

## Case study1

### **Aquamarine project - Hungarian Gas Storage (HGS), subsidiary MVM**

**Project type:** peak-off power electrolysis system

**Purpose:** integrated energy system flexibility and security of supply

**Investment:** EUR 8 million (approximately 66% public funding)

#### **Summary:**

This R&D pilot project aims to develop an integrated low carbon energy system in Hungary using electrolysis equipment to convert off peak surplus electricity primarily from renewable energy sources to green hydrogen. The green hydrogen produced in this way mixed with natural gas can be utilized within HGS's own gas-operated equipment and reduce its CO2 emissions. Furthermore, this natural gas mixed with hydrogen could be injected into the gas transmission system -strictly complying with gas quality and safety instructions – and could be part of the supply to end users.

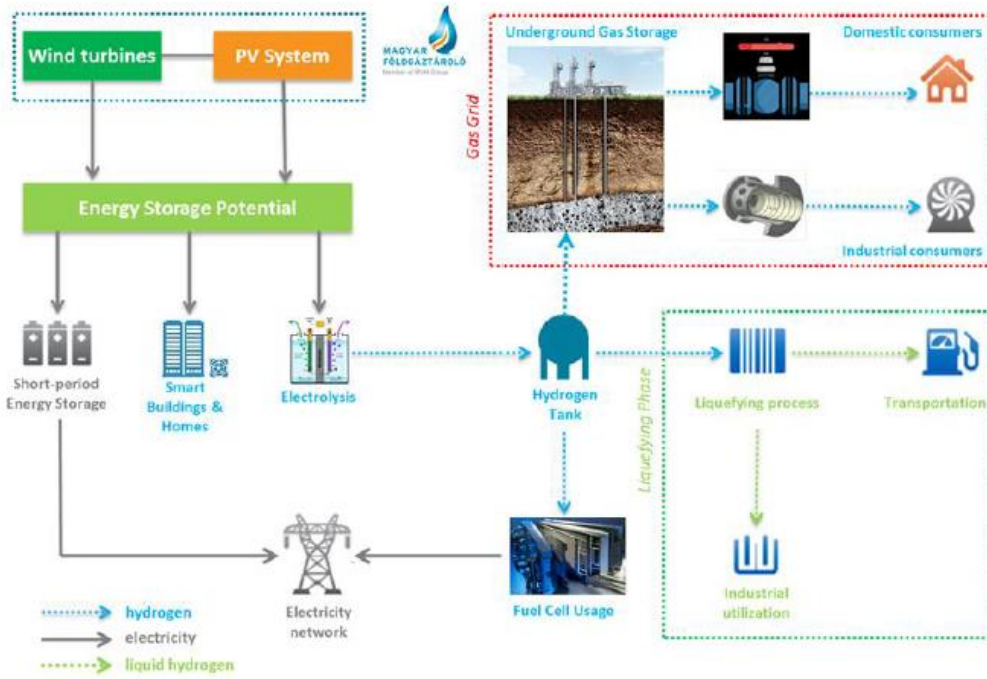
With this initiative, HGS aims to establish a leading R&D center by 2025 in the field of applied industrial research for hydrogen-based energy storage in the CEE region. By 2030, this should translate to HGS becoming one of the largest underground gas storage companies ensuring the balance of the electricity sector with production of synthetic methane.

#### **Main challenges:**

Due to public procurement dependency, there is a very short timeframe (24 months) to develop a new technology. Also the regulatory framework is in its infancy, though it is one of the objectives of this project to help with learning not only about the technology but how policies can support its development.

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