



Project HYGAS No. SS06020165

Mapping the impacts of the efforts to reduce greenhouse gas emissions through hydrogen additions on the lifetime of existing gas power plant infrastructure

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The project aims to enable a safe increase in the proportion of ecologically neutral hydrogen in hydrogen-gas mixtures in facilities currently using natural gas, thereby reducing natural gas emissions. To achieve this aim, it is necessary to describe the influence of different hydrogen concentrations on the mechanical properties of used construction materials, e.g., gas pipelines, to prevent their irreversible damage due to hydrogen embrittlement or corrosion, and to increase the confidence of the technical public in the safety of using hydrogen-gas mixtures. For this purpose, procedures and equipment necessary to assess the state of material degradation due to atomic and molecular hydrogen will be developed, and a prediction model using data science tools will be designed.

Project solution time: 04/2023 – 12/2025

Receiver: Výzkumný a zkušební ústav Plzeň s.r.o.

Co-receiver: MATERIÁLOVÝ A METALURGICKÝ VÝZKUM s.r.o.

