Charles Russell Speechlys

Removing barriers

to re-energise the hydrogen sector

Introduction

The UK's journey to a hydrogen-powered future is losing momentum. Despite bold promises to lead in clean energy, the hydrogen sector faces delays and uncertainty, with projects stalled by unclear plans and limited funding.

Copper Consultancy and Charles Russell Speechlys LLP, a City law firm with specialist clean-tech and renewable energy lawyers, hosted a roundtable in May to explore this in detail. At this event – Removing barriers to re-energise the hydrogen sector – sectoral stakeholders discussed the challenges the industry has faced in recent years and the fork in the road it now finds itself at.

Two key themes shone through. First, the vision for hydrogen – where the Government feels the sector is headed – remains unclear, leaving businesses hesitant to invest and progress, stuck in first gear. A shared, clear strategy is urgently needed to unite government, industry and communities behind a common goal. This summer's review of the Hydrogen Strategy presents a first opportunity for this.

Second, but equally vital, is educating the public and potential end users about hydrogen's role in a greener tomorrow. Many people remain unaware of how it could power daily life - from decarbonising heavy industry to balancing the energy system - or why it matters. Concerns over safety remain, too. Without public support, even the best plans risk falling flat.

Recent setbacks, like cancelled trials, funding delays and slow infrastructure growth, show the cost of indecision. Government must sharpen its focus, speed up support, and clarify hydrogen's place in our energy mix. Industry, too, needs to step up.

By forging a unified vision and sparking public enthusiasm, the UK can reignite its hydrogen ambitions and reclaim its spot as a global pioneer.

The hydrogen landscape as it is

The UK's hydrogen sector, pivotal to achieving net zero by 2050, is stalling despite ambitious targets of 10 GW of low-carbon hydrogen production by 2030 set by previous governments.

Progress lags because of insufficient infrastructure, policy uncertainty and slow investment. Hydrogen Allocation Rounds 1 and 2 (HAR1 and HAR2) both saw substantially fewer projects funded than the MW allowance available, with fears that some developers may withdraw owing to unclear timelines and high costs.

The lack of a robust hydrogen transportation and storage network was a consistent theme at our roundtable. This ongoing deficit in the UK's hydrogen infrastructure risks stranding assets, deterring private investment and stunting domestic hydrogen production and job creation. This is despite the clear advantages hydrogen infrastructure holds, not least the lack of need for pylons, which have previously hurt public acceptance of net zero in certain areas of the UK, and potential to minimise disruption by repurposing some existing infrastructure. Industry voices warned that political delays could further erode investor confidence, jeopardising climate goals and inviting international rivals to take the lead on hydrogen that the UK once held.

Meanwhile, the Government's broad approach – supporting a range of hydrogen production technologies across multiple sectors, with overly complex business models for production, and delayed networks and storage models – arguably dilutes focus and delays specialisation. Although it is appreciated that government must allocate funds wisely to best incentivise industry, perfection can be the enemy of progress. Overwhelming sentiment from the roundtable was that progress is stalling. Recent cancellations and pullbacks from global energy giants highlight indecision and a lack of confidence as the wider net zero transition stalls in the midst of global political and economic headwinds.

It is clear, more than ever, that we need to do more so hydrogen can get its mojo back and deliver on its potential, not least the 320,000 jobs the hydrogen economy could create by 2030 according to Hydrogen UK's 2024 Economic Impact Assessment. Industry must commit to scalable projects and consumer education, while the Government needs to accelerate and simplify funding rounds, clarify infrastructure plans and establish a dedicated hydrogen minister. More incentivisation of hydrogen use in industrial processes and for transportation is required, and feedback from the roundtable suggested that the Government should intervene to raise carbon prices to encourage more uptake of hydrogen.

Without decisive action, the UK risks losing its edge in the global hydrogen race and missing economic and decarbonisation opportunities.

Key asks of industry

Industry must:

Work together to launch a joint public and end-user information campaign, to ensure adequate consumer education on hydrogen and its potential applications in day-to-day life for individuals and businesses.

Use the summer's Hydrogen Strategy review to work with government to agree a defined "vision" for hydrogen, that clearly sets out to the public and future end users of hydrogen where the sector is headed and what it can achieve for them.

Publicise the benefit of high-quality job creation in the hydrogen sector, using skills often present in other industries. Industry must also work with local suppliers to develop local supply chains around major hydrogen projects, in order to ensure resilience in the hydrogen economy and protect against offshoring of manufacturing and economic opportunity.

Create a public-facing investment platform for consumers to invest in hydrogen infrastructure development and earn discounts on their energy bills in return, as is currently being done in the wind sector. This would help give the public a sense of control over the destiny of the hydrogen sector.

Set out cooperation plans with international counterparts for increased information exchange and pooling of research capabilities, to ensure the UK is consistently meeting, if not setting, the international benchmark for hydrogen technology development. These plans can be fed into government via a new working group, to be placed on a statutory footing.

Key asks of government

The Government must:

Accelerate future Hydrogen Allocation Rounds to avoid the uncertainty and drift caused by delays to HAR2, as part of a wider drive to ensure policymakers and government agencies are adequately resourced to review the necessary evidence and develop strategic thinking to meet the challenge of delivering on government milestones, such as Clean Power 2030.

Consider simplified low-carbon hydrogen business models, applicable to all forms of hydrogen production, to help build critical supply volumes to encourage users to transition to hydrogen.

Work with NESO to develop and implement a long-term Energy Transportation and Storage Strategy, which provides political direction on the role of hydrogen and promotes the development of hydrogen infrastructure and the use of salt caverns.

Ensure the outcomes of the forthcoming Hydrogen Strategy review are provided for in the Planning and Infrastructure Bill and related regulations and guidance, to ensure that momentum and progress are capitalised upon. This will create the opportunity for bold policy and strategic decisions to lay the foundations of a successful and enduring hydrogen market and the cascading benefits that this could bring. These include an increase in skilled jobs and greater earning potential, and a fair and just transition for those industries and areas of the country that are heavily dependent upon oil and gas.

Appoint a dedicated Minister for Hydrogen to ensure a holistic understanding of the policy requirements of the sector and advocacy for them within government. This new minister must sit between the Department for Energy Security and Net Zero and the Department for Education, to ensure ambitious policy development creates equivalent green job opportunities in education and skills, to be delivered through Skills England and the Office for Clean Energy Jobs.

Vision and education

The UK hydrogen sector's potential to drive decarbonisation hinges on a clearly defined vision. Without it, the sector risks fragmentation, as government, industry and investors pull in different directions.

A unified vision would prioritise specific applications, such as industrial decarbonisation or heavy transport, streamlining funding and infrastructure development. Currently, the government's broad approach – supporting a range of hydrogen production technologies, with overly complex business models for production, and delayed networks and storage models, across multiple sectors – creates uncertainty, slowing private investment and project delivery.

A focused vision, endorsed by a dedicated hydrogen minister, would signal commitment, align stakeholders and position the UK as a global leader. This clarity is essential to avoid squandered opportunities and maintain momentum towards net zero by 2050.

Equally critical is boosting consumer and end-user education on hydrogen's role and safety. As previous research from Copper Consultancy has found, public awareness remains low, with many unaware of hydrogen's potential to support heavy industry or power vehicles sustainably. Informing communities and businesses about its environmental and employment benefits can build support, ensuring projects gain traction.

Safety education is equally vital, as hydrogen's flammability raises concerns. Transparent campaigns, drawing lessons from successful natural gas transitions, can rationalise risks by outlining robust safety protocols for storage and use. Industry and government must collaborate on accessible outreach – through town and village halls, digital platforms and schools – to foster trust and enthusiasm, empowering consumers to embrace hydrogen as a cornerstone of a greener future.

How to get involved

The UK hydrogen sector stands at a crossroads. To unlock its potential, stakeholders must unite behind a clear vision, accelerate investment, and engage communities through education. Getting involved is critical – whether you are a business seeking to innovate, a policymaker shaping the future, or a citizen eager to support clean energy. Join industry forums, advocate for bold policies, or partner with experts to drive progress.

Copper Consultancy, a leader in strategic communications, is here to help. Our team specialises in navigating complex energy transitions, crafting compelling narratives, and building public support for sustainable projects.

We can guide your organisation to shape the hydrogen agenda and deliver impact. Contact us at **info@copperconsultancy.com** or visit **www.copperconsultancy.com** to explore how we can collaborate.

Together, we can turn ambition into action, ensuring the UK leads the global hydrogen revolution and secures a cleaner, greener future for all.

Charles Russell Speechlys has specialist lawyers in the clean-tech and renewable energy sector.

Whether you are a sponsor, operator, lender or landowner, our team can advise you on all aspects of renewable energy projects. **Visit https://www.charlesrussellspeechlys.com/en/** to find out more.

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