Trans Austria Gasleitung

TRANS AUSTRIA GASLEITUNG GMBH

Main artery of the gas network in Central Europe

Trans Austria Gasleitung GmbH is an Austrian gas transmission system operator and an important partner for the Austrian and European gas supply. Its core business is the transport of gas and the operation and maintenance of gas pipelines and facilities for the reliable and secure supply of energy to Austria and Italy.

More than 30 billion cubic metres of gas are transported annually from the Slovakian/Austrian border to the Austrian/Italian border quickly, silently and in an environmentally friendly manner via the approximately 1,140 km long pipeline network. The federal states of Lower Austria, Styria and Carinthia are also supplied with natural gas.

Transport: reliable, fast and environmentally friendly

Gas is transported quickly and invisibly to customers underground through pipelines with a diameter of about 1.0 m. So-called compressor stations are used at regular intervals to maintain the flow rate of approx. 30 km/h over long distances in the large pipelines.

The electric compressors increasingly used today are driven by high-speed electric motors with magnetic bearings. This modern technology is particularly characterised by increased efficiency and environmental friendliness.

Safety: modern and reliable

The safety of the gas pipelines is ensured by numerous measures, such as the continuous underground routing of the pipelines. The pipelines are equipped with so-called polyethylene insulation against corrosion and additionally with cathodic corrosion protection. In addition, they are regularly cleaned and checked for their technical condition using the so-called pigs.

In addition, the course of the pipeline is checked by regular walking and flying over it. On average, each gas pipeline is fitted with shut-off valves every 15 km to prevent gas escaping in the event of a fault. The operating status is reported to the central monitoring station 24/7 via fibre optic cable or radio link.

Trans Austria Gasleitung GmbH | Wiedner Hauptstrasse 120 A-1050 Wien | tag@taggmbh.at

155

155 Employees (50% Headquarter Vienna – 50% along the Pipeline)

30bn m³

30bn m³ Gas flows through the TAG pipelines annually – 90% of which in transit

Owner

Snam S.p.A. 84.47 % Gas Connect Austria GmbH 15.53%

1140 km

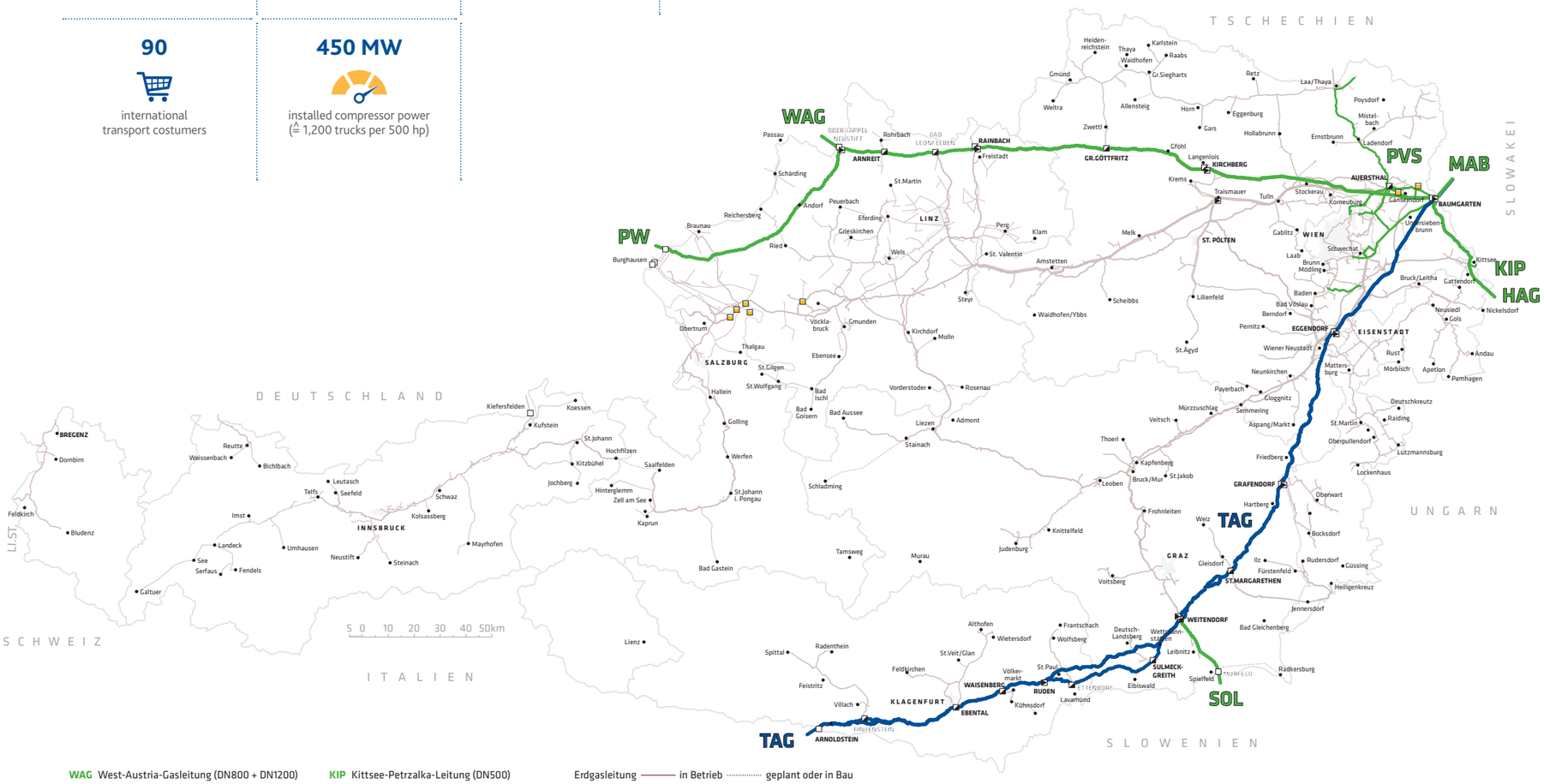
modern and efficient high-pressure gas pipeline network

90

international transport costumers

450 MW

installed compressor power (≙ 1,200 trucks per 500 hp)



WAG West-Austria-Gasleitung (DN800 + DN1200)
SOL Süd-Ost-Leitung (DN500)
HAG Hungaria-Austria-Gasleitung (DN700)
PW Penta West (DN700)

KIP Kittsee-Petrzalka-Leitung (DN500)
MAB March-Baumgarten-Gasleitung (DN500)
PVS Primärverteilungssystem (DN100 - DN1200)
TAG Trans-Austria-Gasleitung (DN900 - DN1050)

Erdgasleitung —— in Betrieb ····· geplant oder in Bau
□ Meßstation (international) ◪ Abzweigstation
Untertage-Erdgasspeicher ▶ Verdichterstation

Quellen: BMK, e-control, GCA, TAG (2019)

NATURAL GAS in Austria

15 %

Share of gas in electricity generation

8.8bn m³

Domestic gas consumption (=354 PJ)

22 %

Share of gas in gross energy consumption

8.3bn m³

Storage capacity (=334 PJ)

Future Perspective

Hydrogen

Carbon neutral gases, in particular hydrogen and biomethane, and carbon neutral electricity will contribute to a successful decarbonisation strategy. Hydrogen plays a central role in industry, especially in energy-intensive sectors such as steel production and the chemical industry. In a first step, the focus is on the CO_2 reduction potential through substitution of existing fossil-based hydrogen applications and future new hydrogen applications and process conversions up to space heating, combined with appropriate upscaling and adapted energy and raw material management.

The transport of energy from the supply sources to the users is already the core task supported by the gas transport infrastructure and TSOs. In the future, the cost-efficient transport of hydrogen via gas pipelines at home and abroad will create a cost-effective link between hydrogen production and hydrogen consumers. This transport can be achieved either through:

- Mixing hydrogen into a methane network
- Use of a special hydrogen infrastructure

Already today, about 20 TWh/a could be transported in the existing Austrian grid in the form of hydrogen if the currently permissible hydrogen content of 4 % in gas pipelines was fully exploited.

With the Austrian hydrogen network, hydrogen is transported across borders. Austrian consumers are supplied with hydrogen and producers take part in cross-border water trading. This will promote the central positioning of the Austrian hydrogen pipeline network and the hydrogen sector in the future European cross-border hydrogen market.

Small Scale LNG (SSLNG) – The Project

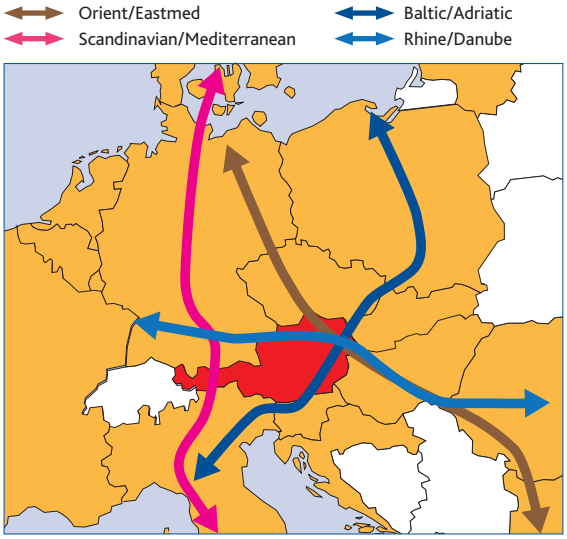
One of the central innovation topics, which TAG GmbH is pursuing vigorously with regard to decarbonisation, sustainability and increasing energy efficiency, is the construction and operation of a liquefaction plant for natural gas and biogas (Small Scale LNG/LBG) with a special market focus on heavy truck traffic.

Key data of the plant

- Capacity: 50,000 tonnes of LNG/LBG per year
- Supply of approx. 25 petrol stations or approx. 1,600 Trucks per year
- Completion planned for 2026, location in the eastern part of Austria
- LNG/LBG make a significant contribution to reduction of emissions

Advantages of LNG/LBG in truck transport

- 90–95% potential reduction of GHG emissions from LBG
- SO_x und NO_x reductions
- Sustainable improvement of air quality, and reduction of noise emissions
- Production of LNG/LBG using sophisticated technology
- Cost-effective and high availability of both Raw materials Natural gas and biomass
- Vehicle range up to 1,400 km
- cost advantage of 5–10% compared to diesel with too much additional potentials due to increasing CO_2 taxes



Austria as intersection of major transport routes in Central and Eastern Europe

District heating – The project

The compressor station Weitendorf with 3 gas-powered compressors is located approx. 20 km south of the provincial capital Graz and is thus ideally situated to recover the heat from turbine combustion and supply it to neighbouring communities and towns.

A waste heat recovery unit (WHRU), which can also convert heat into electricity, is already in operation.

Key data of the plant

- Storage of waste heat from the Weitendorf compressor station at approx. 120°C in the regional heating network.
- an alternative for regional heat supply security and diversification of heat sources.
- Depending on the concept, the project will generate up to 60–70 MW of transferable heat from the compressor capacities for the local network.

Benefits of district heating

- The project is expected to be successful thanks to the use of heat as a by-product and the maturity and affordability of technology to contribute to energy efficiency.
- The project aims to improve the security of heat supply of the district of Graz and the diversification of heat increase sources.