hydro power with hydrogen production systems
- Power-to-gas (P2G) and hydrogen-to-power (H2P) systems
- Hydrogen storage technologies and infrastructure
- Techno-economic analysis and lifecycle assessment of green hydrogen systems
- Hydrogen transport and distribution challenges
- Hybrid renewable-hydrogen microgrid architectures
- Role of hydrogen in sector coupling (power, industry, transport)
- Hydrogen-based energy storage for grid stabilization
- Smart control and optimization techniques for hydrogen production
- Safety, standards, and policy frameworks for green hydrogen deployment
- Pilot projects and case studies on renewable hydrogen systems
- Electrolysis technologies (PEM, alkaline, SOEC) for green hydrogen production
- Integration of solar, wind, and hydro power with hydrogen production systems
- Power-to-gas (P2G) and hydrogen-to-power (H2P) systems

Important Dates:

- Special Session Paper Submission Due : June 15, 2025
- Notification of Paper Acceptance : July 31, 2025
- Camera Ready Paper Submission Due : August 31, 2025
- Regular Registration Due

Author guidelines as per regular paper submission.





Submission Portal

For queries, email: ss_stpec2025@nitgoa.ac.in

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