

## From the black to the green: hydrogen & the energy transition

Hydrogen creates significant opportunities for energy firms to meet ambitious targets linked to the energy transition. Aon is working with the sector to articulate and mitigate these new exposures and accelerate the green evolution.

The energy industry is on a journey to net zero, and COVID-19 has accelerated the transition towards renewables globally. The use of hydrogen as an alternative to fossil fuels is growing rapidly and is expected to play a major part in the energy transition - a market that BloombergNEF estimates could be worth as much as USD 700 billion by 2050.

Hydrogen has the highest amount of energy per unit weight of any substance (120-141MJ/kg compared to 44MJ/kg of gasoline), but its lower density brings complications with unit energy transportation costs.

The good news is that hydrogen production technology forms an integral part of many of today's established processes (including refining, reforming and gasification) so it is not a new alternative. The challenge is that upscaling and mass deployment will present significant challenges to the sector. The magnitude size increase in electrolysis capabilities and challenges to storage also adding complexity.

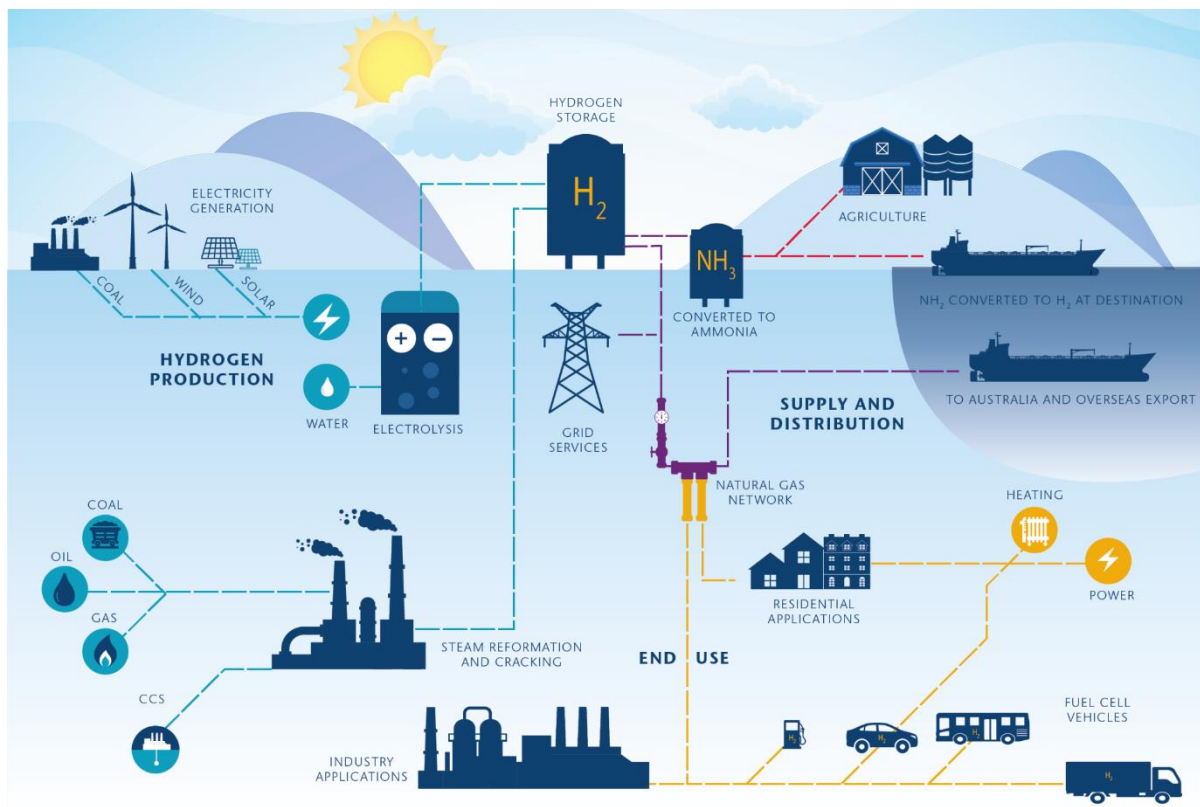
To grasp this opportunity, it is vital that the energy industry both understands and articulates the risk transfer challenges that are experienced throughout the lifecycle of hydrogen. By doing so projects can proceed to be executed lowering companies carbon footprint and at the same time improving their ESG credentials.

“The world is transforming at an unprecedented pace. At Zurich we believe we can have a positive impact in our role as an insurer and in society. Zurich's aim is to help customers transition from carbon-intensive industries. We see the emergence of Hydrogen as a clear example where there is a need for innovative product offerings to support the de-risking of projects and provide additional balance sheet protection to clients.”

Frank Streidl, Head of Energy, Marine & Construction, Zurich Insurance PLC.

Hydrogen production is categorised into three main types; hydrogen captured from fossil fuels but which generates CO<sub>2</sub> (grey hydrogen), hydrogen generated from fossil fuels but which captures and stores the CO<sub>2</sub> emitted (blue hydrogen) and hydrogen generated from electrolysis using green electricity (green hydrogen).

Hydrogen's application is broad, from fueling transport, powering heavy industry and providing the heating in our homes. Through continued investment in infrastructure hydrogen has the capacity to provide a green energy solution for the future.



Under the banner of the Aon Energy Transition Group, Aon has brought together a highly technical team to offer market-leading services for clients in the hydrogen value chain. Our focus is on supporting companies as they navigate the complexities of the energy transition, with a team of cross-class specialists that is helping clients manage and outperform in the evolving landscape through the following areas;

- Generating new and sustainable insurer capacity for the hydrogen value chain
- Product innovation and wording development, offering client solutions to enable projects and the energy transition
- Scaling up our global resources in combination with a risk-based approach

Aon views insurance as an enabler, to build confidence and provide the catalyst for new projects and developments.

If you'd like to discuss any of the issues raised in this article, please contact **Euan Nicolson**, **James Stretton**, or **Rob Colver**.