

# Legal framework for a hydrogen valley in the Netherlands-NRW region, from the EU to the region

2. Forum on Comparative and European Energy Law, 26.10.2023

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- ▶ accredited professionals: ca. 250; in Berlin, Munich, Cologne, Hamburg, Stuttgart, Erfurt & Brussels
- ▶ registered representative of special interests – lobbying register at the German Bundestag – R000790

# Prof. Dr. Dörte Fouquet



Prof. Dr. Dörte Fouquet specialises in EU law and international legal relations with a focus on competition, infrastructure, energy and environmental law. She advises mainly companies, financial institutions, associations and governmental agencies in Germany and other EU Member States as well as EU institutions and at international level.

- ▶ Studies of law in Marburg and Hamburg
- ▶ 1982 research assistant at the University of Hamburg
- ▶ 1988 Ministry for Environment and Energy, Hamburg
- ▶ 1991 Hamburg and Schleswig-Holstein Liaison Office to the European Union, Brussels (Belgium)
- ▶ 1993 partner at the Brussels office of the law firm Kuhbier
- ▶ 2011-2020 partner at BBH, since 2021 partner of counsel
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# Agenda

1. The European strategy for hydrogen
2. European Hydrogen Valleys Partnership
3. The European H<sub>2</sub> legal framework
4. Recommendations of the hydrogen industry

# The European strategy for hydrogen

- ▶ EU Commission Hydrogen strategy (July 2020)
  - Support investment, production and demand; creating a hydrogen market and infrastructure; develop research and (international) cooperation projects
  - Objective:
    - Until 2024: instal at least **6 GW** of renewable H<sub>2</sub> electrolyzers and produce up to **1 Mt** of renewable H<sub>2</sub>
    - Until 2030: instal at least **40 GW** of renewable H<sub>2</sub> electrolyzers and produce up to **10 Mt** of renewable H<sub>2</sub>
  
- ▶ Fit-for-55 Package (July 2021) translates the Hydrogen strategy in legislative proposals:
  - Amendment of TEN-E Regulation, RED, ETS, State aid, EU Taxonomy...

# RePower EU Plan sets the H2 Rhythm in motion

- ▶ REPower EU Plan (May 2022), in response to the global energy crisis, raises European ambitions for renewable H<sub>2</sub> to move away from Russia's fossil fuel imports.
  - Objective: accelerate the uptake of H<sub>2</sub> and scale up the production and import of renewable H<sub>2</sub> to **20 Mt by 2030** through:
    - enabling regulatory framework, also to facilitate access to funding
    - additional funding: the Commission allocated to the Clean Hydrogen Partnership an additional €200 million to double the number of Hydrogen Valleys in Europe by 2025.
- ▶ Green Deal Industrial Plan (February 2023) to enhance the competitiveness of Europe's net-zero industry
  - 40% of strategic net-zero manufacturing needs shall be met domestically, which includes electrolysers and fuel cells. It specifies that at least 100 GW of domestic electrolyser capacity should be installed domestically by 2030.
  - European Hydrogen Bank: new financing instrument run by the Commission to unlock private investments in H<sub>2</sub> value chains and facilitate blending with the existing financial instruments to support H<sub>2</sub> projects



# The European Hydrogen Valleys Partnership

- ▶ The European Hydrogen Valleys Partnership was launched in June 2019 and supported under the S3 Platform on Industrial Modernisation. It was an interregional partnership with the objectives to:
  - Develop the technological readiness and the commercial availability of Fuel Cells and H<sub>2</sub> applications
  - Overcome the lack of access to information and expertise in the field hydrogen
  - Facilitate match-making and co-investment between European regions
  - Strengthen the value chain for Fuel Cells and H<sub>2</sub> technologies via interregional cooperation
  - Contribute to the decarbonization of the EU's economy
  - Green the production of hydrogen
  - Be an active stakeholder on EU policy making on hydrogen
- ▶ Hydrogen Valleys projects were initiated by the Fuel Cells and Hydrogen Partnership (today the Clean Hydrogen Partnership) between the European Commission, the industry and research association to implement these objectives.

# Hydrogen Valleys

- ▶ What is a Hydrogen Valley?
  - Geographical area where clean hydrogen is produced and locally used by households, local transport, and industrial plants. It links hydrogen production, transportation, and various end uses such as mobility or industrial feedstock
- ▶ Hydrogen Valleys are considered as key instrument to implement the European hydrogen strategy and contribute to the European objectives
  - by scaling up green hydrogen production and supply to meet the growing demand from industry, transport and other sectors
  - by contributing to EU energy independence while accelerating the clean energy transition and pursuing the decarbonisation objectives under the Green Deal
- ▶ The Hydrogen Valleys Platform showcases all these projects.

# Netherlands

- ▶ Northern Netherlands is the first region in Europe to receive a subsidy for its Hydrogen Valley called HEAVENN, and is highlighted as a target region for the European Just Transition Fund
  - Grant application has been approved by (the predecessor of) the Clean Hydrogen Partnership
  - Subsidy of € 20M with a public-private co-financing of € 70M for developing a fully functioning green hydrogen value chain
- ▶ Private investment, e.g., decision to build Holland Hydrogen I, which will be Europe's largest renewable hydrogen plant once operational in 2025.
  - The 200 MW electrolyzer will be constructed on the Tweede Maasvlakte in the port of Rotterdam and will produce up to 60,000 kg of renewable hydrogen per day.
  - The renewable power for the electrolyser will come from offshore wind.

# North Rhine- Westphalia

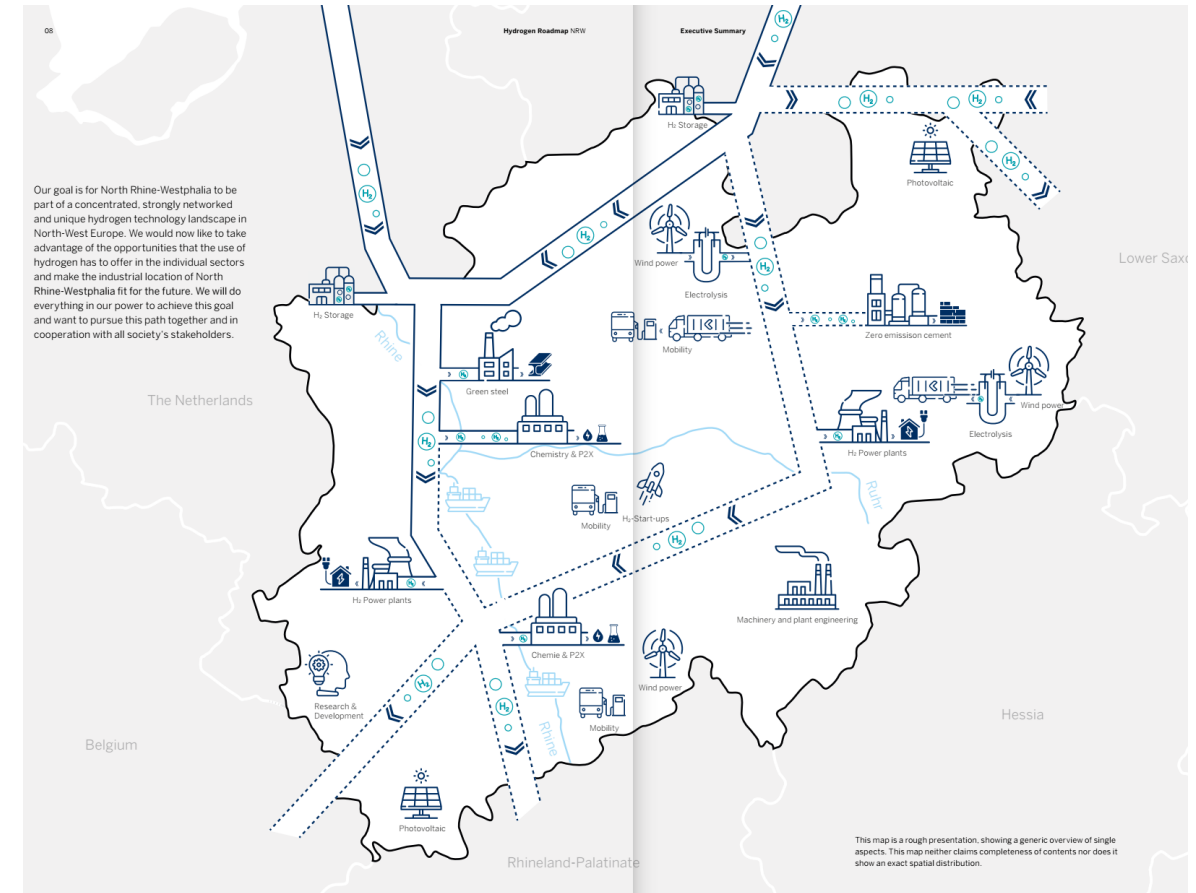
- ▶ By 2025, NRW is set to have its first large-scale hydrogen plant in operation, the first 100 kilometres of a pipeline network are to be installed and 400 fuel cell trucks will be on the road.
- ▶ NRW is willing to intensify international partnerships

*"We aim to join the European Alliance for Clean Hydrogen.*

*In addition to existing cooperation projects with the Netherlands, we will enter into further collaborations to reliably increase the availability of hydrogen in North Rhine-Westphalia.*

*In addition, together with European partner countries, we are working with consortia of companies to attract investment to North Rhine-Westphalia, for example within the framework of the Important Project of Common European Interest (IPCEI)"*

## Hydrogen Roadmap North Rhine-Westphalia



# Close cooperation between North Rhine-Westphalia and the Netherlands



- ▶ Close cooperation between North Rhine-Westphalia and the Netherlands
  - Declaration of intent at the Combined Energy Conference in Arnhem 2020
  - Aim is to exploit the potential of renewable hydrogen and to promote the development of a common infrastructure across borders
- ▶ HY3 project study found that cooperation between the Netherlands and Germany in developing a common hydrogen market and infrastructure will boost opportunities for realising a decarbonised regional economy.
- ▶ Rhine Hydrogen Integration Network of Excellence (RH<sub>2</sub>INE), the initiative of the Province of Zuid-Holland and the Ministry of Economic Affairs, Innovation, Digitisation and Energy of North Rhine-Westphalia aims to develop by 2030 an infrastructure for hydrogen supply in the Rhine ports for freight transport.

# The European legal framework for hydrogen

- ▶ The European legal framework for Hydrogen and Hydrogen Valley projects includes in particular:
  - energy infrastructure investments rules (TEN-E Regulation)
  - state aid rules (CEEAG, GBER, to promote IPCEI), as well as
  - legislative targets for renewable hydrogen for the industry and transport sectors (RED)
    - RED III (not yet in force) sets new binding target of 42,5% by 2030 for RE and new sub-targets for the share of RFNBO in the transport sector and the industry sector

# The European legal framework for hydrogen

- ▶ It is mainly determined by two delegated acts adopted by the European Commission in June 2023 outlining detailed rules to determine renewable hydrogen
  - The first DA defines under which conditions hydrogen, hydrogen-based fuels or other energy carriers can be considered as renewable fuels of non-biological origin (RFNBOs).
  - The second DA provides a methodology for calculating life-cycle greenhouse gas emissions for RFNBOs.
- ▶ The two DAs are interrelated and both are necessary for the fuels to be counted towards EU countries' renewable energy targets.

# Renewable hydrogen: additionality and correlation requirements

- ▶ 2 types of criteria are set to ensure that hydrogen is renewable
  - The **additionality requirement**: Hydrogen producers shall conclude power purchase agreements (PPAs) with new and unsupported renewable electricity generation capacity to ensure that the increased hydrogen production goes hand in hand with new (rather than existing) renewable energy generation.
  - The **temporal and geographic correlation** to ensure that hydrogen is produced when and where renewable electricity is available. This requirement aims to avoid that demand for renewable electricity used for hydrogen production is incentivising more fossil electricity generation overall.
  - Early Bird - **exception**: To support early scale-up of electrolysers, renewable hydrogen producers will have the possibility to sign long-term renewable power purchase agreements with existing installations (until 1 January 2028).



# Energy infrastructure investments rules for H2

- ▶ TEN-E Regulation focusses on linking the energy infrastructure of EU countries
- ▶ 23 June 2022, the revised TEN-E Regulation laying down new EU rules for cross-border energy infrastructure entered into force, including hydrogen for new projects of common interest
  - Objectives of the revised TEN-E Regulation are to encourage investment in hydrogen and CO<sub>2</sub> networks, facilitate cross-border administrative procedures and the access to EU finance
  - It includes hydrogen and electrolyser priority corridors:
    - e.g., **Hydrogen interconnections in Western Europe (HI West)**: Hydrogen infrastructure and the repurposing of gas infrastructure, enabling the emergence of an integrated hydrogen backbone, connecting the countries of the region and addressing their specific infrastructure needs for hydrogen supporting the emergence of an Union-wide network for hydrogen transport. It covers Belgium, Czechia, Denmark, Germany, Ireland, Spain, France, Italy, Luxembourg, Malta, Netherlands, Austria and Portugal.

# Important Project of Common European Interest - first projects ex.

- ▶ Within the framework of the IPCEI, hydrogen projects of MS are publicly funded, with the exceptional approval of the European Commission. The German government has selected a total of 62 large-scale industrial projects in Germany for funding by the federal and state governments.
  - August 2023 : 169 Million funding for Sunfire, the electrolysis provider will receive a total of 169 million euros (162 million euros for setting up series production in Saxony; 7 million euros for North Rhine-Westphalia).
- ▶ 8 of these large-scale industrial projects are in Hamburg...
  - *„Derzeit wird bei der Vorbereitung der Wasserstoffprojekte im Rahmen der europäischen IPCEI-Initiative deutlich, dass der reguläre Notifizierungsprozess durch einen hohen bürokratischen Aufwand enorm in die Länge gezogen wird. Ein schneller und wirkungsvoller Bürokratieabbau beim Vollzug der IPCEI-Förderprojekte – sowie derjenigen, die analog zu IPCEI unter einem anderen System notifiziert werden sollen – wäre wünschenswert.“*

Bürgerschaftsdrucksache, Drucksache 22/12774, Mitteilung des Senats an die Bürgerschaft -Zweite Fortschreibung des Hamburger Klimaplanes 29.08.2023

# Key recommendations for Hydrogen Valleys from Hydrogen Europe

- ▶ Hydrogene Europe position paper to the Commission Roadmap on Hydrogen Valleys to REPower the EU, September 2023:
  - Guidance needed on the optimal locations across the EU for the development of Hydrogen Valley projects, with efforts to interconnect them with other major hydrogen projects (e.g., PCI, PMI, TEN-E, TEN-T, EHB, IPCEIs) within the planification processes for the development of future infrastructure.
  - Simplification and finalization of the ongoing legislative process and increase of support for transposition of energy and climate laws in Member States, through capacity building and support programmes for national and regional administrations.
  - Simplification of processes and increase of flexibility for applicants in different funding sources (e.g. technical assistance on access of other sources of funding to allow for a combination of different funding mechanisms).
  - Targeted funding for skills development and stronger links between EU supported projects should be established

Thank you very much  
for your attention.

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