FLORENCE SCHOOL OF REGULATION

ROBERT SCHUMAN CENTRE

# Clean Molecules for the Energy Transition_2024

@FSR_Energy #FSRExEd

## 12-30 June 2023

Online Training

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### Introduction

Within the EU Green Deal vision, renewable, low-carbon, and even emission-negative gases such as renewable hydrogen and biogas have a central role to play in decarbonising the EU economy. This vision has since been elaborated in subsequent strategies pertaining to key areas, for example, the Energy System Integration Strategy and the EU Hydrogen Strategy. Moreover, the energy crisis in Europe over the past 12 months or so has also brought an added impetus to accelerate the growth of these sectors to ensure the long-term affordability and security of energy in the EU.

The 'Clean Molecules for the Energy Transition' course from the Florence School of Regulation covers the key issues in this fast-evolving area. The three-week programme (2 weeks of offline preparation & 1 week of live classes) offers first-hand insights into the EU and global context of clean molecules, with relevant case studies, topical discussions and panel debates delivered by leading professionals.

**Course structure**

**Week 1 & 2 (10-23 June 2024) |** Offline preparation to the course

**Week 3 (24-30 June 2024) |** Online live classes

Co-funded by the Erasmus+ Programme of the European Union

## Draft Programme

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| **10 June** | **Preparatory weeks on the course platform** |
| 12:00- 13:00 | Welcome Live Class |
| 10 - 23 June | *Read/watch/listen to the material and take the relevant activities on the course platform.* |
| 19 June | 12 – 1 PM CEST<br>Live Office Hour |
| **25 June** | **Day 1: Clean molecules in the EU** |
| 9:00 - 9:15 | Welcome to the course |
| 9:15 - 10:15 | Lecture “The EU context” |
| 10:15 - 11:15 | Lecture “Mapping the system: products, processes, and taxonomies” |
| 11:15 - 11:30 | *Coffee break* |
| 11:30 - 12:00 | Case study “Biogas and biomethane” |
| 12:00-12:30 | Case study “Scenario planning and policy framework for the end-uses of clean molecules in the EU” |
| 12:30 - 13:30 | *Lunch break* |
| 13:30 - 14:30 | Debate “Transportation of clean molecules” |
| 14:30 - 14:35 | Closing |
| **25 June** | **Day 2: Hydrogen deep dive** |
| 9:00 - 9:15 | Welcome and reflections on previous day |
| 9:15 - 10:15 | Lecture “Producing green hydrogen and synthetic fuels with Power-to-X technologies “ |
| 10:15 - 11:15 | Case study “Market uptake of hydrogen” |
| 11:15 - 11:30 | *Coffee break* |
| 11:30 - 12:00 | Mini lecture “EU Hydrogen Bank and market-based support instruments for Hydrogen scale up“ |
| 12:00 - 12:30 | Interactive session “Hydrogen cost-effectiveness in the EU” |
| 12:30 - 13:30 | *Lunch break* |
| 13:30 - 14:30 | Debate “Investment in H2 instrastructure” |
| 14:30 - 14:35 | Closing |
| **26 June** | **Day 3: Regulation and markets** |
| 9:00 - 9:15 | Welcome and reflections on previous day |
| 9:15 - 10:15 | Lecture “The Hydrogen and Decarbonised Gas Market Package” |

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| 10:15 - 11:15 | Lecture “The future of network regulation” |
| 11:15 - 11:30 | *Coffee break* |
| 11:30 - 12:00 | Mini lecture “CBAM, international trade and competitiveness” |
| 12:00 - 12:30 | Interactive session “Certification of clean molecules“ |
| 12:30 - 13:30 | *Lunch break* |
| 13:30 - 14:30 | Debate “Hydrogen and industrial competitiveness: EU, US, China” |
| 14:30 - 14:35 | Closing |

**27 June** **Day 4: Externalities of a clean molecule economy**

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| 9:00 - 9:15 | Welcome and reflections on previous day |
| 9:15 - 10:15 | Lecture “Security of supply for renewable energy supply chains” |
| 10:15 - 11:15 | Lecture “Justice in international clean molecule value chains: CRM, mining, and ‘value” |
| 11:15 - 11:30 | *Coffee break* |
| 11:30 - 12:00 | Mini lecture “Emissions from clean molecules” |
| 12:00 - 12:30 | Interactive session “The role of clean molecules in energy security“ |
| 12:30 - 13:30 | *Lunch break* |
| 13:30 - 14:30 | Debate “Empowering consumers and the risk of greenwashing” |
| 14:30 - 14:35 | Closing |

**28 June** **Day 5: Participants’ projects discussion**

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| 9:00 - 09:15 | Welcome and reflections on previous day |
| 09:15 - 9:50 | Lecture “The shoots new industry: Learnings from an innovator” |
| 9:50 - 11:45 | Mastery challenge “Final presentations & course closure” |