Hydrogen from renewable energy sources has the potential to enable the full decarbonization of the energy system. However, a broad introduction of renewable hydrogen is currently still being held back by the high overall costs. The H2REAL project was launched to loosen this brake.

The project aims to develop a Hydrogen Valley as a key for hydrogen technology and applications in the region of Eastern Austria. Because Eastern Austria offers the perfect environment to demonstrate the implementation of an integrated value chain of production, storage, distribution and consumption of H₂. The various partners of the project are divided into clusters according to their core competence and activities and presented graphically. Since each cluster covers only a fraction of the green hydrogen value chain, the involvement of strong regional key players from the entire spectrum of the value chain is crucial for success.

The H2REAL Valley deployment creates a strong cross-cluster cooperation, through which the hydrogen economy is developing in eastern Austria. The supra-regional cooperation with the model regions Green Energy Lab and New Energy for Industry will also be institutionalized and a project advisory board will be set up.

Based on the economic and ecological requirements of the individual industrial partners, the following implementation plan was drawn up.

Implementation plan:
- joint investments and coordinated infrastructure projects across several federal states and regions,
- development, implementation and optimization of innovative H₂ concepts and novel technical solutions (including several demonstrators),
- synergy effects along the entire hydrogen value chain that lead to a visible reduction in the local hydrogen price as a booster for the establishment of the hydrogen economy in Vienna and eastern Austria.

Goals:
The results of H2REAL ultimately enable more efficient and effective demonstration projects and consequently sustainable scale-up projects on a supra-regional basis.

Cluster classification:
Cluster I – production (blue),
Cluster II – freight-based distribution & logistics (grey),
Cluster III – mobility & infrastructure (red),
Cluster IV - pipeline-based transport and distribution (green).

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Project period: 2023 - 2026
Project partner: In cooperation with Green Energy Lab