



JOIN US IN-PERSON

Organiser:

RenewableWatch

5th Edition

GREEN HYDROGEN IN INDIA

Key Developments and Future Roadmap

April 18-19, 2023 | Le Meridien, New Delhi

Supported by:



Co-sponsors so far:





Mission

- Green hydrogen is one of the fastest growing clean energy sectors and is an important piece of the evolving energy landscape. With its immense potential to help decarbonise hard-to-abate industries as well as the transport and power sectors, all major global economies are jumping on to the green hydrogen bandwagon to transition to net zero.
- Giving a massive boost to India's fledgling green hydrogen sector, the union cabinet approved the National Green Hydrogen Mission in January 2023 with an initial budget outlay of Rs 197,440 million. The mission targets to scale up the country's annual green hydrogen production capacities to at least 5 million metric tonnes per annum by 2030, with a further potential to reach 10 million metric tonnes per annum. This will be supported by the growth of associated renewable energy capacity of about 125 GW.
- The detailed mission document gives an overview of the overall mission goals, strategies to develop the green hydrogen ecosystem on the demand and supply sides, various components under the mission, the governance framework, the implementation roadmap, expected outcomes and the financial outlay. India is one of the first countries to announce such an extensive policy roadmap specifically for green hydrogen and this has given the industry the much-needed confidence in this nascent sector.
- While public sector companies have already started launching tenders and projects in this space, private players are not far behind. Leading oil and gas majors as well as large renewable energy developers have announced massive green hydrogen uptake plans. Various companies are also planning to set up large electrolyser manufacturing facilities to secure future supply chains.
- The industry now awaits clear mandates for green hydrogen procurement by industries to create the required demand for green hydrogen. On the supply side, incentives would be appreciated to scale up domestic manufacturing of electrolysers.
- **The mission of this two-day conference is to discuss the key policy developments, shed light on the lessons from early experiences, assess the future plans of developers, oil and gas majors, industries and manufacturers, as well as highlight the challenges and opportunities in India's green hydrogen sector. This event will bring together policymakers, oil and gas majors, renewable energy developers, large industrial consumers, electrolyser manufacturers, technology providers, researchers, consultants and investors to share their perspective.**



Target Audience

The conference will draw participation from:

- ❖ Green hydrogen developers
- ❖ Renewable energy developers
- ❖ Policy makers and regulators
- ❖ Power utilities
- ❖ Transmission grid operators
- ❖ EPC Contractors
- ❖ Technology providers
- ❖ Engineering and technical consultants
- ❖ Management consultants
- ❖ Energy Storage providers
- ❖ Equipment manufacturers
- ❖ Potential Investors
- ❖ Private Equity firms
- ❖ Financial Institutions
- ❖ Industry Analysts
- ❖ R&D Organisations, etc.



Agenda

Key Trends and Developments

- ❖ What have been the key recent developments in the green hydrogen space?
- ❖ What are the current cost considerations? How is the cost likely to evolve over the next few years?
- ❖ What are the potential barriers for green hydrogen uptake? What are the key pre-requisites to enable a green hydrogen economy in India?

Focus on the National Green Hydrogen Mission

- ❖ What are the key features of the mission? What are the targets and budgets?
- ❖ What incentives have been planned on the demand and supply sides?
- ❖ What can be expected from the next phase of the policy?

Uptake Plans of Oil and Gas Majors

- ❖ What are company plans to incorporate green hydrogen in their future strategies?
- ❖ What modifications are required in the existing oil and gas infrastructure to store and transport green hydrogen?
- ❖ What are the key limitations with respect to green hydrogen integration?

Perspective of Renewable Energy Developers

- ❖ What are your plans in the green hydrogen space?
- ❖ What are the potential business models and cost economics? What are the key barriers and their likely solutions?
- ❖ What are your expectations from the next phase of the policy?

Focus on Green Ammonia and Green Methanol

- ❖ Which are the key derivatives of green hydrogen?
- ❖ What is the cost viability of producing green ammonia and green methanol?
- ❖ What are the key issues in their production and supply?

State Perspective

- ❖ What are the state's plans for green hydrogen uptake?
- ❖ Has the state drafted any policy in this regard?
- ❖ What are the key upcoming green hydrogen projects in the state?

Uptake Plans of Industries

- ❖ What are your plans regarding green hydrogen uptake?
- ❖ What are the current challenges in replacing grey hydrogen with green hydrogen?
- ❖ What incentives are required to scale up green hydrogen adoption in industries?

Domestic Manufacturing of Electrolysers

- ❖ How is the domestic manufacturing landscape for electrolysers evolving?
- ❖ What are the major roadblocks to scale up local manufacturing?
- ❖ What are the key incentives required to promote domestic production of electrolysers?

Storage and Safety Considerations

- ❖ What are the key concerns regarding hydrogen storage and transport?
- ❖ Which Indian standards cater to hydrogen storage and safety considerations?
- ❖ What regulatory steps are required in the near future?

Green Hydrogen Adoption in Transport

- ❖ What is green hydrogen's potential to decarbonise road mobility, shipping and aviation?
- ❖ What have been the key recent projects and developments in this space?
- ❖ What are the key barriers to uptake?

Focus on Fuel Cells

- ❖ What is the market potential for fuel cells in India?
- ❖ What have been the major developments in this space?
- ❖ What incentives are required to scale up manufacturing of fuel cells?

Financing Green Hydrogen Projects

- ❖ What are the emerging financing options in the green hydrogen segment?
- ❖ What are the key considerations that need to be evaluated in financing green hydrogen projects?
- ❖ What are the key solutions to de-risk project development?



Previous Participants

ABRPL, ACME Cleantech, ACVA Solar, Adani Solar, Ador, AES, Affin Hwang, AGC Inc, Aggreko, Aker Solutions, Alfanar, Amplus Solar, Apraava Energy, Aramco Asia, Ariel International Corporation, Aries Power, Armacell, ASK, Autogrid, Avaada Power, AVI Solar Energy, Axis Capital, Azista, Azure Power, Babcock Power, Baker Hughes, Bharat Petroleum Corporation, Black & Veatch, BNP Paribas, Bosch Limited, British Deputy High Commission Ahmedabad, British High Commission, Brookings, Buena Vista Fund Management, Bureau Veritas (India), Cairn, Canadian Solar, Chart Industries Inc., Chemical Process Piping (CPP), Chicago Pneumatic, Chint Power, Clarke Energy, Cleantech Solar Energy, Climate Connect Technologies, CRGI, CSEP, Customised Energy Solutions, Daimler India Commercial Vehicles, Danfoss, Dans Energy, Deccan Equipment and Management, Delta, Diamond Gas International (DGI), DIMTS, DSP Investment Managers, Eastern Electrolyser, Eaton, Edelweiss AMC, EIL, Elara Securities, Electrotherm, ELSAC Engineering s.r.l., Energy Infrastructure Management, enfinity, Engie, Essar power, EverSource Capital, Farm Gas, Fidelity, First Solar, Flowserve Corporation, Fortum, Fourth Partner Energy, Franklin Templeton, FTI Consulting, GAIL, GE Oil & Gas India, GE Steam Power, Gensol, GIP India, GIZ, GMR Energy, Godrej & Boyce Mfg. Co, Government of Western Australia, Govt. of AP, Green Planet Logistics, Green Power International, GreenH, Greenko Group, GSECL, GSPL India Gasnet, H-Energy, H2B2 Electrolysis Technologies SI, Haryana Power Generation Corporation, Hazira LNG, HCC, HDFC Bank, HEG, Helios, Hero Future Energies, HEROSE GmbH, Hindustan Petroleum Corporation, Hitachi ABB, Hoerbiger India, Honeywell, HPCL, ICICI Bank, Idam Infra, IDFC Alternatives, IFC, IGL, IIPL, IIT Mandi, India Infrastructure Finance Company, Indian Energy Storage Alliance, Indian Railways Organization for Alternate Fuels, Indo-German Energy Forum, Indraprastha Gas, Ingersoll-Rand (India) Limited, IOCL, IOTL, IREDA, IRM Energy, JNK INDIA, JSW Steel, Jupiter, Kalpataru Power, Kashyap Consultancy Services, KBR, KEC International, KepcoPlant Service & Engg, KfW IPEX -Bank GmbH, Khaitan & Co., KPIT Technologies, KPMG, Kraft Powercon India, L&T Solar, Larsen & Toubro, Linde, Lloyd's Register, LRQA Inspection Services India LLP, Macquarie, MAHAGENCO, Mahanagar Gas, Mahindra Susten, Maithon Power, Max life, MEA, MECON, MEDA, Ministry of Power, Mitsubishi, Mitsui, MNRE, Mosaic Advisors, Mytrah Energy, National Foundation for India, National Institute of Ocean Technology (Ministry of Earth Science), NEC Technologies, NEDO India, New Horizon, Nikko AM, NIOT Campus, NITI Aayog, Nomura, NTPC, Ohmium, Okaya Power, ONGC, Oswal Infrastructure, Oxbow Capital, Panasonic, Panitek Power AG, Parker Hannifin, Petronet LNG, Phoenix Legal, Plug Power, POSOCO, POWER GRID, PPN Power Generating Company, Praxair, PunjLloyd, PwC, Q Tech Consultants, Ramboll, ReGen Powertech, Reliance Industries, ReNew Power, Respo Safety Solutions, RITES, Rockwin Flowmeter, S&P Global Platts, SafeEnergy, Samena Capital, Samsung Heavy, SBI, Schneider, Scottish Development International (SDI), SECI, Sembcorp Green Infra, SEROS, Shardul Amarchand Mangaldas & Co, Shell India, Siemens Energy, Singhania System Technologies, Skipper, Solar Energy Corporation of India, Spring Energy, Statkraft India, STEAG Energy, Sterling & Wilson, Sterlite, Sumitomo, Surface Modification Technologies Pvt. Ltd., Suzlon, Tata Aia, Tata AMC, Tata Cleantech Capital, Tata Power, Tata Projects, Technip, TERI, TGE Gas Engineering, The Corporate Profiles, Thermax, Thermo Fisher Scientific, Think gas Distribution, Toshiba JSW Power Systems, Toyo Engineering, Toyota Kirloskar, U3S, UPES, UTI AMC, Vedanta, Veeco Instruments, Vikram Solar, VRV Asia Pacific, Waaree Energies, WALLFORT Financial Services, Wartsila, Welspun Renewables Energy, World Bank, Worley, Yes Bank, Zusammenarbeit (GIZ) GmbH.





Delegate Fee

Delegates	Fee			
	INR	GST@18%	Total INR	Total USD
One delegate	25,000	4,500	29,500	400
Two delegates	40,000	7,200	47,200	650
Three delegates	55,000	9,900	64,900	900
Four delegates	70,000	12,600	82,600	1,150

- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.

Please send wire transfer payments to:

Beneficiary India Infrastructure Publishing Private Limited
 Bank Name The Hongkong and Shanghai Banking Corporation Ltd
 Bank Address R-47, Greater Kailash-1, New Delhi-110048, India
 Bank Account No. 094179587002

Swift Code HSBCINBB
 IFSC Code HSBC0110006
 GSTIN 07AAACI5880R1ZV

Sponsorship opportunities are available

TERMS AND CONDITIONS

Payment Policy

- ❖ Full payment must be received prior to the conference. For discounted rates, the payment must be received on or before the discount expires.
- ❖ Substitution and name changes are welcome at no extra charge.

Disclaimer

- ❖ Indian Infrastructure shall assume no liability whatsoever in case the event is postponed or cancelled due to a fortuitous event or unforeseen occurrence that renders the performance of this conference impracticable, illegal or impossible. For purpose of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.
- ❖ Please note that it may become necessary for reasons beyond the control of the organisers to make alterations to the content and timing of the programme or speakers.

Organiser

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes **Power Line, Renewable Watch, tele.net, Indian Infrastructure** and **Smart Utilities** magazines.

It also publishes **Power News** (a weekly newsletter), and a series of reports on the energy sector, including the **Commercial and Industrial Green Hydrogen Market In India** and **India's Renewable Energy Outlook 2021, Green Hydrogen Market In india, Power Market In South Asia, Solar Market in India, Solar Power in India, Solar Power in Africa, Wind-Solar Hybrid Market in India** and **Rooftop Solar in India**. It also publishes the **Solar Power Directory and Yearbook** and the **Wind Power Directory and Yearbook**.

Cover pic courtesy: shutterstock images

For sponsorship opportunities and delegate registrations, contact:

Arushi Sethi - Conference Cell
 Tel: +91-9891365019
 Email: arushi.sethi@indiainfrastructure.com

Khushie Bhardwaj- Conference Cell
 Tel: +91-9818761616
 Email: khushie.bhardwaj@indiainfrastructure.com