ACER-CEER white paper on H2 network regulation

HYDROGEN: TECHNOLOGIES, MARKETS, REGULATION, PAN-EUROPEAN COOPERATION WEBINAR SERIES, 24 February 2021

Claudio Marcantonini - ARERA
Co-chair CEER Regulatory Gas Strategy Work Stream

The views expressed in this presentation belong to the speakers and do not necessarily reflect the views of the European Union Agency for the Cooperation of Energy Regulators, or of any of its Boards.
Why this white paper?

- EU hydrogen (H2) strategy
  - key role for pure H2 in achieving the green transition
  - the hydrogen sector will be EU-wide integrated

- The development of H2 infrastructures raises questions about how to regulate it

- Current EU gas regulation does not cover transport of pure H2

- This white paper presents 6 main recommendations on H2 network regulation that regulators have agreed upon

- Very different situation from that when EU regulation for gas and electricity networks was introduced: gas and electricity networks were already in place, while the H2 sector still need to be fully developed
1. Gradual approach

- Consider a gradual approach to the regulation of H2 networks in line with the market and infrastructure development.

- The H2 development is at an early stage: regulatory intervention will depend on how the H2 sector will evolve.

- Economic principles calling for regulation in case of:
  - Natural monopoly/essential facility
  - Risk of abuse of dominant position

- Regulation should address the actual risk of market foreclosure.

- Risks depend on how demand and supply develops (number of players, volumes, routes) and how networks can accommodate them.

- Member States will face different H2 development paces: need of flexible and gradual EU-wide regulatory regime.
2. Periodic market monitoring

• NRAs need to monitor the **evolution of H2 sector**
  - Market structure and statistics (volume, prices, etc.)

• National monitoring based on **indicators developed at EU level**
  - Consistency checks on monitoring results at EU level

• Based on them, NRA should decide when intervention should kick in

• Get inspired by **existing flexible models**
  - E.g. telecoms: adapting regulatory measures (from a set of tools) according to the market situation (informed by monitoring)
3. Clarity on key regulatory principles

- Stable environment for investments through the application of regulatory principles:
  - Third party access (TPA)
  - Transparency
  - Non-discrimination
  - Unbundling
  - Consumers' protections
  - NRA monitoring and oversight

- How to apply those principles to the H2 sector will depend on how the H2 develops

- If the developments of the H2 sector will have characteristics like those of natural gas, the experience from EU gas regulation can be used

- Not simply copy-paste of the current gas regulation:
  - There are technical and market differences between natural gas and H2
  - Additional challenges can come from applying these principles in an integrated energy system perspective
4. Exemptions for business-to-business networks

- Business-to-business networks can be temporary **exempted** from regulation, avoiding that point-to-point pipelines are unnecessarily impacted.

- **Temporary exemptions until** there are no signs of discrimination or abuse of market power.

- If market conditions change and the network infrastructures becomes essential facility, exemptions should be revoked.

- Need to find the **right balance** between **flexibility** to foster H2 sector development, while at the same **avoiding foreclosure**.
5. Assess repurposing of gas pipelines

• EC H2 strategy relies on **repurposing** CH4 pipelines

• Need for a **balanced consideration** between constructing new H2 pipelines versus the repurposing of existing gas infrastructure

• Identifying which part of the gas network could be used for H2 by using **cost-benefit analysis CBA methodology**
  - considering all aspects including decommissioning costs, and Security of Supply, etc.

• Including repurposing the in **national development plans (NDP)** and in **EU Ten-Year Network Development Plan**

• The above process is part of broader infrastructure development and planning
  - need for a **coherent approach across sectors** for infrastructure planning
6. Cost-reflectivity principle

- Avoiding cross-subsidisation between the gas and H2 network users

- In the context of an actual integrated energy system, the implementation of this principle might require adaptations if the benefits of the use of a network become cross-sectoral

- In case of repurposing gas network assets, unbundling rules should be applied:
  - at least separation of activities, RABs, and costs (accounting unbundling) between the entities that own and operate the H2 infrastructure and the gas infrastructure

- Repurposed gas assets should be valued based on their specific value in the RAB at time of transfer