

EMERGENCY PLAN

to mitigate and avoid the effects of natural gas supply

disruption

in the Czech Republic

**pursuant to Regulation (EU) 2017/1938 of the European Parliament and of the Council of
25 October 2017**

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**MINISTRY OF
INDUSTRY AND TRADE**

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General information

An Emergency Plan that could affect the security of gas supply in the Czech Republic is updated on the basis of the requirements of Articles 8 and 10 of Regulation (EU) No 2017/1938 of the European Parliament and of the Council of 25 October 2017 on security measures the supply of natural gas and repealing Directive (EU) No 994/2010 (hereinafter referred to as the Regulation).

The Emergency Plan was prepared by the Ministry of Industry and Trade, which is the Competent Authority pursuant to Article 2, paragraph 7 of the Regulation, and on the basis of Act No. 458/2000 Coll., On Business Conditions and the Execution of State Administration in the Energy Sectors and on the Amendment to Certain Acts Act) as amended.

Emergencies in the gas industry and the basic procedures for their solution are laid down in § 73 of the Energy Act. More specifically, the actions to prevent emergencies and dealing with emergency are included in Decree no. 344/2012 Coll., The Ministry of Industry and Trade of the state of emergency in the gas industry and the method of safeguarding security of supply standard, which divides consumers into eight groups according to the type of gas consumption and further establishes five consumption levels to limit gas supplies and five consumption levels to interrupt deliveries to individual customer groups. The last consumption level is the emergency stage, which means interrupting natural gas supplies to all customers. This decree passed amendments (MIT Decree no. 215/2015 Coll.) In order to further provisions divorced former Regulation (EU) no. 994/2010 and the current wording of the Energy Act no. 458/2000 Coll.

1. Legislation

1.1 Legislation of the European Union

History and Present:

The European Union has devoted its attention to safeguarding the security of gas supply already in Directive 2004/67 / EC of the European Parliament and of the Council of 26 April 2004 on measures to safeguard security of natural gas supply

The issue of security of supply has also been addressed in the third energy package, namely Directive 2009/73 / EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55 / EC.

When the first major crisis in the supply of natural gas to the Member States of the European Union occurred in 2009, it was decided to issue a new more detailed regulation, which became Regulation (EC) No 994/2010 of the European Parliament and of the Council of 20 October 2010 on measures to safeguard security of supply natural gas and repealing Council Directive 2004/67 / EC. That Regulation is repealed by Regulation (EU) 2017/1938 of the European Parliament and of the Council.

Legislation of the Czech Republic

The national legislation deals with safeguarding security of gas supply in Act No. 458/2000 Coll., On Business Conditions and on the Exercise of State Administration in Energy Industries and on Amendment to Certain Acts (Energy Act), namely the state of emergency in Section 73 of the Act. Under the Act, the Implementing Decree of the Ministry of Industry and Trade No. 344/2012 on Emergency Situations in the Gas Industry, which divided customers according to the type and size of the collection into eight consumption groups, introduced a total of twelve consumption levels and introduced the permitted daily consumption as currently amended 215 / 2015 Sb ..

Other Legal Documents Related to Emergency Situation in the Gas Industry:

Act No. 262/2006 Coll., labor code, as amended

Act No. 59/2006 Coll., on preventing serious emergencies, as amended.

Act No. 239/2000 Coll., on an integrated emergency rescue system, as amended.

Act No. 239/2000 Coll., on an integrated emergency rescue system and changes to some other acts, as amended.

Act No. 240/2000 Coll., on crisis management and changes to some other acts, as amended.

Act No. 241/2000 Coll., on economic measures for states of crisis and changes to some related acts, as amended.

Decree of the Ministry of Industry and Trade No. 345/2012 Coll., on dispatch control for the gas network of the Czech Republic and interchange of a data for dispatch control.

Decree of the Ministry of the Environment No. 256/2006 Coll., on details of serious emergencies prevention.

Decree of the Ministry of the Interior No. 103/2006 Coll. on determining the principles for defining an emergency planning zone and the extent and ways of processing an external emergency plan, as amended.

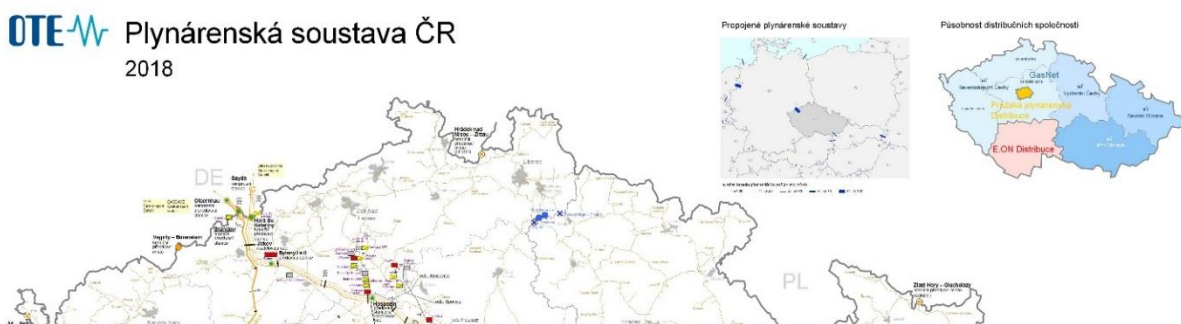
Decree of the Ministry of the Interior No. 328/2001 Coll. as amended by decree No. 429/2003 Coll., on some details for securing the integrated emergency rescue system, as amended.

2. Crisis situations and levels

2.1 Gas system

The gas network is a mutually interconnected set of equipment for the production, transport, distribution and storage of gas, including a system of control and signaling technology and information transfer facilities for the activities of computer technology and information systems used to operate these devices.

Fig. No. 1: The Gas System of the Czech Republic



Source: OTE. a.s.

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This system consists of:

- transmission systems (interconnected set of high-pressure gas pipelines and compressor stations and related technological objects including the control and signaling system)
- distribution systems (a interconnected set of high-pressure, medium-pressure and low-pressure gas pipelines not directly connected to compressor stations)
- direct gas pipelines (not part of a transmission or distribution system - additionally set up to supply gas to eligible customers)
- gas pipelines (equipment starting with a branch from the pipeline of the transmission or distribution system and terminated before the main gas shut-off)
- gas storage facilities (underground gas facilities for the storage of natural gas directly connected to the Czech or foreign gas system)
- plants (gas generating or extraction equipment)
- technical gas dispatching centers (workplaces ensuring the balance between sources and the need for gas and safe and reliable operation of the gas system of the Czech Republic)

The role of natural gas in the Czech Republic's energy balance is growing. Its share of primary energy consumption in recent years is about 20%. Natural gas sources in the Czech Republic are very small. The annual natural gas extraction in South Moravia is about 150 million m³ representing about 2% of its total annual domestic consumption. The Czech Republic is thus almost completely dependent on imports of natural gas from three different sources - the Russian Federation, the countries of the European Union and Norway. At present, approximately 20 companies are involved in the import of natural gas into the liberalized market, with the largest share of imports being secured in particular by long-term contracts for the take or pay delivery of natural gas. The contracting parties to these contracts are mainly RWE Supply & Trading CZ, a.s. The dominant licensed gas traders in the Czech Republic include innogy (formerly RWE) Energie, Pražská plynárenská and E. ON Energie.

The long-term RWE Supply & Trading CZ contract with Gazprom EXPORT LTD (formerly Gazexport) for gas supplies originally concluded by the end of 2013 was extended to 2035 but is currently not actively used; a contract with Norwegian producers was completed in 2017.

Domestic gas consumption in recent years ranges from 8 to 8.5 billion m³.

2.2 Emergency causes

Natural disasters

Depending on the territorial extent and intensity of the effects of natural disasters, gas transport between producer, transmission system operator, distribution system operators, underground gas storage operators and end customers may be disrupted. In particular, there are hazards of surface transitions of surface water caused by floods in places where the soil is either washed away or has slipped down. Uncompromising security of these critical points reduces the hazard significantly. Natural disasters may cause both direct damage (damage or demolition of facilities) as well as indirect damage (caused by subsequent gas consumption failure by customers affected by the natural disasters as well) to gas undertakings.

Technological accident

Extraordinary events are the failure of or an accident to the technological equipment and substantial changes in the operating mode of the gas industry system with the potential hazard of limiting or disrupting the natural gas supply and natural gas transmission as well as events endangering the health or life of employees, inhabitants and property.

These situations particularly include:

- a) spontaneous closing of a route closing valve;
- b) spontaneous closing of a pressure regulator due to an automation failure or pressure situation that causes automatic closing;
- c) spontaneous and forced gas pipeline stretch shutdown due to a natural gas leak or deformations at transitions;
- d) danger to gas pipeline continuity due to possible formation of hydrates;
- e) water and impurities intrusion to gas pipelines during repairs with subsequent danger to natural gas supplies to customers when starting up the pipelines after the repair;
- f) threat of supplies of natural gas to customers due to the presence of gases other than natural gas (air, nitrogen etc.);
- g) emergency shutdown and depressurization of a compressor station or any part of it (hall);
- h) electricity supply failure and uninterrupted power system failure;
- i) group shutdown of turbine generator unit;
- j) forced shutdown of entry filters of a compression station;
- k) spontaneous and forced pipeline shutdown in a compression station due to a natural gas leak or deformation of the gas pipeline;
- l) reduction of control station performance of a compression station;
- m) emergency disruption of any device of the gas industry system that stops further operation of the device;
- n) leak of crude oil, triethyleneglycol, methanol and/or other hazardous substances;
- o) fire security system failures preventing turning on the system;
- p) fire of any device of the gas industry system;
- q) failures on control system of a compressor station or transmission system control room;
- r) control system failure of a border, national or transfer control station, gas quality measurement failure (chromatograph);
- s) extraordinary changes to the transmission mode of the gas industry system due to:
 - a natural event;
 - long-term insufficiency of natural gas resources;
 - sharp drop in the natural gas delivered to the transmission system;
 - disproportional natural gas consumption from the gas industry system;
 - restriction of the transport capacity of the transmission system caused by a long-term emergency shutdown of compression station equipment or a compression station;
 - restriction of transmission capacity of the gas industry system because the pipeline is clogged with hydrates, spontaneous closure of a high number of route closures or pressure controls or a natural gas leak resulting in an emergency shutdown of the gas pipeline;
 - reduction or termination of transmission capacity via HPS or VPS or PRS;
- t) serious, mass and lethal accident.

During normal operation, the level of the risks can be eliminated by consistent compliance with safety rules, technological procedures, preventive inspections and training service staff.

Terrorism

Terrorism may be a serious risk for the gas industry during international tension. Depending on the nature of the terrorist threat or completed terrorist attack, natural gas supplies may be either limited or disrupted.

Destruction of the operational facilities of the gas industry system directly affects the reliability of natural gas supplies for the Czech Republic. The higher the pressure level of the gas pipelines attacked, the higher is the general effect on the natural gas supply from the accident. An underground gas storages accident would substantially affect the supply to customers in the winter.

At present, a long-term disruption of natural gas supplies from one foreign partner is not a danger for the Czech gas industry system, although the level of it is significant with respect to the dependence of our country on imports. The level of danger can be decreased by diversification of resources and concluding long-term contracts with gas producers. Safeguarding gas from more resources and of more than one transmission route is also a defense against potential political misuse and a solution for any extraordinary situation.

Over the last decades, the European system of long-distance transmission of gas has developed into a fully interconnected network that is an important assumption for the secured reliability and security of supplies. Gas is supplied to the system and transmitted across the transit countries for further supply to distribution networks. The continuity of supplies of Russian gas may be negatively influenced by the development of the relationships between Russia and Ukraine, as showed situation from 2014 when gas supplies of Russian gas to Ukraine was fully interrupted and subsequent supplies to some other states was limited (Poland, Hungary, Slovakia) .

2.3 Crisis level

Early warning

If there is specific, serious and reliable information about a potential and probable situation resulting in a substantial deterioration of the gas supplies situation and the declaration of a warning or emergency levels; the early warning level may be triggered by the early warning mechanism.

- occurrence of an extraordinary event with an immediate impact on the gas industry (e.g. a natural disaster)
- occurrence of an extraordinary event in the gas industry (e.g. technical or technological accident, particularly outside the Czech Republic)
- deterioration of the political situation at the international level
- deterioration of the internal political and security situation in states producing or transiting natural gas
- receiving intelligence information about a potential terrorist attack threat
- necessity to control gas consumption and supply - avoiding a state of emergency

Alert

If supplies disrupted or exceptionally high gas demand resulting in a substantial deterioration in natural gas supplies, but the market remains capable of dealing with the disruption of supplies or increased demand without having to adopt other than market measures.

- limited or suspended natural gas supplies in part of the country during long-term extreme temperature conditions in winter
- occurrence of secondary crisis situations
- escalation of the political situation at the international level
- escalation of the internal political and security situation in states producing or transiting natural gas
- receiving intelligence information confirming a real threat of a terrorist attack

State of emergency

If a serious disruption of natural gas supplies or another substantial deterioration of the situation of natural gas supplies occurs and if all suitable market measures are applied, the natural gas supplies are not sufficient to cover the remaining natural gas demand and therefore, other than market measures must be applied in addition particularly to safeguard natural gas supplies to protected customers.

- declaring a state of emergency in the gas industry
- limiting or suspending natural gas supplies to the vast majority or all the state
- the expected term required to restore normal operation exceeds several days up to weeks
- persistent or deteriorating temperature conditions
- occurrence of other secondary crisis situations, threat to the fundamental functions of the state and critical infrastructure
- limited or suspended natural gas supplies due to the international political situation in states producing or transiting natural gas.

3. Measures to mitigate the impact of supply disturbances on district heating and electricity

(a) thermal energy

Customers (natural gas customers) who provide more than 20% of the heat produced from their total production to households, healthcare facilities and social services facilities are included in Group C1, which includes the consumption points of customers with predominant heat consumption with estimated annual consumption exceeds 4 200 MWh in the relevant year and does not fall under Group A or D. These sampling points belong to that group (C1) if the sum of the consumption in the last quarter of the previous year and the first quarter of the year is 70% or more of the total consumption for the period from 1 April of the previous year until 31 March of that year.

Customers who provide heat to households, health care facilities and social services facilities are not restricted in preventing emergency, except when their gas supplier has caused a notification of emergency prevention due to a failure to supply gas or a significant deviation.

For reasons of supplying heat to the above-mentioned customer groups, Group C1 customers are not limiting in both gas consumption and consumption levels for limiting gas supply. Their limitations only occur at the 8th and 9th consumption levels, when C1 customers are limiting gas supply by 20% or 40% respectively. Then, there is only an emergency stage, which means the interruption of the gas supply to all the supply points of the customers of all groups.

An important measure for mitigating the impact of gas supply disruptions on district heating has been the inclusion of heat energy suppliers, C1 customers, among protected customers according

to the new Decree of the Ministry of Industry and Trade No. 344/2012 Coll., On the state of emergency in the gas industry and on the way of securing the security standard.

(b) electricity

The share of natural gas in the production of electricity is not significant. Dropouts of gas supply will not significantly affect the overall production and supply of electricity. Only about 6% of consumed natural gas is used to generate electricity. For this reason, electricity production from natural gas has not yet been included in the category of protected customers.

4. Role and responsibilities of natural gas undertakings and industrial customers

The activities of individual gas market participants in declaring a state of emergency are determined by the provisions of Act No. 458/2000 Coll., On Business Conditions and the Performance of State Administration in the Energy Sectors and on Amendments to Certain Acts (Energy Act - EZ), but are further developed in the Decree of the Ministry Industry and Trade No. 344/2012 Coll., about the state of emergency in the gas industry and about the method of safeguarding the safety standard, as amended.

4.1 Gas transport

Fig. No. 2 – Transmission system



Source: NET4GAS

The system, at which the gas transmission is ensured by a transmission licensee to transport gas, is connected to gas systems in neighboring countries; transmission system is instituted and operated in the public interest.

The obligations of the transmission system operator are defined in § 58 of Act No. 458/2000 Coll. on business conditions and public administration in the energy sectors and on amendments to other laws (the "Energy Act"), as amended.

The responsibilities of the transmission system operator include the responsibility for declaring all three crisis levels - early warning, alert and emergency.

The procedures that need to be complied with are described in the Transmission System Operator's Emergency Plan.

In the event of an emergency, and after consideration, either an emergency or a state of emergency is declared.

4.2 Gas distribution

Fig. No. 3 – Distribution system (DS)

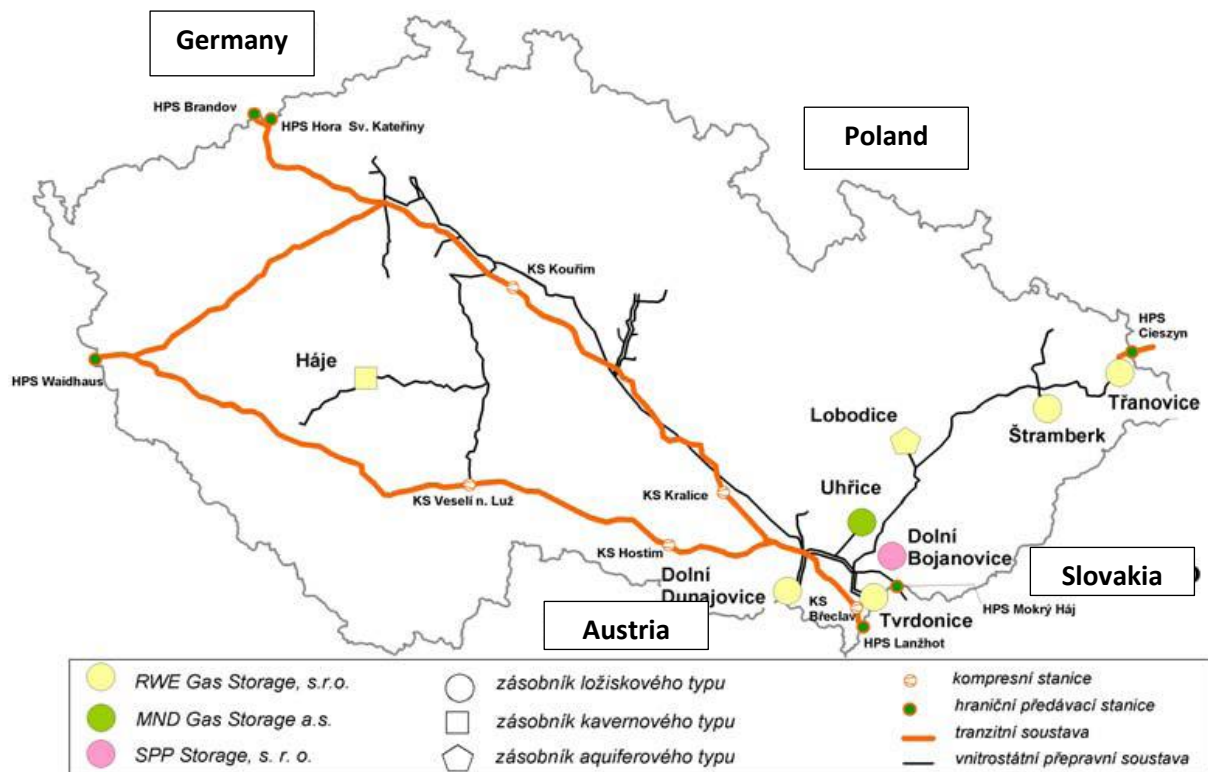


Source: OTE

The obligations of the distribution system operator are defined in § 59 of Act No. 458/2000 Coll., On Business Conditions and on the Exercise of State Administration in the Energy Sectors and on the Amendment to Certain Acts (Energy Act), as amended (see Annex).

4.3 Gas storage

Fig. No. 4 – Underground gas storages



Source: NET4GAS

The obligations of the gas storage operator are defined in § 60 of Act No. 458/2000 Coll., On Business Conditions and on the Exercise of State Administration in the Energy Sectors and on the Amendment to Certain Acts (Energy Act) as amended (see Annex).

4.4 Gas trade

The obligations of the gas trader are defined in Section 61 of Act No. 458/2000 Coll., On Business Conditions and on the Exercise of State Administration in the Energy Sectors and on the Amendment to Certain Acts (Energy Act), as amended (see Annex).

4.5 Industrial customers

Customer obligations and rights are generally defined in Section 62 of Act No. 458/2000 Coll., On Business Conditions and on the Exercise of State Administration in the Energy Sectors and on the Amendment to Certain Acts (Energy Act), as amended (see Annex).

4.6 Ministry of Industry and Trade

The responsibilities of the Ministry of Industry and Trade are laid down in the provisions of Section 16 of Act No. 458/2000 Coll., On Business Conditions and the Execution of State Administration in the Energy Sectors and on the Amendment to Certain Acts (Energy Act), as amended, and by Regulation of the European Parliament and Council No. 2017 / 1938 (see Appendix).

4.7 Intelligence obligations of natural gas undertakings

The reporting obligations of the individual gas market participants are determined by the provisions of Act No. 458/2000 Coll., On Business Conditions and the Execution of State Administration in Energy Industries and on Amendments to Certain Acts (Energy Act), but are further elaborated in the Decree of the Ministry of Industry and Trade no. 344/2012 Coll. on the state of emergency in the gas industry and on how to ensure the safety standard.

5. Crisis (emergency) committees and their tasks

5.2 Emergency committees of gas companies

5.1.1 Transmission system operator

Act No. 458/2000 Coll., On Business Conditions and Performance of State Administration in the Energy Sectors and on Amendment to Certain Acts, confers on the Transmission System Operator (TSO) the obligation in § 58, par. q), to manage the gas system of the Czech Republic in a state of emergency. To do this, the Crisis Team of the transmission system operator and the Central Crisis Team, composed of representatives of individual distribution system operators, gas storage operators, gas producers and the Ministry of Industry and Trade.

- The PPS declares a state of emergency according to the Act No. 458/2000 Coll., Section 73, paragraph 3
- PPS has the right according to Act No. 458/2000 Coll., Section 58, Para. (h) to use, to the extent necessary, the natural gas installations of customers for whom gas is transported in an emergency.

The Crisis Manager is a representative of the Transmission System Operator. His – hers tasks are determined by the Emergency Plan of the Transmission System.

5.1.2 Distribution system operators

The rights and obligations of the distribution system operators in emergency situations are enshrined in Act No. 458/2000 Coll. in Section 59.

5.1.3 Gas storage operators

The rights and obligations of the gas storage facility operators in emergency situations are enshrined in Act No. 458/2000 Coll. in Section 60.

The basic duties and rights of the Chairman and the members of the Emergency Commission as well as the Head of Disaster Management are similar to those of the transmission or distribution system operator.

5.1 The Central emergency committee of the Czech Republic gas system

In order to solve the situation arising from the declaration of an emergency on the gas system of the Czech Republic, the Central Crisis Team is established. The members of the Central Crisis Staff are:

- Transmission system operator
- Distribution system operators
- Underground gas storage operators
- Gas producers
- Ministry of Industry and Trade.

6. Market measures

6.1 Alert level

Given that the Czech Republic is 99% dependent on natural gas imports, it can not use increased flexibility of extraction or some other measures on the supply side. Market measures on the supply side can be used

- Increased flexibility of imports that can be secured by gas supplies from the spot market to virtual trading points in the European Union. Another of the market measures may be
- Increased extraction from gas storage capacity of about 40% of annual consumption and mining capacity close to winter consumption.
- The use of gas backflow is one of the measures in which the Czech Republic has a comparative advantage, as it has the possibility of backflow at all cross-border points. It is already possible to use diversified routes and gas supplies in connection with the built-in reverse gas flows in the transport system, especially the already completed gas pipeline Gazela, which connected the border stations Brandov and Waidhaus / Rozvadov. The Gazela gas pipeline (see Figure 5 - marked in red) is connected in several places with the existing transmission system of the Czech Republic and it is therefore possible to partially provide deliveries to end-customers in the Czech Republic.

On the demand side, the Czech Republic does not have so many tools, as very few customers have the possibility of switching to another fuel in the event of a shortage of natural gas. Demand side can be used

- closed interruptible contracts and beyond
- Negotiating a voluntary reduction in the subscription of some subscribers, depending on the season and duration of the alert.

Additionally, following the provisions of the Decree of the Ministry of Industry and Trade No. 344/2012 Coll., About the state of emergency in the gas industry and about the way of ensuring the safety standard, specifically according to § 3, prevention of the emergency - see Annex.

6.2 Non-market measures in a state of emergency and their effects

In case of emergency, measures can be applied in the field of safeguarding of gas supply both on the supply side and on the demand side. However, the fact remains that the Czech Republic, which does not have strategic gas reserves, has very limited options on the supply side, virtually the only way remains for gas withdrawal from gas storage.

On the demand side, interruptible deliveries are used as a priority in case of emergency, but the procedure is in accordance with the Decree of the Ministry of Industry and Trade No. 344/2012 Coll., About the state of emergency in the gas industry and about the way of safeguarding the safety standard, namely according to § 4, emergency and § 5 , consumption levels.

Withdrawal of gas from storage facilities (underground gas storage facilities)

Mandatory gas withdrawal from UGS is applied after declaring a state of emergency and after the inability to safeguard gas supplies via market measures on the basis of the storage of gas in UGS facilities in the Czech Republic. Decision is made by the Central Crisis Staff PS CR.

Measures that may be appropriate to use in the event of an emergency and to what extent use to master the crisis is necessary

These measures are described in Decree No. 344 dated October 10, 2012 on the state of emergency in the gas industry and about the way of safeguarding the security of supply standard, where in § 4 State of Emergency are listed the activities in case of emergency and in the order in which they follow. An overview of consumption levels is given in § 5 Consumption levels (see Annex).

Effects of national emergency measures in relation to neighboring countries

There are information transmission schemes where is stated the exchange of information of the transmission system operator Net4Gas s.r.o. with dispatchers of foreign partners who take this information into their Crisis (emergency) staff. Crisis staffs can merge and discuss and address the situation in order to mitigate the effects of serious supply disruptions and prevent unnecessary damage to individual Member States.

State of emergency

The state of emergency deals with Section 73 of Act No. 458/2000 Coll.

6.3 Measures relating to undesirable consumption by customers who are not protected customers

Disconnection of individual customers is described in the emergency plan of the distribution system operator.

7. Emergency tests

The Transmission System Operator carried out a simulation of emergency prevention during the alert and emergency phase of the gas system of the Czech Republic, based on a fictitious situation similar to the situation from 6 to 7 January 2009, when Russian natural gas transit via the territory of Ukraine was interrupted. The aim of the simulation was to verify the preparedness of new mechanisms (Central Crisis (Emergency) Committee) in declaring the state of emergency, in accordance with the Decree of the Ministry of Industry and Trade No. 344/2012 Coll., About the state of emergency in the gas industry and about the way of ensuring the security standard of gas supply.

- The theme was to prevent the emergency during the alert phase and declare the emergency.
- The aim was to verify the readiness of new mechanisms (amended Decree No 344/2012, Central Crisis Committee, etc.).
- The purpose was to verify communication and up-to-date telephone, fax and e-mail connections of the designated institutions and participants in the gas market in the Czech Republic, in accordance with the Emergency Plans of the affected entities, including the check of division of end-customers into the consumption level Groups according to No. 344/2012 Coll.

Estimated savings in one day were quantified for each consumption level.

total daily consumption: 42 707 thousand, m³

Consumption level	m ³	%
1	507 217	1,20%
2	2 029 438	4,80%
3	3 889 105	9,10%
4	4 592 546	10,80%
5	6 088 438	14,30%
6	7 582 966	17,80%
7	8 233 712	19,30%
8	11 605 302	27,20%
9	15 892 703	37,20%
10	18 566 437	43,50%

The aim of the simulation exercise was to confirm the readiness of new mechanisms, to verify communication links and cooperation between traders, gas service operators and end customers.

Only customers with annual natural gas consumption exceeding 5 million Nm³ were involved in the simulation exercise.

Restriction of consumption during emergency in the gas industry according to Decree No. 334/2009 Coll. concerned end customers of types A, B1, B2.

8. Description of mechanisms of regional dimension at all crisis levels

Since that initial information about changing the gas supply, possibly approaching a situation that causes the prevention of emergencies and other critical levels, is always the first dispatching TSO performs the dispatching all the opening acts.

8.1 Early Warning

In order to prevent an emergency in an early warning phase, the dispatching of the transmission system operator proceeds as follows:

- a) Informs the chairman of the Central Crisis Staff
- b) Informs the Chairman of the Emergency Commission and the Secretary of the Emergency Commission
- c) Cooperates with all adjacent dispatch centers of foreign TSOs
- d) cooperates with all distribution system operators in the Czech Republic
- e) cooperates with all operators of gas storage facilities in the Czech Republic
- f) Informs the producer of gas in the Czech Republic
- (g) Informs direct customers connected to the transmission system
- h) Informs all gas traders confirming the nomination for shipment
- i) Informs the Market Operator
- j) Informs the Czech Radio, the General Directorate of the Fire Rescue Service, the Ministry, the State Administration of Material Reserves, the Energy Regulatory Office.

8.2 Alert

In order to prevent an emergency in the alert phase, the dispatching of the transmission system operator proceeds as follows:

- a) informs the chairman of the Central Crisis Staff
- b) informs the Chairman of the Emergency Commission and the Secretary of the Emergency Commission
- c) cooperates with all adjacent dispatch centers of foreign TSOs
- d) cooperates with all distribution system operators in the Czech Republic
- e) cooperates with all operators of gas storage facilities in the Czech Republic
- f) Informs the producer of gas in the Czech Republic

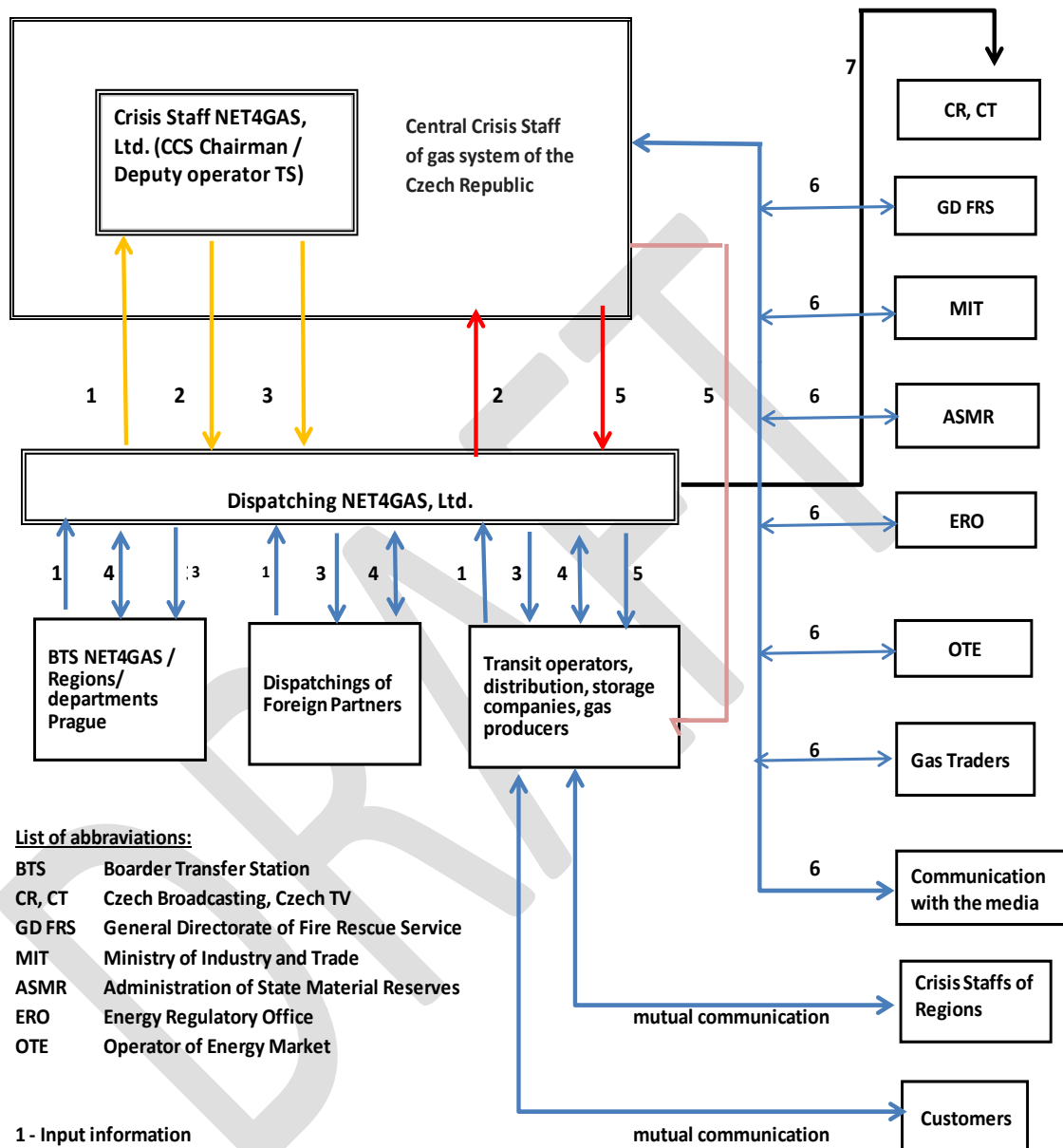
- (g) Informing direct customers connected to the transmission system
- h) Informs all gas traders confirming the nomination for shipment
- i) Informs the Market Operator
- j) Informs Czech Radio, the General directorate of Fire Brigades, the Ministry, State Administration of Material Reserves and the Energy Regulatory Office.

8.3 State of Emergency

In case of declaration of an emergency in the whole territory of the Czech Republic, the dispatching of the transmission system operator shall be carried out in accordance with the emergency ordinance:

- a) Emergency status is declared by the chairman of the Central Crisis Staff
- b) Informs the Chairman of the Emergency Commission and the Secretary of the Emergency Commission
- c) Cooperates with all adjacent dispatch centers of foreign TSOs
- d) cooperates with all distribution system operators in the Czech Republic
- e) cooperates with all operators of gas storage facilities in the Czech Republic
- f) Informs the producer of gas in the Czech Republic
- (g) Informing direct customers connected to the transmission system
- h) Informs all gas traders confirming the nomination for shipment
- i) Informs the Market Operator
- j) Informs the Czech Radio, the General Directorate of the Fire Rescue Service, the Ministry, the State Reserve of Material Reserves, the Energy Regulatory Office.

Graph 1: Information flows when declaring a state of emergency in the Czech Republic gas system



8.4 Measures to be taken at the crisis level

A number of measures in the energy security model of the transmission system operator include agreements with transmission system operators and customers in other gas transmission systems.

8.5 Mechanisms of cooperation

The Czech Republic is a member of the risk groups Belarus, Ukraine and the Baltic Sea. The Czech Republic is directly connected to the German, Slovak and Polish gas systems at the relevant interconnection points in Hořice, Catherine, Waidhaus, Lanžhot and Csieszyn. In terms of regional cooperation, close cooperation with Germany and Slovakia is important to mitigate the risk of shortening domestic gas supplies and to ensure the effective functioning of the internal gas market.

8.6 Solidarity between Member States

The Czech Republic will conclude agreements with Germany and Slovakia on the delivery of solidarity gas in both directions and an agreement with Poland on the delivery of solidarity gas to Poland. The Czech Republic is working on a legal and practical path to create the necessary national legal system and to develop an integrated transport, allocation and appointment system to ensure the delivery of solidarity gas to Germany and Slovakia. The amendment to the Energy Act is being prepared and is due to be finalized for Parliament by the end of 2019.

9. Consultation with neighboring countries

In accordance with Article 8 (6) of Regulation (EC) No 2017/1938 of the European Parliament and of the Council, the competent authorities of the neighboring countries should exchange proposals for the Emergency Plan and carry out consultations at regional level in order to avoid inconsistency between the plans and measures proposed by them plans for preventive measures and contingency plans for other Member States and to comply with the provisions of this Regulation and other EU legislation. The competent authorities in each of the risk groups should exchange proposals for a plan containing proposals for cooperation no later than 5 months before the expiry of the deadline for submitting a plan.

The Emergency Plan shall then be updated every four years or more frequently if circumstances so require or if the Commission so requests. The updated plan thus reflects the updated risk assessment and the conclusions of the tests carried out under Article 10 (3) of Regulation No 2017/1938.

10. Conclusion

Tasks and responsibilities of natural gas undertakings for emergencies are defined both in Act No. 458/2000 Coll., On Business Conditions and State Administration in Energy Industries and on Amendments to Certain Acts (the Energy Act), as well as in the Decree on State of Emergency in the Gas Industry and measures how to safeguard the security standard. In addition, the individual activities of natural gas undertakings are dealt with in detail in the emergency plans of individual gas facility operators in the prevention of emergency and emergency situations and are covered by the "Emergency plan of the gas system of the Czech Republic".

The obligations of the gas undertakings resulting from the Energy Act and the Decree are continuously controlled by the Ministry of Industry and Trade of the Czech Republic as well as by the Energy Regulatory Office.

For emergency and emergency situations, crisis (emergency) committees of individual gas undertakings are established, defining the processes and rules to which responsibilities and powers are assigned, and further on the Crisis Team of the Transmission System Operator and the Central Crisis Team are established.

At the alert level, market-based supply-side measures mainly use increased import flexibility, increased gas withdrawal and possibility of reverse flow in the transmission system, and the use of interruptible contracts on the demand side.

Non-market measures, which are usually used only in an emergency, include compulsory gas extraction on the supply side and demand-side switching to another fuel and a gradual reduction in gas consumption depending on the categorization of customers in individual groups according to the Decree no. 344/2012 Coll., The Ministry of Industry and Trade of the state of emergency in the gas industry and the method of safeguarding security of supply standard.

Cooperation between Transmission System Operators in emergency situations is in place, it will be appropriate to extend it to other countries of the region that are interconnected, as well as to establish co-operation at the level of state authorities.

The reporting obligations of the individual gas service operators are defined by the Energy Act and further developed by the Decree no. 344/2012 Coll., The Ministry of Industry and Trade of the state of emergency in the gas industry and the method of safeguarding security of supply standard.

Deliveries of gas in the case of emergency are primarily intended to provide protected customers. The term "Solidarity Protection Customers" is currently not anchored in the legislative of the Czech Republic (March 2019).

The transport system of the Czech Republic is robust, high quality and carefully maintained and ensures no problem of meeting the N-1 standard, this standard is even much higher in the Czech Republic than the requirement of Regulation No. 2017/1938.

Gas storage, which accounts for about 40% of the annual gas consumption in the Czech Republic, significantly helps to safeguard gas supplies to end customers in the event of an interruption or limitation of gas supplies across Ukraine. Storage capacities are expanding at present and, after completion, total storage capacity will account for approximately 45% of annual consumption.

The Czech Republic is making use of the **diversification of existing routes** and **sources** of gas supply. In 2017, imports from the Russian Federation were 65.1%, from Norway 0.8% and the European Union 34.1%. This has removed the former dependence on a single source of gas from the Russian Federation.

Reverse flows were realized in the Czech Republic's transport system to safeguard gas supply in case of interruption of Ukrainian route for not only Czech customers but also to customers in Slovakia.

The diversification of the new routes has been completed, where it is possible to supply gas to the Czech Republic with this new route through the commissioning of the Nord Stream gas pipeline, the OPAL gas pipeline and Gazelle (HPS Brandov).

The gas supply interruption does not threaten the electricity generation in gas-fired power plants because this generation accounts for about 6% of total electricity production.

The risk analysis shows that supply limitations or suspensions across Ukraine will not threaten the gas supplies to customers in the Czech Republic. Cumulation of failures such as the failure of gas supplies across Ukraine and the failure of natural gas supply over Boarder Transfer Station Hora sv. Kateřiny is highly unlikely, as well as the failure of several underground gas storages at the same time.

The gas system of the Czech Republic fully complies with the requirements of Regulation (EU) No 2017/1938 of the European Parliament and of the Council of 25 October 2017 on measures to safeguard security of gas supply and repealing Regulation (EU) No 994/2010.

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