

# Project Overview: "H2 Readiness of the TAG pipeline system"

A look at the current events in Europe shows that the expansion of renewable energy has gained noticeable importance and urgency. In the future, green gases such as hydrogen will be crucial for a climate-friendly and more independent energy supply. Gas transmission system operators such as TAG will play a central role thereto, as the transport of hydrogen via pipelines, especially via repurposed natural gas pipelines, is the most effective, competitive and sustainable method.

## **The H2 Project**

TAG's "H<sub>2</sub> Readiness of the TAG pipeline system" project connects the H2 pipeline at the Italian-Austrian border (Arnoldstein) with the ones at the Austrian Slovakian border (Baumgarten). It opens the gateway for low cost hydrogen from North Africa to Europe, enabling the transport of the green and alternative energy



carrier from an additional supply region to Europe's main demand regions.

The project consists of repurposing 1 out of 3 existing CH4 pipelines of TAG's system for 100% Hydrogen, with all related facilities such as compressors, metering stations and in/offtakes, between Arnoldstein and Baumgarten. There it is connected within Austria to the H<sub>2</sub>-WAG-pipeline of GCA to supply the central part of Austria and the southern part of Germany and also to the H<sub>2</sub>-pipeline of EUSTREAM. It serves as the Basis for Austria's local H<sub>2</sub> Network on DSO Level (AGGM: H2 Roadmap for Austria) to meet the local needs of customers in Austria.

Our 380 km long H2 pipeline is optimized to transport Hydrogen in " $H_2$  forward flow direction" from low cost production areas in North Africa, with an import capacity to Austria of around 168 GWh/day, to the largest hydrogen demand clusters by utilizing existing infrastructure.

Due to its bidirectional design, it can also transport Hydrogen in "H<sub>2</sub> reverse flow" and enables IT, AT, DE, SK, CZ and the full CEE countries to develop a Hydrogen-market, supporting competition and security of supply. The system is designed to have high availability to ensure security of supply.

#### **Project Data:**

- Repurpose of one out of 3 existing CH4 pipelines (380 km) for Hydrogen
- Construction of H2 compressors along the pipeline
- Metering Stations at the interconnection points
- Intake/offtake pointe for local production and supply (connection to the DSO Network)
- TSO-Connections: IT (SNAM), AT (GCA), SK (EUSTREAM)

### **Project Status:**

- Feasibility study ongoing
- It is aimed that the H2 pipeline is in full operation in 2030.

#### **Strong Project Support**

The project is supported by numerous large companies and demand regions along the corridor, potential producers and by the Austrian Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology.

The project has been submitted as candidate to receive the status "<u>Project of Common Interest</u>" on EU level and is part of Austria's <u>Coordinated Network Development Plan</u>. It is aimed that the H2 pipeline is in full operation in 2030.

### **The Corridor**



TAGs project, as part of the envisaged H2 network, is aligned in two TSO Groups, the <u>SunsHyne</u> Group and the <u>SoutH2 Corridor</u> Group to ensure consistent and needs based infrastructure development.

It is expected that the main source of H2 is North Africa. By taking advantage of the high solar irradiance and wind speeds, electricity can be produced at low cost, using renewable generation to produce the power for H2 production. To transport the H2, mainly repurposed CH4 pipelines will be used.

Therefore, it enables fast implementation and a lower environmental impact compared to new infrastructure or other transportation options. It provides Europe with affordable hydrogen by unlocking this low cost green generation with a vast potential (EHB & ECH2A: Learnbook on hydrogen Supply Corridors).

The entire corridor is serving the largest hydrogen demand clusters in central Europe, supports to decarbonize industries along the route up to Germany: it has the potential to become the future backbone of H2 supply, supporting society in Europe and North Africa.

It is an essential part of the European Hydrogen Network, covering the "Adriatic H2 Corridor", the "South Eastern H2 Corridor" the "Eastern H2 Corridor" according to the <u>REPowerEU</u> plan and also of corridor A (North Africa and Southern Europe) and E (East and South-East Europe) according to the <u>European Hydrogen Backbone</u>.