

Bird & Bird

Our Green Hydrogen capabilities



Our Energy & Utilities Group

Our Energy and Utilities Group of over 200 lawyers spread across our network advise on energy and utilities matters across all of our practice areas. As an international team, our sector approach is not broken down by offices but into sub-groups that focus on particular aspects of the Energy & Utilities sector.

Our global team push the boundaries of where the energy and utilities sector needs to go. Looking ahead means you need to understand what has happened before. Our team has been doing this for a long time. Combining our lawyers' experience in procurement, delivery of complex projects, innovative energy and utility solutions, and technology focus equips you with advisors who understand the strategic and cost requirements you may face in delivering solutions which increasingly coincides with fast-moving demands.

We do not merely advise on energy transactions, but instead advise on the interaction of law and regulation with technology, energy market transactions and infrastructure. We utilise our expertise in traditional energy & utilities markets when undertaking innovative projects as we help to create and shape new opportunities for our clients and engage with disruptive business models.

Our group brings together an international team of lawyers across practice areas, including corporate, tax, commercial, banking and finance, real estate/planning, regulatory and administrative, technology and IP. Our team understand the industry.

Our joined-up approach recognises sector convergence meaning we look beyond energy at broader legal and market forces such as ESG regulation, financial regulation, product compliance and supply chain management.

Our clients include many organisations that are developing or investing in projects and technological solutions to the challenges presented by the combined forces of climate change and energy security. We and our clients see these challenges as a driver of change, innovation, cost saving and internal/external engagement. We work with our clients and their other consultants to accelerate innovation, enhance engagement and create purpose-driven capabilities for organisations that need to thrive and be resilient in uncertain times.

Clients turn to us for our energy industry knowledge and our ability to solve complex problems, provide commercial, industry focused advice, protect their business and enhance its value in order to meet the transforming needs of the energy sector.

Whether you are a global or multi-national corporation or a small or medium-sized entity, you will benefit from advice of our global team who push the boundaries of where the sustainability and net zero carbon sectors need to go.



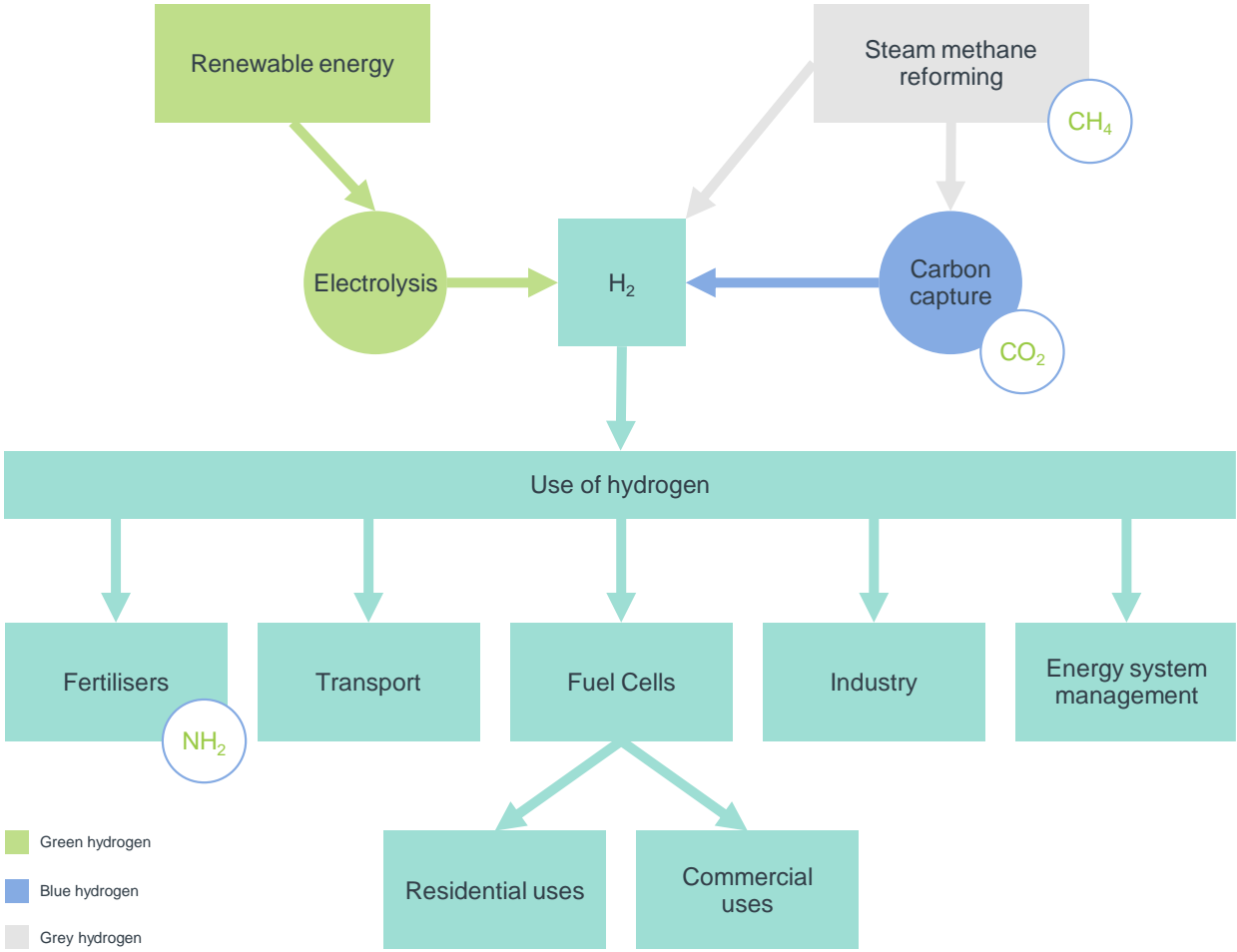
Other key points:

- Over 400 green economy deals across 17 countries in the last 4 years.
- Once again named as the number 1 firm globally for M&A transactions in renewables by volume in the Clean Energy Legal League Tables 2022, based on the number of deals done in 2021. We were also ranked 4th in the Project Finance category by number of deals.
- We won The Lawyer's Energy & Infrastructure team of the year in 2021.
- We co-edited of "Renewables: A Practical Handbook" (Globe Law and Business), authored chapters in "Clean Tech Clean Profits" (Institute of Directors), chaired the Environmental Industries Commissions Sustainable Smart Cities Taskforce and sit on Practical Law's energy consultation board.
- We are also leaders of the Solar Power Europe task forces on EPC, O&M and Asset Management. We also led the O&M workstream for the Open Solar Contracts initiative to achieve global standardisation in solar project contracting.

A focus on hydrogen

Hydrogen is clean and versatile

Whether as an energy carrier, as energy storage for renewable energies, as a climate-neutral fuel in transport, as an essential element of sector coupling (dovetailing green electricity with the heat and mobility sectors as well as industry, or as a means of decarbonising CO₂ sources (such as the steel or cement industry).



Accordingly, the desires surrounding the use of hydrogen are growing – and with them the legal questions that arise in this context. For these are as diverse as the usability of hydrogen.

The legal issues

Our hydrogen-focused team has already successfully supported and strategically advised various projects on the practical use of hydrogen technology. We work seamlessly as cross-jurisdictional teams and cooperate with technical consulting specialists where necessary.

Following this approach, we would like to support you as a strong and highly knowledgeable legal advisor in the implementation phase that has now begun and bring about an optimised change in the use of energy sources together with you.

As a firm, Bird & Bird are proud to be contributing (alongside other leading law firms) to several working groups on a pro-bono basis to draft GH2's Green Hydrogen Standard Guide and Green Hydrogen Contracting: For People and Planet, which will provide guidance and principles for good green hydrogen contracting.

Due to the speed of industry developments, this expert working group is preparing guidance to support decision makers, communities and companies in developing contracting practices for green hydrogen projects that ensure rapid expansion to everyone's benefit. The consultation version of the set of guidance is now live [here](#). An overview of the guidance is available [here](#).

Please see page 10 for highlights of our experience.

Green hydrogen is the petroleum of tomorrow

A successful energy transition can only be achieved by combining security of supply, affordability and environmental compatibility with innovative and intelligent climate protection. This requires an alternative option to the fossil fuels that are still predominantly used at present.

Hydrogen has a key role to play in the energy transition. This is because, in addition to numerous other advantages as a renewable energy carrier, it makes it possible to significantly reduce CO2 emissions.

The flexible energy carrier is indispensable for the energy transition and opens up new markets within the framework of the entire value chain: technologies, generation, storage, infrastructure and use including logistics and important aspects of quality infrastructure.

To read our latest International Green Hydrogen report, please click [here](#).



Bird & Bird has a ‘Strong knowledge on hydrogen – in relation to both local and international laws and standards. They have showed that they are levelled up and competent to identify the advantages and disadvantages, gaps and challenges for every country, able to propose areas to work on and how to go about doing it. This stems from their willingness to work with the industry partners and corporations, participate in activities and events on hydrogen and the different applications organised by government agencies, industry and trade associations.’

Legal 500 Asia-Pacific, 2022

Core legal areas

In the following, we would like to highlight some of the key legal areas surrounding hydrogen.

Hydrogen & Regulation

In the context of the production, transport, distribution and consumption of hydrogen, numerous regulatory provisions must be observed.

A key legal and economic issue is the double burden of certain levies and charges that still applies in the context of energy storage and thus also the use of hydrogen.

Another key issue in terms of regulatory law is the development of a nationwide – or European – hydrogen infrastructure. Without a sufficient infrastructure, it is obvious that the full potential of hydrogen cannot be exploited.

If, in addition, subsidies are granted to develop an innovative technology or to fund a project, it is important to observe the subsidy law requirements for the proper use of the subsidies. In individual cases, this may justify, among other things, strict compliance with all obligations under public and European procurement law regarding the tendering of contracts. In the event of non-compliance with the subsidy requirements, there is a risk that the subsidies will have to be repaid – plus interest!

In any case – the regulatory framework starts to offer viable business models, but the resulting obligations must be strictly observed! In addition, the regulatory framework is not entirely set and developers and investors have to observe the different national, European and international developments with attention.

In any case – we are here to advise you with respect to such regulatory framework.

Hydrogen & Contracts

The implementation of hydrogen production or storage projects (e.g. power-to-gas plants) or infrastructure projects (e.g. the development of a hydrogen infrastructure) require a balanced and solid contractual basis. The complexity of the supply and off-take contracts required for these projects should be considered – also with respect to investment and financing issues – from the very beginning.

Hydrogen & IP: Protect and defend your intellectual property!

Many promising projects in the field of hydrogen production or transport and distribution start with a pioneering invention. For example, high-performance storage technologies need to be developed in order to be competitive and attractive to consumers. These inventions need to be protected, for example through patent protection at national and international level. Likewise, your patents and trademarks should be effectively enforceable against any imitators.

Conversely, when developing new products and processes around hydrogen, you should consider the increasing density of third-party patents and also design your new product with a view to ensuring your “Freedom to Operate” as far as possible.

The complexity of the supply and off-take contracts required for these projects should be considered – also with respect to investment and financing issues – from the very beginning.

Hydrogen & Cooperation

For the success of your engagement, it is necessary that you place your cooperation with partners on a solid foundation under the respective company law. The establishment of a tailored joint venture or a common project company, to which know-how, industrial property rights, technology or services can be contributed in addition to financial resources, is a typical example. At the heart of this is the joint venture agreement, which must describe the common goal of the cooperation just as clearly as the respective services of the cooperation partners. The possibilities of the partners to influence the development of a company must also be regulated. In case of a common investment the mutual rights and obligations including lock-up periods, exit

scenarios and management incentive packages are to be considered with attention.

All relevant contracts should be drafted clearly, practically and with foresight and take enough account of the special features of the technologies and their change or further development. We accompany and advise you in all necessary strategic decisions and the practical steps of setting up such a joint venture or a common company, whether in connection with research and development, production or distribution or a combination of both.

Do you intend to play a role in the growing market around hydrogen and are you planning to acquire a company, a significant stake or a start-up in this area? We would be happy to support you in these cases with our experienced team, which, in addition to the necessary corporate/ Venture Capital/M&A expertise, knows all the relevant legal interfaces and has a good understanding of the technical background. This includes, for example, questions of intellectual property, financing issues and cooperation agreements as well as the other aspects surrounding hydrogen investments.

Managing contractual and governmental dispute risk

Complex and innovative hydrogen projects, especially those of a cross-border nature, also require participants to identify and mitigate their risk as regards contractual counterparties, and also host governments or other state-entities whose actions have the potential to undermine the value and viability of a project. Our experts can advise on the best contractual structures and dispute resolution options to ensure that the risk of serious disputes is minimised and that when disputes do arise they are resolved with maximum speed and efficiency.

Disputes with joint venture partners, suppliers, customers, and contractors require careful and strategic handling to ensure optimal outcomes. Operators and other stakeholders also need to be alert to the risk of claims from third parties impacted by projects and their operation, and/or claims for environmental damage. Cross-border investment in hydrogen projects also requires a consideration of the availability of investment treaty protections to safeguard cross-border investment from the harmful actions of governments or related bodies. This requires an awareness of the existence of such treaty protections and how they might apply to the proposed investing entities and the host state(s) under consideration.

And beyond that

In addition to the topics highlighted as examples, a wide range of other questions can arise, such as the financing of projects.

In any case – shape your cooperation and your acquisitions and make them solid, forward-looking and resilient!

Our experience

- **Commercial bank lender:** 1MW electrolyser, advising the bank lender to a wind farm project in the UK in connection with the addition of an electrolyser to a wind farm for the purposes of an innovative hydrogen fuel production and storage facility used to power a ferry service and cars.
- Assisting **Cummins** on the PEM Electrolyser Project. The Project would include the supply by Hydrogenics Europe NV (or any of its affiliates) of Iberdrola, Ingeteam and any companies formed by them including IberLyzer with electrolysers and related equipment, the establishment of an electrolyser manufacturing facility in Spain, and an equity investment by Hydrogenics into IberLyzer as project company for the cooperation. We are also supporting on related activities, including due diligence on Spanish cooperation partners and securing public funding for the Project in Spain.
- Advising **ENAGÁS** on the preparation of a hydrogen supply contract. ENAGÁS is currently participating with ACCIONA in a project for the construction and operation of a renewable hydrogen production plant in Mallorca (Spain). We will help our client to draft a contract model for the supply of hydrogen to be produced by the Plant. The supplier will be the SPV owning the Plant, which will be formed by ENAGÁS RENEWABLE and ACCIONA.
- Setting up **HYBRIT Development AB**, a cooperation between LKAB, SSAB and Vattenfall for fossil-free, hydrogen based, production of steel.
- Advising **Hy24 and Mirova** in their EUR 200 million investment in green hydrogen pioneer Hy2gen AG, in partnership with CDPQ and Technip Energies. The capital will be used for the construction of facilities in several jurisdictions across Europe, producing green hydrogen-based fuels – or "e-fuels" – for maritime and ground transport, aviation and industrial applications. The investment is the largest private green hydrogen-focused capital raise to date. This innovative and significant transaction for the future of green hydrogen in Europe was a great opportunity to combine our private equity expertise with our hydrogen sector knowledge to perform multi-jurisdiction legal due diligence in a cross-border transaction.
- Advising **Hy24**, the world's largest clean hydrogen infrastructure investment platform, on its €70m investment in Berlin-based company H2 MOBILITY Deutschland, the largest capital increase in the Hydrogen refuelling sector to date. The investment will be executed by Hy24 through the Clean H2 Infra Fund, which is to date the world's largest hydrogen fund. H2 MOBILITY, a leading operator of hydrogen refuelling stations which already operates over 90 stations across Germany, intends to use the funding to further expand its network to 300 stations by 2030. This advice was provided by our cross-border French and German team and underlines the capabilities and know-how of the team in pioneering and establishing technologies and infrastructure to build the future of mobility.
- We were appointed to be the legal counsel to the newly set up **Hydrogen & Fuel Cells Association of Singapore (HFCAS)**, comprising members from the public agencies and the private sectors to promote the use of hydrogen and fuel cells to help Singapore decarbonize and move towards a greener energy mix for power generation, mobility and industrial applications. We were also shortlisted as part of the team (with KPMG) in bidding for the recent project that was commissioned by the Strategy Group in the Prime Minister's Office in Singapore to assess the feasibility of hydrogen for long-term cost-competitive emissions reduction in Singapore.
- We are advising a **mining company** in relation to the IP aspects of its decarbonisation project, including the development of its hydrogen electric haul truck for use in its business. We are assisting in negotiating and concluding Joint Development Agreements with numerous partners who are contributing various technology inputs into the project. The work involves agreeing complex IP structures with the various counterparties as to ownership and licensing, and exclusivity. We are also providing strategic advice in relation to securing patent protection for the innovative hydrogen powered engine. The client is committed to carbon neutrality by 2040. This project is key in obtaining that aim, and it is expected that the developed hydrogen fuel cell technology will also be adopted as the leading provider of clean energy for consumer technologies.
- Assisting **Scale Gas Solutions, S.L.** on the preparation and negotiation of contractual arrangements for the implementation of the first ever hydrogen pumping station in Spain.

- We advised **The Co-operative Bank** to finance a co-located wind farm and electrolyser in order to produce hydrogen. The hydrogen would then be used for the production of locally sourced heat and then transported in a ferry powered by a hydrogen fuel cell on a Scottish Island called Shapinsay.

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