



Trans Austria Gasleitung

Austrian Gas Infrastructure Development Day 2019

TRANS AUSTRIA GASLEITUNG GmbH
KNEP 2020-2029

Vienna, 15.10.2019

Content

1. The TAG System –Supply and Transit

2. Capacity scenario and capacity projects

3. Re-investment projects

4. Perspective & Sustainable engagement

The TAG System

The TAG-System

- 3 Pipelines of 380 km each: 1140 km
- 5 compressor stations: 480 MW

Netzkopplungspunkte

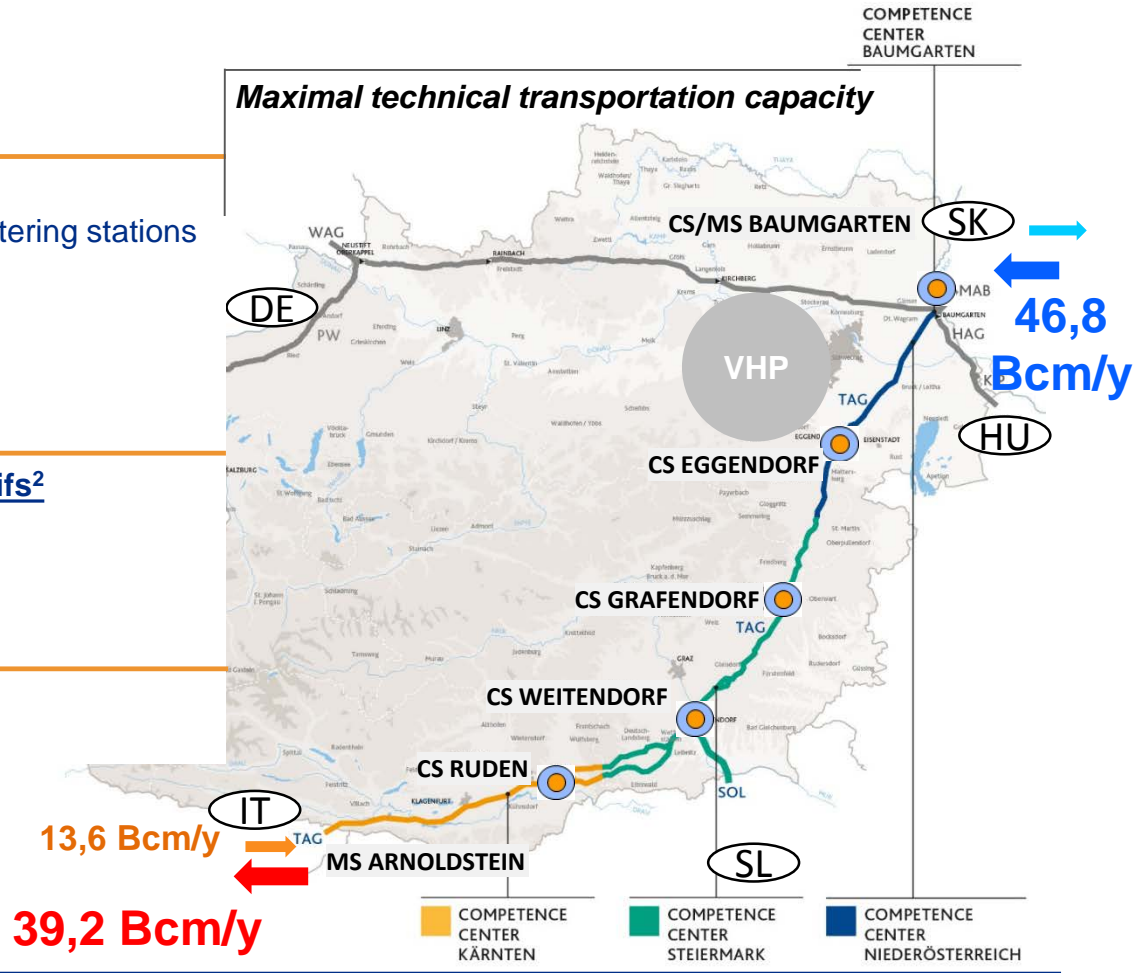
- 2 cross border interconnection points with metering stations (BGT, ARNO)
- 9 to the domestic Austrian distribution system
- 4 national internal (TAG<->GCA)
 - 3 in Baumgarten with WAG and PVS¹
 - 1 in Weitendorf with the SOL pipeline

Entry-Exit System: relevant points and Y-tariffs²

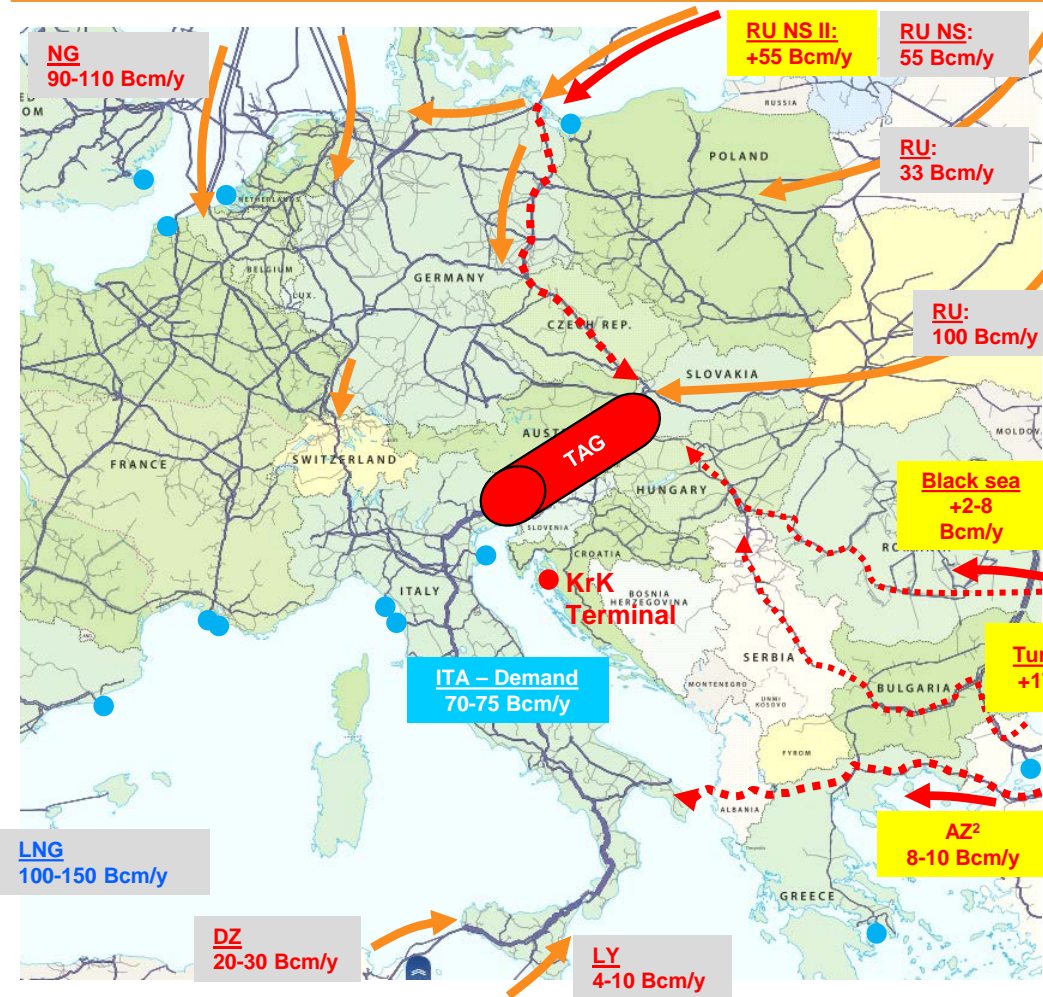
- ➡ Entry Baumgarten (FZK) 0,77 EUR/kWh/h
- ➡ Exit Arnoldstein (FZK) 4,63 EUR/kWh/h
- ➡ Entry Arnoldstein (DZK) 0,62 EUR/kWh/h
- ➡ Exit Baumgarten (UK) 1,12 EUR/kWh/h

Sourcing of Fuel gas / Electricity

- via tenders



The TAG System – Situation in central Europe 2020-2025



Projects with main relevance for TAGG¹

- TAP/TANAP: 2019 (~90% completion in Aug.)
- Nord Stream II++: 2019-2020
- Black Sea Gas²: ?
- Turkstream: 2019-2020
- KrK Terminal: 2021

- Existing supply / route
- Planned new supply / route
- FID / advanced projects

¹ Source: TYNDP 2018 – TAGG from ENTSOG

² Range mainly depending on the supply potential.

³ Range considering 31,5 Bcm/y of RU-Gas toward Turkey Entry; about 15 Bcm/y Turkey consumption

The TAG System – National supply

What is the TAG system?

- An Austrian supply gas System
- About 5-10% of gas demand Austria¹
- Backbone of the supply of South & South-East AT (Burgendland, Styria, Carintia) together with the „Südschiene“

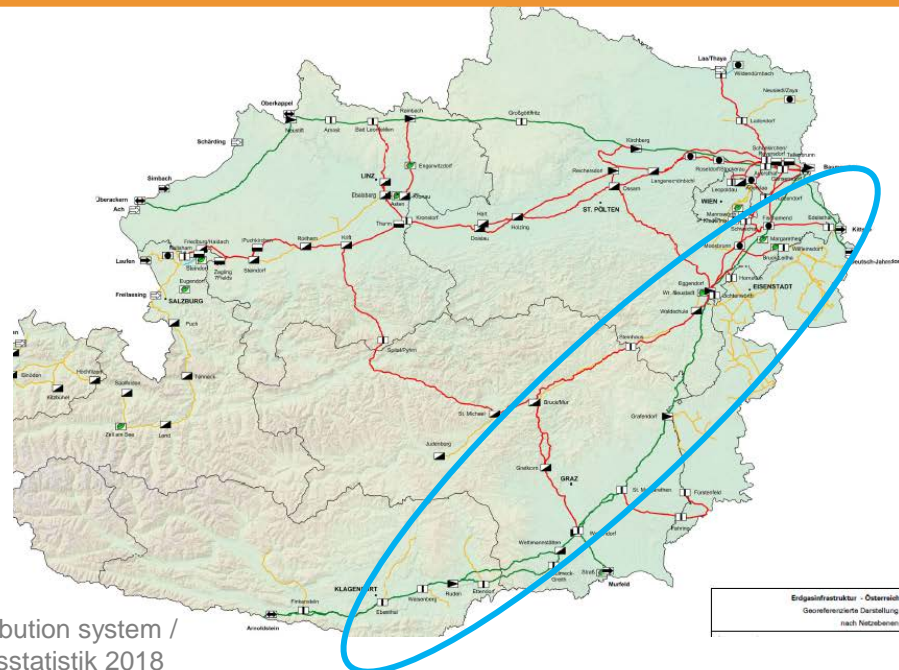
Versorgungssicherheit Österreichs
Industrie/KWK; SoS; Versorgungsinsel

Energie data –2018

- in Baumgarten: 331,605 GWh
- in Arnoldstein: 311.848 GWh
- to SOL: 13.244 GWh
- To Distribution Syst.: 11.234 GWh
- Fuel gas: 3.038 GWh

Key values:

- About 40% of ITA gas demand
- About 55% of SLO+HR gas demand
- About 10% of AT gas demand



The TAG System – EU Transit

What is the TAG system?

- A stable and reliable Gas Transit System
- About 40% of gas demand ITA¹
- About 55% of gas demand SLO + HR (over the SOL System of GCA)²

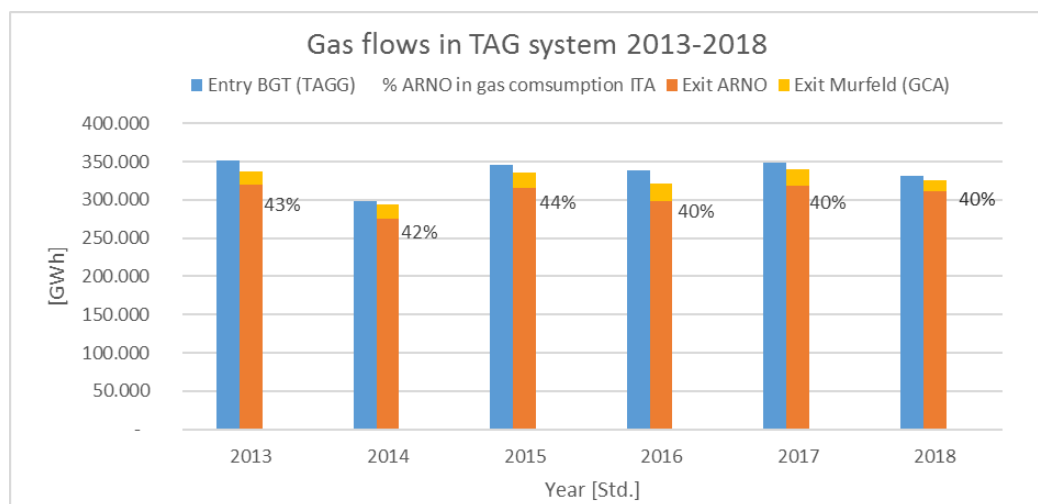
Security of transit for Security of Supply of
Italia, Slovenia and Croatia

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- Rund 40% ITA gas demand
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- Rund 5-10% AT gas demand



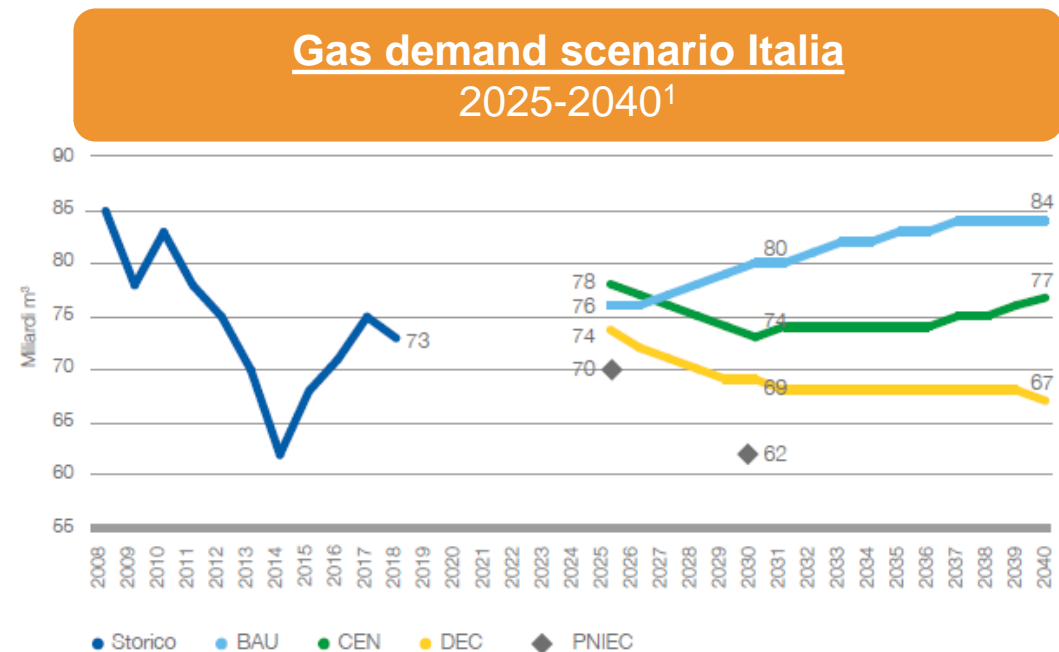
Short outlook on the Italian demand

Prolongation of current economy

- BAU: Business as usual; current trend and economic development

Compliance with European targets

- CEN: foresees the general development of RES, the green gases
- DEC: focusses on a stronger development of electricity and RES for the energy transition
- PNIEC: according the Italian NECP submitted end of 2018



Content

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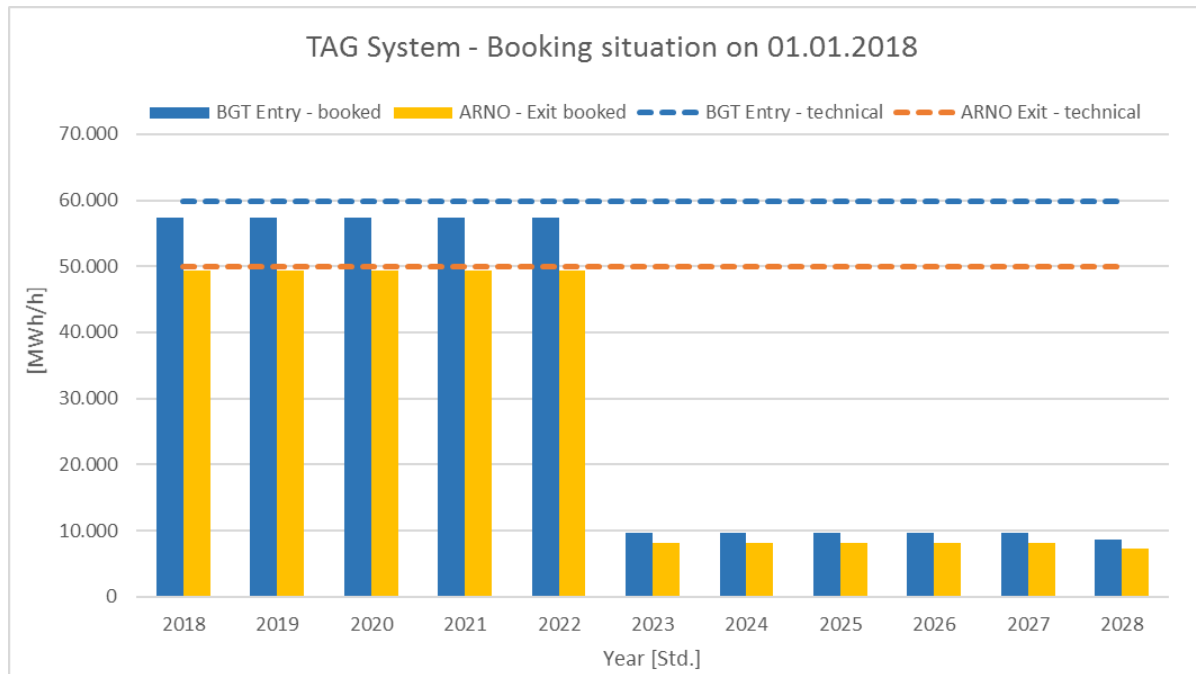
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Gas demand and project survey 2019

Relevant Points - TAG GmbH

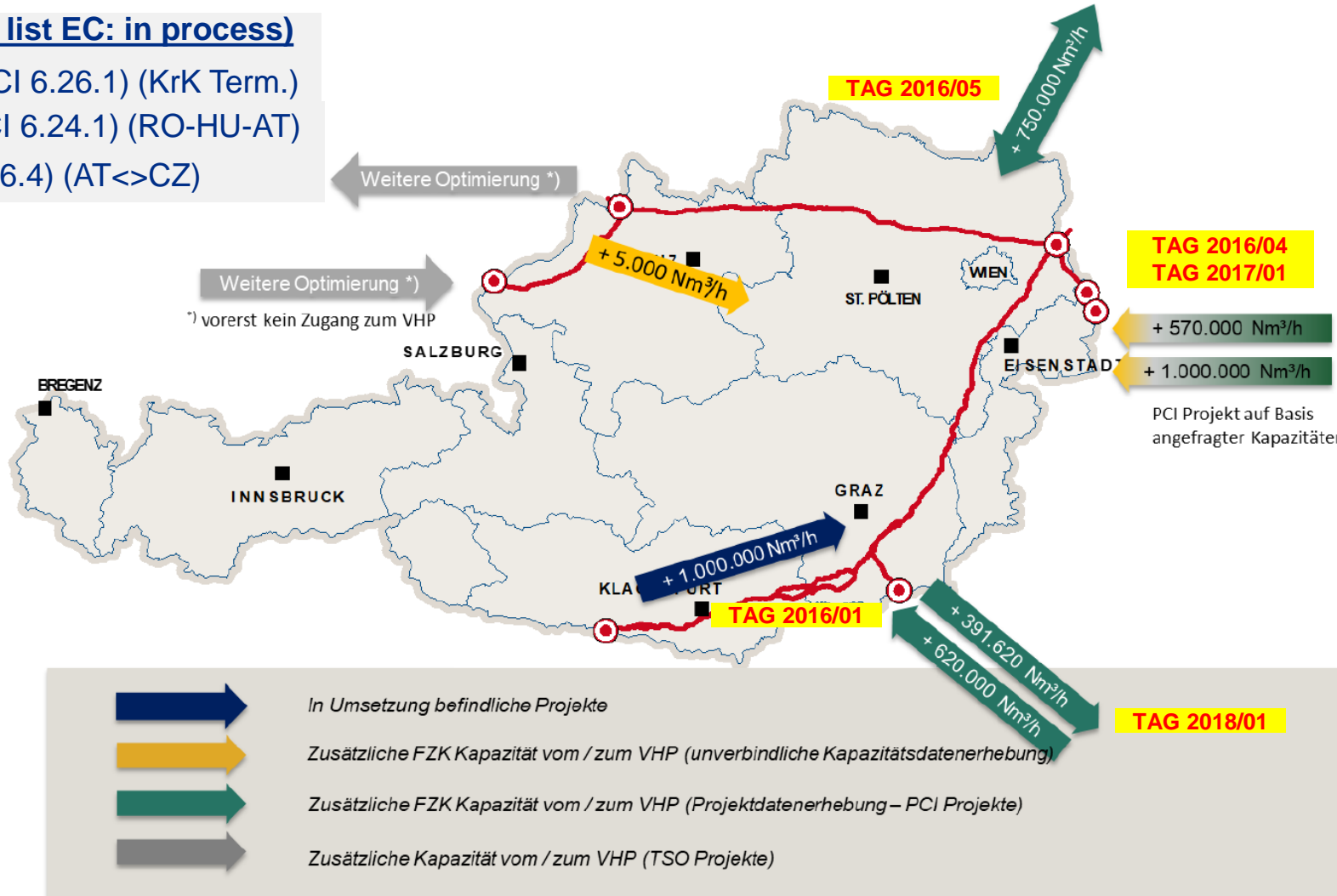


- High booked transportation capacity till 2023
- Significant increase of available capacity from 2023
- Capacity demand survey 2019: no demand
- Infrastructural project survey 2019: no demand

KNEP 2019: capacity scenario & TAG projects

PCI-projects (4th list EC: in process)

- GCA: Murfeld (PCI 6.26.1) (KrK Term.)
- GCA: Moson (PCI 6.24.1) (RO-HU-AT)
- GCA: BACI (PCI 6.4) (AT<>CZ)



5 projects for additional capacity

Completed

„Baumgarten Flexibilität“

- TAG 2015/01: GCA>TAG Reinforced connection - MS4 24.10.2016
- TAG 2016/02: GCA>TAG Reinforced connection - AZ1/BOP13 15.11.2017

In Planing or In completion

(Project with or
without
amendments)

TAGG Projects mainly complementary to GCA-PCI projects

- TAG 2016/04: Mosonmagyaróvár I (low option) 4,5 years
- TAG 2017/01: Mosonmagyaróvár II (high option) 4,5 years
- TAG 2016/05: BACI 4,5 years
- TAG 2018/01: Exit Murfeld 4,5 years

→ Implementation of project under condition of positive economic viability

TAGG Projects for Capacity quality upgrade / flexibilisation / SoS

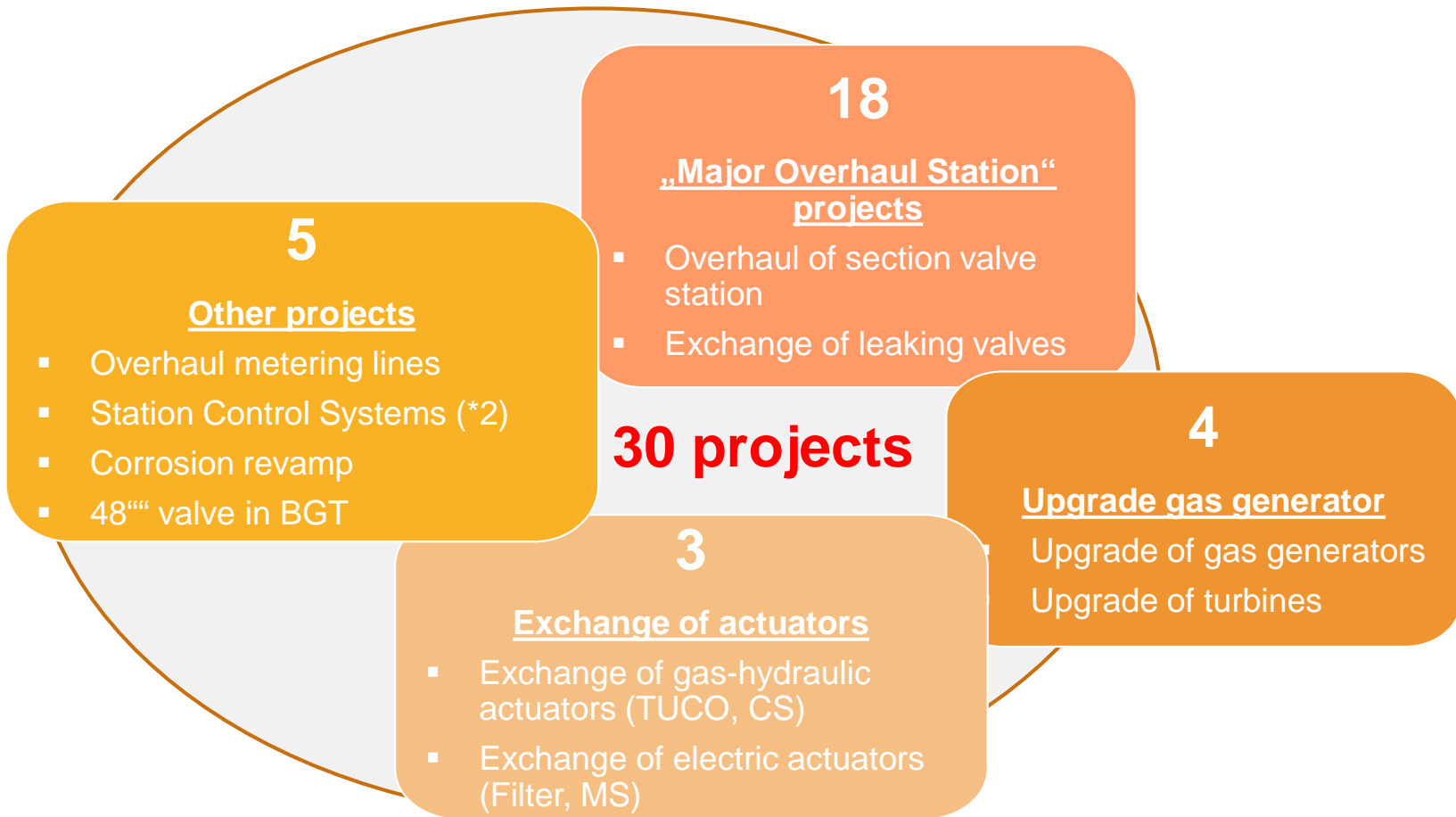
- TAG 2016/01: TAG Reverse Flow Weitendorf/Eggendorf Q4 2020
(also complementary to Entry Murfeld from GCA)

→ Project postponed by 1 year to 2020

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30 Re-investment projects



Security

Innovation

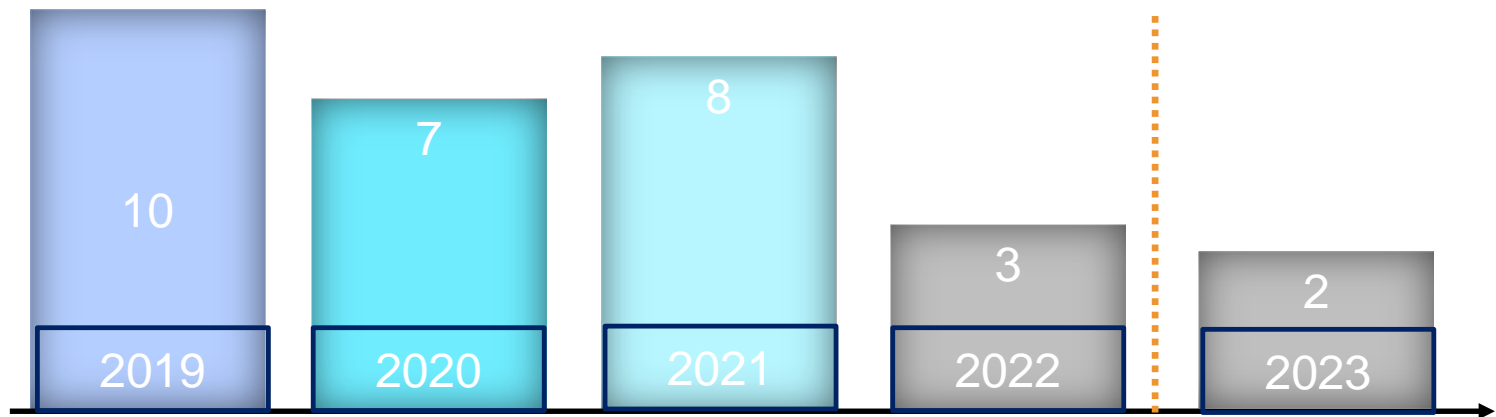
Environment

Digitalisation

Technology

KNEP 2019 – Re-investment projects

- 30 re-investment projects have been represented in current KNEP 2019.
 - Investment outlook amounts to approx. 3 years: 2020-2022++
 - Projects with high investments (Over 500 kEUR)
- Infrastructure of the 30 projects concerns:
 - 11 re-investment projects in Compressor stations
 - 19 re-investment projects along the pipeline and in the section valve station



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TAGG Positioning in the LNG mobility in AT

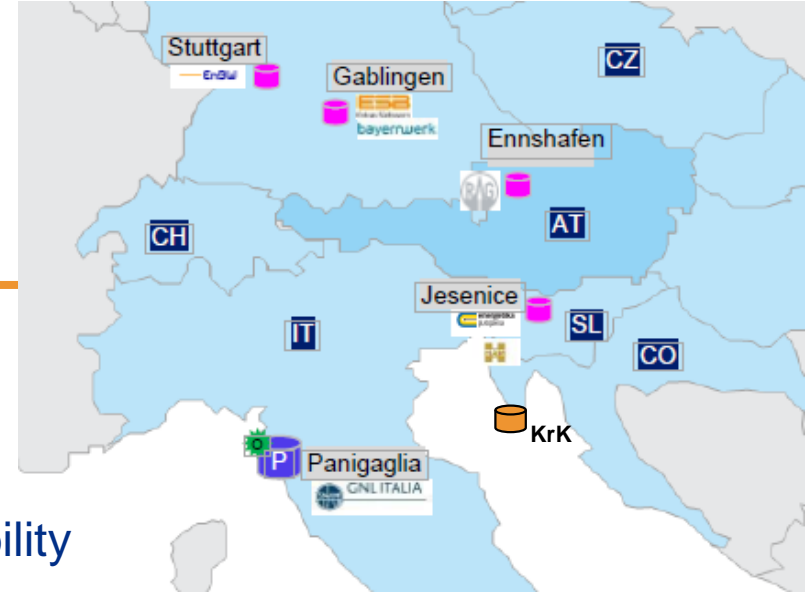
Rationale


- Foster AT market development for LNG in mobility
- Diversification of activity for TSO


MoU SNAM / OMV / TAGG signed (24.09.2019²)


- 2019: TAGG conducts a feasibility study

“Intention to jointly explore potential opportunities in the field of sustainable LNG mobility in Austria such as the construction of a small-scale LNG liquefaction plant, the framework for a later LNG supply agreement, and the development of a LNG market.”



 Existing large scale LNG terminal

 Existing LNG plant/stations, ITA not represented

 FID; in construction¹

EU target efficiency & carbon footprint reduction

Reduction of “carbon footprint” & emissions

→ Further steps // Further ideas

EU target - 2030

- NECP¹ submitted end 2018
- GHG: -40%
- Energy efficiency: -32,5%
- RES penetration: 32% in mix

TAGG lauchs internal thoughts

- Modernisation of Turbine and gas generators
- Electric-driven compressors
- Operate the car fleet on gas

Compressor-station	Gas-compressor	Elektro-compressor
Baumgarten	4	1
Eggendorf	3	1
Grafendorf	3	2
Weitendorf	3	
Ruden	3	

Compressor station and units	Turbine Type	Potential Technology Upgrade	Gas Generator Type	Potential Technology Upgrade	Project Phase
Baumgarten C500	72-hole old	72-hole new	DLE 1.0	DLE 1.5 Xtend	Planning
Baumgarten C600	72-hole new	/	DLE 1.0	DLE 1.5 Xtend	Planning
Baumgarten C700	46-hole	72-hole new	DLE 1.0	DLE 1.5 Xtend	Engineering
Baumgarten C800	72-hole new	/	DLE 1.5	DLE 1.5 Xtend	Executed
Ruden C400	46-hole	72-hole new	DLE 1.0	DLE 1.5 Xtend	Executed
Ruden C500	46-hole	72-hole new	DLE 1.0	DLE 1.5	Executed
Ruden C600	72-hole new	/	DLE 1.5	DLE 1.5 Xtend	Execution

Source: TAG GmbH

Thank you for your attention!

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