# CONFERENCE AGENDA | DAY 1

| Session | Topic |
|---|---|
| 0800 | Registration & Coffee |
| 0855 | Welcome Remarks by Conference Convenor: Manish Panchal |
| 0900 - 1100 | INAUGURAL SESSION<br><br>• Green, Grey, Blue, Purple, Turquoise, Yellow, Pink – Decoding the Various forms of Hydrogen Production<br>• Hydrogen in Global Energy Mix<br>• Policies needed to support a multi-sector global hydrogen economy.<br>• Role of Hydrogen in Reducing India's Carbon Intensity by 45% by 2030<br>• Role of "Green Hydrogen Obligation" in Promoting GH2GNH3 in India<br>• Green Hydrogen for India's Sustainable Energy Transition |
| 1100 - 1115 | **Networking & Refreshments** |
| 1115 - 1145 | **Hydrogen, Ammonia & Hydrogen Carriers: Opportunities & Advancements**<br><br>The role of ammonia and hydrogen in the energy revolution. Ammonia as a hydrogen source for fuel cells: what are the latest technology advancements and opportunities? What is the potential for Green ammonia in different industrial and economic sectors, such as the fertiliser industry. What are the latest successful examples of ammonia projects in the global energy market |
| 1145 - 1215 | **Defining Green Hydrogen and Decoding Various forms of Green Hydrogen Production**<br><br>How will green hydrogen and its production process and cost compete with other forms of hydrogen. How will GH2's low emission levels help it score over other forms. How will India's ability to produce low cost electrolyser, a world class solar market and proximity to a large consumption base make its green hydrogen projects competitive. |

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| 1215 - 1245 | **Green Hydrogen as a Viable way to Upgrade Raw Biogas**<br><br>Exploring biological methanation of carbon dioxide and hydrogen to bio methane. Enabling biogas plants to increase their production of green gas so that it is a form of reasonably priced renewable energy |
| 1245 - 1315 | **Making A Case For Off takers To Use Green Hydrogen**<br><br>How can offtakers be encouraged, motivated and incentivised to use green hydrogen. Are current taxes, carbon credits or fee exemptions that are currently being deployed to do so effective. What would convince them to pay the current premiums to use green hydrogen, and what can be the incentives they will consider to make the switch such as the environment, cost or futureproofing. Analysing which industries have the most potential to benefit from converting from green hydrogen and are likely to form the basic volume of the demand for a future hydrogen market |
| 1315 - 1400 | **Networking & Lunch** |
| 1400 - 1430 | **PANEL DISCUSSION: Making the Tough Choice of Location: Assessing the Advantages of Deploying Hydrogen for Industrial Clusters Vs. Decentralised Projects**<br><br>How industrial clusters can be used to aggregate demand, to achieve a higher volume of offtake and allow green hydrogen to compete financially. What are the benefits of sector coupling - how industrial or chemical off takers can be integrated with mobility, maritime, or aviation. How can developers help facilitate and get involved in industrial clusters? Are there cost benefits for developers saving on land charges and transportation of hydrogen? |
| 1430 - 1500 | **PANEL DISCUSSION: Deploying Electrolysis Alongside Renewables**<br><br>An insight into how renewable projects can deploy electrolysis to produce green hydrogen, either to generate revenue or to compensate for low generation. Understanding how developers in other markets have secured offtake for their projects, and how those relationships were built and nurtured |
| 1500 - 1530 | **Effective Strategies for Co-Locating Electrolysis with Wind Projects**<br><br>How can a wind project deploy electrolysis to produce green hydrogen, either to generate revenue or to compensate for low generation? Analysing the challenges of offshore wind hydrogen generations including transportation to the mainland, as well as potential technology such as desalination to use water. |

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| 1545 - 1745 | **THE 10 MINUTE RAPID FIRE DEMAND FORECASTING SESSIONS**<br><br>**Transition to Hydrogen Vehicles**<br>How quick will be the uptake of hydrogen vehicles and how prepared is the automobile industry to transition to this fuel source in addition to their hybrid and EV (electric vehicle) programs. What will be the imperatives for distribution infrastructure for the same.<br><br>**Hydrogen in Aviation – Is it Fit to Fly?**<br>Is hydrogen aviation closer than assumed? Timelines for commercial flights in the coming years. Benefits of hydrogen over sustainable aviation fuels<br><br>**Is Green Hydrogen the Solution to Green Steel?**<br>Can hydrogen help decarbonise the Steel Industry, what are the key globally launched projects and experiences so far, what policy and technology upgrades will be required to accomplish the objectives<br><br>**Hydrogen in Heavy Transportation and Mobility**<br>Sustainable and Smart Mobility Strategy using hydrogen fuel cells application. What are the opportunities, associated challenges and suggestive options to overcome the same.<br><br>**Hydrogen & Maritime: Solutions, Innovations & Timescales**<br>What is the potential impact for Hydrogen Fuel Cells in Maritime? How can Public – Private Partnerships foster hydrogen advancements in the maritime and transport sectors. Will Liquid hydrogen be able to replicate the LNG economy?<br><br>**Hydrogen & Power Generation**<br>In power generation, hydrogen is one of the leading options for storing renewable energy, and hydrogen and ammonia can be used in gas turbines to increase power system flexibility. Ammonia could also be used in coal-fired power plants to reduce emissions.<br><br>**Can Hydrogen Help Indian Railways Mission 2030 of Going Carbon Neutral**<br>Indian Railways' green fuel vertical Indian Railways Organisation of Alternate Fuel (IROAF) has launched bids for the development of hydrogen fuel cell-based train on Indian Railways network. Is that indicating towards newer opportunities<br><br>**Hydrogen Demand from Fertilisers & Chemical Sector**<br>Renewable ammonia represents a 6 billion-euro ($7.25 billion) opportunity for fertilizer producers by 2030, according to Citibank, based on 20 million tonnes of annual sales globally for clean power and shipping fuel compared with virtually none now. Global ammonia sales currently amount to 180 million tonnes.<br><br>**Hydrogen & Petrochem**<br>Refineries require massive amounts of hydrogen. And companies that convert low-grade crude oil into low-emission fuels need even more of this light gas. What is the demand forecast from this sector that can encourage developers to deploy large investments<br><br>**Hydrogen & Glass**<br>The entire glass manufacturing industry will need to undergo the biggest technological change since its inception to comply with the Paris Agreement on climate change, and to meet the demand for carbon free manufactured products coming from its customers. |

# CONFERENCE AGENDA | DAY 2

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| 0800 | Registration & Coffee |
| 0855 | Welcome Remarks by Conference Convenor: Manish Panchal |
| 0900 - 0945 | **PANEL DISCUSSION: How to Make Green Hydrogen a Bankable Asset?**<br><br>Assessing the obstacles to Green Hydrogen becoming bankable; what CAPEX costs increases might we see in the near future? Behind the scenes insight into what banks want to see, and their views of challenges such as counterparty risk, country risk, energy prices, and technology risk. Understanding the regulations that will accompany the financing of hydrogen projects such as contracts for difference or carbon pricing, and how this might shape a future hydrogen economy |
| 0945 - 1030 | **PANEL DISCUSSION: Structuring Private Finance Deals for Green Hydrogen Projects**<br><br>Assessing the typical contracts that are used in green hydrogen projects and how this might change – will contracts for difference dominate or will there be more regulated assets in future? How are deals usually structured? How can developers or technology providers make their projects more attractive to investors? How can investors mitigate or factor in technological risk when investing in a project? How do financial deals secure offtake, or work a potential into the deal itself to offer a guarantee against the developmental risk? |
| 1030 - 1100 | **Green Bonds for Financing Hydrogen**<br><br>Over 30 nations have released hydrogen with over 200 hydrogen projects declared with aggressive investment plans, and governments around the world have committed over US $70 billion in public finance. It is anticipated that overall expenditures in hydrogen spending would approach US $300 billion through 2030—the equivalent of 1.4 percent of global energy financing. India is targeting a production of 1mn tonnes of Hydrogen per year by 2030 and financing that will require innovations in investment options |
| 1100 - 1130 | **Hydrogen as a Tradable Commodity**<br><br>Can Hydrogen become a tradeable commodity in the years to come. How can improving energy security for importers and reducing dependency on fossil fuel exporting countries help with the same. How carbon pricing can expand opportunities |
| 1130-1145 | **Networking & Refreshments** |

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| 1145 - 1215 | **Global Hydrogen Supply Chains Creation & Development**<br><br>What are the effective ways of developing and creating a global hydrogen value chain. Integrating and creating opportunities along hydrogen's value chain. Driving innovation and knowledge transfer along the value chain<br>Global hydrogen movers and shakers: what is their next move? |
| 1215 - 1245 | **Building a Hydrogen Transport Backbone: Will Pipelines Be Ready to Carry Hydrogen?**<br><br>Understanding the physical feasibility of the grid to take hydrogen assets, and how much blending needs to take place for how long before 100% hydrogen usage can be achieved? Avoiding building costly new pipelines by converting existing capacity to carry hydrogen – to what extent is this feasible? How much of the existing pipeline can be converted and what are the costs? What could be the safety concerns associated with both repurposed or purpose-built hydrogen pipelines associate with compression and transmission? |
| 1245 - 1315 | **How will the Gas Markets need to be Restructured for Hydrogen**<br><br>As the pipelines are repurposed for hydrogen usage, and new pipelines are deployed what are the regulatory concerns for TSOs? Who will be responsible for regulating hydrogen pipelines, and developing and awarding certifications and standards? |
| 1315 - 1400 | **Networking & Lunch** |
| 1400 - 1430 | **Deploying Blended Hydrogen into the Grid**<br><br>Can Hydrogen be blended successfully into grids for easier utilisation. What are the challenges associated with blending and how ready are customers to receive hydrogen? |
| 1430 - 1500 | **Future Ports: Sustainable Energy Hubs**<br><br>What is the potential impact for Hydrogen Fuel Cells in Maritime? How can Public – Private Partnerships fostering hydrogen advancements in the maritime and transport sectors be optimised. How critical will it be to build Future Ports into Sustainable Energy Hubs. Will Liquid hydrogen be able to replicate the LNG economy? |

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| 1500 - 1530 | **Building Hydrogen Refueling Stations to Power the Future of Mobility**<br><br>The main challenges and drawbacks limiting hydrogen refuelling stations deployment. How can joint efforts between industry and Government and Industry to industry help develop infrastructure for hydrogen production, distribution, and supply |
| 1530 - 1600 | **OPEN ROUNDTABLE: How can Green Hydrogen help reduce reliance on Imports?**<br><br>An open session for delegates to share their thoughts on how Green Hydrogen can help to reduce India's dependence on energy imports. |
| 1600 - 1615 | **Networking & Refreshments** |
| 1615 - 1645 | **Emerging Hydrogen Production Technologies in Accelerating Decarbonization**<br><br>Current State and Future Developments in Hydrogen Production Technologies. The Main Challenges and Drawbacks that limit the deployment of hydrogen technologies |
| 1645 - 1715 | **Electrolysers, Hydrogen Technologies, Production & Cost Development Anticipation**<br><br>Electrolyser technologies: what has been done so far and what is next? How will technology help in scaling up and lowering the costs of electrolysis which seemingly is an intertwined relationship. What actions will the key stakeholders need to take to make it a reality? What are the key considerations in cost externalities within CAPEX and OPEX projections |
| 1715 - 1745 | **TECHNOLOGY TALK: Pem Vs Alkaline Electrolysers**<br><br>Assessing the benefits of PEM vs. alkaline technologies, new emerging technologies and the possibility of combining multiple technologies. Understanding how technology producers are planning to scale up their production to reduce CAPEX costs. Evaluating the potential of electrolyser created auxiliary markets – is it possible to create an extra value stream by leveraging the extra flexibility created? |
| 1745 | Closing remarks & end of conference |