

EXHIBITION & CONFERENCE SINGAPORE EXPO | SINGAPORE | 5-8 SEPTEMBER 2023



Enabling hydrogen growth in Europe and beyond

Gastech leadership roundtable post event report



















The roundtable

The Gastech Leadership Roundtables formed an integral part of the Gastech 2022 thought leadership agenda. Several closed-door roundtables, on a range of topics, took place within the event's exclusive Gastech Energy Club.

The invitation only roundtables provided a forum for participants to influence and lead the future direction of energy production, supply and use, while building high-level industry connections, with deep networking opportunities.

The aim of the Leadership Roundtables was to create a series of high level, productive discussions with tangible takeaways and reports. Participants benefitted from making extensive, high level industry connections with unique networking and discussion opportunities.

The discussion were held under Chatham House rules, with key takeaways and topic reports produced by Knowledge Partner, Wood Mackenzie, and agreed with all stakeholders.

No comments are attributable to any one participant.

Knowledge partner



Gastech are pleased to announce Wood Mackenzie as the official knowledge partner for the Gastech Leadership Roundtables.

Wood Mackenzie is a global research and consultancy business, partnering with organisations and governments to inspire better decision making. For nearly 50 years, Wood Mackenzie has been providing quality data, analytics, and insights used to power the natural resources industry.





Enabling hydrogen growth in Europe and beyond

Introduction

Wednesday 7 September, 2022 | 11.30 – 13.00

Executive Boardroom Gastech Energy Club

It is a development as exciting as it is unprecedented – at least in the UK. In a landmark moment, hydrogen is set to be injected into a gas-fired power station. The pilot, which is part of the Net Zero Technology Centre project, a programme specifically designed to develop cost-effective technologies for the net zero industry, is expected to come online next year. If successful, it will be regarded by some as a significant milestone in the UK clean energy narrative.

In many other parts of the world, however, hydrogen has already gained an important foothold. Take China, for example. It consumes over 120 million tonnes of hydrogen each year. The USA and India also have developed hydrogen markets.

Europe, however, is lagging behind Asia. According to the European Commission, "hydrogen accounts for less than 2%" of Europe's energy consumption.

The IEA wants the world to "tap into hydrogen's vast potential". In the future, it believes that hydrogen can "become a critical part of a more sustainable and secure energy future".

So, which policies, market and technology developments are needed to meet stringent EU targets for low-carbon hydrogen deployment on a relatively short timescale?

These three challenges were discussed at the Gastech Leadership Roundtable on hydrogen, where a global set of senior industry and government leaders debated this very topic.

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The roundtable participants were:



CONFIRMED PARTICIPANTS



Ayla Majid
Chairperson
Government Holdings Pte Ltd
Founder and
Chief Executive Officer
Planetive



Daniel Muthmann Chairman European Hydrogen Backbone Initiative



Paul Bogers Vice President, Hydrogen Shell



Fabrizio Botta Chief Commercial Officer Saipem



Marco Alverà
Chief Executive Officer
TES-H2



Nicola Grady-Smith Senior Vice President, City and Corporate Integrated Solutions bp



BC Tripathi Senior Advisor GreenKo



Andreas Scheirenbeck
Founder and Board Member
HH2E



Alessandro Bresciani Senior Vice President, Climate Technology Solutions Baker Hughes



Dr Samir J. Serhan Chief Operating Officer Air Products

MODERATORS



Murray Douglas Head of Hydrogen Research Wood Mackenzie



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FACILITATOR



Arthur Hanna
Board Member
Copenhagen Institute for
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Visiting Professor of Energy
Economics
Loughborough University

Roundtable Summary

Gastech has summarised the main points of discussion in eight succinct bullet points.

They are as follows:

1) Unlocking supply

The roundtable broadly agreed that policies that support the economic competitiveness of low-carbon hydrogen, such as the recently passed Inflation Reduction Act (IRA) in the U.S., are crucial to unlocking supply. Targets and investments in support of technology, manufacturing, infrastructure and demand development were all proposed as mechanisms to create pull on low-carbon hydrogen supply and stimulate local economic growth.

2) Regulation

Simplified regulatory frameworks were also a hotly debated topic. In particular, the requirements outlined in the European Commission's Delegated Acts were a source of frustration for project developers. Following the Gastech 2022 event the European Parliament voted down what were deemed as excessive constraints and regulations in the nascent European market. However, developers are still seeking much needed clarity on the rules defining renewable hydrogen.

3) Successful project execution

All participants expressed willingness to share the ingredients for successful project execution. They highlighted several world-scale hydrogen project developments as definitive triumphs. Participants broadly agreed that the successes demonstrated how streamlined regulatory processes and industry collaboration have enabled more rapid deployment of lower-cost and lower-carbon supply projects.

4) Infrastructure

The regulatory discussion included a debate on the importance of infrastructure and the need to embed infrastructure objectives and plans in development projects. Participants also saw a need to factor in supply and demand targets for low-carbon hydrogen. The general consensus was that lessons from the current energy crisis in Europe will be essential, especially from the natural gas sector, where policymakers have intervened to accelerate the regulatory approval of gas import infrastructure in recent months. Finally, those present noted that similar policy support and long-term planning are required to underpin hydrogen dedicated infrastructure.

5) Creating certainty around demand

Participants felt that beyond establishing robust policy and regulatory frameworks, supply project developments and funding will depend on creating certainty around demand. Participants explained that Energy Hub developments focused on existing



hydrogen consumers, such as refineries, generate momentum for developments in emerging sectors. They went on to note because these developments create immediate scale and demand pull, they de-risk low-carbon hydrogen supply projects. This, they held, supports the more favourable economics needed to attract offtakers in new or emerging sectors.

6) Support customer adoption

Additionally, participants believed that more work was required to support customer adoption, with a need to continue efforts across as broad a range of demand sectors as possible. They broadly agreed that it was still too early to lock measures into too narrow a range of deployment options. Hydrogen, they said, was becoming an increasingly attractive option for decarbonisation where electrification was not possible or not practical. And, importantly, they highlighted the fact that there will be significant regional differences in economics, scale and sector hydrogen adoption.

7) Imports

Those attending noted that Europe and Asia had the potential to benefit greatly from imports from regions with a renewable resource feedstock advantage, which impacts the economics of major hydrogen supply projects. However, they conceded that technological innovation was needed for the reconversion

of hydrogen carriers to fully unlock this advantage. As technology catches up to demand, they believed that the economics of European domestic supply could be improved by producing hydrogen with excess renewable energy supply.

8) Cross-sector collaboration

Roundtable participants felt that hydrogen can potentially disrupt virtually every aspect of the energy value chain. And as the session closed, participants emphasised the need for cross-sector collaboration as well as industry and public partnerships, which was a central theme of the roundtable.

The content of this report is accurate as of the time of the roundtable which took place on Wednesday, 7th September 2022.

End notes and citations

The Guardian

Peak power: hydrogen to be injected into UK station for the first time

https://www.theguardian.com/environment/2022/oct/23/peak-power-hydrogen-injected-uk-station-centrica

European Commission

Hydrogen

https://energy.ec.europa.eu/topics/energy-systems-integration/hydrogen_en

IEA

International action can scale up hydrogen to make it a key part of a clean and secure energy future, according to new IEA report https://www.iea.org/news/international-action-can-scale-up-hydrogen-to-make-it-a-key-part-of-a-clean-and-secure-energy-future-according-to-new-iea-report

Conclusion

The roundtable broadly agreed that policies that support the economic competitiveness of low-carbon hydrogen were crucial to unlocking supply. Participants felt that beyond establishing robust policy and regulatory frameworks, supply project developments and funding would depend on creating certainty around demand. Perhaps, most crucially, participants stressed the importance for cross-sector collaboration. Simply put, the group believed that to achieve the desired result of energy independence, security and decarbonisation, all major participants would need to play their part.

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