Case study 2

CVUT project - CEZ ESCO

Project type: Peak-off power electrolysis system

Purpose: Energy efficiency creating energy savings

Investment: EUR 8.9 million (minus VAT)

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:

While conditions have improved markedly in 2020, there remain some lingering legislative and financial obstacles to achieving projects like this in the future. For one, Act No 218/2000 does not allow the renovation of nationally owned buildings like this to be financed through supplier credit. The CVUT project did not have this limitation and was financed with a combination of supplier credit and EU funds. Second, energy performance contracts (EPCs) are still relatively new models for finance that decision makers and stakeholders still do not fully understand and appreciate, and therefore they take a very conservative approach.

Related content: Please refer to recent GLOBSEC building renovation content:

- May webinar 'Slovakia post COVID-19 recovery: How to deliver a green boost to the economy' focusing on renovation wave in Slovakia
- October 2020 Tatra Summit Slovakia Building Renovation Focus Group


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