

Executive course to master European hydrogen legislation

1-2 April 2025

Sala Europa - Villa Schifanoia, Via Boccaccio 121 - Florence

Course Director

Christopher Jones | Florence School of Regulation/RSCAS/EUI

Teaching Assistant

James Kneebone | Florence School of Regulation/RSCAS/EUI

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Introduction

The EU's future renewable and low-carbon market is now taking concrete shape, with the agreement of a raft of legislation at EU level. The next Commission – which has identified the development of the EU's hydrogen market as one of its main energy and climate priorities – will be decisive in shaping the market and delivering on targets and objectives.

Understanding this in depth, and how the next Commission will shape policy and the market, will be essential for companies investing in this huge opportunity, and for regulators – getting the regulatory framework right in project planning right from the onset will be crucial.



Programme

1 April

Day 1

9.00 - 9.30

Introduction to EU policy and approach on Hydrogen.

- The overall legislative framework: how does it all fit together?
- The objectives being pursued by the EU.

Christopher Jones | Florence School of Regulation/RSCAS/EUI

9:30 - 11.00

The Gas and Hydrogen Directive and Regulation: regulating the networks.

- Unbundling
- TPA; transmission, storage, import terminals
- Tariffs
- Distribution systems
- Derogations
- Exemptions and conditions for their grant
- TYNDPs and planning
- The new ENTSO body and its responsibilities

Gideon Saunders | Ontras

11.00 - 11.30

Coffee break

11.30 - 12.30

The state of play of developments the European Hydrogen Grid.

- The Target Model: which grid configuration is envisaged and at what timescale?
- Which investments have already reached final investment stage?
- The financing models implemented.
- Will the EU have a series of national or regional grids? How quickly do we expect an EU grid to develop?
- The development of ENNOH; how will it work, what will be its first actions?

Christoph von dem Bussche | Gascade

12.30 - 13.30

Lunch break

13.30 - 14.30

Outline of the legal and policy framework that is now applicable.

- The wider policy objectives and framework; how will the new Commission deliver on its targets and objectives?
- Networks: the Gas and Hydrogen Package
- The REDIII Directive
- The Delegated acts
- ReFuel Aviation and Maritime
- ETS and CBAM
- What comes next?

Kitti Nyitrai | DG Energy, European Commission

14.30 - 15.30

The RED III and the ReFuel Maritime and Aviation.

- Outline of the Directive
- RES target
- Industrial hydrogen obligation on Member States

- Transport targets, and RFNBOs
- The Refuel Regulations
 - What are the targets
 - How will they have to be implemented?
 - What will be their effect?
 - How should companies prepare for the introduction?

Christopher Jones | Florence School of Regulation/RSCAS/EUI

Maria Olczak | Oxford Institute for Energy Studies

15.30 - 16.00 *Coffee break*

16.00 - 17.30 ETS and CBAM, The Hydrogen Bank.

- How the ETS works
- What will be the effect of the ETS on hydrogen production in the EU? Who will be affected?
- How will the CBAM change things? How will it work?
- What do companies need to do to prepare for the CBAM?
- The Hydrogen Bank: objectives, how it works, first results, perspectives

Samuel Verschraegen | Legal Service, European Commission

17.30 - 18.00 Wrap up from day one and follow-up Q&A from participants to speakers.

18.30 - *Welcome cocktail*

2 April **Day 2**

9.00 - 10.30 Technical requirements for investors in hydrogen projects (Part 1)

- Delegated Act on additionality
- Delegated act on GHG reduction
- Mass balance and the EU Data base
- Pitfalls for importers, where to get the CO₂ and how to transport the hydrogen
- Sustainability requirements for Fuels
- Delegated Act on Low-carbon fuels

Maximilian Kuhn | Hydrogen Europe

10.30 - 11.00 *Coffee break*

11.00 - 12.00 Technical requirements for investors in hydrogen projects (Part 2)

- Delegated Act on additionality
- Delegated act on GHG reduction
- Mass balance and the EU Data base
- Pitfalls for importers, where to get the CO₂ and how to transport the hydrogen
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Maximilian Kuhn | Hydrogen Europe

12.00 - 13.00 *Lunch break*

13.00 - 14.30 The subsidy and support framework.

- An overview of the State aid rules
 - The legal framework

- The IPCEI Framework
- Guidelines on State aid for climate, environmental protection and energy 2022
- The Clean Industrial Deal and State aid for Hydrogen projects.
- National support schemes: which are the best Member States to target investments.
- The IRA; can you 'double dip'?
- The evolution of the Guidelines

Anna Colucci | DG COMP, European Commission

14.30 - 15.30 Member States ambitions and actions on Energy Policy.

- The National Energy and Climate Plans: level of ambition of the Member States
- The main support frameworks
- Where are the key investment opportunities?
- Are support frameworks limited to national projects, or are they promoting imports?

Christopher Jones | Florence School of Regulation/RSCAS/EUI

James Kneebone | Florence School of Regulation/RSCAS/EUI

15.30 - 16.30 Closing remarks and discussion.

Christopher Jones | Florence School of Regulation/RSCAS/EUI

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Christopher Jones | Florence School of Regulation/RSC/EUI

Christopher Jones is a Part-time Professor at the Florence School of Regulation (European University Institute).

Christopher is Adviser 'Hors Classe' and former Deputy Director General at DG Energy.

He has a background in Law (University of Reading; Colledge of Europe) and he has been serving in the European Commission for more than thirty years.



Gideon Saunders | Ontras

Gideon Saunders is Senior Advisor Public Affairs at the gas and hydrogen TSO ONTRAS Gastransport GmbH with focus on European energy policy. From 2021 to 2024, he was Regulatory Affairs Manager at the European Network of Transmission System Operators for Gas (ENTSOG) in Brussels. Prior to joining ONTRAS he also worked for DBI Gas- und Umwelttechnik. He holds an MSc. in Energy Economics and Business Administration from Leipzig University.



Christoph von dem Bussche | Gascade

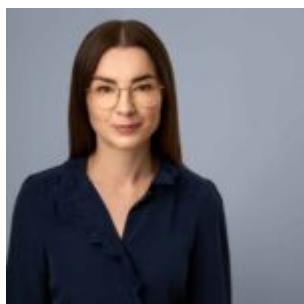
Christoph von dem Bussche is the Managing Director of the German transmission system operator GASCADE. With its gas transmission network located in the heart of Germany, GASCADE plays a crucial role in ensuring energy security and connects five neighboring European countries. At the same time, the company is driving significant hydrogen infrastructure projects both onshore and offshore. Von dem Bussche holds a PhD in Chemistry and began his career at BASF, where he held various senior positions before becoming Managing Director. Since 2016, Christoph von dem Bussche has served on the board of the European Network of Transmission System Operators for Gas (ENTSOG) and, since 2020, on the AquaVentus Association. AquaVentus is dedicated to making offshore-produced green hydrogen available in large volumes for the German and European hydrogen market via an offshore pipeline.



Kitti Nyitrai | European Commission DG Energy

Kitti Nyitrai is Head of Unit Decarbonisation and sustainability of energy sources in the Commission's Directorate-General for Energy since May 2020. Previously, she was Member of Cabinet of Energy Commissioner Kadri Simson, where she was in charge of topics including energy system integration and hydrogen, as well as of the strategy to reduce methane emissions and Member of Cabinet of Energy and Climate Commissioner Arias Cañete. She joined the Directorate-General for Energy in 2007 to deal with security of gas supplies and later on Trans-European Energy Networks. In 2014, she worked as a Case Manager for State aid control in energy in the Directorate-General for Competition, after which she became Assistant to the Director-General for Energy, covering internal energy market, State aid and

infringements. Ms Nyitrai holds an MBA Degree in International Business from the MIB School of Management in Trieste as well as a Master's degree in Business and Economics from the University of Pécs in Hungary. She also studied at the Ecole Supérieure de Commerce in Montpellier.



Maria Olczak | Oxford Institute for Energy Studies

Maria Olczak is a Research Fellow at the Oxford Institute for Energy Studies, specializing in the Quantification, Measurement, Reporting, and Verification (QMRV) of Greenhouse Gas (GHG) Emissions. She recently earned her PhD (2020-2024) in Chemical Engineering from Queen Mary University of London. Her doctoral research focused on bridging the gap between scientific research, technologies, and policies to monitor and mitigate methane emissions from industrial sites, including biogas plants. A College of Europe alumna, Maria has a strong academic foundation in European policy and regulation. In 2022, she joined the Environmental Defense Fund as a consultant, where she conducted research on coal mine methane and methane policies within the context of liquefied natural gas (LNG) trading. Prior to this role, she spent five years as a Research Associate at the European University Institute's Florence School of Regulation Gas Area. During this time, she concentrated on policy and regulatory frameworks aimed at reducing methane emissions, decarbonizing the EU gas market, and advancing the role of low-carbon hydrogen and biogas/biomethane. Maria began her professional career at the Polish Ministry of the Environment, where she played an active role in the preparations and proceedings of the COP19/CMP9 as a member of the Polish Presidency Team.



Samuel Verschraegen | European Commission Legal Service

Samuel Verschraegen is a graduate of the Université Libre de Bruxelles and the College of Europe in Bruges. He began his career as an academic assistant at the College of Europe, where he specialized in EU institutional law and EU energy policy. He then worked for more than four years in several law firms, focusing on energy and climate law. He later joined the European Commission's Directorate-General for Climate Action, where he provided legal advice on EU policies aimed at deploying innovative low-carbon technologies in the EU, including the development of support mechanisms for the production of green hydrogen. In January 2025, he joined the European Commission's Legal Service, where he primarily focuses on State aid in energy and the environment.



Maximilian Kuhn | Hydrogen Europe

Dr. Maximilian Kuhn started his career 20 years ago in the energy business as a consultant for Government Relations. He held senior roles at the Environmental Policy Research Center (FFU) and as a project coordinator for energy projects at Columbia University in the City of New York. From 2013, he joined the European Commission as a Scientific Project Officer to coordinate tasks of the European Commission's Energy Security, Systems and Market Unit. Since 2010 he served as editor-in-chief and research staff at the European Center for Energy and Resource Security (EUCERS) at King's College London and lecturer at HULT Business School London. Currently Dr Kuhn is an Advisor to Hydrogen Europe with a focus on regulation, codes and standards.



Anna Colucci | European Commission DG Competition

Anna Colucci is Director for Markets and cases in Energy and Environment in DG Competition. She previously joined DG Energy in February 2016, where she was head of the Retail markets, Coal and Oil Unit. From 2007 to 2016 she held several management positions in DG Competition. In particular, she managed the State aid unit dealing with "Post, Health and other services" and was also head of the Strategy unit. Prior to her joining DG Competition, she had thirteen years' experience in transport policy within DG Move. Ms Colucci has a degree in Political Sciences from the Institut d'Etudes Politiques of Strasbourg, a master in European Studies from the College of Europe of Bruges and a diploma in International Relations Studies from the Johns Hopkins University Bologna.



James Kneebone | Florence School of Regulation/RSC/EUI

James Kneebone is a Research Associate at the Florence School of Regulation. He is a specialist in European hydrogen policy and industrial decarbonisation. James's recent publications have covered infrastructure planning for hydrogen transportation, hydrogen financing mechanisms in the EU, industrial policy, and the issue of ensuring justice in the development of renewable hydrogen trade with African stakeholders. Before joining the FSR, James worked in DG ENER of the European Commission, where his primary areas of work were security of supply and the EU Methane Strategy.

James is a PhD candidate at ETH Zurich. He also holds an MSc in International Development from Utrecht University and a BSc in Liberal Arts and Sciences from University College Maastricht. However, his studies also included stays at the University of Sydney and Universidad de la Habana. James has ethnographic fieldwork research experience from Havana, Cuba, where he investigated bottom-up economic development models.