

Gas Preventive Action Plan of the Republic of Austria

according to Article 8 and Article 9 of Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010

Vienna, 2023

Imprint

Media owner, publisher and editor:

Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and
Technology, Radetzkystraße 2, 1030 Vienna

Responsible for the content: Department Crisis Management and Energy Intervention
Vienna, 2023. Status: 02 November 2023

Content

Content.....	3
1 General Information.....	5
1.1 Competent Authority.....	5
1.2 Risk Groups.....	5
2 Description of the Austrian Gas Network.....	6
2.1 Key Figures for the Austrian Gas Sector.....	6
2.2 Market Areas.....	8
2.3 Transmission Pipeline System.....	8
2.4 Distribution Network.....	9
3 Summary of National Risk Assessment.....	10
3.1 Risk Assessment Market Area East.....	10
3.1.1 Risk Elements.....	10
3.1.2 Identification of Possible Disruptions.....	11
3.1.3 Severity of the Possible Disruptions.....	12
3.1.4 Likelihood.....	12
3.1.5 Risk Matrix.....	13
3.1.6 Possible Disruptions in the High Risk Range.....	13
3.1.7 Possible Disruptions in the Moderate Risk Range.....	14
3.2 Risk Assessment Market Areas Tyrol and Vorarlberg.....	16
3.2.1 Risk Elements.....	16
3.2.2 Identification of Possible Disruptions.....	17
3.2.3 Risk Matrix.....	18
3.2.4 Possible Disruptions in the Moderate Risk Range.....	18
4 Infrastructure Standard.....	20
4.1 Single Largest Gas Infrastructure.....	20
4.2 N – 1 Formula.....	20
4.3 Calculation of the Infrastructure Standard for Austria.....	20
4.4 Cross-border Interconnection Points.....	22
5 Supply Standard.....	23
5.1 Legal Basis.....	23
5.2 Calculation of the Required Quantities and Services.....	24
5.3 Implementation of the Monitoring.....	25
5.4 Requirements for Compliance with the Supply Standard.....	25
5.5 Impact, Effectiveness and Efficiency of the Measure.....	26
5.6 Results of the 2022 Survey.....	26
5.7 Planned Expansion of the Supply Standard.....	27
6 Preventive Measures.....	28
6.1 Gas Storage.....	28
6.1.1 Strategic Gas Reserve of the Republic.....	28
6.1.2 Storage Incentives – Protected Gas Quantities.....	28

6.1.3	Direct Connection of all Austrian Gas Storage Facilities.....	28
6.1.4	Use-it-or-lose-it.....	28
6.1.5	Options for Balancing Energy (Market Maker).....	29
6.1.6	Bilateral Agreement with Germany on the Joint Use of the Haidach and 7Fields Natural Gas Storage Facilities	29
6.2	Diversification	30
6.2.1	Imports via Alternative Routes	30
6.2.2	Gas Diversification Act (GDG 2022)	30
6.3	Gas Consumption Reduction and Energy Efficiency	30
6.3.1	Energy Saving Campaign	31
6.3.2	Energy Efficiency Act (EEffG)	31
6.3.3	Expansion of Renewable Energy.....	31
6.3.4	“Get out of Oil and Gas” Subsidy Program	32
6.3.5	Renewable Heat Package (EWP).....	32
6.3.6	Environmental Subsidies Program.....	32
6.3.7	Renewable Gas Act (EGG).....	33
6.4	Other Prevention Measures	33
6.4.1	Long-term Planning (LTP).....	33
6.4.2	Coordinated Network Development Plan (CNDP).....	35
7	Other Measures and Obligations	38
7.1	The Technical Quality of the Network Service	39
7.2	The Commercial Quality of Network Service.....	40
8	Infrastructure Projects.....	42
8.1	Integrated Network Infrastructure Plan (NIP)	42
8.2	Ten-Year-Network Development-Plan	42
8.3	Projects of Common Interest – Austrian Project Candidates for Hydrogen Infrastructure 43	
8.4	H2 Collector East.....	44
9	Public Service Obligations Related to Security of Supply.....	46
10	Consultation with Stakeholder.....	48
11	Regional Dimension.....	49
	List of Tables.....	50
	List of Figures.....	51
	Abbreviations	52

1 General Information

1.1 Competent Authority

The authority responsible for the preparation of the Preventive Action Plan Gas is the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology. The plan was drawn up in cooperation with the regulatory authority E-Control and the market and distribution area manager, Austrian Gas Grid Management AG (AGGM).

1.2 Risk Groups

Austria is a member of the following risk groups:

- Eastern gas supply:
 - Risk Group "Ukraine"
 - Members: Bulgaria, Czech Republic, Denmark, Germany, Greece, Croatia, Italy, Luxembourg, Hungary, Austria, Poland, Romania, Slovenia, Slovakia and Sweden
 - Risk Group "Baltic Sea"
 - Members: Belgium, Czech Republic, Denmark, Germany, France, Luxembourg, Netherlands, Austria, Slovakia and Sweden
- North Africa gas supply :
 - Risk Group "Algeria"
 - Members: Greece, Spain, France, Croatia, Italy, Malta, Austria, Portugal and Slovenia
 - Risk Group "Libya"
 - Members: Croatia, Italy, Malta, Austria and Slovenia
- South-East gas supply:
 - Risk Group "Southern Gas Corridor – Caspian"
 - Members: Bulgaria, Greece, Croatia, Italy, Hungary, Malta, Austria, Romania, Slovenia and Slovakia

2 Description of the Austrian Gas Network

The Austrian gas network is a historically grown system, which, due to its geographical location, was an important hub for the onward distribution of Russian natural gas mainly to Southern and Western Europe in the past. In recent months, however, not least due to the Russian war of aggression against Ukraine, increased gas flows from west to east have been observed.

The focus of the development of the gas network is on assuring and increasing the security of supply for Austrian gas customers and those of neighbouring countries.

The Austrian gas network consists of three pipeline levels:

- **Transmission pipelines** for the import and export of gas by means of high-pressure pipelines
- **Level 1 distribution pipelines** for supra-regional gas transport in Austria
- **Level 2 and 3 distribution pipelines** for regional distribution to end customers

In addition to the transmission and distribution pipelines, storage facilities as well as natural gas production and biomethane plants are also part of the Austrian gas infrastructure.

The Austrian gas network is characterised by three market areas. The Market Area East is the largest, where two transmission system operators process the transit of gas. The networks of Trans Austria Gasleitung GmbH (TAG GmbH) and Gas Connect Austria are interconnected in Baumgarten. Historically, the largest share of the gas flow comes from Baumgarten. The ratio between gas transit and consumption in Austria has been about 5 to 1 in recent years.

The lower gas flows from Russia to the EU triggered a higher gas flow from Germany to Austria in 2022. In the past, the gas flows in the TAG system were operated in normal flow (from north to south). Since 2022, a physical flow from Italy to Austria has been realised regularly due to the geopolitical situation.

2.1 Key Figures for the Austrian Gas Sector

Austria holds gas fields in Lower Austria, Upper Austria and Salzburg, which produced approx. 6.96 TWh in 2022, which is equivalent to about 7.9 % of domestic consumption.

Austria has a very high underground gas storage capacity (97.64 TWh) in relation to the size of the country and its gas demand. The existing storage facilities are thus able to store about 100 % of the domestic gas consumption in one year, but storage customers use them not exclusively for Austria.

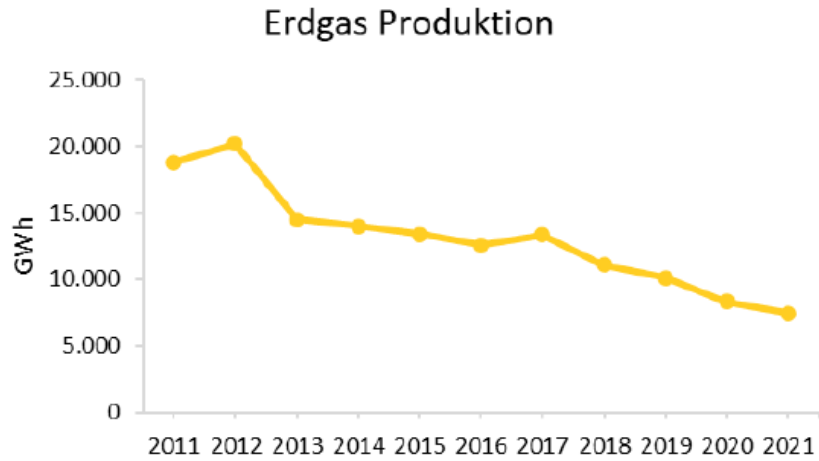


Figure 1: Natural gas production in AT 2021; Source: AGGM-CNDP 2022

Table 1: Key figures on the gas industry for Austria

Natural gas key figures in GWh	
Domestic production (2022)	6 960
Imports (2021)	444 517
Storage balance (2021)	41 722
Exports (2021)	393 545
Gross domestic consumption (2021)	100 308
Thermal power plants (2021)	26 697
Heating plants (2021)	2 620
Final energy consumption (2021)	65 045
Industry (2021)	35 943
Transport (2021)	2 366
Other sectors (2021)	11 211
Households (2021)	21 472
Storage volume (working gas) 2023	97 644

Source: Eurostat, retrieved 21.08.2023; AGSI+, retrieved 16.08.2023

2.2 Market Areas

Austria is divided into three market areas (MA):

- Market Area East
- Market Area Tyrol
- Market Area Vorarlberg

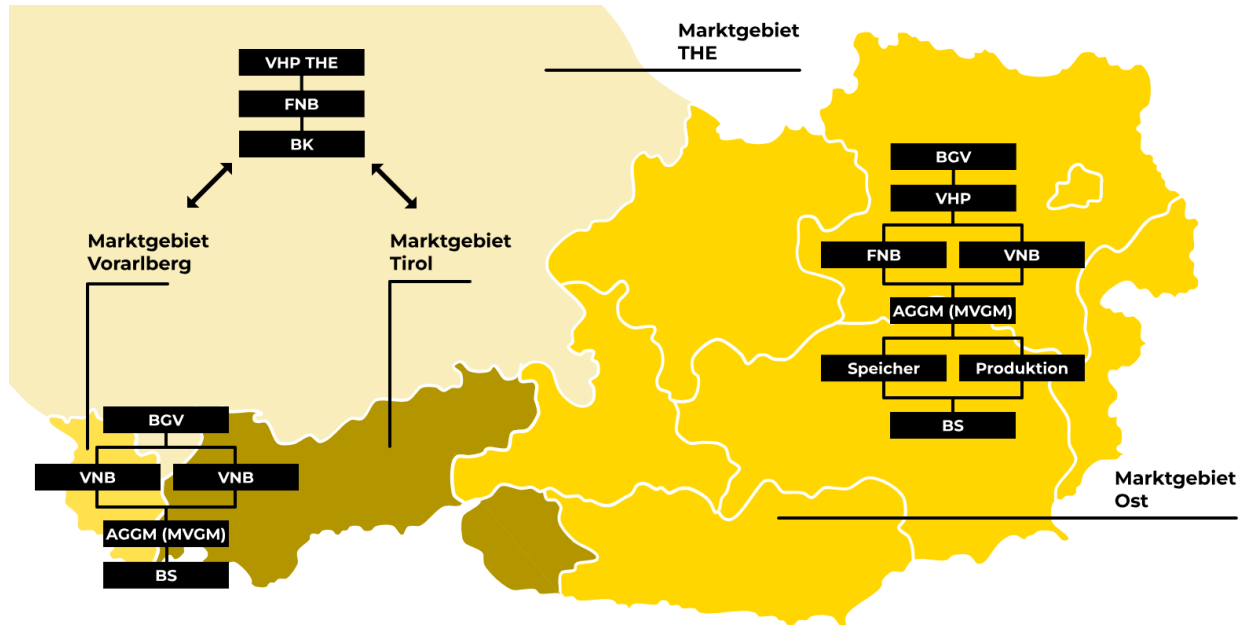


Figure 2: Market areas and market participants; Source: AGGM

2.3 Transmission Pipeline System

Transmission pipelines are pipeline facilities for the transport of natural gas through a high-pressure pipeline or network. The transmission pipelines and their auxiliary facilities, e.g. compressor and metering stations, enable the transit of natural gas through Austria as well as the connection at grid interconnection points via their route with grid level 1. They partly cover domestic supply. The Trans Austria Gasleitung (TAG) and the West-Austria-Gasleitung (WAG) pipelines form the main axes in the gas network. The Austrian transmission network only runs through the Market Area East and comprises approx. 2,000 km of high-pressure pipelines.

The Austrian transmission system has six interconnection points, two with Germany (Oberkappel and Überackern/Burghausen), one with Slovakia (Baumgarten), one with Hungary (Mosonmagyaróvár), one with Slovenia (Murfeld/Ceršak) and one with Italy (Arnoldstein/Tarvisio). There is another connection point with Slovakia (Petrzalka), which is currently not used.

AGGM is responsible for the coordination of the network control as well as network management and balancing energy management in the transmission network.

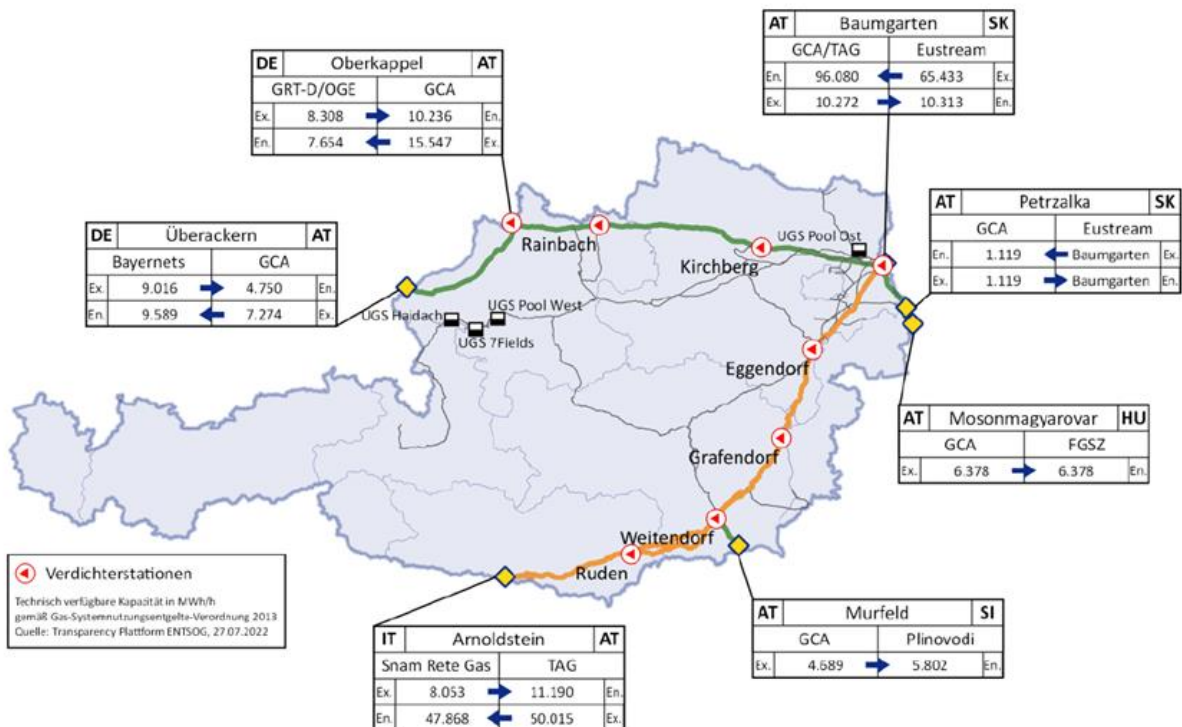


Figure 3: Technical capacities at the relevant points in the MA East in MWh/h; Source: AGGM-CNDP 2022

2.4 Distribution Network

The Austrian distribution network covers all market areas (East, Tyrol and Vorarlberg) and has a total length of approx. 44,000 km.

Level 1 (high-pressure network) distribution pipelines are pipelines which are operated at high pressures of up to 70 bar and are mainly required for supra-regional gas flow control and thus large-scale customer supply. They also serve as connections to natural gas storage facilities.

As the distribution area manager AGGM is responsible for controlling the distribution network level 1. Level 2 and 3 distribution pipelines are pipelines that serve to directly supply end customers and are controlled by the network operators. The majority of end consumers are connected to the natural gas supply via low-pressure pipeline systems. The natural gas is brought to the vicinity of the end consumers under high or medium pressure and reduced to low pressure level in pressure regulating stations.

The natural gas, which is imported e.g. from Russia, Norway, the USA, Qatar and from other countries, arrives mainly at the natural gas stations Baumgarten (Lower Austria) and Oberkappel (Upper Austria) for further distribution in Austria. Here it is taken over, measured, tested and compressed for further transport. Compressor stations and many measuring and transfer stations make an efficient natural gas transport possible.

3 Summary of National Risk Assessment

The national risk assessment was carried out separately for the Market Area East and the Market Areas Tyrol and Vorarlberg.

3.1 Risk Assessment Market Area East

3.1.1 Risk Elements

The following 42 risk elements were examined:

- (International) gas flows (5):
 - ENTRY Point Baumgarten (gas flow through it),
 - ENTRY Point Oberkappel (gas flow through it),
 - ENTRY Point Arnoldstein (gas flow through it),
 - ENTRY Point Überackern (gas flow through it),
 - No gas supply from the Russian Federation to Europe.

- Infrastructures (34):
 - (Gas station) Baumgarten,
 - (Network interconnection point) Oberkappel,
 - (Network interconnection point) Arnoldstein,
 - (Network interconnection point) Überackern,
 - TAG pipeline (Trans Austria Gas Pipeline),
 - 4 compressor stations along the TAG pipeline (Eggendorf, Grafendorf, Weitendorf, Ruden),
 - 9 exit stations along the TAG pipeline (Eggendorf, Grafendorf, St. Margarethen, Weitendorf, Sulmeck/Greith, Ettendorf, Waisenberg, Ebenthal, Finkenstein),
 - WAG pipeline (West Austria Gasleitung),
 - 2 compressor and exit stations along the WAG pipeline (Kirchberg, Rainbach),
 - 3 exit stations along the WAG pipeline (Großgöttfritz, Bad Leonfelden, Arnreith),
 - Penta West line,
 - Neustift compressor station on the Penta West line,
 - Production facilities of OMV and RAG (2),
 - 6 storage sites (Haidach, Schönkirchen, Tallesbrunn, Puchkirchen, 7Fields/Zagling, Aigelsbrunn & Haidach 5).

- Incidents (3):
 - Price volatility,
 - Insufficient investment,
 - Sudden, unexpected spikes in demand.

Some risk elements are broken down into several subsystems (components): e.g.

- Risk element Baumgarten is subdivided into, among others
 - 3 measuring stations,
 - 3 compressor stations and
 - Baumgarten node as a whole.
- Risk element TAG pipeline (Trans Austria Gasleitung) is subdivided into
 - 7 sections (pipeline sections).

In total, these are 62 subsystems.

3.1.2 Identification of Possible Disruptions

Several disruptions are possible per subsystem of each risk element; the total number of disruptions examined is 498.

The categories of the examined disturbances are the following:

- In the (international) gas flows:
 - Political discrepancy supplying country / transit country;
 - Terrorist attack on a foreign main infrastructure facility or damage as a result of armed conflict
 - Technical failure of a foreign main infrastructure;
 - Failure of a main foreign infrastructure due to natural disaster (flood, earthquake, etc.);
- Infrastructures:
 - Technical failure,
 - fire,
 - terrorist attack,
 - natural event (flood, earthquake, etc.),
 - failure of electricity supply,
 - failure of the IT infrastructure;
 - risks of a social nature (strike, sabotage, vandalism, theft);
- In the case of the 3 events (price volatility, insufficient investment, sudden and unexpected spikes in demand):
 - Sharp price increases (due to bottleneck situation in upstream networks or speculation),
 - Unpredictable developments in demand,
 - Time delays in the implementation of investment measures,
 - Unforecasted cold spells.

3.1.3 Severity of the Possible Disruptions

The severity of the disruption is assessed using a five-point scale:

- (1) Low => No countermeasures required to maintain security of supply,
- (2) Moderate => Supply to all customers ensured with technical and supply-side measures,
- (3) Significant => Supply of protected customers ensured with market-based measures,
- (4) Severe => Supply of protected customers only ensured with non-market-based measures,
- (5) Very severe => No supply to protected customers ensured.

3.1.4 Likelihood

The likelihood of the disorder occurring is assessed using a five-point scale:

- (1) Very unlikely: $E < 0.01$ => Less often than once in 100 years,
- (2) Unlikely: $0.01 \leq E < 0.03$ => Once in 30 to 100 years,
- (3) Possible: $0.03 \leq E < 0.1$ => Once in 10 to 30 years,
- (4) Likely: $0.1 \leq E < 1$ => Once in 1 to 10 years,
- (5) Very likely: $E \geq 1$ => Annually or more often.

3.1.5 Risk Matrix

From the combination of the severity of the impact and the probability of occurrence of a disruption results the position of this disruption in the risk matrix:

Likelihood	5	very likely more than once in 10 years	40	8	5	0	5
	4	likely once in 10 years	0	0	2	0	0
	3	possible once in 10 to 30 years	41	25	0	1	13
	2	unlikely once in 30 to 100 years	199	54	6	0	45
	1	very unlikely less than once in 100 years	29	14	1	1	9
Risk matrix - overall			low	moderate	significant	severe	very severe
			1	2	3	4	5
Severity							
Possible disruptions in relation to risk elements / subsystems					Amount	% Share	
Low risk					410	82,3%	
Moderate risk					65	13,1%	
High risk					23	4,6%	
Total					498	100,0%	

3.1.6 Possible Disruptions in the High Risk Range

In the Market Area East, a total of 23 possible disruptions in the high risk range (all of regional / local significance) were identified.

They concern the risk elements:

- 1. ENTRY Point Baumgarten (supply via UA and SK is interrupted for a winter half-year (October to March)) (2 disruptions).
- 1. ENTRY Baumgarten (procurement via UA and SK is interrupted for the injection period (April to November)) (2 disruptions)
- 5. No gas delivery from the Russian Federation to Europe via all routes (supply via SK permanently interrupted) (1 disruption)
- 14. Exit station Grafendorf (TAG, connection to the distribution level in central Burgenland) (3 disruptions),
- 15. Exit station St. Margarethen (TAG, connection to the distribution level in south-east Styria and south Burgenland) (3 faults),
- 18. Exit station Sulmeck-Greith (TAG, connection to the distribution level in South Styria) (3 faults),
- 19. Exit station Ettendorf (TAG, connection to the distribution level in South Carinthia / Lavanttal) (1 fault),
- 21. Exit station Waisenberg (TAG, connection to the distribution level in South Carinthia / Völkermarkt) (1 fault),
- 23. Exit station Finkenstein (TAG, connection to the distribution level in South Carinthia / Villach) (1 fault),

- 26. Exit station Großgöttfritz (WAG, connection to the distribution level in Northern Lower Austria / Zwettl) (3 faults),
- 29. Exit station Arnreith (WAG, connection to the distribution level in North Upper Austria / Rohrbach) (3 faults).

The main focus of this risk assessment is on a long-term or permanent interruption of gas supplies from the Russian Federation due to political disagreements or as a result of damage to foreign infrastructure due to a terrorist attack or as a result of armed conflict.

Risk mitigation recommendations:

- Examination of further alternative routes from Norway, North Africa, Azerbaijan and LNG terminals and possible infrastructure projects in upstream network areas,
- Filling of the Haidach and 7Fields storage facilities from Germany,
- Review of the maximum possible withdrawal capacities from the Haidach and 7Fields storage facilities or increase in withdrawal possibilities,
- Expansion of import capacities from Germany (WAG) and Italy,
- Maintenance of the Strategic Gas Reserve,
- Reduction of gas consumption.

In addition, there is a risk of an interruption of the gas pipeline (level 2) immediately after the station or complete failure of the exit station for a period of 1 to 7 days or an even longer period.

Reasons for this are:

- Excavation / digging work or
- Failure of the electricity supply or
- Failure of critical IT infrastructure.

Recommendations for risk mitigation:

- Create conditions to clarify the storage volume of the level 2 pipeline network,
- Create conditions to clarify the use of alternative feed-in options,
- Thematization of these disruptions with the affected distribution system operator.

3.1.7 Possible Disruptions in the Moderate Risk Range

In the Market Area East, a total of 65 possible disruptions in the moderate risk range were identified, 6 of which are of significance for the entire Market Area East, the rest are of regional / local significance.

The 6 possible disturbances with significance for the entire Market Area East relate to the risk element:

1. ENTRY Point Baumgarten (gas flow via this point) (6 disruptions)

Specifically, this entails the following risks:

- No supply of gas via UA and SK to Baumgarten for a period of 4 weeks,
- No delivery of gas via UA and SK to Baumgarten for a winter half-year (October to March) and
- No delivery of gas via UA and SK to Baumgarten for the single storage period (April to November).

Possible reasons:

- (Long lasting) political disagreement supplier country / transit country or
- Technical failure of a foreign main infrastructure, no repair over a long period of time,
- Terrorist attack on a foreign main infrastructure facility or damage as a result of armed conflict, no repair over a long period of time, or
- Reduction to contractual minimum deliveries

Recommendations for risk reduction:

- Determine max. technical withdrawal from OMV, RAG and Uniper storage facilities for 182 days (winter half-year),
- Examine further alternative routes from Norway and from LNG terminals,
- Examining the maximum possible withdrawal capacities from the Haidach and 7Fields storage facilities or increasing the withdrawal possibilities,
- Expansion of import capacities from Germany (WAG) and Italy,
- Maintaining the Strategic Gas Reserve
- Reduction of gas consumption.

The remaining 59 possible disruptions with significance of regional / local importance concern the risk elements:

- 14. exit station Grafendorf (TAG, connection to the distribution level in central Burgenland) (6 faults),
- 15. exit station St. Margarethen (TAG, connection to the distribution level in south-eastern Styria and southern Burgenland) (6 faults),
- 18. exit station Sulmeck-Greith (TAG, connection to the distribution level in South Styria) (6 faults),
- 19. exit station Ettendorf (TAG, connection to the distribution level in southern Carinthia / Lavanttal) (7 faults),
- 21. exit station Waisenberg (TAG, connection to the distribution level in South Carinthia / Völkermarkt) (7 faults),
- 22. exit station Ebental (TAG, connection to the distribution level in South Carinthia / Klagenfurt) (8 faults),
- 23. exit station Finkenstein (TAG, connection to the distribution level in South Carinthia / Villach) (7 faults),
- 26th exit station Großgöttfritz (WAG, connection to the distribution level in Northern Lower Austria / Zwettl) (6 faults) and

- 29. exit station Arnreith (WAG, connection to the distribution level in Northern Upper Austria / Rohrbach) – (faults)

Specifically, there is a risk of complete failure of the exit station for a period of 1 day to 2 months.

Possible reasons:

- Technical failure,
- fire,
- terrorist attack,
- flood / storm / earthquake,
- sabotage,
- vandalism,
- theft.

Risk mitigation recommendations:

- Create conditions to clarify the storage volume of the level 2 pipeline network,
- Create conditions to clarify the use of alternative feed-in options,
- Ensure rapid response of standby services and technical precautions in connection with electrical failures.

3.2 Risk Assessment Market Areas Tyrol and Vorarlberg

3.2.1 Risk Elements

In the market areas Tyrol and Vorarlberg, the following 4 risk elements and their total of 12 subsystems were examined:

- ENTRY Points in Tyrol and Vorarlberg,
 - Kiefersfelden transfer point to the network of TIGAS Erdgas Tirol GmbH,
 - Vils transfer point to the network of Erdgasversorgung Außerfern GmbH,
 - Lindau transfer point to the network of Vorarlberger Energienetze GmbH,
 - Leiblach transfer point to the network of Vorarlberger Energienetze GmbH,
 - Höchst transfer point to the network of Vorarlberger Energienetze GmbH,
 - Bangs transfer point to the network of Vorarlberger Energienetze GmbH.
- Gas flows from/via Germany,
 - Network of TIGAS Erdgas Tirol GmbH or network of Erdgasversorgung Außerfern GmbH,
 - Network of Vorarlberger Energienetze GmbH or Stadtwerke Bregenz GmbH,
- Gas supplies from Russia,
 - Network of TIGAS Erdgas Tirol GmbH or network of Erdgasversorgung Außerfern GmbH,
 - Network of Vorarlberger Energienetze GmbH or Stadtwerke Bregenz GmbH,
- Gas supplies from Western Europe,

- Network of TIGAS Erdgas Tirol GmbH or network of Erdgasversorgung Außerfern GmbH,
- Network of Vorarlberger Energienetze GmbH or Stadtwerke Bregenz GmbH.

3.2.2 Identification of Possible Disruptions

For each subsystem of each risk element, several disruptions are possible; the total number of examined disruptions amounts to 25.

The categories of the examined disruptions are the following:

- ENTRY Points in Tyrol and Vorarlberg,
 - Total failure for the duration of 1 day to 1 month due to
 - technical failure,
 - sabotage/attack,
 - natural event.
 - Failure of a component for a period of 1 day due to
 - technical failure,
 - sabotage/attack,
 - natural event.
- Gas flows from / via Germany,
 - Total failure for a period of 1 day to 1 week due to
 - technical failure,
 - sabotage / attack,
 - natural event.
 - Partial outage for a period of 1 day to 1 week due to
 - technical failure,
 - sabotage/attack,
 - natural event.
 - Partial failure for a period of 1 day to 1 week due to
 - bottleneck situation in the upstream transmission network.
- Gas deliveries from Russia,
 - Permanent total failure due to,
 - technical failure,
 - sabotage / attack,
 - natural event,
 - political reason.
 - Permanent partial failure due to,
 - technical failure,
 - sabotage/attack,
 - natural event,
 - political reason.
- gas supplies from Western Europe,
 - Total failure for the duration of 1 day to 1 week due to
 - technical failure,
 - sabotage / attack,
 - natural event.

- Partial outage for a period of 1 day to 1 week due to
 - technical failure,
 - sabotage/attack,
 - natural event.

3.2.3 Risk Matrix

The assessment of the severity of the disruption, the assessment of the probability of the disruption occurring and the determination of the position of this disruption in the risk matrix were carried out in the same way as for the MA East.

Likelihood [cases/year]	5	very likely: $E \geq 1$	4	0	0	0	0
	4	likely: $0,1 \leq E < 1$	0	0	0	0	0
	3	possible: $0,03 \leq E < 0,1$	0	1	0	0	0
	2	unlikely: $0,01 \leq E < 0,03$	9	2	1	1	2
	1	very unlikely: $E < 0,01$	0	0	1	2	2
			<i>low</i>	<i>moderate</i>	<i>significant</i>	<i>severe</i>	<i>very severe</i>
			<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
			<i>Severity</i>				

Possible disruptions in relation to risk elements / subsystems		Amount	% Share
	Low risk	20	80.0 %
	Moderate risk	5	20.0 %
	High risk	0	0.0 %
Total		25	100.0 %

3.2.4 Possible Disruptions in the Moderate Risk Range

In the market area Tyrol and in the market area Vorarlberg 5 possible disruptions in the moderate risk range were identified.

These 5 possible disruptions in the moderate risk range concern the risk elements:

1. Entry Points Tyrol and Vorarlberg (3 disruptions).
2. Gas flows from/via Germany (2 disruption).

Specifically, the following risks exist:

- Total failure of the Kiefersfelden transfer point to the network of TIGAS Erdgas Tirol GmbH for a period of 1 day to 1 week,
- Total failure of the Vils transfer point to the network of Erdgasversorgung Außerfern GmbH for a period of 1 day up to 1 week,
- Total failure of the network of TIGAS Erdgas Tirol GmbH or the network of Erdgasversorgung Außerfern GmbH for a period of 1 day to 1 week,

- Total failure of the Lindau transfer point to the network of Vorarlberger Energienetze GmbH for a period of 1 day up to 1 week, and
- Total failure of the network of Vorarlberger Energienetze GmbH or Stadtwerke Bregenz GmbH for a period of 1 day up to 1 week.

As no Russian gas has already been contractually purchased by Tyrol and Vorarlberg since Russia completely stopped deliveries to Germany, there is no impact and the severity of the risk is 1.

Possible reasons:

- technical failure,
- sabotage/attack,
- natural event and
- political reason.

Risk mitigation recommendations:

- Stockpile critical plant components/operating equipment,
- Smart deployment of technical and maintenance teams so that critical points can be reached as quickly as possible if necessary,
- Contractual provisions in new contracts with customers and suppliers,
- Diversification of procurement (multiple suppliers),
- Review and update existing agreements with adjacent network operators/suppliers, and
- Swift completion of the interconnector between Salzburg and Tyrol ("Hochfilzenleitung") and thus direct access to the natural gas storage facilities in Upper Austria.

4 Infrastructure Standard

The competent authority shall take the necessary measures to ensure that, in the event of failure of the single largest gas infrastructure, the technical capacity of the remaining infrastructure is capable of delivering the quantity of gas needed to meet the total demand for natural gas in the calculated area on a day of exceptionally high demand, as it is statistically likely to occur once in 20 years.

It should be noted that the infrastructure standard alone is not a meaningful measure of a country's security of supply, as

- only the infrastructure is considered. No consideration is given to whether gas supply sources are actually available at the possible import points and whether they are actually used.
- import infrastructure is also used in the MA East for transit through the MA East, these capacities are not available for the supply of the MA East.
- the infrastructure standard is a static parameter. For an assessment of the security of supply, it must also be considered whether the storage facilities named as entry points can also be filled again.

This means that even with a high infrastructure standard, the creation of additional capacities may be necessary.

4.1 Single Largest Gas Infrastructure

The single largest gas infrastructure in Austria is the Baumgarten grid interconnection point on the border with Slovakia.

4.2 N – 1 Formula

$$N - 1 [\%] = \frac{EP_m + P_m + S_m + LNG_m - I_m}{D_{\max}} \times 100$$

4.3 Calculation of the Infrastructure Standard for Austria

For the Market Area East, the result of the infrastructure standard calculation is 172 %. This result proves that the natural gas infrastructure in the Market Area East meets the requirement of greater than 100 % according to Regulation (EU) 2017/1938. However, the framework conditions have changed significantly since February 2022 with the Russian war of aggression on Ukraine. Against this backdrop, the informative value of the infrastructure standard, which is based purely on performance, is severely limited. Despite an infrastructure standard of more than 100 % in Austria, a secure supply cannot be assumed, especially if the largest infrastructure, Baumgarten (main source: Russia), were to

permanently cease to exist and the remaining infrastructure would have to be used to supply end customers, fill storage facilities in accordance with minimum storage levels and export to downstream countries on the basis of fixed capacities.

$$172 [\%] = \frac{180.45 + 2.1 + 44.07 + 0.0 - 140.34}{50.31} \times 100$$

Table 2: Infrastructure standard

System name	Techn. capacity [mio. Nm ³ /d]	Definition & explanation
Baumgarten	140,34	Exit Slovakia
Oberkappel	21,95	Minimum from Exit THE and WAG Kap OK-->BM
Überackern	0	Integrated in Oberkappel
Arnoldstein	17,29	Exit Italy
Freilassing & Laa/ Thaya	0,87	Designated standard capacity
EPm	180,45	Technical capacity of entry points
Natural Gas Production OMV	1,76	Booked standard capacity
Natural Gas Production RAG	0,30	Booked standard capacity
Biomethane Production	0,05	Booked standard capacity
Pm	2,10	Max. technical production capacity
Storage Pool OMV	23,39	at storage level of 30 % working gas volume
Storage Pool RAG	14,20	at storage level of 30 % working gas volume
7Fields Transmission Pipeline	0	interruptible capacity only
7Fields Distribution Area	6,49	storage level of 30 % working gas volume
Haidach Transmission Pipeline	0	interruptible capacity only
Haidach Distribution Area	0	No connection in Austria
Sm	44,07	Max. technical exit capacity
LNGm	0	Max. technical capacity of LNG plants
Im	140,34	Max. technical capacity of single largest infrastructure
Dmax	50,31	Max. daily gas demand Baseline scenario max. of the next 10 years
N – 1	172 %	

Source: AGGM (LTiP 2022); Note on 7Fields pipeline and Haidach pipeline: the withdrawal capacity is included in the value for Oberkappel.

4.4 Cross-border Interconnection Points

- Arnoldstein (AT ↔ IT),
- Baumgarten WAG (AT ↔ SK),
- Oberkappel (AT ↔ DE) and
- Überackern ABG and SUDAL (AT ↔ DE).

Reverse flow capacities are not subject to any special regulations, they are to be booked as capacities in the other direction and are also treated in the same way.

Capacity products commonly used in Austria are the following:

- "Freely allocable capacity": a capacity that enables fixed transports throughout the MA and provides fixed access to the Virtual Trading Point.
- "Dynamically allocable capacity": a capacity, which can only be offered as fixed capacity in combination with specified entry or exit points, and use in connection with other entry or exit points or the Virtual Trading Point is only possible on an interruptible basis.
- "Interruptible capacity" means the natural gas transmission capacity, which may be interrupted by the transmission system operator in accordance with the terms and conditions set out in the transportation contract.
- "Standard capacity" means the capacity at the entry or exit points into or from the distribution area. It is composed of a fixed and an interruptible part, where the availability of the fixed part is dynamic and depends on the current sales in the distribution area.

Cross-border interconnection point with an exemption pursuant to Article 5(4) of Regulation (EU) 2017/1938:

- Murfeld (AT) / Ceršak: temporary exemption until 1 November 2025, granted by decision of E-Control V REV G 01/20/3 dated 29 October 2021. Market-based expansion measures are unaffected by this and can of course be realized if there is sufficient market demand. In the CNDP 2022 some projects for expansion in Murfeld are already planned.

Mosonmagyóvár: With the decision of E-Control V REV G 02/20/3 of 29 October 2021 the former exemption decision for Mosonmagyóvár was revoked. Reason: It was determined that non-commercial bidirectional capacities are available, and in a solidarity case gas can flow from Hungary to Austria via the border interconnection point Mosonmagyaróvár. Thus, the obligation resulting from Regulation (EU) 2017/1938 to create capacities for load flows in both directions is fulfilled.

5 Supply Standard

Based on the experience of the Ukraine crisis in 2022, it was decided that, until further notice, only direct or indirect storage capacities would apply to prove compliance with the supply standard case c). In addition, amendments to the Natural Gas Act 2011 (Gaswirtschaftsgesetz 2011 – GWG 2011) expanded the group of protected customers from residential customers in a first step to include basic social services and in a second step to include district heating systems. The regulatory authority may, by ordinance, issue more detailed provisions on the conduct of the review, the collection modalities and the type of evidence required.

5.1 Legal Basis

Article 6 Regulation (EU) 2017/1938 in conjunction with section 121 (5) of the GWG 2011 obliges suppliers who supply protected customers with natural gas pursuant to Article 2 of Regulation (EU) 2017/1938 to ensure the supply standard pursuant to Article 6 of this Regulation. The protected customers in the case of Austria are

- residential customers connected to a natural gas distribution network,
- basic social services, other than education and public administration, connected to a natural gas distribution network; and
- district heating systems, to the extent that they supply heat to residential customers, basic social services, or small and medium enterprises and cannot switch to a fuel other than gas.

The suppliers of these protected customers shall ensure the supply in any case in the following scenarios:

- a) extreme temperatures for seven consecutive days of peak load, as statistically likely to occur once in 20 years;
- b) exceptionally high gas demand over a 30-day period, as is statistically likely to occur once in 20 years; and
- c) for a 30-day period in the event of a failure of the single largest gas infrastructure under average winter conditions.

Failure to comply with the obligation under section 121(5) of the GWG 2011 is punishable by an administrative fine of up to €75,000 (section 159(2) line (12) of the GWG 2011).

Pursuant to section 24 of the E-Control Act (Energie-Control-Gesetz – E-ControlG), it is the duty of E-Control to monitor compliance with section 121 (5) of the GWG 2011. This paragraph contains the obligation of every supplier of protected customers to ensure the supply standard pursuant to Art. 6 of the Gas SoS Regulation for its protected customers. In concretization of these provisions, the regulatory authority is required to issue detailed provisions by ordinance on the performance of the review, the survey modalities and the

type of evidence required. In the course of this survey, these suppliers shall disclose the procurement and storage contracts with which they ensure the necessary quantities and capacities to meet the supply standard.

Fulfilment of cases a) and b) of the supply standard

The following contracts may be submitted as evidence for cases a) and b) above:

- OTC contracts with a specific contractor,
- storage contracts and
- forward contracts on the stock exchange.

It should be noted here that in the case of contracts with a place of performance abroad (e.g. transfer point TTF) or when using foreign storage facilities, the transport contracts via which the corresponding quantity can be transported to Austria must also be specified. Spot contracts, on the other hand, cannot be used to meet the supply standard due to the short delivery period.

Fulfillment of case c) of the supply standard

In order to meet case c), only evidence of corresponding storage provision (storage contracts and monthly storage levels) is admissible and must be provided in the survey. This proof can also be provided by the respective upstream supplier.

This regulation on proof of storage provision was implemented in 2022 and was correspondingly new for the suppliers of protected customers. Results from the 2022 implementation are described in Section 5.6. Due to the long lead time, all suppliers were expected to meet their obligations in 2023. Ultimately, gas supply to all customers was also ensured in 2022.

5.2 Calculation of the Required Quantities and Services

Since not all suppliers have equal access to historical consumption data – and thus the basis for calculating the quantities and services required by the Regulation – the data basis is provided by the Market and Distribution Area Manager (MDAM), which is the AGGM Austrian Gas Grid Management AG, for each network area. Here it is important to mention that the maximum consumption values from the months of December to February for scenarios a) and b) of Regulation (EU) 2017/1938 can occur equally per month. For this reason, the regulatory authority E-Control chooses a safety-conscious approach and uses the respective maximum value per scenario from the months December to February for all three months. A percentage mark-up based on statistical values is used to account for basic social services. Operators of district heating systems shall provide the data necessary to calculate the supply standard to be met by the supplier to the supplier upon request. Operators of district heating networks may make the calculations at the level of the entire network and allocate the required quantity of heat for the supply standard to the district heating plants.

5.3 Implementation of the Monitoring

The compliance monitoring will be carried out by means of a detailed survey of the suppliers of end customers. For the survey, an internet portal is used in which the suppliers should, among other things, indicate the number of metering points supplied by them in the respective network area. The quantities and services required to meet the supply standard are then calculated by multiplying them by the previously determined demand per scenario and month. The period under consideration for the survey is in each case the upcoming heating period, i.e., the period from 1 October to 1 April.

In addition, the suppliers are surveyed as to which procurement, storage and transport contracts they have agreed over which term, with which contract partner and with which contract transfer point in order to maintain the monthly quantities and services required to meet the supply standard. Here, all procurement contracts through which the supply of protected customers is secured in the period under consideration are to be specified.

In addition to selected contract data of the storage contracts, the name of the contracting party as well as the forecasted storage levels and withdrawal rates per month from October to March are to be indicated. As the storage data can only be planned quantities at the time of the survey, the corresponding values are to be updated monthly with actual values or new forecasts. It is necessary to indicate the withdrawal rate, since this could decrease as the storage tank is emptied. In addition, storage levels and withdrawal rates as of the 1st of each month for October through March must be updated monthly by the utility holding storage contracts.

If the contract quantities are transferred at a transfer point outside the Austrian market area, it must also be shown how transport into the MA is secured to the same extent via transport contracts.

5.4 Requirements for Compliance with the Supply Standard

The following requirements must be met for compliance with the supply standard:

- The quantities required to meet the supply standard for the coming winter half-year must already be contractually secured at the time of the survey in the summer, and thus before the start of the heating period. The aim here is for companies to make early efforts to secure supplies for their protected customers, rather than having to procure large quantities for this customer group on the spot market at short notice.
- Only fixed supply, storage and transport contracts are considered to be secured, as only these guarantee a secured service over the period under consideration. Fixed supply contracts include both OTC transactions with a corresponding term and forward transactions on the exchange. Interruptible contracts and spot contracts cannot be used to meet the supply standards.

5.5 Impact, Effectiveness and Efficiency of the Measure

The necessity to conclude secured contracts in advance in order to enable the supply of protected customers even in the scenarios specified in Regulation (EU) 2017/1938 deprives suppliers of the possibility to cover this customer group at short notice. This means that any cost advantages on the spot market can be used to a lesser extent. At the same time, however, it must be emphasized that, depending on the price development, short-term coverage may not only bring advantages, but may also cause additional costs. Therefore, in order to prevent price speculation for the area of protected customers, the measure to secure the relevant quantities is set as described above. The measure is not expected to have any impact on the environment.

5.6 Results of the 2022 Survey¹

Suppliers of protected customers were requested in the summer of 2022 to disclose to the regulatory authority by 31 August 2022 contract details of their procurement, transportation and storage contracts used to supply protected customers (residential customers and basic social services) and to record corresponding data in the internet portal provided for this purpose. In the course of a full survey, all 50 suppliers who were supplying protected customers in Austria with gas at that time were contacted. For the calculation of the fulfilment of the supply standard, the indicated quantities and services from the reported procurement and storage contracts were used. It should be noted that in the case of storage usage, not only the storage level but also the maximum withdrawal rate was included in the calculation for meeting the supply standard. In addition, companies that were unable to provide exact quantities and services due to the use of full supply or framework agreements had to provide additional evidence from their upstream suppliers. In the substantive review, it was determined for 32 suppliers that they had sufficient gas and also storage capacities available to meet the various manifestations of the supply standard in the winter months of 2022/2023. Eight suppliers exited the market before the winter period began and their respective protected customers were reassigned to other suppliers. Nine suppliers had problems with the proof of the respective storage capacities, but solutions could be found here as well. One supplier basically refused to disclose information on storage capacities and was reported by the authority. In total, the storage quantities required to fulfil case c) could be collected and verified, so that sufficient quantities were contractually secured to be able to supply all protected customers even in the extreme situations listed in Article 6 of Regulation (EU) 2017/1938.

¹ Survey for 2023 not yet completed, therefore evaluation of the 2022 survey - without district heating plants, as legal basis for this was not done until after the 2022 survey.

5.7 Planned Expansion of the Supply Standard

On 19 October 2023, the National Council passed an amendment to the GWG 2011, according to which the supply standard is to be extended. Gas suppliers are to be obliged to secure the supply of protected customers for 45 days from October 2024 by means of appropriate storage. This obligation will be reduced to the already existing level of 30 days in total, provided it can be proven to the regulator that the gas volumes held in reserve to meet this obligation are of non-Russian origin. In addition, the introduction of a supply standard for operators of gas-fired power plants in the Electricity Sector Act 2010 (Elektrizitätswirtschafts- und -organisationsgesetz 2010 – ElWOG 2010) is envisaged with an analogous provision.

6 Preventive Measures

6.1 Gas Storage

6.1.1 Strategic Gas Reserve of the Republic

The strategic gas reserve is a state-controlled stockpiling of natural gas in gas storage facilities. Following the creation of a legal basis in the GWG in 2022, the Austrian distribution area manager, Austrian Gas Grid Management AG (AGGM), was commissioned to purchase the natural gas. The strategic gas reserve has been in place since 1 November 2022, to the extent of 20 TWh – around 22 % of Austria's annual gas consumption. The gas volumes are stored in gas storage facilities that are capable of direct delivery to Austrian market areas. Gas volumes from the strategic gas reserve can only be released by the Federal Energy Minister within the framework of an ordinance pursuant to sections 5 and 26 of the Energy Steering Act 2012 (Energienkungsgesetz 2012). On 19 October 2023, the National Council passed an amendment to the GWG 2011, according to which the term of the strategic gas reserve is to be extended until 1 April 2026, with the possibility for the federal government to stipulate a different expiry date by ordinance.

6.1.2 Storage Incentives – Protected Gas Quantities

End consumers who have themselves made arrangements for disruption of gas supply are treated differently in the case of energy steering: Gas quantities that have been stored by end consumers (or by contracted third parties) are protected from intervention measures that restrict the ownership or power of disposal of such quantities. The measure is primarily aimed at largescale consumers, but is open to all end users. In order to avoid false incentives in the direction of hoarding gas quantities in excess of one's own needs, the protection is limited in terms of quantity to a share of 50 % of their consumption in the previous calendar year. If necessary to meet requirements under international or EU law or to maintain the technically secure and reliable operation of the gas network, the protected gas quantities may also be accessed.

6.1.3 Direct Connection of all Austrian Gas Storage Facilities

By means of an amendment to the GWG 2011, in 2022 operators of storage facilities on Austrian territory were obliged to connect the storage facilities to the Austrian pipeline system. This ensured that all Austrian gas storage facilities are capable of supplying Austrian customers directly.

6.1.4 Use-it-or-lose-it

Storage users are required to offer or return unused storage capacity. This enables other companies to access and fill the storage facilities. If storage capacities remain systematically unused, they must be withdrawn by the storage company after prior written notice. Details

of the obligations of storage users and storage companies are set out in a decree issued by E-Control.

This measure has prevented storage users from leaving their booked storage capacity unused for non-market reasons.

6.1.5 Options for Balancing Energy (Market Maker)

To ensure that the balance between gas input and gas output in the natural gas network is always even, there is so-called balancing energy. The quantities of gas bought or sold are those that the market and distribution area manager (MDAM) must physically inject into or release from the natural gas network in order to ensure network stability. This model was expanded in 2022 to allow additional balancing energy quantities to be held in the event of an interruption in natural gas supplies from Russia. At the request of the Federal Energy Minister, the balancing group coordinator, in this case AGCS Austrian Gas Clearing and Settlement AG, must conduct a transparent, non-discriminatory, market-based and public tender procedure for the provision of gas volumes to ensure security of supply. The gas shall be held in storage facilities that can be used for delivery to the market areas. The costs of the storage are covered by federal funds.

6.1.6 Bilateral Agreement with Germany on the Joint Use of the Haidach and 7Fields Natural Gas Storage Facilities

In February 2023, Austria and Germany agreed in a bilateral agreement on joint responsibility for the use and filling of the Haidach and 7Fields natural gas storage facilities, as well as on the transport of stored gas volumes in the event of a shortage. The signing of the agreement followed on from a memorandum of understanding signed in July 2022 and serves to implement requirements under European Union law. The two storage facilities have already been used by both Austrian and German gas companies in the past. Key points of the agreement:

- Responsibility for the filling destination of the two natural gas storage facilities, which are located in Austria but have so far been predominantly connected to the German network, will be shared between Austria and Germany in the overall scheme of things.
- Transit for gas via Germany to Tyrol and Vorarlberg will remain in place even in the event of a gas shortage. Austrian companies that have stored gas in Haidach or 7Fields can thus transport these storage volumes via Germany to Vorarlberg and Tyrol even in the event of an emergency, provided that technical reasons do not prevent transit.
- Austria and Germany also mutually guarantee that access to the quantities stored in the Haidach and 7Fields storage facilities for the purpose of ensuring security of supply will continue to exist even in the event of an energy shortage or gas shortage situation.

6.2 Diversification

6.2.1 Imports via Alternative Routes

One of the largest gas companies in Austria was awarded a contract in this year's annual auction for capacities of around 40 TWh p.a. for the period October 2023 to September 2026, and around 20 TWh p.a. for the period October 2026 to September 2028. The border transfer points for the natural gas are Oberkappel via Germany and Arnoldstein via Italy. These capacities, in combination with alternative non-Russian gas sources of this gas company, secure a large part of the Austrian gas demand.

The federal government actively supports the participation of Austrian companies in the joint European purchasing platform (AggregateEU), through which non-Russian gas can be purchased, and which contributes to reducing Europe's dependence on Russian natural gas. Austrian companies use this platform to diversify their portfolios.

6.2.2 Gas Diversification Act (GDG 2022)

In order to reduce dependence on Russian natural gas, guidelines were issued to assist with the additional costs incurred by companies due to the supply of natural gas from non-Russian sources. The legal basis for this is formed by the "Federal Law on the Promotion of the Exit from Russian Natural Gas and the Diversification of Natural Gas Purchases from Other Sources" (Gasdiversifizierungsgesetz 2022 – GDG 2022). Switching to non-Russian natural gas in Austria potentially means higher costs. The Gas Diversification Act 2022 aims to mitigate these costs and subsequently, the higher costs for consumers, by providing financial support for affected companies. Another goal is to increase economic resilience by reducing dependence on Russian natural gas. This is to be achieved by cushioning the additional costs of diversification that affect companies. Between 2022 and 2025, funds amounting to 100 million euros will be made available annually to compensate companies that feed natural gas from non-Russian sources into the network. These companies must provide proof of the origin of the natural gas in accordance with the guidelines. Only natural gas from non-Russian sources that has been withdrawn for consumption in Austria by the end of 2025 will be supported. This way, the Gas Diversification Act 2022 is intended to reduce negative effects on the economy and consumers in Austria.

6.3 Gas Consumption Reduction and Energy Efficiency

In order to increase the EU's energy security, EU energy ministers adopted the Coordinated Gas Demand Reduction Measures Regulation in July 2022. The regulation stipulated that all EU countries voluntarily reduce their gas consumption by 15 % from 1 August 2022 to 31 March 2023, compared to the average of the previous five years of this period. This regulation was extended until 31 March 2024. Overall, a gas reduction of 19.8 % could be achieved in Austria over the period August 2022 – March 2023 compared to the reference period. In order to achieve this target by means of voluntary measures, there was, among other things, an energy-saving campaign, *Mission11*.

6.3.1 Energy Saving Campaign

The *Mission11* energy-saving campaign is a federal government initiative aimed at saving 11 % of energy consumption in all households throughout Austria. This saving can be achieved – without much effort or investment – through small changes in behaviour. The campaign's website, www.mission11.at, provides a wealth of information and tips on how each and every individual can actively save energy and reduce their own costs. These energy-saving measures not only lead to greater independence from coal, oil and natural gas, but also counteract the climate crisis.

6.3.2 Energy Efficiency Act (EEffG)

In June 2023, an amendment to the "Federal Act on the Improvement of Energy Efficiency in Households, Businesses and the Federal Government as well as Energy Consumption Registration and Monitoring" (Bundes-Energieeffizienzgesetz – EEffG) was passed. The EEffG is intended to help flatten the increase in electricity demand expected over the next few years as far as possible. To this end, the act sets out goals such as improving energy efficiency, reducing energy consumption and effectively implementing Directive (EU) 2018/2002. In 2030, a nationwide final energy consumption of no more than 920 PJ, and in the period from 2021 to 2030, a reduction in nationwide final energy consumption of at least 650 PJ are to be achieved. Of this, at least 250 PJ of consumption reductions are to be achieved through federal subsidies, among other things, and at least 400 PJ through other alternative strategic measures, taking into account savings by the federal government and the Bundesimmobiliengesellschaft m.b.H. For the first time, guideline values for increasing energy efficiency were also prescribed for the federal states. In cooperation with the federal government, the states are required to publish documentation of their strategy for implementing the "energy efficiency first" principle in connection with the integrated National Energy and Climate Plan for Austria (NECP) every two years, starting no later than 2024. In addition, energy suppliers will be subject to information obligations towards consumers under certain circumstances. For example, those suppliers of a total of more than 25 GWh per year must offer free and telephone consultations on essential energy efficiency information such as energy consumption, savings, costs and price developments. Energy suppliers of a total of more than 35 GWh per year must also set up a free advice centre. In addition, a coordination office for combating energy poverty will be set up. Moreover, companies must have energy audits carried out at regular intervals by energy auditors qualified to do so. In parallel, other support programs for increasing energy savings are to continue as before.

6.3.3 Expansion of Renewable Energy

Next to achieving climate and environmental protection goals, the expansion of renewable energies is also necessary to ensure long-term security of supply in Austria. Their expansion also has the additional goal of reducing dependence on fossil energy sources and thus also on imports of these from a few foreign suppliers. The expansion of renewable energies is being driven forward in accordance with the current government program "Aus Verantwortung für Österreich. 2020 – 2024". One of the goals stated in this program is to achieve a full supply of electricity from renewable energy sources by 2030 (national / on

balance). In order to increase electricity production from renewable energy sources, the "Federal Act on the Expansion of Energy from Renewable Sources" or Renewable Energy Expansion Act (Erneuerbaren-Ausbau-Gesetz – EAG) creates a framework for nationwide subsidies to drive forward the expansion of renewables in Austria. In addition to the aforementioned full supply of electricity from renewables by 2030 (national / on balance), the goal is also to achieve climate neutrality by 2040. Starting from production in 2020, annual electricity generation from renewable sources is to be increased by 27 TWh by 2030. Of this, 11 TWh is to come from photovoltaics, 10 TWh from wind, 5 TWh from hydropower and 1 TWh from biomass. The contribution of photovoltaics is to be achieved in particular through the goal of equipping one million roofs with photovoltaics. According to a study by the Environment Agency Austria, the technical-economic area potential still available in Austria exceeds the current expansion targets for 2030 by 11 TWh. In addition to the EAG, a Renewable Energy Expansion Acceleration Act (Erneuerbaren-Ausbau-Beschleunigungsgesetz – EABG) is planned, which will facilitate and accelerate procedures for the construction of renewable energy generation plants and grid infrastructure.

6.3.4 “Get out of Oil and Gas” Subsidy Program

In order to achieve the goals set by the federal government of full supply of electricity from renewables by 2030 (national / on balance) and the achievement of climate neutrality by 2040, the "Get out of Oil and Gas" funding initiative was created for the heating sector. This is intended to help ensure that all old coal and oil heating systems in Austria are replaced by a modern heating system powered by renewable energies by 2035. In addition, the use of fossil gas for space heating should be eliminated wherever possible by 2040. The "Get out of Oil and Gas" program provides federal funding for the purchase of a climate-friendly heating system. In the private sector, for example, the exchange of a fossil heating system for a highly efficient or climate-friendly local or district heating connection and – where this is not possible – for a heat pump or biomass heating system is supported with up to 7,500 euros in subsidies. The subsidy program already existed for two years from 2021 to 2022, and due to its success will now be continued for another two years until 2024.

6.3.5 Renewable Heat Package (EWP)

The federal government has agreed on the Renewable Heat Package (Erneuerbaren Wärme Paket – EWP), which provides for a ban on gas heating systems in new buildings starting in 2024. Furthermore, additional subsidies for boiler replacement amounting to 1 billion euros until 2026 and an increase for the renovation bonus to a total of 200 million euros are planned. This package of measures will further reduce gas consumption in space heating.

6.3.6 Environmental Subsidies Program

Targeted subsidies support sustainable projects that play a significant role in shaping Austria's energy and climate future. Companies are supported both in energy efficiency projects and in the conversion to renewable energies (Umweltförderung im Inland – UFI). Important priorities concern the sustainable use of biomass and the expansion of district heating plants. These areas are particularly important for the economy in rural areas and are therefore also an important element of EU funding. The annual use of renewable energy

sources can be increased by about 1,080 GWh through the funded projects. The increase in energy efficiency amounts to 338 GWh/a.

6.3.7 Renewable Gas Act (EGG)

The Renewable Gas Act (Erneuerbares-Gas-Gesetz – EGG) is intended to oblige gas suppliers to replace a certain proportion of fossil natural gas with renewable gas in the future (green gas quota). A corresponding draft law by the BMK was reviewed in spring 2023. The quota model should lead to an increase in the share of domestically produced renewable gases, thereby reducing dependence on imports and increasing security of supply. By 31 December 2030, gas suppliers are to substitute a total of at least 7.5 TWh of the gas volumes sold by them to end consumers in that year with renewable gases. For the period from 1 January 2031 to 31 December 2040, a green gas quota is to be set in such a way that at least 15 TWh of the gas quantities sold to end consumers are substituted by renewable gases in the period from 31 December 2035 to 31 December 2040.

6.4 Other Prevention Measures

In addition to ensuring secure and reliable grid operation through appropriate grid planning (see below), regular monitoring of compliance with the supply standard by the regulatory authority E-Control is also one of the key preventive measures.

In terms of prevention, the instrument of the Merit Order List (MOL) defined and established within the framework of the Austrian market model – for standard products and for flexibility products – should also be mentioned, which is described and explained in detail in the emergency plan.

Preventive measures are also understood to include those measures that ensure the long-term supply of natural gas via secure and reliable network operation as well as via a network that has been developed in line with demand and with sufficient storage capacities. In accordance with the Austrian legal provisions, the LTP as well as the CNDP are prepared as planning instruments by the market and distribution area manager together with the network operators, which ensures the demand-oriented expansion of the pipeline system in Austria after approval of these plans or the projects contained therein.

6.4.1 Long-term Planning (LTP)

Pursuant to the legal situation in force since 21 November 2011, the MDAM has, pursuant to section 18 par. 1 line 11 in conjunction with section 22 of the GWG 2011, the task to prepare a LTP for the distribution area at least once a year in accordance with the objectives of section 22 par. 1 of the GWG 2011. This provision stipulates that the objective of the LTP is to ensure that the distribution pipeline facilities pursuant to Annex 1 of the GWG 2011

- meet the demand for transport capacities to supply end consumers, taking into account emergency scenarios,
- achieve a high level of availability of transport capacity (security of supply of the infrastructure),

- as well as to plan the capacity requirements at the entry and exit points to the transmission system and to storage facilities, as well as
- to establish coherence with the community-wide network development plan (Ten-Year-Network Development-Plan "TYNDP") as well as the CNDP in accordance with sections 63 et seqq. of the GWG 2011;
- meet the infrastructure standard pursuant to Art. 5 of Regulation (EU) 2017/1938 in the market area,
- increase transparency for the market with regard to planned and already decided network expansions and network upgrades, including the schedule of investment projects,
- and enable the injection and supply of renewable gases.

In this context, all market participants named in the GWG 2011 must participate in the preparation of the long-term planning by making data available at the request of the AGGM.

The long-term and integrated planning provides the basis for the efficient transformation of the energy system by creating and maintaining the necessary transport infrastructure for renewable gases.

In accordance with the objectives of section 22 of the GWG 2011, the sales forecast and planning of measures are based on the assumption of securing full supply for the connected active grid customers as well as the grid customers seeking connection. The basis for the planning of measures are the forecasts of the distribution network companies and the applications for capacity expansion submitted in accordance with section 33 (2) of the GWG 2011.

The long-term and integrated planning is based on data obtained continuously from the management of the distribution area as well as on information provided by the distribution system operators. For the first time, the future hydrogen demand of industry and power plants was also surveyed together with the distribution system operators. In addition, a forecast of the feed-in of renewable gases (biomethane and hydrogen) was requested from the distribution system operators. The storage companies as well as the domestic natural gas producers were also asked about their expansion plans and the Ten-Year-Network-Development Plan was used as a reference. A reconciliation with the network development plan of the Austrian Power Grid (APG) electricity transmission network was carried out. The Long-Term and Integrated Planning was coordinated with the integrated National Energy and Climate Plan (NECP) and the Coordinated Network Development Plan. The data basis and the results of the long-term and integrated planning for 2022 were discussed with the market participants at the Austrian Gas Infrastructure Day (AGID) on 19 January 2023. For the first time, not only the methane demand of end customers but also the future hydrogen demand was presented in the sales scenarios. The end customers' demand was analysed on the basis of three sales scenarios, whereby three different development possibilities were assumed for the conversion from methane to hydrogen. The planning period was also extended from 10 years to 20 years with a view to 2050, in order to be able to map and reflect the necessary developments for achieving climate neutrality in 2040 in the planning.

All pressure and volume assurances made to distribution system operators, storage companies, producers, renewable gas producers and network users at border transfer points for 2023 can be met. From the point of view of the level 1 distribution lines, all end customers connected to the network can be supplied at all times.

The analysis of the capacity situation for the future years shows that through the implementation of the 22 new and 20 approved, continued projects of the long-term and integrated planning 2022, all committed pressure and volume agreements can be met and the new capacity expansion applications can be committed.

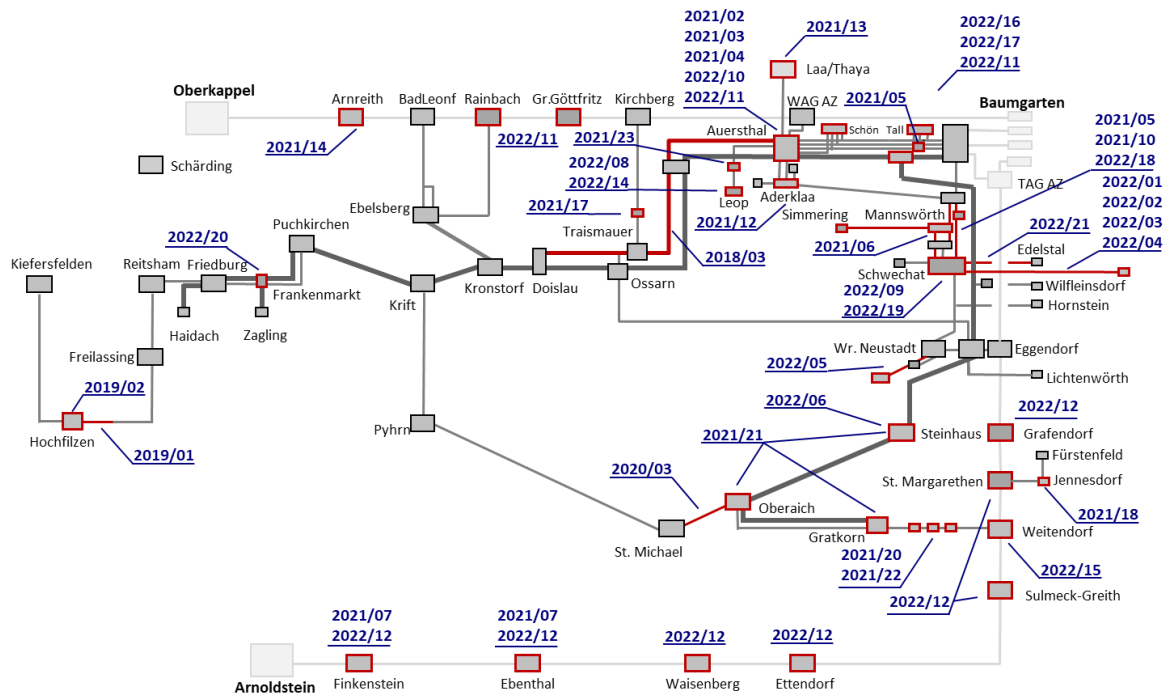


Figure 4: Project overview of the LTIP 2022 (Source: AGGM)

6.4.2 Coordinated Network Development Plan (CNDP)

The CNDP plan refers to the transmission networks in Austria that are located in the Market Area East. The aim of the coordinated network development plan is in particular:

- to meet the demand for line capacities to supply end consumers, taking into account contingency scenarios,
- to contribute to the realisation of the objectives of the Paris Climate Change Agreement 2015 and to take measures to achieve climate neutrality for Austria by 2040, which relate in particular to the planning of natural gas pipeline facilities,
- to achieve a high level of availability of pipeline capacity (security of supply of infrastructure),
- to meet the transport requirements,

- to comply with the obligation to meet the infrastructure standard pursuant to Art. 6 of Regulation (EU) 2017/1938 in the market area as well as
- the integration of the energy sector, taking into account the high value of gaseous energy sources and by linking different energy sources and sectors.

When preparing the CNDP, technical and economic expediency, the interests of all market participants and coherence with the community-wide network development plan and the long-term planning shall be taken into account.

The market and distribution area manager shall prepare a capacity scenario together with the transmission system operators within the framework of the CNDP.

Two categories of capacity requirements are defined:

- Capacity requirements for security of supply at home and abroad (established in H2-ready are shown in green).
- Capacity requirements bundled at the point provided by the upstream network operator are shown in grey.

In addition, the capacity scenario 2022 shows sources that must be developed for independence from Russian gas. It is taken into account that both methane and hydrogen can flow from these sources. With regard to hydrogen, reference should be made in this context to the goals of the Austrian hydrogen strategy (1 GW installed capacity for electrolysis plants by 2023, etc.), which can make a significant contribution to ensuring security of supply.

The first part of the "WAG Loop" project of Gas Connect Austria GmbH, which creates additional capacity to reliably transport even more non-Russian gas to Austria via Germany, was approved by the regulatory authority E-Control in the current CNDP.

The Market Area Manager (MAM) and the transmission system operators (TSOs) point out that merely the creation of additional capacity at the cross-border transfer points is not sufficient to ensure security of supply. Both capacities and quantities must be booked by market participants at the respective sources.

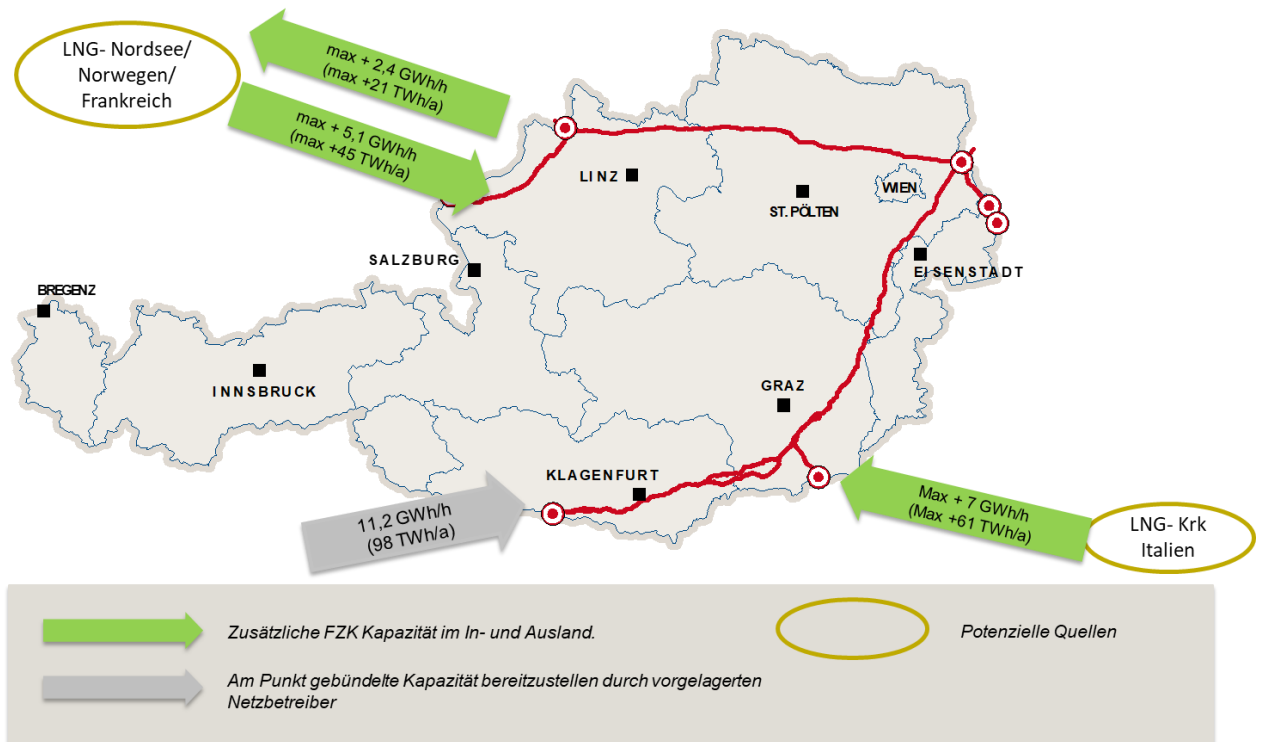


Figure 5: Source: AGGM, Gas Connect Austria, TAG GmbH; 2022

The announced new capacity requirements are included in the CNDP and the transmission system operators develop corresponding projects that are suitable for covering the additional capacity requirements. The projects were developed in coherence with the European planning instruments and in coordination between the domestic and foreign transmission system operators. The needs of the distribution area are also taken into account.

7 Other Measures and Obligations

The Ordinance on Gas System Service Quality (Gasnetzdienstleistungsqualitätsverordnung) of the E-Control Management Board as amended in 2013 sets standards for network operators with regard to the safety, reliability and quality of the services provided to network users and other market participants, as well as indicators for monitoring compliance with these standards.

Pursuant to section 30 par. 1 of the GWG 2011, the regulatory authority must set standards for network operators with regard to the safety, reliability and quality of the services provided to network users and other market participants, as well as indicators for monitoring compliance with the standards, by ordinance. On the other hand, pursuant to section 30 par. 4 of the GWG 2011, network operators are obliged to submit the key figures specified in the ordinance to the regulatory authority on an annual basis and to publish them.

In order to perform the task assigned to it by the legislator, E-Control has issued the Ordinance on Gas System Service Quality on the basis of section 30 of the GWG 2011, Federal Law Gazette I No. 107/2011, as amended by Federal Law Gazette BGBl. I No. 23/2023, in conjunction with section 7 par. 1 E-ControlG, BGB. I No. 110/2010 as amended by Federal Law BGBl. I No. 7/2022.

To collect the relevant data, a survey form based on the 2013 amendment to the Ordinance on Gas System Service Quality is prepared annually and made available to the Austrian gas network operators at the beginning of March for reporting their data. The underlying survey period is always the previous calendar year.

The surveys on commercial quality as well as outage and fault data are carried out via an internet portal on the homepage of the regulatory authority. The aim is to achieve efficient data collection and to point out missing data and any typing errors to the user as soon as they are submitted. In addition, a uniform way of collecting data for gas and electricity is to prevent misunderstandings regarding the data to be provided. Particular attention is paid to achieving the same understanding of the respective question with each network operator in order to obtain comparable data. This is achieved in particular by providing explanatory information on the E-Control website and by offering the possibility of contact by telephone or e-mail.

The results of the network service quality survey are also included in aggregated form in the CEER Benchmarking Report at the international level. Here, the country results of the member states on different key figures of the network service are compared.

According to section 3 of the Ordinance on Gas System Service Quality as amended in 2013, the defined standards are considered to be met if they are complied with by the respective network operator in 95 % or more of the corresponding cases per standard. Basically, a distinction can be made between two types of quality: technical and commercial quality.

7.1 The Technical Quality of the Network Service

The technical quality of the network service primarily results from the operation and maintenance of the distribution networks. When operating and maintaining the distribution grids, the distribution system operators must comply with the relevant rules of technology (ÖNORMEN, ÖVGW guidelines). Essential aspects of the technical quality of the network service are the reliability of supply and the operational security of supply (network operation, maintenance), with the aim of ensuring the uninterrupted distribution of natural gas in sufficient quality and quantity with the required operating pressure up to the customer installation.

For the purpose of monitoring the technical quality of the network service, data on incidents and supply interruptions are collected. The network operator shall provide the following information for each fault and each supply interruption:

- Description of the incident,
- Selection of the network level,
- Start and end of the supply interruption,
- Number of customers (network users) affected by the supply interruption,
- Is it a planned supply interruption or an unplanned incident?
- Is the cause of the supply interruption inside or outside the distribution network? If it is inside the distribution network, a further distinction is made between cause with external fault, without external fault and cause in the gas technical system (e.g. gas pressure regulators, gas meters, meter regulators, house pressure regulators).
- Was it a regionally exceptional event (not mandatory)?

Only supply interruptions in the distribution network are taken into account. It does not take into account, for example, faults that occurred in gas appliances for which the customer is responsible for maintenance (e.g. gas boiler, gas cooker, etc.). To calculate the total duration of all unplanned supply interruptions, the duration of the respective interruption is multiplied by the number of customers affected. There are also regional differences due to population density and building types (single-family house vs. apartment building). Thus, for example, a supply interruption in a large city usually affects more customers at the same time than in rural areas. In addition, it should be noted that interruptions that did not affect any customers are not taken into account in the calculation of the indicator.

In contrast to electricity as well as to other countries, the present evaluation was not adjusted for cases of force majeure (e.g., exceptionally severe storms, extreme snowfall, etc.). The reason for this is, on the one hand, that only comparatively few network operators voluntarily provided data on regionally exceptional events and, on the other hand, it can be assumed that significantly fewer "regionally exceptional events" have an impact on pipeline-based gas supply than, for example, on overhead lines in the case of electricity.

In addition to showing how many customers were affected by supply interruptions in the distribution network, the key figures SAIDI, SAIFI and CAIDI can also be calculated in combination with the number of metering points per network operator:

- SAIDI = (total duration of all unplanned supply interruptions) / (total number of customers supplied),
- SAIFI = (total number of unplanned supply interruptions) / (total number of customers supplied),
- CAIDI = (sum of duration of all unplanned supply interruptions) / (total number of unplanned supply interruptions).

In terms of the technical quality of network service, the SAIDI value in 2021 was 1.07 minutes per metering point supplied. This represents the average duration of unplanned supply interruptions per supplied metering point with cause in the distribution network. This means that in 2021 each Austrian gas customer had no gas available for an average of 1 minute and 7 seconds. This is the lowest value since the start of the survey in 2013. The average number of interruptions per supplied metering point (SAIFI value) remained stable compared to 2020 at 0.0034. Compared to 2019, this represents an improvement of around 37 %. The CAIDI value for Austria in 2021 was 316 minutes of average supply interruption duration per affected network user. Compared to 2020, this represents an improvement in the CAIDI value in 2021 of around 16 %.

7.2 The Commercial Quality of Network Service

The commercial quality of network service, on the other hand, focuses primarily on the services provided by network operators to customers, such as responses to inquiries, preparation of cost estimates, adherence to deadlines and dates, transparent publication of relevant information, etc.

In the context of commercial quality, services provided by network operators to their customers are primarily considered, such as compliance with deadlines specified by regulation. In detail, the network operators have to answer various questions on the following sections and submit data on the key indicator calculation to the regulatory authority:

- network access,
- network entry,
- network accounting,
- disconnection and restoration of network access,
- determination of the meter reading,
- adherence to schedules,
- customer information and complaint management, and
- security and reliability of network operation.

In terms of commercial quality, the year 2017 shows that the majority of network operators are at a consistently sound level of network service quality. It is particularly worth mentioning that, pursuant to section 13 Gas Grid Service Quality Ordinance as amended in 2013, every distribution system operator must comply with the rules of technology to ensure secure and reliable gas grid operation as defined in section 133 in conjunction with section 7 par. 1 no. 53 of the GWG 2011. Compliance with these rules of technology shall be verified through certification by a testing, monitoring or certification body accredited in

accordance with the Accreditation Act 2012, BGBl. I No. 28/2012, as amended by Federal Law Gazette BGBl. I No. 40/2014, or by providing equivalent evidence to the regulatory authority.

8 Infrastructure Projects

8.1 Integrated Network Infrastructure Plan (NIP)

In accordance with the Renewable Energy Expansion Act (EAG), the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) is preparing an integrated Austrian network infrastructure plan (Integrierter österreichischer Netzinfrastukturplan – NIP). The NIP is an overarching strategic planning instrument and is being prepared for the first time. With it, the Energy Minister is presenting a planning basis for the expansion and restructuring of the energy transmission infrastructure for 2030 and for achieving climate neutrality in 2040. The consistently integrated view of higher-ranking energy transmission for electricity and gas is intended to enable the necessary expansion of renewable energy generation to be coordinated in the best possible way with grid development, storage facilities and flexibility options. The NIP thus enables a comprehensive and overall view of the future energy system. It thus addresses what the energy supply may look like in the coming years and what energy infrastructure is needed to transform the energy sector. The required national generation from renewable energies and scenario estimates for future energy consumption are presented. Derived from this are the future transport requirements on the higher-ranking grid levels in the electricity and transmission levels as well as grid levels 1 and 2 in the gas sector, including an emerging hydrogen pipeline infrastructure. The draft of the NIP is based on a series of scientific elaborations, which were validated with the planning of the Austrian transmission system operators and the market area manager. Numerous stakeholders from the energy industry, environmental organizations, social partners, politics and administration in the federal and state governments were involved in the process of drafting. The draft is currently being consulted.

8.2 Ten-Year-Network Development-Plan

Every two years, the European Network of Transmission System Operators Gas (ENTSOG) prepares a non-binding, community-wide network development plan (TYNDP), which covers a planning horizon of at least ten years. In addition to a presentation of the pan-European infrastructure, it provides, in particular, a consideration of supply potential, market integration, and security of supply.

One objective of the TYNDP is to model an integrated network in order to identify future potential investment gaps in a timely manner, particularly with regard to cross-border capacities. In accordance with the provisions in Regulation (EC) 715/2009, ACER reviews the national ten-year network development plans with regard to their consistency with the TYNDP and, in the case of contradictions, recommends the amendment of one of those plans concerned, depending on the merits of the case.

In the TYNDP, projects are classified into the following categories. In addition to this, the PCI status is assigned to the projects according to the current PCI list.

- Projects with final investment decision ("FID")
- Projects without final investment decision
- Projects with advanced status ("Advanced")
- Projects with less advanced status ("Less-Advanced")

The following table shows the Austrian projects, which are part of the TYNDP 2022.

Table 3: Infrastructure projects

TYNDP project number	Project name	Status in TYNDP 2022	Suitable for increasing H2 shares	Projects in CNDP 2022	5th PCI list
TRA-N-954	TAG Reverse Flow	Less-Advanced	Yes	TAG 2016/01	No
TRA-N-766	Entry Murfeld	Less-Advanced	Yes	GCA 2015/08	No
TRA-N-389	Upgrade of Murfeld/Ceršak interconnection	Less-Advanced	Yes		No
TRA-N-600	Czech-Austrian Interconnection (AT)	Less-Advanced	Yes	GCA 2015/01a	No
TRA-N-1059	Czech-Austrian Interconnection (CZ)	Less-Advanced	Yes	GCA 2015/01a	No
OTH-N-604	P2G4A.	Less-Advanced			No
HYD-N-757	H2 Backbone WAG + Penta West	Less Advanced		GCA 2022/02 GCA 2022/03	No
HYD-N-986	H2 Readiness of the TAG pipeline system	Less Advanced		TAG 2022/01	No

Source: ENTSOG, TYNDP 2022 – Annex A & TYNDP 2022 List of Projects

8.3 Projects of Common Interest – Austrian Project Candidates for Hydrogen Infrastructure

An important instrument at EU level for the development of a European hydrogen infrastructure is the preparation of the first list of PCI (Projects of Common Interest) and

PMI (Projects of Mutual Interest) by the European Commission as part of the PCI process in accordance with TEN-E Regulation (EU) 2022/869. The BMK is actively involved in this preparation and is in close exchange with European partners (especially the European Commission, Member States, transmission system operators, regulatory authorities, stakeholders).

In total, about 147 hydrogen infrastructure projects and 33 electrolysis projects were submitted in the category "*Hydrogen infrastructure and electrolyzers*", of which the following three Austrian project candidates:

- GCA: H2 Backbone WAG + Penta West (implementation until 2030).

The project enables bidirectional transport of hydrogen between DE and AT by rededication and expansion of existing pipelines (200 km new hydrogen pipeline; 140 km rededicated natural gas pipeline). This is intended to increase security of supply for both countries.

- GCA: H2 Backbone Murfeld (implementation until 2035)

The project enables bidirectional hydrogen transport at the Murfeld interconnection point in both directions (AT-->SI, SI-->AT). The project could connect potential hydrogen sources from the south (e.g. the converted LNG terminal in Krk) with demand centers in Central Europe as well as with storage facilities.

- TAG: H2 Readiness of the TAG pipeline system

The project involves the conversion of one of three existing pipelines of the TAG 100 % hydrogen system with all associated facilities and branches between the Italian-Austrian border and the Austrian-Slovakian border for connection to the EUSTREAM hydrogen pipeline. The system will be fully operational in 2030, mainly using existing infrastructure.

These Austrian hydrogen infrastructure projects are actively supported by the BMK in their application as "Projects of Common Interest" at European level within the PCI process. Specifically, according to Art. 3 of the TEN E Regulation, there is also the requirement that a project candidate requires the approval of those Member States whose territory the project candidate concerns.

On 28 June 2023, the preliminary list was adopted in the technical decision-making body; according to this, two of the three AT hydrogen project candidates (GCA: H2 Backbone WAG + Penta West and TAG: H2-Readiness of the TAG pipeline system) will probably be included in the PCI list.

8.4 H2 Collector East

One project planned for the future transport of hydrogen in Austria is the H2 Collector East. The goal is to build a 100 % H2-ready gas pipeline – partly by adapting existing infrastructure. From 2026, renewable hydrogen will be transported from northern Burgenland to Lower Austria and Vienna.

The hydrogen comes from what will be Austria's largest electrolysis plant, PanHy (Pannonian Green Hydrogen). PanHy is a project of Burgenland Energie and Verbund. It is the largest planned Austrian electrolysis plant – with 60 MW in the first expansion stage and 300 MW in the final expansion stage. Along the future route of the H2 Collector East, there are other promising locations for additional electrolysis plants at seven substations. The implementation of the H2 Collector East will enable the harvesting of a significant amount of additional wind and solar energy.

The planning steps of Netz Burgenland, Netz Niederösterreich, Wiener Netze and Gas Connect Austria for the construction of the H2 Collector Ost have been approved by E-Control.

9 Public Service Obligations Related to Security of Supply

The GWG 2011 provides for the following public service obligations in section 5:

For network operators:

1. the equal treatment of all customers of a network with the same characteristics of transport service;
2. the conclusion of contracts under private law with network users for connection to their natural gas pipeline systems (general obligation to connect);
3. the construction and maintenance of a natural gas infrastructure sufficient for the domestic supply of natural gas and for the fulfilment of obligations under international law.

For natural gas companies:

1. the attainment of the objectives set out in section 4 fig. 1 and 2 of the GWG 2011 with the means at their disposal;
2. the fulfilment of obligations imposed by legal provisions in the public interest.

Natural gas companies shall endeavour to fulfil the obligations imposed on them in the general interest pursuant to section 5 paras 1 to 2 to the best of their ability by all means available to them.

The objectives set out in section 4 of the GWG 2011 are the following:

- to ensure the secure supply and efficient utilisation of gas as well as the necessary infrastructure for the secure supply of gas and to lay the foundations for decarbonisation, cost-effective supply and the efficient utilisation of gaseous energy sources in the planning of natural gas pipelines;
- to provide the infrastructure necessary for the secure supply of gas to the Member States of the community;
- establish a market organisation for the natural gas industry in accordance with EU primary legislation and the principles of the internal gas market as set out in the common rules for the internal market in natural gas;
- to bring about an appropriate allocation of network costs to network users by introducing the calculation of the system usage charge and a cost roll-up mechanism;
- compensate for public service obligations in the general interest imposed on network operators and relating to security, including security of supply, regularity, quality and price of supplies, as well as environmental and climate protection;

- to lay the foundations for an increasing use of the potential of biogenic gases for the Austrian gas supply;
- to ensure compliance with the infrastructure standard pursuant to Art. 5 of Regulation (EU) 2017/1938;
- to contribute to the achievement of the objectives of the Paris Climate Change Agreement 2015 and to set measures to achieve climate neutrality for Austria by 2040, which relate in particular to the planning of natural gas pipeline systems;
- to continuously increase the share of renewable gases in the Austrian gas grids;
- to realise national potentials for sector coupling and sector integration through the existing gas infrastructure; and
- to continuously promote the use of renewable gas in the Austrian gas supply.

10 Consultation with Stakeholder

On 26 June 2023, a meeting took place between the Federal Ministry for Climate Protection (BMK), the regulatory authority (E-Control) and the Market and Distribution Area Manager (AGGM) to update the prevention plan and the risk assessment. Afterwards, the coordination took place in writing.

Gas companies, relevant organisations representing the interests of households, relevant organisations representing the interests of commercial gas customers including electricity generators and the national regulatory authority were consulted in writing on 29 August 2023.

The competent authorities of the EU Member States in the relevant risk groups were consulted in writing on 19 September 2023. No comments were received.

11 Regional Dimension

With regard to the regional dimension, the Annexes and the Common Risk Assessments should be noted.

List of Tables

Table 1: Key figures on the gas industry for Austria 7
Table 2: Infrastructure standard 21
Table 3: Infrastructure projects..... 43

List of Figures

Figure 1: Natural gas production in AT 2021; Source: AGGM-CNDP 2022 7
Figure 2: Market areas and market participants; Source: AGGM..... 8
Figure 3: Technical capacities at the relevant points in the MA East in MWh/h; Source: AGGM-CNDP 2022..... 9
Figure 4: Project overview of the LTIP 2022 (Source: AGGM) 35
Figure 5: Source: AGGM, Gas Connect Austria, TAG GmbH; 2022 37

Abbreviations

AGGM	Austrian Gas Grid Management AG
Art.	Article
BGBL	Federal Law Gazette / Bundesgesetzblatt
BMK	Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
CNDP	Coordinated Network Development Plan
EAG	Renewable Energy Expansion Act / Erneuerbaren-Ausbau-Gesetz
E-ControlG	E-Control Act / Energie-Control-Gesetz
EEffG	Energy Efficiency Act / Bundes-Energieeffizienzgesetz
ENTSOG	European Network of Transmission System Operators Gas
EWG	Renewable Heat Act / Erneuerbare-Wärme-Gesetz
Gas SoS Regulation	Regulation (EU) 2017/1938
GWG 2011	Natural Gas Act 2011 / Gaswirtschaftsgesetz 2011
LTiP	Long-term and integrated planning
LTP	Long-term planning
MA	Market area
MDAM	Market and distribution area manager
NECP	National Energy and Climate Plan
NIP	Integrated Network Infrastructure Plan / Integrierter österreichischer Netzinfrastukturplan
PCI	Projects of Common Interest
TAG	Trans Austria Gasleitung
TAG GmbH	Trans Austria Gasleitung GmbH
TYNDP	Ten-Year-Network Development-Plan
WAG	West Austria Gas Pipeline

**Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and
Technology**

Radetzkystraße 2, 1030 Vienna

+43 (0) 800 21 53 59

servicebuero@bmk.gv.at

bmk.gv.at