

The green hydrogen life cycle

What are the legal considerations at each stage?

Click on a label to view more information

Introduction

Green hydrogen is an exciting and important part of the energy transition. Bringing it in to popular use comes with an array of legal considerations. Our lawyers work with clients at all stages of the green hydrogen lifecycle, including production by electrolysis, transport and storage, and consumption.

This document highlights the key legal considerations at each stage and how we can support you.

Contact us to find out how we can support your business in the transition to green hydrogen.



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Production by electrolysis

Green hydrogen is produced by splitting water into hydrogen and oxygen. This is done using electrolyzers that are powered by renewable energy. This sustainable method plays a crucial role in the global effort to decarbonise the energy system. It offers a clean alternative to other types of hydrogen production that rely on fossil fuels.

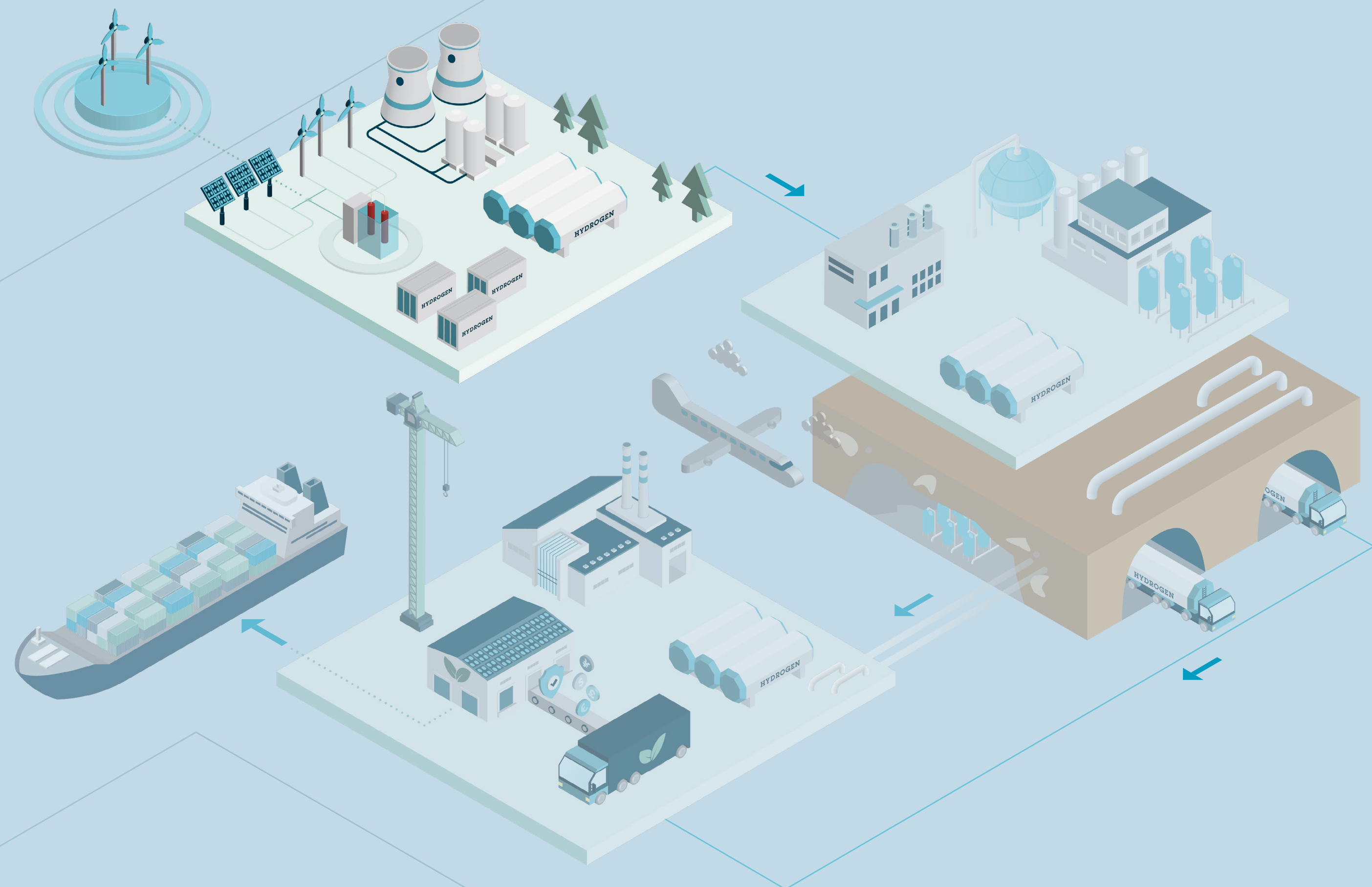
Legal considerations

- Developing a project in line with applicable planning and grid connection constraints.
- Securing a form of input electricity that is secure, affordable and in line with applicable low carbon standards.
- Ensuring the hydrogen supply/offtake arrangements are of an appropriate length, are with a creditworthy offtaker and are consistent with subsidy or revenue support mechanisms.

How we can help

We provide comprehensive project development support, including on planning, property, construction and grid connections. Our team offers specialist advice on co-location strategies, to allow the pairing of electrolyzers with physically connected forms of generation through private wire PPAs. We help develop corporate and green power PPA solutions for projects that are not physically co-located. Additionally, we facilitate hydrogen sales agreements, including the associated transport arrangements. We also advise on offtake arrangements consistent with subsidy or revenue support mechanisms to ensure revenue protection for projects.

Work with us to navigate the complexities and maximise the success of your green hydrogen production initiatives.



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Transport and storage

Transport and storage are critical components of the green hydrogen economy. The adaptation of existing gas pipelines and forms of road transportation allow this highly combustible fuel to be safely and efficiently delivered to end-users of green hydrogen. Green hydrogen is a key energy vector and can be stored across seasons to help balance the power grid.

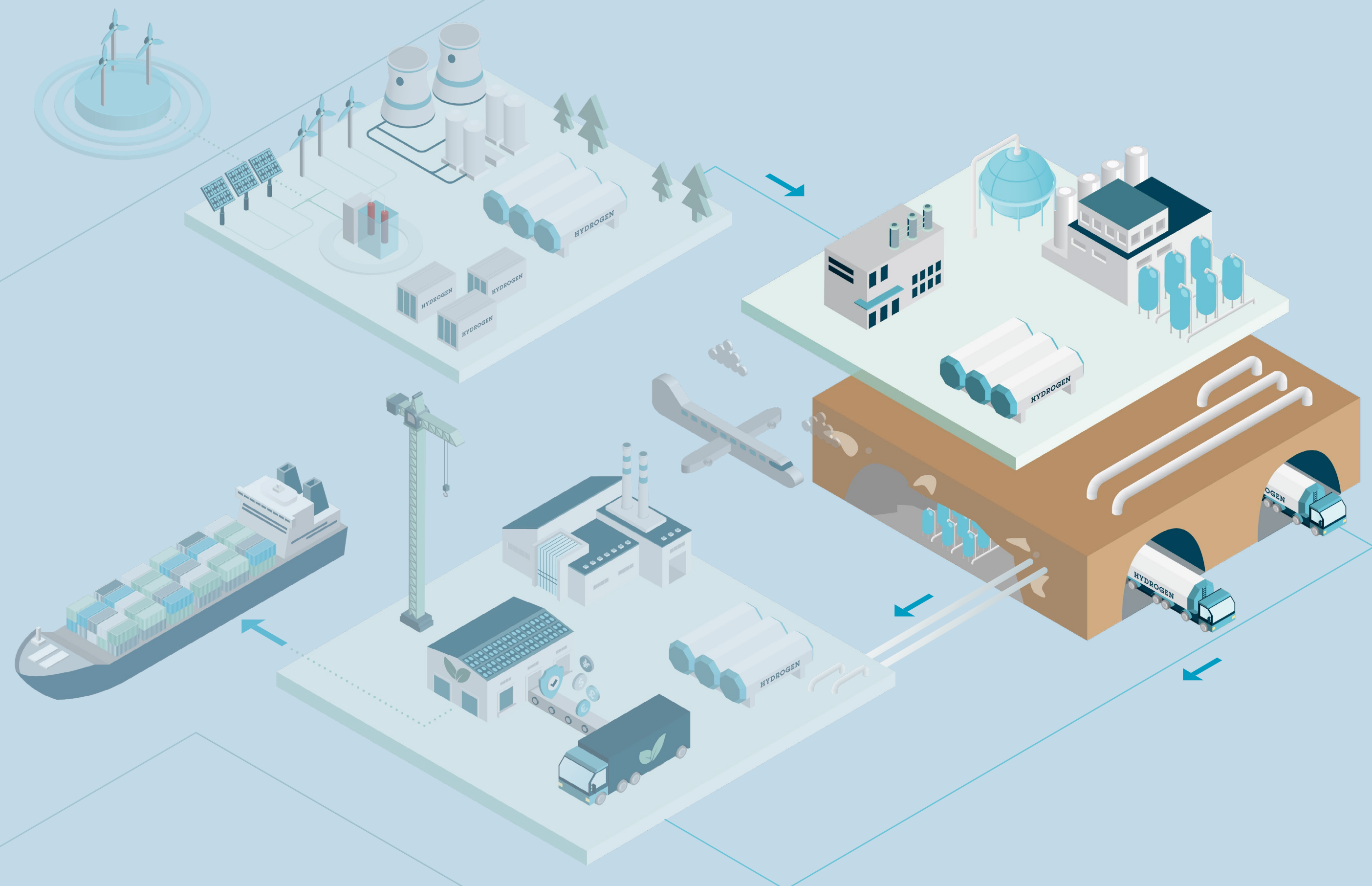
Legal considerations

- Using existing gas networks requires navigating complex regulatory issues and interfacing with the national grid gas operator.
- Using gas networks generally (new or repurposed) also implies important safety and commercial charging implications.
- In the case of road transport, adapting commercial trailers, leasing machinery and addressing refuelling infrastructure availability are essential considerations.
- Effective storage solutions (such as gas or salt caverns) are vital for maintaining a stable hydrogen supply and opening up the potential of interseasonal storage.

How we can help

We provide expert legal guidance to help you navigate these complexities. Our team specialises in regulatory compliance, interfacing with national grid systems and structuring commercial and storage arrangements.

Work with us to ensure your green hydrogen transport and storage initiatives are successful and compliant with all relevant regulations.



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Consumption and uses

Green hydrogen can replace fossil fuels (including gas) as a green fuel. It has a wide range of uses, these include:

- Industrial (e.g. chemical feedstocks, fertiliser production, steel production and refineries).
- The heavy transport sector (shipping, long-haul aviation, long-haul heavy road transport and non-road mobile machinery).
- Peaking power generation.

Legal considerations

- Securing a regular and predictably priced supply of green hydrogen.
- Verifying the traceability of green hydrogen in accordance with evolving regulations and green certification requirements.
- Analysis of potential public funding for the adaptation of equipment and machinery to green hydrogen.

How we can help

Our services include structuring gas sales agreements from both the producer and consumer sides. We can help you address feedstock and supply issues and offer sector-specific support for mobility, gas-to-power, and industrial and heating applications.

Work with us to successfully integrate green hydrogen into your energy strategy and drive sustainable growth.



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Our international expert lawyers



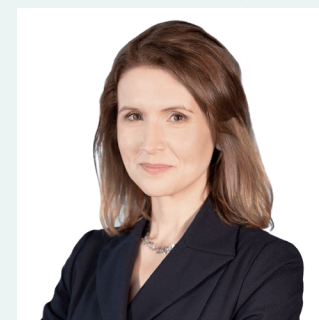
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For more information on green hydrogen, please visit our [dedicated webpage](#).

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