Status-quo of Hydrogen Utilisation in NG COM Member Countries

Roundtable input by Hungary

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MEKH

ERRA Natural Gas Markets and Economic Regulation Committee
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Policy Level: Hungary's National Hydrogen Strategy (2021)

MEKH
HUNGARIAN ENERGY AND PUBLIC UTILITY REGULATORY AUTHORITY

PRIORITY OBJECTIVES - 2030

Production of large volumes low-carbon and decentralized carbon-free hydrogen

Establishing the conditions necessary to produce low-carbon and carbon-free hydrogen that is in compliance with user requirements and is competitively priced.

- 20 thousand tons / year low-carbon hydrogen
  +
- 16 thousand tons / year "green"* and other carbon-free hydrogen
- 240 MW electrolyser capacity**

Decarbonisation of industrial consumption, partly with hydrogen

At first, predominantly low-carbon hydrogen will be used to make the industrial processes and product use "more green", with a shift to carbon-free hydrogen usage on the longer term.

- 20 thousand tons / year low-carbon hydrogen
  +
- 4 thousand tons / year "green"* and other carbon-free hydrogen
- avoiding the emission of 95 thousand tons of CO_2

Green transport

Accelerating the transition to clean modes of transportation by a gradual transition from gas oil usage to clean alternatives. Within this framework, on the 2030 timeline, hydrogen may become a realistic alternative primarily in heavy-duty vehicle traffic.

- 10 thousand tons / year "green"* and other carbon-free hydrogen
- 20 hydrogen refuelling stations / 40 refuelling points
- 4.8 thousand HFC vehicle
- avoiding the emission of 130 thousand tons of CO_2

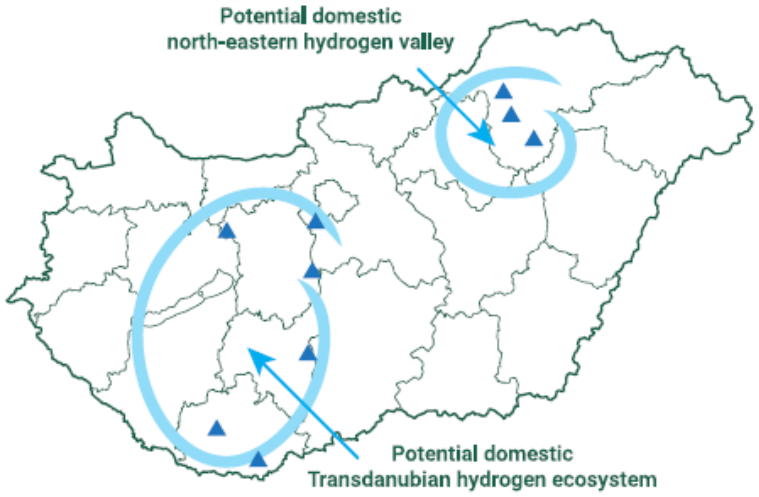
Electricity and (natural) gas support infrastructure

Building sector integration ability - primarily seasonal energy storage ability - by utilising intersectoral synergy, establishing infrastructure that will enable the transition to carbon neutrality, and reconstructing existing infrastructure.

- 60 MW average cut-off capacity
- min. 2% per year volume blending ratio in the natural gas system (where appropriate)

Policy level (2) – Key messages

- The Hungarian government currently considers „blue”/”turquoise” H2 „low-carbon”.
- For CCS a regulatory environment and support system is planned.
- PV based electrolysis centers have potential.
- GO pertaining to hydrogen types is planned.
- Plan for two hydrogen valleys by 2030.
- 2% H2 blend is planned.



Policy Level : *Responsible institutions*

Regulatory and network operator framework is still to be decided upon

Policy

Regulation

Infrastructure)

MINISTRY OF ENERGY

(still to be decided)

FGSZ MEMBER OF MOL GROUP

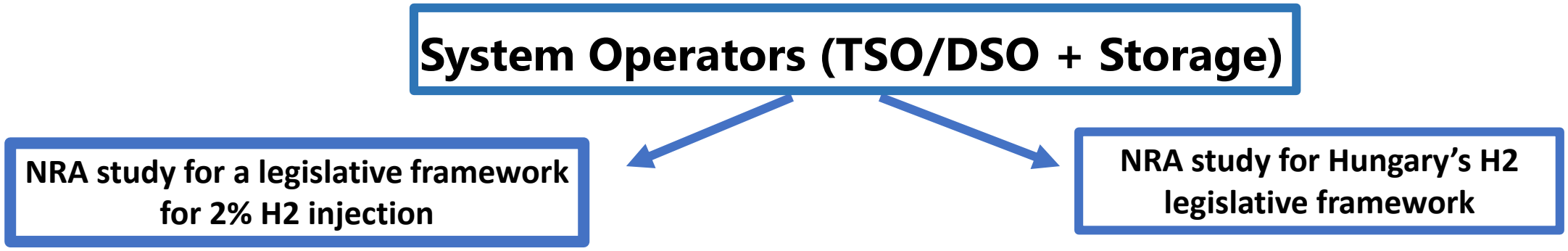
(still to be decided)

Research

Hungarian Hydrogen Technology Association

Regulatory Level

- *What has been the level of exposure of the regulator towards hydrogen?*
- MEKH is exposed to H2 regulation on the EU level:
  - Hydrogen and decarbonised gas market package
  - TEN-E (including PCI/PMI H2 project proposals)
  - ACER tasks



Industry/Market Level

- The most important Pilot project: Aquamarine (2024 Q2)
- The Hungarian Gas Storage Ltd is intending to implement an electrolysis system with approximately 2,5 MW total performance
- Goal is to use surplus renewable energy for the electrolysis

Mix with natural gas and use within the Gas Storage's own gas-operated equipment (and reducing its own CO_2 in this way) emission

Mix H2 with natural gas and mix into the gas transmission system

Industrial players may also supply H2: MOL, Holcim (Lafarge) and Nitrogénművek, Electron Holding (PV)

THANK YOU FOR YOUR ATTENTION!

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