

## CML Seminar Series: Legal and Regulatory Aspects of the Hydrogen Economy

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The Executive Centre



The CML Seminar Series resumed with a session by Professor John Paterson on the legal and regulatory aspects of the hydrogen economy. Professor Paterson is a Professor at the School of Law, University of Aberdeen. He co-founded the Aberdeen University Centre for Energy Law and directs the university's involvement in the North Sea Energy Law Programme. Professor Paterson is also currently a Visiting Professor in residence at NUS Law, where he is teaching an intensive course on *International and Comparative Oil and Gas Law* over the coming term.

The seminar opened with an overview of the uses and promises of hydrogen—particularly in the global push towards climate neutrality, energy security, and more equitable access to energy. Professor Paterson also suggested that hydrogen might offer a socially acceptable alternative to nuclear power and other controversial energy sources. Singapore's National Hydrogen Strategy was briefly discussed as a case study, with Professor Paterson highlighting the potential applications of hydrogen in transforming the city-state's power generation, maritime, and aviation sectors.

The discussion then turned to the opportunities (and challenges) in sourcing and transporting hydrogen. The safe handling of hydrogen will naturally be a topic of concern for policymakers. But beyond that, hydrogen must also be produced by climate-neutral means in the long run if it is to be a serious driver of decarbonisation. The climate-neutral production of hydrogen is, in turn, largely conditional on the availability of renewable energy. From a legal and regulatory perspective, it is in

this space of sustainable hydrogen sourcing that policymakers are faced with the most vexed questions.

The European Union has been a frontrunner in attempting solutions to these questions, and so Professor Paterson turned to consider the EU's Hydrogen Strategy 2020 and its constituent initiatives (eg, the REPowerEU Plan 2022). Emphasis was placed on the revised Renewable Energy Directive ('RED II'), and how it interfaces with the EU's hydrogen ambitions. Professor Paterson also spoke on the United Kingdom's Hydrogen Strategy 2021. He noted that between the UK and the EU's hydrogen strategies, the former offered more room for the use of low-carbon (or 'blue') hydrogen as a bridging fuel.

Some policy challenges are universal to all economies making the transition to hydrogen. To what extent should renewable energy be channelled to hydrogen production instead of end-users? Professor Paterson also noted that between hydrogen and an equivalent mass of carbon dioxide, the former is the more potent greenhouse gas. If leaks are unavoidable in the production and transmission of any gas, then what can be done to mitigate the consequences of such incidents? These are some questions that policymakers will have to grapple with moving forward.

Notwithstanding the complexities around reaching a climate-neutral future through hydrogen, Professor Paterson closed the seminar on an optimistic note. "We are on the cusp of change," he said. "This could go in a number of directions. But it is conceivable."

