



THE REPUBLIC OF BULGARIA

MINISTRY OF ENERGY

EMERGENCY PLAN TO SAFEGUARD THE SECURITY OF NATURAL GAS SUPPLY OF THE REPUBLIC OF BULGARIA

SOFIA 2022



TABLE OF CONTENTS:

GENERAL INFORMATION.....	3
Gas supply standard.....	6
Member States within the risk groups.....	6
CHAPTER 1 Definition of crisis levels.....	7
CHAPTER 2 Measures to be adopted per crisis level.....	9
CHAPTER 3 Specific measures in relation to electricity supply and district heating.....	17
CHAPTER 4 Person or team in charge of crisis management.....	19
CHAPTER 5 Roles and responsibilities of the different participants.....	21
CHAPTER 6 Measures concerning the undue gas consumption of non-protected customers.....	29
CHAPETR 7 Measures of voluntary reduction of gas consumption	30
CHAPTER 8 Emergency response tests.....	31
CHAPTER 9 Regional dimension.....	32
ANNEXES.....	37

GENERAL INFORMATION

This Emergency Plan has been prepared on the basis of Article 72(a), paragraph 1, item 2 of the Energy Act, Article 8 and Article 10 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 and reflects the requirements of Council Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas (Regulation 2022/1369). The Plan complies with the National Risk Assessment (NRA) of the Republic of Bulgaria and the Common Risk Assessment in the groups, prepared on the basis of the requirements of Article 7 of Regulation 2017/1938 (the Regulation). The National Emergency Plan has been prepared in the Ministry of Energy of the Republic of Bulgaria, following consultations with the natural gas undertakings, the relevant organisations representing the interests of household and industrial customers of natural gas, including electricity producers, and the national regulatory authority.

The plan shall cover the responsibilities, obligations and actions of the competent authority, natural gas and electricity system operators, natural gas and electricity distribution system operators, natural gas suppliers, major natural gas customers, including energy producers, and the crisis management groups under this plan for each of the three crisis levels, in order to effectively address supply disruptions and/or exceptionally high demand for natural gas, in accordance with Article 10 paragraph 1 of the Regulation 2017/1938.

Purpose: The plan is prepared to identify measures to be taken under the control of the Ministry of Energy (ME) to be implemented by the gas transmission system operator Bulgartransgaz EAD in cooperation with natural gas companies, major industrial customers and consumer associations and to eliminate or mitigate the impact of a gas supply disruption for the country and the regional risk groups. The Plan will be implemented in the event of crisis situations affecting or likely to affect the smooth operation of the Bulgarian gas market and/or the security of supply, in accordance with the Regulation.

Definitions:

- "security" means security as defined in Article 2 item 32 of Directive 2009/73/EC;
- "customer" means security as defined in Article 2 item 24 of Directive 2009/73/EC;
- "household customer" means security as defined in Article 2 item 25 of Directive 2009/73/EC;
- "essential social service" means a service related to healthcare, essential social care, emergency, security, education or public administration;
- "protected customer" means a customer as defined in Article 2 item 5 of Regulation (EU) 2017/1938, namely: "protected customer" means a household customer who is connected to a gas distribution network and, in addition, where the Member State concerned so decides, may also mean one or more of the following, provided that enterprises or services as referred to in points (a) and (b) do not, jointly, represent more than 20 % of the total annual final gas consumption in that Member State:
 - (a) a small or medium-sized enterprise, provided that it is connected to a gas distribution network;
 - (b) an essential social service, provided that it is connected to a gas distribution or transmission network;
 - (c) a district heating installation to the extent that it delivers heating to household customers, small or medium-sized enterprises, or essential social services, provided that such installation is not able to switch to other fuels than gas;
- "natural gas undertaking" means an undertaking as defined in Article 2 paragraph 1 of Directive 2009/73/EC, namely any natural or legal person performing at least one of the following functions: production, transmission, distribution, supply, purchase or storage of natural gas, including LNG, which is responsible for the commercial, technical and/or maintenance tasks related to those functions, but shall not include final customers;
- "transmission" means transmission as defined in Article 2 item 3 of Directive 2009/73/EC;
- "transmission system operator" means transmission system operator as defined in Article 2 item 4 of Directive 2009/73/EC;

- "distribution" means distribution as defined in Article 2 item 5 of Directive 2009/73/EC;
- "distribution system operator" means distribution system operator as defined in Article 2 item 6 of Directive 2009/73/EC;
- "interconnector" means interconnector as defined in Article 2 item 17 of Directive 2009/73/EC;
- "emergency supply corridors" means Union gas supply routes that help Member States to better mitigate the effects of potential disruption of supply or infrastructure;
- "Union alert" means a Union-specific crisis level triggering a mandatory demand reduction and which is not related to any of the crisis levels pursuant to Article 11 paragraph 1 of Regulation (EU) 2017/1938;
- "gas consumption" means the overall supply of natural gas for activities on the territory of a Member State, including the final consumption of households, industry and electricity generation, but excluding, inter alia, gas used to fill storage capacities, in line with the definition for "supply, transformation and consumption of gas" used by the Commission (Eurostat);
- "feedstock" means "non-energy use of natural gas" as referred to in energy balances calculations by the Commission (Eurostat);
- "reference gas consumption" means the volume of a Member State's average gas consumption during the reference period; for Member States where gas consumption increased at least by 8 % in the period from 1 August 2021 to 31 March 2022 compared to the average gas consumption during the reference period, "reference gas consumption" means only the volume of gas consumption in the period from 1 August 2021 to 31 March 2022;
- "reference period" means the periods from 1 August to 31 March during the five consecutive years preceding the date of entry into force of this Regulation, starting with the period from 1 August 2017 to 31 March 2018;
- "intermediate target" means the intermediate target as set out in Annex Ia to Regulation (EU) 2017/1938;
- "storage capacity" means storage capacity as defined in Article 2 item 28 of Regulation (EC) No 715/2009;
- "technical capacity" means technical capacity as defined in Article 2 item 18 of Regulation (EC) No 715/2009;
- "firm capacity" means firm capacity as defined in Article 2 item 16 of Regulation (EC) No 715/2009;
- "interruptible capacity" means interruptible capacity as defined in Article 2 item 13 of Regulation (EC) No 715/2009;
- "LNG facility capacity" means LNG facility capacity as defined in Article 2 item 24 of Regulation (EC) No 715/2009;
- "storage system operator" means storage system operator as defined in Article 2 item 11 of Directive 2009/73/EC;
- "storage facility" means storage facility as defined in Article 2 item 9 of Directive 2009/73/EC;
- "system" means system as defined in Article 2 item 13 of Directive 2009/73/EC; points (a) and (b) do not, jointly, represent more than 20 % of the total annual final gas consumption in that Member State:

Gas Coordination Group (GCG), facilitate the coordination of measures concerning the security of gas supply. GCG shall be composed of representatives of the Member States, in particular representatives of their competent authorities, as well as the Agency for the Cooperation of Energy Regulators (the "Agency"), ENTSOG and representative bodies of the industry concerned and those of relevant customers.

The Bulgarian competent authority shall ensure that conditions for supplies to protected customers are established without prejudice to the proper functioning of the internal energy market and at a price respecting the market value of the supplies. The measures shall be designed to guarantee a continued supply, under very demanding conditions, to protected customers, and to measures to mitigate the impact of an emergency.

In Bulgaria, protected customers shall be those described in Regulation 2017/1938. These are household customers connected to a gas distribution network, small and medium-

sized enterprises, any district heating installation to the extent that it delivers heating to household customers, provided that such installation is not able to switch to other fuels than gas; (e.g., heating and power cogenerating producers using gas turbines and/or piston engines), all public activities including hospitals, residential care homes, prisons, schools, and other community infrastructures, public and private ones that perform accredited nursing care activities and operations, as well as residential and non-residential customers with consumption up to 0.05 mcm/y. Solidarity protected customers in Bulgaria according to Regulation 2017/1938 shall be households (household customers) who are connected to a gas distribution network, healthcare, services related to essential social care, emergency services, security services and district heating installations, to the extent that they deliver heating to household customers, provided that such installations are not able to switch to other fuels than gas; (e.g., heating and power cogenerating producers using gas turbines and/or piston engines). **Annex No. 8** provides a detailed description of the protected customers.

According to the approach adopted by the Republic of Bulgaria, district heating companies whose main fuel is natural gas, but only part of their facilities are able to switch to an alternative fuel, shall not be included in the scope of protected customers. Minimum natural gas quantities shall be envisaged for them according to the Preventive Plan to ensure the secure and reliable operation of the heat generation and transmission facilities. The envisaged minimum natural gas quantities for the district heating companies with alternative fuel shall represent only approximately 8% of the total natural gas consumption in normal operation and are technologically necessary as the alternative fuel used in the Republic of Bulgaria for district heating companies is fuel oil (heavy fuel oil). The technological process of switching to and operating with this type of fuel requires the use of certain minimum natural gas quantities, which are necessary to ignite the alternative fuel and to stabilise the combustion process in order to fully burn the alternative fuel oil. The presence of certain minimum amounts of natural gas in the combustion process results in a more efficient combustion of the alternative fuel used. This in turn significantly reduces the release of harmful emissions into the atmosphere, which contributes to the protection of the environment, including the population's life and health. In accordance with the environmental legislation (Directive 2004/35/EC of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage and, accordingly, the Environmental Protection Act in force in the Republic of Bulgaria), for large combustion plants with an installed capacity of more than 50 MW, such as the majority of the district heating installations in the country, there is a time limit on the operation of alternative fuel oil, namely no more than 10 calendar days within 12 months.

Apart from this, there are district (local) heating installations in the Republic of Bulgaria for the production of heat only, which supply mainly household customers. The technological scheme of these installations includes gas boiler installations for the production of steam necessary for the heating of the back-up fuel - fuel oil. Thus, minimum natural gas quantities are also provided for these installations. A complete disruption of the natural gas supply to these installations would inevitably lead to a disruption of the installation's production regime and the cessation of heat production for household consumers.

Heat production installations, including cogeneration, are of major importance during the winter months for Bulgaria's energy security and their decommissioning would lead to an energy crisis in the country. In the event that the gas supply to these companies is completely cut off and they cease operation, their customers (predominantly households) will, for objective reasons, have to switch to another alternative source of heating, which will in practice be electricity. This is confirmed by the fact that a large part of the panel residential buildings in the country (built in the largest Bulgarian cities) are designed to be heated by district heating and not all residential premises have chimney outlets). Excessive consumption of electricity will lead to an imbalance of the electricity system, which may lead to its collapse.

In this respect, the Bulgarian Emergency Plan foresees heating companies to switch to alternative fuels, explicitly indicating that the restriction of gas supply shall be done without jeopardising the safe and reliable operation of the heat production and transmission facilities, i.e. the heat supply service for protected household consumers, including children, health and educational establishments. The Plan requires all district heating companies to declare the timing of their switchover to alternative fuels and the minimum quantities of natural gas they require to ensure the operational reliability and security of their production installations.

Gas supply standard

Article 6 of the Regulation establishes the standard for the natural gas supply to energy markets in the Member States of the European Union. It sets out the necessary measures (steps) to be taken during periods of crisis in order to ensure the natural gas supply to protected customers.

The minimum standard of supply to be ensured by natural gas undertakings is to guarantee supplies to protected customers for at least 30 days in the following cases:

- extreme temperatures during a 7-day peak period occurring with a statistical probability of once in twenty (20) years;
- any period of at least thirty (30) days of exceptionally high gas demand, occurring with a statistical probability of once in twenty (20) years;
- for a period of at least thirty (30) days in the case of disruption of the single largest gas infrastructure under average winter conditions.

The competent authority shall require the natural gas undertakings that it identifies, to take measures to ensure the gas supply to the protected customers of the Member State in each case.

In order to fulfil these requirements, information is requested from the relevant participants as follows:

- Historical data as well as forecasts of the impact of anomalous low temperatures on hourly and daily gas demand levels.

The public provider, end suppliers, and traders of natural gas determine the natural gas quantities required on an annual, monthly, and daily basis for their protected customers. District heating companies are required to provide information on the time required to switch to alternative fuel operation and the minimum natural gas quantities they need to ensure the operational reliability and security of operation of the facilities at the heat sources to provide heat service to their protected customers. The information on the natural gas quantities required and on the supply contracts concluded shall be updated at least every two years.

Additional cases, besides the above mentioned can be collected and addressed in the national risk assessment.

Crisis management authorities related to natural gas supply

The authorities designated for declaring and managing the three crisis levels according to Article 11 of the Regulation and the Plan shall be as follows:

- - EC Emergency Response Coordination Centre, EC-GCG and EC Crisis Management Group;
- Competent authorities of the risk group countries;
- Regional Crisis Management Coordination Centre;
- The competent authority of Bulgaria - declares one of the crisis levels, immediately notifies the European Commission (Commission, EC) as well as the competent authorities of the Member States,
- Crisis Management Group (CMG)- Departmental Crises Team of the Ministry of Energy;
- Crises Team for the implementation of the Emergency Plan of Bulgartransgaz EAD;
- Crises Team of LNG supply, production, transmission and storage companies.

Member States within the risk groups

According to Annex I of the Regulation, the Republic of Bulgaria falls in three gas supply risk groups: Eastern - Ukraine, Trans-Balkan and South-East - Southern Gas Corridor - Caspian Sea.

Risk group Ukraine includes: Bulgaria, Czech Republic, Denmark, Germany, Greece, Croatia, Italy, Luxembourg, Hungary, Austria, Poland, Romania, Slovenia, Slovakia and Sweden;

Risk group Trans-Balkan includes: Bulgaria, Romania, Greece and Hungary.

Risk Group Southern Gas Corridor - Caspian Sea includes: Bulgaria, Greece, Croatia, Italy, Hungary, Malta, Austria, Romania, Slovenia, and Slovakia.

CHAPTER 1 Definition of crisis levels

The **Competent authority** for security of natural gas supply within the meaning of Article 3 paragraph 2 of Regulation 2017/1938 shall be the Minister of Energy of the Republic of Bulgaria.

The Competent authority shall ensure that:

a) no measures are introduced which unduly restrict the flow of gas within the internal market at any time;

b) no measures are introduced that are likely seriously to endanger the gas supply situation in another Member State; and

c) cross-border access to infrastructure in accordance with Regulation (EC) No 715/2009 is maintained as far as technically and safely possible, in accordance with the emergency plan.

The Transmission system operator shall ensure that when an emergency is declared in a neighbouring Member State, capacity at interconnection points to that Member State, irrespective of whether firm or interruptible, and whether it has been booked before or during the emergency, has priority over competing capacity at exit points into storage facilities. The system user of the prioritised capacity shall promptly pay fair compensation to the system user of the firm capacity for the financial loss incurred as a result of prioritisation including a proportionate reimbursement for the cost of the firm capacity being interrupted. The process of determining and paying the compensation shall not affect the implementation of the priority rule.

The Energy and Water Regulatory Commission (EWRC) is an independent specialised state body responsible for regulating the activities in the energy sector and in the water supply and sewerage services. EWRC was established in 1999. In the energy sector, the EWRC monitors the energy markets and carries out price and licensing control in respect of the activities of transmission, supply and distribution of electricity; storage, transmission, supply and distribution of natural gas; trading in electricity; public supply of electricity and natural gas; generation and transmission of electricity and/or heat. (<http://www.dker.bg>)

Members of the Bulgarian Oil and Gas Association and Bulgarian Association Natural Gas are companies and specialists involved at all levels of the gas sector: design and supervision of gas systems and installations, financial modelling in the sector, importers of gas equipment and installers, gas distribution companies and companies carrying out natural gas transmission, natural gas traders.

According to Article 11 of Regulation 2017/1938, the crisis levels are divided into three:

a) early warning level ("early warning"): where there is concrete, serious and reliable information that an event which is likely to result in significant deterioration of the gas supply situation may occur and is likely to lead to the alert or the emergency level being triggered; the early warning level may be activated by an early warning mechanism;

b) alert level ("alert"): where a disruption of gas supply or exceptionally high gas demand which results in significant deterioration of the gas supply situation occurs but the market is still able to manage that disruption or demand without the need to resort to non-market-based measures;

c) emergency level ("emergency"): where there is exceptionally high gas demand, significant disruption of gas supply or other significant deterioration of the gas supply situation and all relevant market-based measures have been implemented but the gas supply is insufficient to meet the remaining gas demand so that non-market-based measures have to be additionally introduced with a view, in particular, to safeguarding gas supplies to protected customers in accordance with Article 6.

The competent authority shall declare one of the crisis levels referred to in Article 11 of Regulation 2017/1938 and shall immediately inform the Commission as well as the competent authorities of the Member States with which Bulgaria is involved in a regional risk group and shall provide them with all the necessary information, in particular with information on the actions it intends to take. In the event of an emergency which may result in a call for assistance from the Union and its Member States, the competent authority of Bulgaria shall without delay notify the Commission's Emergency Response Coordination Centre (ERCC).

The European Commission shall verify, as soon as possible, but in any case within five days of receiving the information from the competent authority, whether the declaration of an emergency is justified in accordance with point (c) of paragraph 1 and whether the measures taken follow as closely as possible the actions listed in the emergency plan and are not imposing an undue burden on natural gas undertakings and are in accordance with paragraph 6. The Commission may, at the request of another competent authority, natural gas undertakings or on its own initiative, request the competent authority to modify the measures where they are contrary to the conditions referred to in Article 11. The Commission may also request the competent authority to declare an end to the emergency where it concludes that the declaration of an emergency is not or is no longer justified in accordance with paragraph 1, (c) of Regulation 2017/1938.

Three days following the notification of the Commission request, the competent authority shall modify the measures and shall notify the Commission thereof, or shall inform the Commission of the reasons for which it disagrees with the request. In the latter case, the Commission may, within three days of being informed, amend or withdraw its request or, in order to consider the issue, convene the competent authority or, where appropriate, the competent authorities concerned, and, where the Commission considers it to be necessary, the GCG. The Commission shall set out its detailed reasons for requesting any modification to the action. The competent authority shall take full account of the position of the Commission. Where the final decision of the competent authority diverges from the Commission position, the competent authority shall provide the reasons underlying such decision.

The Commission may declare a regional or Union emergency at the request of a competent authority that has declared an emergency and following the verification in accordance with Article 11 paragraph 8.

The Commission shall declare, as appropriate, a regional or Union emergency at the request of at least two competent authorities that have declared an emergency and following the verification in accordance with Article 11 paragraph 8, and where the reasons for such emergencies are linked.

In all cases, when it declares a regional or Union emergency, the Commission, using the means of communication most appropriate to the situation, shall gather the views of, and take due account of all the relevant information provided by other competent authorities. When the Commission decides, following an assessment, that the underlying basis for the regional or Union emergency no longer justifies the declaration of an emergency, it shall declare an end to the regional or Union emergency and shall give its reasons and inform the Council of its decision.

As soon as an emergency is declared at regional or Union level, the Commission shall convene the **Gas Coordination Group (GCG)**.

In a regional or Union **emergency**, the Commission shall coordinate the action of the competent authorities, taking full account of relevant information from, and the results of, the consultation of the GCG. The Commission may convene a crisis management group composed of the crisis managers referred to in Article 10 paragraph 1 point (g) of Regulation 2017/1938, of the Member States concerned by the emergency. The Commission, in agreement with the crisis managers, may invite other relevant stakeholders to participate. The Commission shall ensure that the GCG is informed regularly about the work undertaken by the crisis management group.

The Commission, after consulting the GCG, shall establish a permanent reserve list for a monitoring task force consisting of industry experts and representatives of the Commission. The monitoring task force may be deployed outside the Union when necessary and shall monitor and report on the gas flows into the Union, in cooperation with the supplying and transiting third countries.

The crisis may be caused by the occurrence of the following main risks of different origins, which are not limited to the following:

- Expected anomalous low or high outside temperatures, and anomalously high gas demand;
- Supply disruption at any entrance within the Group;
- Lack of contractual security;
- Failure of a section of the network at home or abroad;
- Technical issues in the infrastructure;
- Technical issues in the infrastructure of upstream and downstream interconnected natural gas systems;
- Sabotage, vandalism, thefts in the NGTS facilities;
- Reduced or interrupted gas supply from third parties (especially natural gas suppliers, consumers, upstream natural gas system operators, independent natural gas operators);
- Unexpected exceptionally high demand for natural gas related to commercial or financial parameters;
- Long-term natural gas supply constraints;
- Civil unrest, war, terrorism, natural disasters, etc.

If any of the above events occur, one of the three crisis levels is predicted to occur and the National and Regional Risk Assessment is followed for assessment.

The security of gas supply shall be the shared responsibility of natural gas undertakings, Member States, in particular through their competent authorities, and the Commission, within their respective areas of activity and competence. Natural gas undertakings shall bear the main responsibility for the security of supply, as a shared responsibility, together with the competent authority and the European Commission, according to Article 3, paragraph 1 of Regulation 2017/1938 and in particular, the responsibilities under Article 13, paragraph 2 thereof.

CHAPTER 2. Measures to be adopted per crisis level

Events whose probability of occurrence leads to the declaration of one of the three crisis levels are: expected anomalous (extremely low) outside temperatures, anomalous (extremely) high demand for natural gas, supply interruption at any entry point in the country, lack of contractual security, failure of a section of the networks at home or abroad, other emergencies arising from a complicated international situation, military conflicts, crises, terrorist actions, etc.

2.1. **Early warning** shall be declared by a competent authority where there is concrete, serious and reliable information that an event which is likely to result in significant deterioration of the gas supply situation may occur and is likely to lead to the alert or the emergency level being triggered.

The early warning level may be activated by an early warning mechanism. The competent authority shall inform the Commission as well as the competent authorities of the Member States with which Bulgaria is directly connected and shall provide them with all the necessary information, in particular with information on the actions it intends to take.

When declaring an **Early Warning** level, the competent authority transmits and exchanges the information through the different communication channels, namely 24-hour telephone and internet connections, through the Operational Dispatcher, the Operational Duty Officer at the Ministry of Energy, Physical Dispatching and Regimes Department of Bulgartransgaz EAD, the TSOs of the neighbouring countries in the risk group, about the current situation to each customer of the gas supply system.

The early warning mechanism and actions to be taken are as follows:

2.1.1 The Transmission System Operator shall implement the notification scheme under **Annex No. 1**.

2.1.2 ME, EWRC, natural gas undertakings and operators of neighbouring countries in the region shall be notified in accordance with the scheme in **Annex No. 1**.

2.1.3. The information flow diagram - **Annex No. 2** shall be triggered.

2.1.4. Measures for increased operational control of the network parameters shall be undertaken by estimating the natural gas quantities from all sources at the entry points of the gas transmission network for at least three days ahead, compared with a three-day consumption forecast based on the concluded transmission contracts. Current consumption

levels and the correlation between the outside temperature and natural gas consumption shall be monitored. The likelihood of a supply/demand imbalance shall be determined and the imbalance of the gas transmission system as a whole on an hourly basis shall be monitored.

2.1.5. Where commercially and technically feasible, additional gas shall be injected into the underground gas storage facility (Chiren UGS) or virtual injection shall be carried out by replacing the gas from Chiren UGS with a proportional amount of gas at entry of the network.

2.1.6. Where commercially and technically feasible, the maximum level of natural gas available in the transmission network (linepack) shall be reached.

2.1.7. The natural gas undertakings shall inform Bulgartransgaz EAD Crisis Team on all issues regarding the possible changes of the supply and demand levels for the next three days and shall nominate the contact persons for the schemes in **Annexes No. 2, 3 and 4.**

Natural gas undertakings shall report:

- The reason for the threat;
- The approximate time until a disruption occurs;
- The estimated amount of natural gas loss as a result of the potential event;
- The information on interruptions in the natural gas supply to protected customers in the event of a disruption;
- The assessment of the emergency situation, together with a request to convene the Fuel Security Team;
- information on the expected effects of market activities.

The Transmission System Operator shall appoint a Permanent Crisis Team (Crisis Team for the implementation of the Emergency Plan), which shall be responsible for the implementation of the measures set out in the Plan. The notification scheme to be triggered upon the occurrence or anticipated occurrence of a crisis level, the natural gas undertakings, consumers, media and the Crisis Team shall be determined by an order issued by the Executive Director of the TSO Bulgartransgaz EAD.

2.1.8. Awareness-raising measures shall be taken to reduce natural gas consumption. The competent authority shall carry out general awareness activities targeting gas consumers, informing them that gas supplies will be restricted and appealing for voluntary reductions in gas use. The competent authority shall inform the Operator, the Bulgarian Oil and Gas Association and the Bulgarian Association Natural Gas that such general information will be made public. The Operator shall inform gas suppliers and major customers. Notification shall be made through the established information channels by official letter and/or email and/or telephone.

The purpose of these measures shall be to reduce the natural gas consumption. Establish additional stocks of alternative fuels. Prevent unjustified gas consumption without creating technically dangerous situations both in the country and in the regional risk group. The measure shall support the countries and operators in the risk group to carry out preliminary preparations before the event occurs, which is the reason for introducing crisis level 1 "Early Warning" and ensuring the normal operation of the operators in supplying natural gas to all customers.

Upon becoming aware of an anticipated event that may lead to a deterioration of the supply situation, the Minister of Energy may convene a meeting of the Ministry of Energy's Departmental Crisis Team (DCT-ME). Having received a recommendation from the Crisis Team, the Minister of Energy decides whether to declare an "Early Warning" in accordance with Article 11(1)(a) of Regulation No. 2017/1938. Information on the introduction of an "Early warning" shall be published on the Minister of Energy website. The decision to lift the warning level shall be made by the Minister of Energy in consultation with the team.

The Head of the DCT-ME shall monitor and evaluate the information received from the participants and members of the Crisis Team for the implementation of the Emergency Plan-BTG and, if the situation continues to deteriorate, shall prepare to declare a crisis level **2 "Alert"**.

2.2 "Alert" - crisis level 2 shall be declared where a disruption of gas supply or exceptionally high gas demand which results in significant deterioration of the gas supply situation occurs but the market is still able to manage that disruption or demand without the need to resort to non-market-based measures.

Before declaring an Alert Level, the Minister of Energy may convene the DCT-ME on the recommendation of which he shall decide whether to declare a crisis level of "Alert".

The following conditions shall be met in order to proceed with this action:

- the likelihood of the event occurring is 100% or one of the contingencies has already occurred;

- Bulgartransgaz EAD Crisis Team (EPICT) has assessed the imbalance in the gas transmission system as such that can be overcome by market-based measures (based on the contracts and agreements concluded and the flexibility embedded in them, the local production and the possibilities for withdrawal from Chiren UGS).

Following the declaration of an Alert Level, the competent authority shall immediately inform the Commission, as well as the competent authorities of Greece, Romania and Hungary with which Bulgaria is in a common risk group for regional cooperation, and shall provide them with all necessary information on the action it intends to take. Information on the current situation in the country is transmitted and exchanged via various communication channels, such as 24-hour telephone line and internet connections, through the operational dispatcher and/or operational duty officer at the Ministry of Energy and/or the Physical Dispatch and Regimes Department of Bulgartransgaz EAD and/or the TSOs of the neighbouring countries in the risk group(s).

If Alert is declared or cancelled, the Minister of Energy shall publish this information on the website of the Ministry of Energy and inform GCG as well as the competent authorities of the Member States of the respective risk groups.

The Minister of Energy shall recommend that natural gas companies initiate market-based measures in accordance with their procedures drawn up in accordance with the regulatory requirements in the event of a disruption of the natural gas supply to the gas system.

When **an Alert Level** is declared, the actions envisaged in the notification scheme shall be implemented: The following measures shall be taken:

2.2.1. TSO shall activate the notification scheme of Bulgartransgaz Crisis Team;

2.2.2. ME, EWRC, natural gas undertakings and operators of neighbouring countries in the region shall be notified in accordance with the scheme in **Annex No. 1**;

2.2.3 The information flow diagram - **Annex No. 3** shall be triggered;

2.2.4. Measures are taken to increase operational control of network parameters by estimating natural gas volumes from all sources at the entry points of the gas transmission network for three days ahead, compared with a three-day consumption forecast based on signed transmission contracts, current consumption levels and the ambient temperature-consumption correlation, determining the likelihood of a supply-demand imbalance and monitoring the imbalance of the system as a whole on an hourly basis.

2.2.5. Where commercially and technically feasible, additional gas shall be injected into Chiren UGS or virtual injection shall be carried out by replacing the gas from Chiren UGS with a proportional amount of gas at entry of the network.

2.2.6. Where commercially and technically feasible, the maximum level of natural gas available in the transmission network (linepack) shall be reached.

2.2.7. The **market-based measures** in terms of supply shall be applied in accordance with Annex II of Regulation 2017/1938.

2.2.7.1. Measures to enhance the flexibility of production shall be applied, i.e. maximise withdrawal from own sources.

2.2.7.2. Measures to enhance the flexibility of natural gas import shall be taken, i.e. maximise supply from import.

2.2.7.3. Measures for commercial storage of gas withdrawal capacity and quantities of stored natural gas.

2.2.7.4. Actions to supply natural gas in the reverse direction at interconnection points with a forward flow exit from the country of the physical flow.

2.2.7.5. Coordinate the actions with TSOs from neighbouring countries in the region, i.e. trigger operating agreements or transfer between different transmission systems, with the agreement of the natural gas undertakings with rights over them.

2.2.8. The market-based measures in terms of demand shall be applied in accordance with Annex II of Regulation 2017/ 1938:

2.2.8.1. The natural gas consuming companies shall switch to the consumption mode up to the amount of the orders confirmed by the Public provider/Traders according to their contracts.

2.2.8.2. Interruption of natural gas consumption for consumers where this action is expressly regulated by contract.

2.2.8.3. Voluntary switching off part of the load from consumers.

2.2.8.4. Voluntary fuel switching by consumers.

The measures under point 2.2.7 shall contribute to maximising the supply (both commercially and technically) of natural gas to consumers within the framework of existing contracts and agreements, and those under point 2.2.8 to voluntarily limit the natural gas consumption within the framework of the existing contracts.

2.2.9. The reporting obligations of natural gas undertakings under Regulation 2017/1938 at Alert crisis level are similar to those at Emergency crisis level and are described below in the Plan.

When an emergency is declared, natural gas undertakings provide the following information to the competent authority on a daily basis:

- daily gas demand and supply estimates over the next three days in volume and energy units - million cubic meters per day and megawatt hours (mcm/d and MWh);
- the daily flow rate of gas supply at all cross-border entry and exit points, as well as at all points connecting production facilities, storage facilities or LNG terminals to the network, in million cubic metres per day (mcm/d or MW/h);
- actual consumption and estimated quantities of natural gas for at least three days ahead for their protected customers in volume and energy units - million cubic meters per day and megawatt hours (mcm/d and MWh);
- the period, expressed in calendar days, for which the supply of natural gas to the protected customers is expected to be safeguard.

After declaring an Alert level, the Crisis Teams in the trade companies continuously analyse the situation and control the use of market means based on the information provided by the companies. The decision to lift the alert shall be made by the Minister of Energy following a consultation with the Crisis Team of the Ministry of Energy.

If available market-based measures are exhausted and there is a lack of possibility for further crisis response, the energy companies trading in gaseous fuels shall notify the TSO and the recipients with whom they have contracted natural gas sales.

In the event of a continuing deterioration of the situation, the Head of the Crisis Team of the Ministry of Energy shall assess the information received from the companies and from the members of the EPICT-BTG and, if necessary, propose to the Competent authority to declare an Alert Level 3, informing the Head of the CMG (Crisis Management Group) and the parties involved in the risk group for the respective case. In the event of an exceptionally high demand for natural gas, a significant supply disruption or other significant deterioration of the supply situation, and when all relevant market-based measures have been applied but the supply of natural gas is insufficient to meet the remaining demand for gas, so that non-market-based measures need to be further introduced in order to, in particular, safeguard the gas supply to protected customers, "**Emergency**" shall be declared.

2.3 "Emergency"

If any of the events referred to in point 2.2. (anomalous outside temperatures, anomalous high demand for natural gas, supply interruption at any entry point in the country, lack of contractual security, failure of a section of the networks at home or abroad, the inlet pressure of the gas transmission system is lower than 28 bar_g, the available quantity of natural gas in the gas transmission system reaches a critical level of 18 mcm; other emergencies arising from a complicated international situation, military conflicts, crises, terrorist actions, etc.), and EPICT-BTG assesses an imbalance in the system that cannot be overcome by market-based measures (i.e. based on the concluded contracts, agreements and the flexibility embedded in them, the local production and the withdrawal from Chiren UGS) occur, an **Emergency** level shall be declared and the actions under the notification scheme shall be carried out, and the management authorities, civil protection forces and assets in the event of natural disasters, accidents and catastrophes shall also be notified. It shall be declared by the competent authority, which shall immediately inform the Commission

thereof, as well as the competent authorities of the Member States with which Bulgaria is directly connected, and shall provide them with all necessary information on the action it intends to take. In the event of an emergency (according to Article 6, paragraph 2 of Regulation 2017/1938) which may result in a call for assistance from the Union and its Member States, the competent authority shall without delay notify **the Commission's Emergency Response Coordination Centre (ERCC, Article 7 of EU Decision 1313/2013)**.

When declared an emergency, the competent authority shall follow the pre-defined actions set out in the Emergency Plan. In duly justified exceptional circumstances, the competent authority may take actions which differ from the Emergency Plan.

In the event of an emergency resulting in a threat to the supplies to protected customers, the Minister of Energy may:

- adopt a decision to release mandatory gas reserves upon a request of the TSO, constituting a non-market-based measure within the meaning of Regulation 2017/1938;
- introduce a restrictive natural gas supply regime for all or part of the territory of the country, upon a reasoned proposal from the transmission undertaking.

The competent authority establishes the roles and responsibilities of the various parties concerned in such a way as to ensure that a three-tiered approach is followed, first involving the natural gas undertakings, where appropriate the electricity undertakings, and the industry, the Member States at national or regional level; and, thirdly, the Union.

The Minister for Energy notifies about declaring or cancelling an emergency by publishing an announcement on the website of the Ministry of Energy and informs GCG and the competent authorities of the Member States in the risk group on commencement of implementation of non-market-based measures.

Within 5 days of receiving information from the competent authority, the European Commission shall verify whether declaring of an "emergency situation" is justified in accordance with the definition of an emergency and whether the measures taken correspond to the actions listed in the emergency action plan and do not impose an undue burden on natural gas undertakings. The Commission may, at the request of another competent authority of the group of natural gas undertakings or on its own initiative, ask the competent authority to amend the measures where they are contrary to the conditions referred to in the previous sentence. The Commission may also request from the competent authority to declare an end to the emergency where it concludes that the declaration of an emergency is not or is no longer justified in accordance with paragraph 1 point (c) of Regulation 2017/1938.

The EC may, at the request of a competent authority, energy undertaking or on its own initiative, request from the competent authority that has declared "an emergency situation" level, to amend the measures that contradict the conditions specified in Article 11, paragraph 8 of Regulation 2017/1938.

The **Commission may** declare a regional or Union emergency at the request of the competent authority that has declared an emergency and following the verification in accordance with Article 11, paragraph 8 of Regulation 2017/1938. The Commission shall declare, as appropriate, a regional or Union emergency at the request of at least two competent authorities that have declared an emergency and following the verification in accordance with Article 11 paragraph 8, and where the reasons for such emergencies are linked.

In all cases, when it declares a regional or Union emergency, the Commission, using the means of communication most appropriate to the situation, shall gather the views of, and take due account of all the relevant information provided by other competent authorities.

When the Commission decides, following an assessment, that the underlying basis for the regional or Union emergency no longer justifies the declaration of an emergency, it shall declare an end to the regional or Union emergency and shall give its reasons and inform the Council of its decision. The Commission shall coordinate the actions of the competent authorities at regional and Union levels, pursuant to Regulation 2017/1938, *inter alia*, through GCG or, in particular, in the event of a regional or Union emergency.

In the event of **a regional or Union** emergency, the transmission system operators shall cooperate and exchange information by using the ReCo System for Gas established by the European Network of Transmission System Operators for Gas (ENTSOG). ENTSOG informs the Commission and the competent authorities of the Member States concerned accordingly.

When "**an emergency**" crisis level is declared, **natural gas undertakings** shall provide the following information to the Competent authority on a daily basis:

- daily forecasts of natural gas supply and demand for the next three days;
- the volume of natural gas daily flow and the rate of utilisation at all cross-border entry and exit points, as well as at all connection points of the industrial plant, storage facility or LNG terminal to the transmission network expressed in MWh/day;
- the daily level of mandatory natural gas reserves;
- the period, expressed in calendar days, for which the supply of natural gas to the protected customers is expected to be safeguard;
- actual consumption and forecast quantities of natural days intended for protected customers for a period of at least three days ahead;
- the time, quantities and source of natural gas delivered within the system through non-market-based measures;
- measures, which the respective operator or commercial undertaking plans to take and has already taken to mitigate the impact of the emergency and information about their effectiveness;
- requests for additional measures to other competent authorities;
- measures taken at the request of the competent authorities of other Member States.

The transmission system operator shall ensure that when an emergency is declared in a neighbouring Member State, capacity at interconnection points to that Member State, irrespective of whether firm or interruptible, and whether it has been booked before or during the emergency, has priority over competing capacity at exit points into storage facilities. The system user of the prioritised capacity shall promptly pay fair compensation to the system user of the firm capacity for the financial loss incurred as a result of prioritisation including a proportionate reimbursement for the cost of the firm capacity being interrupted. The process of determining and paying the compensation shall not affect the implementation of the priority rule.

The decision to terminate a state of emergency shall be made by the Minister of Energy after recommendation of DCT-ME. The Minister of Energy shall immediately notify the Gas Coordination Group (GCG) about termination of the emergency situation. Afterwards, the transmission system operator, based on information from cooperating system operators and interested market participants, shall prepare a crisis report with particular emphasis on the conclusions, opportunities for improvement of crisis procedures and guidelines for infrastructure development to avoid similar events in the future. The transmission system operator shall provide the report and conclusions to the Minister of Energy.

Procedure of release of mandatory natural gas reserves

The transmission system operator shall submit a request to the Minister of Energy for permission to release mandatory reserves. The Minister of Energy shall review the application for release of mandatory reserves and provides consent by a decision after all market-based measures have been exhausted, but natural gas supply is still insufficient to satisfy the remaining demand for natural gas.

After obtaining consent from the Minister of Energy, the Transmission System Operator starts deliveries from the mandatory reserves of natural gas.

In case of release of mandatory reserves, the aforementioned undertakings, after receiving the information, shall deliver natural gas to the gas system in quantities and on a date specified by the transmission system operator.

The TSO shall provide the Minister of Energy and the Chairman of the National Regulatory Authority with information on the date and quantity of released reserves and the storage facilities from which they were withdrawn, as well as on the energy undertakings from which they were withdrawn after the end of each gas day on which mandatory reserves are released.

The energy undertakings engaged in economic activities in the field of natural gas import and gas systems' users are obliged to follow the instructions of the transmission system operator.

Annex No. 5 shows the consumption by days, as well as the impact of temperature in January in 2017, 2018, 2019, 2020 and 2021. During a long period of temperature below (-16°C) degrees (especially in the city of Sofia regarding the large share in consumption of

Toplofikatsia Sofia EAD) the daily consumption can reach up to 16 - 17 mcm/day, while at positive outside temperature the consumption can decrease to about 10 mcm/day.

In the event of declaring "**Emergency**" crisis level, the following measures shall be taken:

2.3.1 Triggers a notification scheme of the Crisis Team referred to in item 2.1.1;

2.3.2 Triggers a notification scheme of the management authorities and civil defence assets in the event of disasters, accidents and catastrophes.

2.3.3 Notifies users and mass media, according to the scheme (**Annex No. 1**).

2.3.4. Activates the information flow chart for notifying natural gas undertakings, the ME, the EWRC, the operators of neighbouring countries in the region and the European Commission - **Annex No. 4**.

2.3.5. Takes measures to increase the operational control of network parameters and precisely specifies the demand and supply levels for three days ahead.

2.3.6. Temporary suspension or curtailment of natural gas production or supply as soon as possible (within 48 hours) pursuant to an order issued by the Chairperson of EPIC.

2.3.7. Where a need arises to introduce restrictive regime, suspension or curtailment of gas supply for more than 48 hours, a reasoned proposal to the Minister for Energy shall be drawn up pursuant to Article 21 of Ordinance No 10 of 9 June 2004 on the procedure of introducing restrictive regime, suspension or limitation of the production or supply of electricity, heat and natural gas. The proposal shall be made no later than 24 hours after occurrence of the emergency.

2.3.8. The market-based measures in terms of supply shall be applied in accordance with Regulation 2017/1938, described in item 2.2.7.

2.3.9. The market-based measures in terms of demand shall be applied in accordance with Regulation 2017/1938, described in item 2.2.8.

2.3.10 The non-market-based measures regarding supply shall be applied in accordance with Annex VIII of Regulation 2017/1938.

2.3.10.1. Increase in domestic gas production — by order of Physical Dispatching and Regimes Department of Bulgartransgaz EAD to the Operator of production companies.

2.3.10.2. Withdrawal capacity increase of Chiren UGS. To be ordered by Physical Dispatching and Regimes Department of Bulgartransgaz EAD to the Operator/s of production companies.

2.3.10.3. Physical Dispatching and Regimes Department of the Gas Transmission System Operator shall order all network users with concluded transport contracts to ensure the maximum daily volumes agreed with the external supplier, also in cases where this results in additional costs pursuant to wholesale supply contracts.

2.3.10.4. Enforced shut-down of electricity generation by undertakings using natural gas as fuel.

2.3.10.5. Enforced use of stocks of alternative fuels;

2.3.10.6. Utilisation of the full capacity of the available natural gas stored in Chiren UGS to satisfy protected customers.

2.3.10.7. Coordinated actions by transmission system operators from neighbouring countries in the region to trigger transfer between the different transmission systems.

The actions described in item 2.3.10 are key to maximizing natural gas supplies in the country, namely from imports, local production and storage facilities, and are mandatory for this crisis level in view of the fact that demand exceeds supplies. The procedure for implementation of items 2.3.10.1 - 2.3.10.3 and items 2.3.10.6 - 2.3.10.7 is according to Bulgartransgaz EAD Emergency Plan and Instruction for actions in introducing a restrictive regime. The introduction of the actions under items 2.3.10.4 - 2.3.10.5 shall be ordered by the Departmental Crisis Team of the ME through the information flows described in Annex No. 4.

Developed levels to limit gas consumption and effect of introducing the levels in winter month:

Restriction level winter period	Actions	Expected range of daily consumption (MWh/d)* in January after introducing the restriction level
0 (no restrictions)	None	126.8 – 170.2 GWh/d (12.0 – 16.1 mcm/d)
1	Limitation of consumption to the maximum possible consumption according to information provided by users.**	97.2 – 126.8 GWh/d (9.2 – 12.0 mcm/d)
2	Limitation of natural gas consumption by district heating companies with alternative fuel (switching to reserve fuel).	72.9 – 97.2 GWh/d (6.9 – 9.2 mcm/d)
3	Limitation of natural gas consumption for industrial enterprises with alternative fuel (switching to reserve fuel).	64.4 – 72.9 GWh/d (6.1 – 6.9 mcm/d)
4	Limitation of technological interruptible unprotected users and of gas distribution companies. Interruption of the interruptible consumers of low emergency level and short term of interruption.	55.0 – 64.4 GWh/d (5.2 – 6.1 mcm/d)
5	Interruption of non-interruptible consumers with consumption over 500 thousand m ³ per day. Suspension of natural gas supply to industrial enterprises with alternative fuel	41.2 – 55.0 GWh/d (3.9 – 5.2 mcm/d)
6	Provision of natural gas to protected customers in the Republic of Bulgaria Interruption of interruptible consumers and non-interruptible consumers with consumption over 500 thousand m ³ per day.	29.5 – 41.2 GWh/d (2.8 – 3.9 mcm/d)
7	Provision of natural gas to solidarity protected customers in the Republic of Bulgaria Restriction of alternative fuels producers	19.0 – 29.5 GWh/d (1.8 – 2.80 mcm/d)

*The values in volumetric units are indicative and were calculated at a natural gas calorific value of 10,57 MWh/1000m³.

** In the event that no up-to-date information is provided for the relevant gas year, the latest data provided from previous gas years shall be used.

The Transmission system operator Bulgartransgaz EAD has developed estimates for 7 levels of restriction of natural gas supply so that in the event of a shortage of natural gas for all consumers, to be able to gradually restrict and/or exclude certain groups of consumers.

The most severe levels of restriction envisage natural gas supply to be guaranteed only to protected consumers and, accordingly, to undertakings operating at uninterrupted production cycle, which need additional technological time for temporary shutdown of production facilities, in order to prevent production or industrial failures, taking into account the potential opportunities for gas withdrawal from Chiren UGS.

The preliminary schemes and estimates developed by the Operator Bulgartransgaz EAD for introduction of phased limitation and phased suspension of natural gas supplies for certain groups of users, take into account, accordingly, the seasonality of supplies / consumption of natural gas by these users, i.e. summer/winter mode of operation (respectively summer/winter 24 hours consumption), as well as, compulsory, the potential

risk of occurrence of production or industrial failure, in the event of a gas supply interruption, as well as the necessary technological time to switch to alternative fuel for those users (undertakings/manufacturing plants) with such a technological capability and provision of the necessary alternative fuel stocks.

During preparation of the preliminary estimates and schemes for introduction of phased limitation and phased suspension of natural gas supplies for certain groups of users, developed by the operator Bulgartransgaz EAD, the historical experience and response capabilities of the operator, institutions and undertakings during the gas crisis of the country within the period from January 6 to 21, 2009, have also been taken into account.

*Levels 6 and 7 shall be introduced no earlier than 30 days after occurrence of an emergency situation, unless for operational and/or other reasons endangering the operation of the gas transmission network, it is imperative to be enforced earlier.

3.3.4. In applying the measures under item 3.3, the competent authority and system operators strive to ensure maximum natural gas supply to protected users.

Annex No. 6 shows the balance of consumption by months (based on historical data for the last few years), under various scenarios for supply restriction.

Chiren UGS features, based on historical data, are shown in **Annex No. 7**.

The percentage limitation scenarios at the main entry point shown in **Annex No. 6** are based on agreed 8 million m³ per day in the winter period and 6 million m³ per day in the summer period, with expected consumption in the country in 2021-2022 within 2.9-3.3 billion m³/year.

The analyses of cases of natural gas supply suspension consider options with maximum use of alternative entry points. According to statistics, the peak consumption of natural gas on the coldest days is about **170 GWh/d.** (for the coldest period of time in the past 20 years). At the end of October 2019, the first section of the gas pipeline - expansion of gas infrastructure from the Bulgarian-Turkish border to the Bulgarian-Serbian border was run into operation. The capacity of the new entry point Strandzha 2/Malkoclar is 567 GWh/d. The total contribution of each of the measures described in the Plan on a market and non-market basis will help respond to the situation at "alert" level, and will contribute to mitigate the situation at "emergency" level by increasing the amount of natural gas available in the country and the regional risk group. The specified measures and actions to mitigate the potential impact of interruption of gas supplies on district heating and the electricity sector aim at preventing disruption of heat supply to the main group "Protected customers", and therefore it is appropriate to adopt and implement the specific measures.

CHAPTER 3: Specific measures in relation to electricity supply and district heating.

3.1. District heating.

Possible interruptions of natural gas supply, depending on the period (summer/winter) and the presence of additional sources that are burned with other fuels (for example boilers with fuel oil), can cause disruptions in the continuity of heat supply to end users. Continuity of natural gas supply is therefore an important element in ensuring users' energy security in relation to heating buildings, especially during the heating season at low outdoor temperatures.

The total natural gas consumption in Bulgaria is about 3 bcm per year. Of this amount, ¾ is for industrial purposes, about 32% for district heating plants, 10% for manufacture of construction materials and 10% for the chemical industry, 8% for transport needs and 7% is for other purposes.

The likely consequences of gas supplies interruption in **the district heating sector** affect the largest cities in Bulgaria with a large number of subscribers/households using natural gas district heating. The potential disruption of supplies to metropolitan heating plants will inevitably have a major social, economic and political impact on Bulgaria.

3.1.1. Natural gas is used as main fuel in the following plants:

- Toplofikatsiya Sofia EAD, including Sofia Thermal Power Plant (1 432.5 MWt) and Sofia Iztok Thermal Power Plant (2 014.4 MWt), or a total of 239 MWe;
- EVN Bulgaria Toplofikatsiya EAD – 80 MWe (445 MWt);
- Veolia Energy Varna EAD - a total 11.22 MWe (55.43 MWt);
- Toplofikatsia-Burgas EAD - a total 17.82 MWe (74.45 MWt);
- Toplofikatsia-Pleven EAD - a total of 68 MWe (466 MWt);

- Toplofikatsia-Vratsa EAD - a total of 8.24 MWe (72 MWt);
- Toplofikatsia - Razgrad EAD - 3,014 MWe (29 MWt);
- Toplofikatsia VT AD - 2.81 MWe (173 MWt)

For the above plants, 100% of the total generation electrical power is provided by the use of natural gas.

- Toplofikatsiya Pernik AD has two steam generators that use coal as main fuel and a gas-fired steam generator. When operating on natural gas, the plant may reach 15 MWe;

Biovet AD Peshtera is the only electric power generation plant with a gas turbine of 18.5 MWe (99 MWt) capacity.

Apart from those specified in item 3.1.1, there are also smaller cogeneration plants in the country of total electric power 51.4 MWe;

Electric power by using natural gas is also generated in Bulgaria at TPP Varna - a condensation plant with a total installed capacity of 630 MW.

The natural gas quantities for electric power and heat generation in Bulgaria in the period 2016–2021, in bcm/y, are shown in the table below:

Type of generation	2018	2019	2020	2021
	bcm/y	bcm/y	bcm/y	bcm/y
Natural gas for electric power generation	0.345	0.362	0.402	0.615
Natural gas for heat generation	0.772	0.721	0.727	0.793
Total:	1.117	1.083	1.129	1.408

The generating capacity of gas-fired power plants in Bulgaria compared to the total generating capacity in the electricity sector is small in percentage, but essential for ensuring the national energy balance. The likely consequences of interruption of natural gas supplies in the electricity sector will not have a significant impact on the internal electricity market, given the low percentage of generation capacities using natural gas, but the loss of district heating would force the population to replace this type of energy with electricity, which would result in overloading of the power system.

3.2. Electricity generation from natural gas.

The role of natural gas for electricity generation in Bulgaria (capacity for electricity generation from gas (total in MW), as a percentage of total generation capacity and co-generation (total in MW)) in the electricity sector is not significant, but it affects the energy balance of the country. It is related to the operation of the large district heating plants using co-generation capacities. In addition, it should be noted that the interruption of natural gas supplies to consumers in the autumn and winter period can lead to a significant increase in the demand for electricity due to its use for heating as a substitute to gas heating.

There is only one condensation plant in the country, which uses natural gas as its main fuel. In recent years, it has rarely been in operation considering the high price of natural gas on exchange markets, but is essential for the energy security of the country. The remaining condensation plants use natural gas only as ignition fuel. The likely consequences of interruption of gas supplies to the condensation plants will not affect the internal electricity market. The country's electricity system has sufficient reserve capacities that can be switched on as substitutes. Commercial companies in the Energy sector, in implementation of the Energy Act and other regulatory acts, interact to ensure the necessary coordination, including the exchange of information, between the main participants in the gas and electricity sectors.

3.3. Measures undertaken to mitigate the impact of supply disruptions on the district heating and electricity sector.

Continuity of natural gas supply is an important element in ensuring users' energy security in relation to heating buildings, especially during the heating season at low outdoor temperatures.

3.3.1. The non-market-based measures regarding demand are applied, according to Annex VIII of Regulation 2017/1938.

If market-based measures prove insufficient to overcome the shortfall in gas supplies, and given the importance of solidarity as a measure of last resort, the Member State providing

solidarity should, at the next stage, be able to apply non-market-based measures, including limitation of consumption of certain groups of customers, in order to fulfil its solidarity obligations.

3.3.2. Enforced switching to alternative fuel.

The district heating companies cover a significant part of gas consumption during the winter months and at the same time they are obliged to have an alternative fuel, according to the provisions of Ordinance No. 11 of 10.06.2014 on fuel reserves. Their limitation must be done without jeopardizing the safe and reliable operation of the heat power generation and transmission facilities, i.e. the heat supply service for protected household consumers, children, health and educational establishments.

Enforced restriction/interruption of natural gas supply for a period of up to 48 hours by Bulgartransgaz EAD or for a period of more than 48 hours by the ME shall be carried out according to conditions and schemes prepared by Bulgartransgaz EAD. The gas transmission system operator develops 7 levels of supply restriction in such a way that in the event of natural gas shortages for all consumers, certain groups of consumers shall be gradually restricted and/or excluded, namely unprotected with alternative fuel, unprotected without alternative fuel, protected non-household, services and households.

CHAPTER 4 Person or team in charge of crisis management

The Minister of Energy, as a competent authority, is responsible for ensuring the security of gas supplies. He shall monitor and analyse the situation regarding the security of gas supplies, coordinate activities in the event of a crisis, announce introduction of separate crisis levels, give consent to the use of non-market-based measures (mandatory stocks) in the event of an emergency within the meaning of Regulation 2017/1938 introduce restrictions of natural gas consumption for certain periods of time on the territory of the Republic of Bulgaria or part of it in the event of an emergency within the meaning of Regulation 2017/1938, shall be in charge of communication with the European Commission and shall provide information on implementation of both market-based, as well as non-market-based measures in order to verify whether the declaration of an emergency is justified, through its representative shall participate in the sessions of the Gas Coordination Group of the European Commission and ensure exchange of information between the European Commission and the Ministry of Energy.

To deal with crisis conditions, the plan defines the responsibilities and obligations of the crisis management authorities and their members, to ensure their effective and timely response in case of emergency situations that could disrupt the smooth supply of the Bulgarian natural gas market, taking into account the provisions of Directive 2009/73/EC of the European Parliament and of the Council, Regulation 715/2009 of the European Parliament and of the Council, the Energy Act and its implementing regulations.

4.1. A Departmental Crisis Team was established for crisis management in the Ministry of Energy, by order of the Minister of Energy, issued pursuant to Art. 63, para. 2 of the Disaster Protection Act. It is a temporary authority that acts as a crisis management group. The Departmental Crisis Team supports the ME management in carrying out disaster protection activities, management of crisis and emergency situations of a non-military nature, arising as a result of natural disasters, fires, catastrophes, accidents, criminal activity, terrorism and other social, economic and political circumstances of a nature that disrupts the normal functioning of the energy system, causes instability in the political and social environment, endangers the life, health, property of citizens, cultural and material values, the environment and, in general, the national security of the country. The Minister of Energy, who is also a competent authority, shall exercise control over the activities of the Departmental Crisis Team.

4.2. The structure of Departmental Crisis Team shall be established by order of the Minister of Energy, appointing managers from the ME who possess the necessary expertise and experience in managing crisis situations and are familiar with the regulations related to protection in the event of disasters and crises of a different nature.

4.2.1. Chairman of the Departmental Crisis Team shall be the Deputy Minister of Energy, appointed to organize, manage and supervise the activities of Directorate "Security of Energy Supply and Management in Crisis Situations" (SE and MCS).

4.2.2. Deputy Chairman of the Departmental Crisis Team and Secretary of the committee shall be the Head of Security of Energy Supply and Management in Crisis Situations Directorate.

4.2.3. Members of the Departmental Crisis Team are:

- Head of Directorate Energy Projects and International Cooperation
- Head of Directorate Energy Strategies and Policies for Sustainable Energy Development;
- Head of Directorate Corporate Management in Energy;
- Head of Directorate of Finance, property management, information and communication services;
- Head of the Directorate Legal and Regulatory Activities, Administrative Services and Human Resources;
- The Head of Management in crisis situations and defensive mobilization preparation department in Directorate "SE and MCS";

The Minister of Energy approves the Rules of procedure of the Departmental Crisis Team (DCT).

By its actions, the DCT-ME should safeguard the security of gas supplies by ensuring proper and continuous functioning of the internal market of natural gas ("gas"), by allowing for exceptional measures to be implemented when the market can no longer deliver the gas supplies required, including solidarity measure of a last resort, and by providing for the clear definition and attribution of responsibilities among natural gas undertakings, the Member States and the Union regarding both preventive action and the reaction to concrete disruptions of gas supply. Establishes transparent mechanisms concerning, in a spirit of solidarity, the coordination of planning for, and response to, emergencies at national, regional and Union level.

4.3. The Departmental Crisis Team shall perform the following main tasks:

- establishes permanent communication according to the scheme set out in **Annex No. 3** with the National Emergency Management Authority (NEMA) and the crisis committees of commercial companies in the energy sector within the disaster area or affected by the crisis/emergency situation.

- prepares documents for declaring the state of warning by the CM (crisis level), as defined in 5.1.7 of this plan;

- through on-duty officers in the ME, receives up-to-date information about the situation in the affected areas. It shall strive to achieve maximum efficiency in implementation of the measures for protection of the population and infrastructure and prevention of interruptions in supply with energy resources;

- analyses the information received from the companies and NEMA, assesses the degree of destruction and harmful consequences of a disaster or crisis/emergency situation in the energy system and determines measures for immediate implementation;

- assesses the situation, composition and state of the response forces for disasters and crisis/emergency situations in the commercial companies of the energy sector;

- makes decisions on undertaking specific actions to control the disaster or the crisis/emergency situation and proposes them to the Minister of Energy and, when necessary, to NEMA.

- organizes the interaction of the ME with the structures of the Unified Rescue System of the country (DG Fire Safety and Population Protection (FSPP)- Ministry of the Interior, the regional directorates of the Ministry of the Interior, the Bulgarian Red Cross, ministries and agencies, municipal authorities for disaster protection, centres for emergency medical services, medical and health establishments in the area of the disaster, etc.) during implementation of disaster protection measures and performance of tasks and disaster control measures.

- organizes, coordinates and supervises the actions of the undertakings of the Energy sector, a constituent part of the ESS, in implementation of tasks and disaster protection measures;

- is responsible for implementation of the duties assigned arising from implementation of the National Preventive Plan for Disaster Protection and the Action Plan of the ME, in constant interaction with the National Crisis Team, the Regional Cooperation Centre, the structures of the EC;

- offers the Minister of Energy solutions for crisis/emergency situations management and handling the consequences of disrupted supplies;
- makes proposals to the Minister for securing additional financial means, fuel stocks and other resources for disaster protection activities and management of crisis/emergency situations and for handling the consequences;
- offers estimates for allocation of the stocks of energy and other resources in a crisis/emergency situation and introduction of a restrictive regime for supply of electric power, thermal energy or natural gas in cases where it is necessary to limit or interrupt the supply for a time longer than 48 hours throughout the country;
- proposes measures in support of natural gas supplies to neighbouring countries (member states of the European Union) or cooperation with the member states of the European Union, in accordance with Annex I to the regulation and Regulation No. 2009/715.
- prepares summaries and summarized reports to the Minister of Energy and/or the NEMA on the changes that have occurred in the situation and the progress of restoration/rescue activities.

The work of the Departmental Crisis Team shall be supported by operational on-duty officers in the Ministry of Internal Affairs and experts from Directorates Security of energy supply and crisis management. The Departmental Crisis Team, when carrying out its activities and depending on the situation, can work in normal and crisis mode according to the rules approved by the Minister of Energy.

In case of absence of one of the members, his deputy shall be appointed by the relevant administrative unit, involved in the work of the Departmental Crisis Team. If necessary, by decision of the Chairman of the Departmental Crisis Team, other employees may be recruited to work at the committee.

- EPICT - The operator of the gas transmission network appoints a permanent Emergency plan implementation crisis team (EPICT), in charge of Plan implementation on his behalf. The notification scheme in the event of occurrence or expectation of occurrence of a level of danger, to the Committee shall be according to the order of the Executive Director of the Operator.

CHAPTER 5 Roles and responsibilities of the different participants

5.1. Natural gas undertakings shall bear the main responsibility for the security of supply, as a shared responsibility, together with the competent authority and the European Commission, according to Article 3, paragraph 1 of Regulation 2017/1938 and in particular, the responsibilities under Article 13, paragraph 2 thereof. According to the definition of Art. 2 of Directive 2009/73 EC (the Directive), such are any natural or legal person performing at least one of the following functions, but excluding end customers:

- natural gas production;
- natural gas transmission;
- natural gas distribution;
- natural gas delivery;
- purchase of natural gas;
- natural gas storage.

Natural gas also includes compressed natural gas (CNG) and liquefied natural gas (LNG).

5.1.1. The main role for the security of natural gas supplies in the country among all undertakings plays the operator of the Bulgarian gas transmission system Bulgartransgaz EAD, which exercises the following responsibilities:

5.1.1.1 Performs operational technical management and operation of the gas transmission system and its facilities;

5.1.1.2. It carries out operational technical management and operation of Chiren underground gas storage (Chiren UGS);

5.1.1.3. Controls the parameters of the entry and exit points and the information coming from other transmission operators, available in Main Directorate Technical Operations, more specifically in Physical Dispatching and Modes department of Bulgartransgaz EAD;

5.1.1.4. Forecasts daily the level of gas demand for three days ahead, in hourly and daily terms, taking into account historical data, weather forecast and information received from gas undertakings;

5.1.1.5. Forecasts daily the level of hourly and daily gas supply for three days ahead, taking into account the concluded transport and supply contracts, the contracts with local production undertakings and the technical capability of gas withdrawal from Chiren UGS;

5.1.1.6. Determines the necessary natural gas quantities, based on information received from gas undertakings about the estimated monthly consumption of protected customers, so that it is able to fulfil the security of supply standard;

5.1.1.7. Within 30 days of entry into force of this plan, shall submit to natural gas undertakings the forms for providing the information under item 5.1.1.6.

5.1.1.8. Communicates with the competent authority, gas undertakings, industrial users and user associations, local authorities, state authorities and other interested institutions and organizations, on issues related to security of supply, also in case of temporary interruption or limitation of natural gas production or supply and introduction of a restrictive regime;

5.1.1.9. Orders a temporary interruption or restriction of natural gas supply for a period of up to 48 hours, according to Art. 24 of Ordinance No. 10 of June 9, 2004, on the procedure for introducing a restrictive regime, temporary interruption or limitation of the production or supply of electricity, thermal energy and natural gas, and/or Ordinance No. 12/09.06.2004 concerning the activities of the gas transmission and distribution network operators;

5.1.1.10. Makes a request and schedules for introduction of a restrictive regime by the Minister of Energy or the mayor of the municipality, according to the provisions of Ordinance No. 10 of 09.06.2004;

5.1.1.11. Issues orders in connection with item 5.1.1.9. and item 5.1.1.10. to network users and directly to their customers, as well as to the operators of distribution networks connected to the operator's transmission network, in order to prevent failures of the gas transmission system. Bulgartransgaz EAD shall issue orders based on the conditions and schemes, according to which a restrictive regime will be introduced for the users connected to the transmission network, developed on the basis of Art. 19 para. 2 and para. 3 of Ordinance 10 of 09.06.2004;

5.1.1.12. Proposes to the competent authority to declare crisis levels, according to this Plan and informs it of the actions taken pursuant to the Energy Act /EA/, as well as under Ordinance No. 10/09.06.2004 and Ordinance No. 11/10.06. 2004, provided for in the Plan;

5.1.1.13. Coordinates actions with transmission operators from neighbouring countries;

5.1.1.14. Together with the competent authority of the country, shall inform and, if necessary, ask for support from the EC to tackle the emergency situation;

5.1.1.15. If there is more than one gas transmission operator on the territory of the country, such as the new independent gas transmission operator ICGB AD, Bulgartransgaz EAD **has a coordinating** function under the Emergency Action Plan.

5.1.1.16 If necessary, Bulgartransgaz EAD may store natural gas quantities in Chiren UGS of maximum volume of up to 70 mcm, in compliance with an order of the Minister of Energy, issued pursuant to Art. 70 of the EA imposing additional public service obligations. The quantities specified in the order constitute a reserve necessary to ensure continuity of supply in accordance with Annex VIII to Regulation 2017/1938.

5.1.1.17 In case of withdrawal of quantities under item 5.1.1.16, the same shall be recovered by the users of the gas transmission network in the following order:

- If technologically possible - natural gas quantities within three months during the injection period and after cancelling the Emergency situation level;
- By paying the value of natural gas, within one calendar month, counted after cancelling the Emergency level.

5.1.1.18. Bulgartransgaz EAD costs for maintaining natural gas reserves under item 5.1.1.16 shall be reimbursed by the prices for access and transmission of natural gas through the gas transmission networks in accordance with Art. 35 of the Energy Act.

Responsibilities of undertakings

5.2.1. The natural gas undertakings shall provide full support to the competent authority.

5.2.2. The natural gas undertakings shall inform Bulgartransgaz EAD Crisis Team on all issues regarding possible changes in the levels of demand and supply for the next three days and shall indicate contact persons for the schemes under Annexes No. 2, 3 and 4.

5.2.3. The natural gas undertakings shall fully cooperate with Bulgartransgaz EAD Crisis Team for implementation of the measures under Chapter 2 of the Plan. Cooperation should be understood as fulfilment of the operator's orders in the cases provided for by law and in an informational aspect. The natural gas undertakings are indicated according to the activities under Art. 2, item 1 in Directive 2009/73/EC. If an undertaking participates in more than one activity, by default all specified links apply to all activities. Each gas undertaking defines the activities in which it participates and the contact persons, possibly different for the different activities, and provides them to the ME.

5.2.4. Natural gas undertakings that supply natural gas to customers of **uneven consumption* (including district heating companies and end suppliers) shall be obliged to provide natural gas quantities to compensate for the **unevenness* of their customers' consumption.

5.2.5. The undertakings under item 5.2.4 shall be bound to store at the beginning of the winter season /withdrawal period/ in Chiren UGS natural gas quantities to compensate for the seasonal unevenness, which should be within 10% up to 20% of the annual supply requests of natural gas for their users of uneven consumption*. Undertakings should withdraw these quantities during the winter season /withdrawal period/ at rates compensating for the **unevenness* until the end of the season;

5.2.5.1. The natural gas undertakings under item 5.2.5 shall be obliged to maintain in Chiren UGS at the beginning of the winter season an indicative volume of a total of 290 mcm or a total of 3,000,000 MWh;

5.2.5.2. In the presence of prerequisites for occurrence of a gas crisis, natural gas undertakings under item 5.2.4 shall be bound to take measures to increase the quantities stored by them, in accordance with their delivery capabilities and the technical capability of Chiren UGS;

5.2.5.3. If there are no longer prerequisites for occurrence of a gas crisis, natural gas undertakings can freely manage the additional quantities under item 5.2.5.2;

5.2.5.4. Bulgartransgaz EAD is obliged to provide capacity for injection, storage and withdrawal of the quantities under item 5.2.5. In this regard, the gas transmission system operator determines the capacity for injection and withdrawal of these quantities by months and rules for capacity nomination and distribution by undertakings. The injection and withdrawal capacities of these quantities by months and by suppliers shall be set by the Operator, who publishes on his website the order for fulfilling the obligations under item 5.2.5.;

5.2.5.5. The undertakings under item 5.2.4 shall be bound to notify the competent authority and Bulgartransgaz EAD of the exact natural gas quantities they should store according to items 5.2.5 and/or 5.2.5.1, prior to beginning of the injection season, but not later than February 15 of the current calendar year, and within the same period they shall submit to Bulgartransgaz EAD an application for booking the annual capacity products to cover the injection, withdrawal and storage of the respective natural gas quantities. If the natural gas undertakings fail to submit the required information to the competent authority and Bulgartransgaz EAD within the specified period, Bulgartransgaz EAD shall announce the capacity necessary for injection, withdrawal and storage of these natural gas quantities as free;

5.2.5.6. Bulgartransgaz EAD shall allocate the relevant capacity products booked to cover the injection, withdrawal and storage of natural gas quantities under item 5.2.5 in accordance with the current Rules for use of underground gas storage Chiren and the procedure applicable to the relevant product.

5.2.5.7. The costs of the licensed undertakings for maintaining natural gas reserves under this Chapter 5 shall be reimbursed by the prices of the licensing services pursuant to Art. 35 of the EA.

5.3. Control over fulfilment of the obligations under item 5.2.4 and item 5.2.5 shall be exercised by the competent authority within the meaning of Regulation (EC) No. 2017/1938 and by the Departmental Crisis Team established by its order. For this purpose, by the

beginning of the injection period, but not later than 15 February of the current calendar year, the undertakings referred to in item 5.2.4 are required to provide information on the natural gas supply contracts concluded with customers with **fluctuating consumption*.

The seasonal fluctuation in supply per customer shall be calculated by applying a fluctuation factor (FF) as follows:

$$FF = V_s / V_w$$

Vsummer — sum of the quantities consumed in the previous calendar year for the months from April to September;

Vwinter — sum of the quantities consumed in the previous calendar year for the months from January to March and from October to December;

When FF is less than 0.6, the supply is deemed as fluctuating, and in all other cases – as even.

5.3.1. To verify the information under item 5.2.5, the undertakings referred to in item 5.2.4 shall submit excerpts from their contracts with deleted commercially sensitive information to the gas transmission operator Bulgartransgaz EAD. It shall submit a report to the competent authority about the storage and injection capacities booked by the undertakings under item 5.2 according to the information received.

5.3.2. In the event of failure to fulfil the obligations under item 5.3 which may jeopardise the integrity and safe operation of the gas transmission system, Bulgartransgaz EAD shall undertake measures pursuant to the provisions of Section VI of the Rules for management and technical operation of gas transmission networks of 3 September 2013, adopted by the EWRC.

5.4 The prices for access and storage of natural gas at storage facilities to be paid by the undertakings under item 5.2.4, are regulated and subject to approval by the EWRC.

5.4.1 The natural gas undertakings with concluded natural gas supply contracts with non-household customers and/or end suppliers shall be bound to:

5.4.2. keep a list of names, means of communication and officials responsible for coordination and interaction with each customer, which should be updated on a monthly basis, and provide summarized information by electronic means regarding all exit points and hand-over points of Bulgartransgaz EAD. Non-household customers should be divided into protected and unprotected within the meaning of item 9.1. The obligation for this division rests with the undertakings under item 5.4.1;

5.4.3. have a precise forecast of consumption based on the nominations for annual, monthly and daily consumption of these consumers for each hand-over point at AGRS/GRS/GMS, including the expected peak consumption levels. Information on household consumers must be separated from that of industrial consumers. Information on protected non-household consumers must be separated from information on unprotected non-household consumers;

5.4.4. By 15 October each year, natural gas undertakings shall provide to the transmission system operator up-to-date information about the gas year starting on 1 October referred to in item 5.4.3.

5.4.5. Natural gas undertakings which conclude or amend contracts for wholesale gas supply with suppliers from a third country and/or with operators of facilities for domestic gas production/LNG shall be obliged to notify the competent authority of:

- term of the Contract;
- contracted total annual and monthly average quantities (by months);
- in the event of an alert or an emergency – the maximum quantities contracted;
- Delivery points - agreed delivery points.
- Minimum daily and monthly volumes of gas;
- Conditions for suspension of gas supplies.

5.5. Specific obligations of natural gas undertakings

5.5.1. The public supplier is obliged to require external suppliers to include flexible clauses in the supply contracts providing in the event of a crisis level, the possibility to increase the quantities supplied above the levels agreed.

5.5.2. Gas traders are obliged to require from the production undertakings with which they have concluded purchase contracts to switch, upon the declaration of an emergency, to an operational mode of maximum technically feasible production.

5.5.3. The public supplier is obliged to require external suppliers to include flexible clauses in the supply contracts providing in the event of a crisis level the possibility to increase the quantities supplied above the levels agreed.

5.5.4. Transmission system operators (other than Bulgartransgaz EAD), which have a physical connection to the transmission system, are required to execute the orders of the combined operator Bulgartransgaz EAD.

5.5.5. The operators of distribution networks which have a physical connection to the transmission system are required to execute the orders of the combined operator Bulgartransgaz EAD.

5.5.6. Natural gas customers who have a physical connection to the transmission system are required to execute the orders of the combined operator Bulgartransgaz EAD.

5.5.7. Production undertakings are required to switch, upon the declaration of an emergency, to an operational mode of maximum technically feasible production.

5.6. The reporting obligations of the natural gas undertakings are as follows:

5.6.1. Combined gas operator Bulgartransgaz EAD:

Bulgartransgaz EAD is a combined gas operator carrying out the activities involving natural gas transmission and storage. The Company pursues transparent and responsible behaviour policy and aims at ensuring secure conditions and sustainable development of the natural gas market in the country and the region in compliance with the principles of equality and transparency. In its capacity as a transmission system operator and storage operator, it enables the development and reliable functioning of natural gas transmission and storage infrastructure on the territory of the Republic of Bulgaria. The company operates the gas transmission network, which enables the transmission of natural gas to consumers in Bulgaria and the neighbouring countries, and the Chiren underground gas storage facility for the activity involving the natural gas storage. Production companies and 2 main groups of connected customers - gas distribution companies and non-household users are connected to Bulgartransgaz EAD gas transmission network.

- on the basis of the information received from the other undertakings Bulgartransgaz EAD reports to the Departmental Crises Team of the ME on entry point pressures, supplies to Bulgaria, the consumption of the household and non-household customers connected to the gas transmission network, the parameters of the gas transmission network (pressure, natural gas quantity in linepack, operating mode, etc.) and on the need to ensure compliance with imposed restrictions on the part of customers connected to the gas transmission network, including the need to switch to an alternative fuel, etc. [It also reports on] the need to alter the crisis level declared to a lower level;

- reports the daily gas demand and supply forecasts for the following three days, in million cubic metres per day (mcm/d);

- reports the daily flow of gas at all cross-border entry and exit points and all points connecting production facilities, storage facilities or LNG terminals to the network, in million cubic metres per day (mcm/d);

- reports the period, expressed in days, for which it is expected that gas supply to protected customers can be ensured.

5.6.2 Bulgargaz EAD is a sole shareholder joint-stock company established in accordance with the Commercial Act under the jurisdiction of the Bulgarian Energy Holding EAD. The company is the only public supplier of natural gas in Bulgaria.

According to the Energy Act the public supply of natural gas in Bulgaria is subject to licensing by the EWRC and only one licence for the activity is issued, which covers the entire territory of the country.

By Decision No.R-046 of 29 November 2006, SEWRC issued Licence No L-214-14 of 29 November 2006 to Bulgargaz EAD for the public supply of natural gas in Bulgaria. The licence is valid for a period of 35 years.

For the entire effective period of the licence Bulgargaz EAD is authorised to perform the rights and discharge the following obligations:

- conclude contracts with producers of and traders in natural gas for the purchase the necessary quantities of natural gas to cover demand from consumers connected to the gas transmission network as well as the agreed quantities necessary for the operation of public suppliers;

- conclude agreements for the sale of natural gas to customers;

- conclude agreements for the transmission of natural gas with the transmission company and distribution companies;
- conclude agreements for the storage of natural gas with storage facility operators;
- perform other necessary activities relating to the public supply of natural gas;
- the licence holder must ensure the uninterrupted and high-quality supply of natural gas;
- the licence holder may not refuse to conclude contracts for the sale of natural gas with customer who are not directly connected to the gas transmission network or with public supplier in accordance with the provisions laid down in applicable law.

In the capacity as main supplier of natural gas in Bulgaria, Bulgargaz EAD reports on:

- the expected supply quantity for a period of 3 days ahead;
- the hourly and daily consumption of gas of its customers;
- the quantities it can ensure under provisional supply contracts (flexible contracts);
- the compliance on the part of its customers with imposed restrictions (temporary curtailment/restrictive regime).
- the period, expressed in days, for which it is expected that gas supply to protected customers can be ensured.

5.6.3. (Domestic) production undertakings report on:

- the expected withdrawal quantities for a period of 3 days ahead;
- the expected pressure at the connection point between the installations of the production undertaking and the gas transmission system;

5.7. Storage undertakings report on:

Pursuant to Licence No. Л--214-10/29.11.2006, issued by SEWRC, Bulgartransgaz EAD provides natural gas storage services by using its own underground gas storage Chiren. The natural gas quantities stored in Chiren UGS cover mainly the seasonal fluctuations in domestic consumption and in the cases of changed contracted natural gas supplies. Chiren UGS has local importance.

Currently, when filled in at a maximum, Chiren UGS is able to cover about 25-30% of the daily needs during the cold winter months. Chiren UGS has 24 exploitation wells and a compressor station of approximately 9 MW total installed capacity. The present storage capacity can provide storage of up to 550 mcm. The capacity for withdrawal and injection is directly dependent on the formation pressure and the total amount of gas in storage. The minimum withdrawal capacity is 0.5 mcm/day, and the maximum - 3.82 mcm/ day. Where necessary, this can be increased up to 4.7 mcm/day by means of forced (emergency) mode of gas withdrawal. However, such emergency withdrawal is only possible when the gas storage is full and can be maintained for a period of up to 30 days.

Underground gas storage Chiren reports on:

- expected withdrawal quantities for a period of 3 days ahead;
- expected pressure at the connection point between the installations of the production undertaking and the gas transmission system.

In compliance with paragraphs 2-5 of Regulation 2017/1938, by November 1 each year the Republic of Bulgaria must achieve the following objectives for filling the total capacity of Chiren UGS, namely:

- a) for 2022: 80%;
- b) as of 2023: 90%.

Target of Chiren UGS filling	2022
August 1 — intermediate target	49%
September 1 — intermediate target	61%
October 1 — intermediate target	75%
November 1 — filling target	80%

For 2023 and subsequent years, the Republic of Bulgaria should submit to the Commission by September 15 of the previous year a draft filling schedule with intermediate targets for February, May, July and September, including technical information in a summarized form for the underground gas storage facilities on its territory, directly related to its market zone. The filling schedule and intermediate targets are based on the average

filling rate over the previous five years and enable continuous monitoring throughout the filling season.

Every year, starting in 2023, Bulgartransgaz EAD will monitor gas storage since February to avoid rapid gas withdrawal from the underground gas storage facility in mid-winter, which could pose security challenges to deliveries before the end of winter. The result of the monitoring shall be reported to the competent authority.

5.8. Natural gas distribution undertakings

The natural gas distribution and supply activities to customers connected to the distribution networks is carried out by regional and local gas distribution companies – mainly private companies, operating in licence regime and price regulation conditions. Overgas Mrezhi AD, Aresgas AD, Citigas Bulgaria EAD and others have the largest market share. Production companies and two main groups of connected customers - gas distribution companies and non-household users are connected to Bulgartransgaz EAD gas transmission network. **Distribution undertakings report on** the consumption of household and non-household customers connected to the distribution network, the parameters of the gas transmission network, namely pressure, available natural gas quantity in the gas distribution network (linepack), operating mode, and compliance with any restrictions imposed by customers connected to the distribution network, including the switch to an alternative fuel, etc. They also report on the status of supply to households and important public services (security, health care, education, etc.).

In a crisis, all industrial customers have specific tasks to implement with a view to safeguarding the supply of natural gas to protected customers

Industrial gas consumers are required to cooperate with the operator of the gas transmission or distribution system to which their networks are connected in the development of curtailment plans. For this purpose, by 31 July each year, they provide information about the minimum consumption of natural gas necessary to prevent threats to the safety and health of people, or damage to or destruction of technological equipment (that is the quantity of natural gas that corresponds to the maximum allowed consumption at the tenth stage of supply). The indicated quantities of natural gas can be verified by the operators on the basis of historical data on consumption.

Industrial consumers are required to strictly comply with the restrictions imposed on natural gas consumption, when the measures set out in point 2 of the plan are applied. The maximum quantity of natural gas, which customers may acquire during a period of curtailed consumption, is indicated in the respective contracts for sale, transmission and distribution of natural gas or in comprehensive agreements. In addition, the industrial customers purchasing natural gas for their own use and the entities contracting the transmission or distribution of natural gas must also have procedures in place for taking action in the event of disruption of natural gas supply to the gas system and an unforeseen increase in gas consumption.

In fulfilling their reporting obligations, industrial customers use available information flows, notably the 24-hour telephone line and internet link via an operational dispatcher and/or official on duty at the Ministry of Energy, and the database comprising up-to-date information about all customers listed in **Annex No. 4**, which is updated on an annual basis.

5.9. Competent authority

All crisis levels are declared by the competent authority. The competent authority may delegate this task solely to a public authority, a transmission system operator or a distribution system operator. The delegated tasks are performed under its supervision and are specified in the preventive action plan and the emergency plan. In the cases envisaged in the Regulation referred to in Article 9(4), the competent authority notifies the curtailment measures referred to in paragraphs 1 to 3 to the EWRC and the European Commission and makes a public announcement through the media.

The competent authority provides information on any need for assistance to the Commission's Emergency Response Coordination Centre (ERCC). The competent authority conducts an assessment of the overall situation and advises on the assistance that should be provided to the most affected Member States and, where appropriate, to third countries.

In duly justified circumstances irrespective of a declaration of an emergency, the competent authority of the most affected Member State may require natural gas undertakings to provide the information referred to in point 5.1 or additional information necessary to

assess the overall situation of the gas supply in the Member State or other Member States, including contractual information, other than price information.

Assesses the information received for security-related purposes within a period of three months and submits the results of the assessment to the Commission. The competent authority establishes the rules on sanctions applicable to infringements by natural gas undertakings of the provisions of Article 14(6) or (7) and takes all measures necessary to ensure that they are implemented. The penalties provided must be effective, proportionate and dissuasive.

The competent authority prepares a request to the Commission and all Member States for application of the solidarity measure in respect of the solidarity protected customers in its territory. It assumes an obligation to provide solidarity to the countries in the risk group in accordance with Article 13 of Regulation (EU) 2017/1938.

When the competent authority declares an end to one of the crisis levels indicated in Plan, it notifies the Commission as well as the competent authorities of the Member States with which the Member State of that competent authority is directly connected.

After the end of an emergency, the competent authority referred to in point 5.1.7, as soon as possible and at the latest six weeks after the lifting of the emergency, provide the Commission with a detailed assessment of the emergency and the effectiveness of the measures implemented, including an assessment of the economic impact of the emergency, the impact on the electricity sector and the assistance provided to or received from, the Union and its Member States. Such assessment is to be made available to the GCG and must be reflected in the updates of the Preventive Action Plans and the Emergency Plans.

5.10. National regulatory authority (EWRC)

EWRC is responsible for issuing, modifying, supplementing, suspending, terminating and withdrawing licences for electricity and/or heat generation, the transmission of electricity, heat or natural gas, the distribution of electricity or natural gas, the storage of natural gas at storage facilities and/or liquefying natural gas or the import, the unloading and regasification of liquefied natural gas at LNG facilities, trade in electricity, organising an electricity exchange, the public supply of electricity or natural gas, the supply of electricity or natural gas from end suppliers, the distribution of traction electricity along railway distribution networks and the supply of electricity by a supplier of last resort.

It establishes the rules for access to electricity and gas transmission networks, electricity and gas distribution networks and natural gas storage facilities, including quality standards for services and supplies, and where necessary reviews them to ensure effective access;

EWRC certifies electricity transmission and gas transmission system operators as compliant with the requirements for independence, monitors their compliance and submits relevant notifications to the European Commission;

The Commission requires that, where necessary, transmission and distribution system operators propose modifications to the rules and the general terms and conditions of the contracts provided for in the Energy Act to be approved by the Commission acting on their proposal.

It monitors the transition from a regulated market to an organised market based on the principle of freely negotiated prices in accordance with the electricity trading rules.

According to the amendments to the Energy Act of 8 October 2019, the energy regulator approves a platform for trading in natural gas on a proposal from the gas transmission network operator. As noted in the report of the working group, in accordance with the requirements laid down in Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks, in order to procure short-term standardised products, the transmission system operator trades on a trading platform.

5.11. Competent authorities of the neighbouring countries.

The competent authorities of the neighbouring countries in the risk group(s) cooperate in the implementation of this Plan. The Member States may allow their competent authorities to delegate specific tasks set out in Regulation (EU) 2017/1938 to other bodies. They monitor and control the natural gas supply situation in the respective countries, declare the respective crisis level, apply the measures planned to cope with threats and notify the competent authorities and Commission services via the regional centre. The competent authorities may guide the actions of operators and provide to the Commission information necessary to assess the gas supply situation, once received from the natural gas undertakings. They adopt

decisions on the cancellation of emergency situations and notify the Commission, once received from the natural gas undertakings. They adopt decisions on the cancellation of emergency situations and notify the Commission.

5.12. European Commission

The Commission convenes the Gas Coordination Group (GCG) as soon as it declares a regional or Union emergency. In a regional or Union emergency, the Commission shall coordinate the action of the competent authorities, taking full account of relevant information from, and the results of, the consultation of the GCG.

The Commission in particular:

- ensures the exchange of information;
- ensures the consistency and effectiveness of action at Member State and regional levels in relation to the Union level;
- coordinates the actions with regard to third countries and European bodies.

In the event of a regional or Union emergency, the Commission may request that the competent authority provides it without delay with at least:

- the information set out in point 5.9;
- the information on the measures planned to be taken and those already implemented by the competent authority to mitigate the emergency, and information on their effectiveness;
- the requests made for additional measures to be taken by other competent authorities;
- the measures implemented at the request of other competent authorities.

Where the Commission considers that the gas supply in the Union or part of the Union is exposed to a risk or is likely to be exposed to a risk that may lead to the declaration of a crisis level, it may require the competent authorities concerned to collect and submit to the Commission the information necessary to assess the gas supply situation. The Commission shares its assessment with the GCG.

The Commission may convene a **Crisis Management Group** (CMG) composed of the crisis managers referred to in Article 10(1)(g) of Regulation 2017/1938, with members from the Member States affected by the emergency. The Commission shall ensure that the GCG is informed regularly about the work undertaken by the Crisis Management Group. The Commission, after consulting the GCG, shall establish a permanent reserve list for a monitoring task force consisting of industry experts and representatives of the Commission.

The monitoring task force may be deployed outside the Union when necessary and shall monitor and report on the gas flows into the Union, in cooperation with the supplying and transiting third countries. When the Commission decides that the underlying basis for the regional or Union emergency no longer justifies the declaration of an emergency, it shall declare an end to the regional or Union emergency and shall give its reasons and inform the Council of its decision.

CHAPTER 6: Measures concerning the undue gas consumption by non-protected customers

In order to prevent undue gas consumption during an emergency or during the application of the measures referred to in Article 11(3) and Article 13, the competent authority of the Member State concerned shall inform customers who are not protected customers that they are required to cease or reduce their gas consumption without creating technically unsafe situations.

The measure introduced to prevent the undue gas consumption by customers who are not protected customers (during an emergency) and to curtail the gas consumption. This is a non-market-based measure used where all available means of satisfying the needs of the customers of natural gas have been exhausted. Any undertaking that fails to comply with the natural gas consumption restrictions shall be subject of financial sanction. The amount of sanction shall be set depending on the quantity of consumed natural gas over the period of exceeding the capacity as a result of the introduced restrictions and is calculated as follows:

- in case of exceeding the hourly capacity, as the product of the maximum capacity registered by the metering system, over the capacity resulting from the introduced restrictions, the number of hours in the month in which the restrictions are imposed, **and four times higher** than the fixed fee for the transmission service for a given tariff group to which a customer will be qualified based on the capacity assigned to that customer;

- in case of exceeding the hourly and daily capacity, the sanction shall be calculated as the product of the maximum capacity registered by the metering system, over the capacity resulting from the introduced restrictions, the number of hours in the month in which the restrictions are imposed, **and eight times the fixed fee** for the transmission service for a given tariff group to which the customer could be qualified based on the capacity assigned to that customer;

Where Bulgaria has declared an emergency and has indicated that cross-border action is required, any increased gas supply standard or additional obligation under Article 6(2) imposed on natural gas undertakings in other Member States in the same risk group shall be temporarily reduced to the level established in Article 6(1) of Regulation 2017/1938. The obligations laid down in the first paragraph of this Article shall cease to apply immediately after the competent authority declares an end to an emergency, or the Commission concludes, in accordance with the first paragraph of paragraph 8, that the declaration of an emergency is not or is no longer justified.

In the event of an emergency in the natural gas system, the consumption of unprotected customers is regularly monitored by the relevant operators of transmission and distribution systems. In case of undue consumption, they activate the procedures for immediate interruption of natural gas supplies according to the network code of the Bulgarian gas transmission system and the Code on distribution systems. In addition, in the event of a state of Emergency crisis warning, the national natural gas operator as well as the distribution system operators issue recommendations for prudent consumption - voluntary actions to be taken by all natural gas users in order to optimise use of gas and continuation of gas supplies to protected customers.

CHAPETR 7 Measures of voluntary reduction of gas demand

In accordance with Council Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas, the Republic of Bulgaria shall make every possible effort to reduce its gas consumption in the period from 1 August 2022 until 31 March 2023 by at least 15% compared to its average gas consumption in the period from 1 August to 31 March in the five consecutive years preceding the entry into force of that regulation ("voluntary demand reduction"). The measures are clearly defined, transparent, proportionate, non-discriminatory and verifiable. In the selection of measures, the principles laid down in Regulation (EU) 2017/1938 were taken into account, so that:

- a) do not unnecessarily distort competition or the proper functioning of the internal gas market;
- b) do not threaten the security of gas supplies to other Member States or the Union;
- c) comply with the provisions of Regulation (EU) 2017/1938 regarding protected customers.

The recommended measures for voluntary reduction of gas demand in the Republic of Bulgaria are as follows:

- illuminated advertising be turned off during the period from 1.00 am until 5.00 am;
- reduction of street lighting at night, at the initiative of municipal administrations;
- Reduction of showering time;
- the owners of shops, offices, banks and other buildings with a public purpose, shall not leave the doors of the premises open when there are heating/cooling devices turned on;
- reduction of the heating temperature of public and private pools by up to 1°C;
- more regular defrosting and cleaning of refrigerators and freezers;
- individual reduction of indoor temperature by up to 1°C in winter months and correspondingly recommended individual increase of indoor temperature by up to 1°C in summer months;
- using as little electronics as possible, including unplugging electronic devices when not in use;
- reduction of artificial lighting in premises, including the use of fewer light sources;
- more frequent cleaning of windows and lighting fixtures from contamination;
- switching off or reducing to the minimum possible degree the thermostat of heating devices when there are no people in the room, without creating a risk of freezing of the internal heating installations.
- limited use of elevators when going down from a higher to a lower floor.

When declaring a state of alert in the Union by the Council (Article 4 of Regulation (EU) 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas) in accordance with Article 5(1), each Member State shall mandatory reduce its consumption in accordance with Article 5(2) ("mandatory demand reduction"). For the purposes of mandatory demand reduction while an alert is declared in the Union, gas consumption in the period from 1 August 2022 until 31 March 2023 (the "reduction period") should be 15% lower compared to with its reference gas consumption. Any reduction in demand achieved during the pre-alert period in the Union shall be taken into account for the purposes of mandatory demand reduction. For this purpose, the procedure under item 2.3 of the Plan shall be activated, including if necessary, the application of non-market-based measures, detailed in item 2.3.10 of the Plan.

Regulation (EU) 2022/1369 permits to limit the reference gas consumption, used to calculate the mandatory demand reduction target pursuant to paragraph 2, by the volume of gas equal to the difference between the intermediate target specified in Regulation 2017/1938 for 1 August 2022 and the actual volume of gas stored on 1 August 2022, if the intermediate target is fulfilled by that date. It is also allowed to limit the reference gas consumption used to calculate the mandatory demand reduction target under paragraph 2 to the volume of gas during the reference period used as feedstock.

Upon decision-making to take measures to reduce gas demand, priority shall be given to those related to reducing gas consumption in the electricity sector, to encourage fuel switch in the industry, national awareness-raising campaigns, and targeted obligations to reduce heating and cooling, to promote switching to other fuels and reduce consumption by industry.

CHAPTER 8: Emergency response tests

The Minister of Energy has a proactive role in organising emergency response tests (below referred to as response tests). The tests are held at least once every 4 years, and their date and organisation are determined by the Minister of energy.

The response test scenario shall be prepared by an expert panel and is not revealed until the test is carried out. The scenario assumes a series of events that assess potential problems in the operation of gas systems until the event requiring the initiation of an emergency, i.e. until the objective necessity of initiating non-market-based measures. It is also acceptable to assume a high-impact scenario that would immediately lead to an emergency.

The crisis response test scenario implies variations of the simulation depending on the decisions made by its participants. The test scenario is approved by the Minister of Energy; the entities named in the test (the stakeholders) must participate in it. For the implementation of the response test, the mechanisms and means of communication must be clearly defined to clearly distinguish test messages from real communication between stakeholders.

The test must be carried out in conditions as close as possible to real ones. The use of "virtual time" for slowly changing time processes is allowed. For the test phase where decisions are made the "virtual time" must equal the real time. Formulation of evaluations or conclusions shall be avoided during the tests. Non-test observer functions are usually defined to record the events, decisions, procedures and instructions used and identify facts that occur during the response tests. The first response tests will be carried out no later than one year from the date of adoption of this emergency plan.

After performing the response test, a summary phase of results obtained from it shall be presented. A summary of the conclusions, timeline of events and post-test recommendations shall be provided by the authority responsible for the test in the final report to the Minister of Energy.

The transmission system operator, the distribution system operators and the storage system operators are required to conduct response tests at least once a year in the form of practical tasks or staff simulations for failure scenarios of key elements of the managed infrastructure. Depending on the needs of the scenario, such tests may be conducted in cooperation with enterprises that may be affected by the effects of a potential intervention or that may have an impact on minimizing the effects of the events.

Test reports and conclusions are required to be submitted to the Minister of Energy.

Bulgartransgaz EAD shall develop and analyse studies with limited supply of natural gas and extremely high demand for natural gas. The aim is to obtain information and evidence on the effectiveness of the established measures and the need to adopt new emergency/crisis measures in order to meet the demand for natural gas or in the worst case to comply with the Standard for supplies referred to in Article 6 of Regulation 2017/1938.

The Emergency Plan shall be updated every four years after 1 March 2019 or more often if so required by the circumstances or upon a request by the Commission. The updated plan shall reflect the updated risk assessment and the results of tests performed at least once in-between the plan updates in accordance with paragraph 3 of this Article. Regarding the updated plan Article 8 (4–11) shall apply of Regulation 2017/1938.

The Emergency Plan shall ensure the maintenance as far as it is technically possible and safe the cross-border access to the infrastructure under Regulation (EC) No 715/2009 in the event of an emergency and shall not introduce a measure(s) which the cross-border gas flow is unjustifiably restricted. The plan is subject to review and is evaluated for effectiveness by carrying out tests. The tests that envisage the involvement of Departmental Crisis Team - ME or Crisis Team for the implementation of the Emergency Plan of Bulgartransgaz EAD, the Crisis Teams of the companies shall be organised in accordance with paragraph 2, Article 10 of Regulation 2017/1938 at least once in-between the four updates of the Emergency Plan.

In the event of an incident during the current year in the country, which led to a crisis at a certain level of danger, the specified planned system verification test is not carried out. At the planning stage of the tests and in order to verify the effectiveness of the plan, the Head of the Departmental Crisis Team of the ME may request additional information on the time schedule from the participating actors, where such information must be available. The participating actors provide the requested information in a timely manner, appropriately classifying any confidential information.

The measures, actions and procedures contained in the emergency plan **shall be tested at least** once between the four-year updates referred to in paragraph 2. In connection with this, the competent authority simulates high and medium impact scenarios and responses in real time in accordance with that emergency plan. The results of the tests are presented at the GCG by the competent authority.

The simulation includes the identification and assessment of emergency natural gas supply corridors and also identifies which Member States can address identified risks, including in relation to LNG. The gas supply and infrastructure disruption scenarios and the methodology for the simulation are defined by ENTSOG in cooperation with the GCG. The ENTSOG for gas ensures an appropriate level of transparency and access to the modelling assumptions used in its scenarios. The Union-wide simulation of gas supply and infrastructure disruption scenarios is repeated every four years unless circumstances warrant more frequent updates. The Commission is empowered to adopt delegated acts in accordance with Article 19 in order to update the composition of the risk groups set out in Annex I by amending this Annex in order to reflect the evolution of the major transnational risks to the security of gas supply in the Union and its impact on Member States, taking into account the result of Union-wide simulation of gas supply and infrastructure disruption scenarios carried out by ENTSOG in accordance with Article 7(1). Before proceeding to the update, the Commission consults the GCG in the setting provided for in Article 4(4) on the draft update.

CHAPTER 9: Regional dimension

9.1. Measures to be adopted per crisis level.

The regional dimension of the Emergency Plan provides a possibility for the three Member States in the Trans-Balkan risk group (Romania, Bulgaria and Greece) to cooperate in the application of market-based and non-market-based measures. Such cooperation helps to prevent disruptions in the normal functioning of the gas market in South Eastern Europe and Europe and pool efforts and resources to address risks and cope with disruptions in natural gas supply. It envisages the application of cooperation mechanisms in the regional dimension with a view to ensuring that the Member States in the risk group have access to information that allows them to prevent or respond to potential disruptions in gas supply through the implementation of an effective system for communication and exchange of information between the individual competent authorities of the Member States belonging to the risk group.

The plan **enhances regional cooperation between risk group countries through planning so that decisions on the security of gas supply are not taken solely on the basis of national assessments and considerations but take into account the regional dimension**. The latter enhances the accuracy of the regional dimension in the assessments and measures to prevent and mitigate crises and ensures greater efficiency in the scale of the joint actions. Furthermore, it lowers the security costs of supplying natural gas to customers, including industrial customers, who are sensitive to the impact of such costs on their ability to compete on the international markets. The plan enhances the regional dimension in a number of elements of the framework for the security of gas supplies, including through a common risk assessment and regional chapters setting out jointly agreed measures.

The action plan envisages **a mechanism for cooperation** in the regional dimension for the first time. The mechanism offers a phased approach, starting with defining the mechanism and followed by exchanges within the risk group. The goal is to ensure that the Member States in the risk group have access to information that will allow them to prevent or respond to potential disruptions in natural gas supply and putting in place an effective system for communication and exchange of information between the individual competent authorities of the Member States in the risk group.

9.1.1. Early warning crisis level

The competent body of the Member State which has declared an early warning immediately notifies all other Member States in the risk group of the crisis level declared and any measure applied or intended to be applied in order to deal with the consequences of the disruption in natural gas supply. 'Early warning' is declared where there exists concrete, serious and reliable information that an event may occur which is likely to result in a significant deterioration of gas supplies and is likely to trigger an alarm on the level of 'alert' or 'emergency'. The competent authority should report any changes in the situation in the gas system, including all adopted or discontinued measures, if any.

9.1.2. Alert crisis level:

The competent body of the Member State which has declared an alert immediately notifies all other Member States in the risk group of the crisis level declared and any measure applied, or measures planned to be applied in order to deal with the consequences of the disruption in natural gas supply.

When an alert is declared, the market is still able to manage that disruption or demand without the need to resort to non-market-based measures. The competent authority reports any changes in the situation in the gas system, including all adopted or discontinued measures, if any.

9.1.3. Emergency crisis level

The competent body of the Member State which has declared an emergency immediately notifies all other Member States in the risk group of the crisis level declared and any measure applied or intended to be applied in order to deal with the consequences of the disruption in natural gas supply.

The competent authority should report any changes in the situation in the gas system, including all adopted or discontinued measures, if any. Non-market-based measures should be additionally introduced in order to more specifically safeguard natural gas supplies to protected customers in accordance with Article 6. In accordance with Article 11(7) of Regulation (EU) 2017/1938 during an emergency, upon a request of the relevant electricity or gas transmission system operator, a Member State may decide to prioritise the gas supply to certain critical gas-fired power plants over the gas supply to certain categories of protected customers.

9.2. Cooperation mechanism

In order to make the regional cooperation feasible, Member States agree on a cooperation mechanism at risk group level. Such a mechanism should be developed sufficiently in time to allow for discussing and agreeing on appropriate and effective cross-

border measures, which will require the agreement of each Member State concerned, to be included in the regional chapters of the preventive action plans and the Emergency Plans, after consulting the Commission.

This Regulation [introduces], for the first time, a solidarity mechanism between Member States as an instrument to mitigate the effects of a severe emergency within the Union including a burden sharing mechanism. The mechanism ensures that the access to other key gas supply contracts relevant for the security of supply is guaranteed. The mechanism ensures that the access to other key gas supply contracts relevant for the security of supply is guaranteed.

Where there is reliable information on a situation outside the Union that threatens the security of gas supply of one or several Member States and that may trigger an early warning mechanism involving the Union and a third country, the Commission should inform the GCG without delay and the Union should take appropriate action to try to ease the situation.

The competent authorities of the risk group agree on a cooperation mechanism for the preparation of the preventive action plan and the Emergency Plan, including the exchange of draft plans.

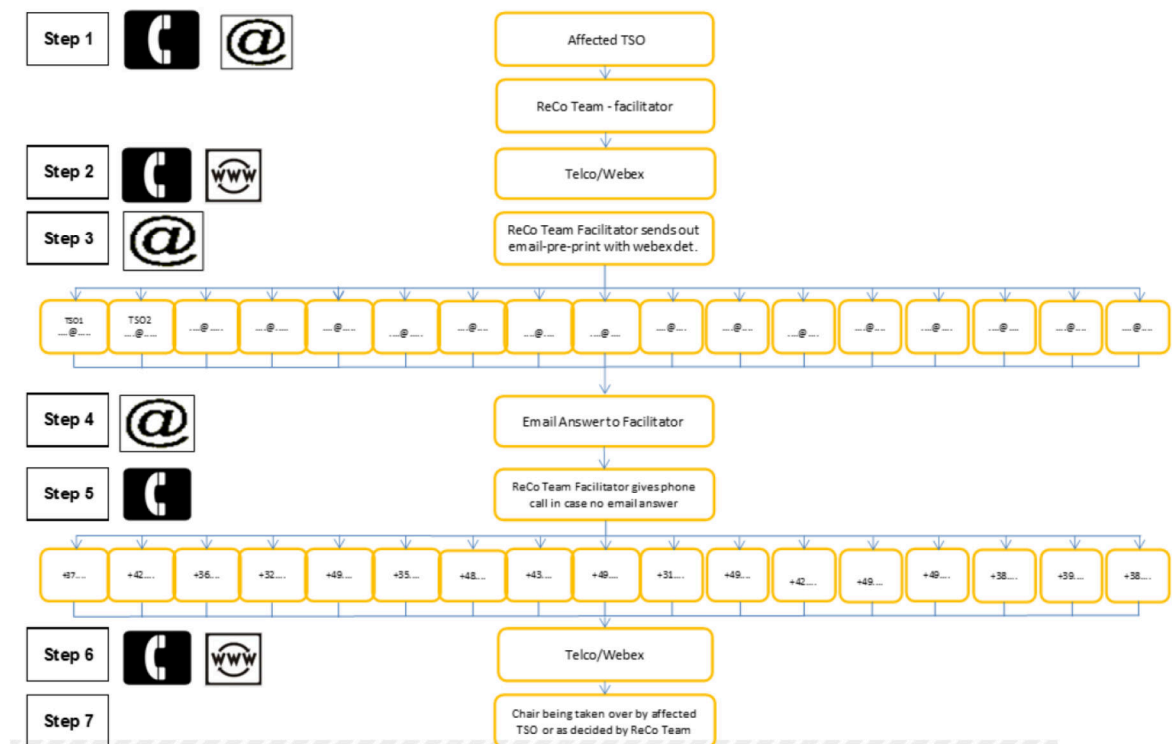
9.2.1. Procedures within the framework of the Regional Coordination system for gas (ReCo system for gas).

In accordance with Article 3(6) of Regulation (EU) 2017/1938 **the Regional Coordination System for Gas** (ReCo System for Gas) established by ENTSOG and comprising standing expert groups plays a significant role in cooperation and the exchange of information between transmission system operators in the case of emergency at regional or EU level.

Transmission system operators (TSO) cooperate and exchange information, including on gas supply flows in a crisis situation, using the Regional Coordination System for Gas (ReCo). ReCo teams are primarily intended to enable the exchange of information between gas transmission system operators along an existing channel. This has the potential to facilitate the approval of common emergency procedures, the organisation of urgent communication system resilience tests and conduct studies with a view to their improvement.

Although all operational procedures of ReCo teams may be regarded as emergency measures, the existence of ReCo teams is considered a preventive measure. The ReCo system offers a set of instruments which includes measures such as swaps or additional capacity. Each measure may be adopted, depending on the incident classification scale.

The ReCo system includes a diagram depicting the information flow between its constituent parts.



9.2.2. Procedures between operators of neighbouring transmission systems.

At the technical level, indicating telephone numbers and e-mail addresses for contact is essential for rapid decision-making in the event of danger and verifying the transmission of communications by the authorised managers. The competent bodies of the countries in the risk group require that their respective system operators exchange information flow charts to enable ReCo teams to benefit from the best available practices.

The mutual assistance agreements are updated within the framework of the interconnection agreements, taking into account the requirements laid down in applicable legislation governing the security of gas supplies and establishing a clear correspondence between crisis levels and the relevant measures.

9.2.3 Regional Trans-Balkan risk group

9.2.4 Measures to be taken in the different crisis situations.

The measures set out in this chapter are essentially information requirements that can be useful to all Member States belonging to the risk group in their response to emergency situations, the steps taken to prevent the crisis from expanding and giving assistance to the Member States requiring assistance at all crisis levels.

Early warning crisis level:

When the competent body of a Member State participating in the risk group declares an early warning, it must notify the crisis level within one day to all other Member States in the risk group, and provide information about each measure taken. The competent authority of the declaring Member State updates all other Member States belonging to the risk group on the early warning situation every four days, communicating all adopted or discontinued measures, if any.

Alert crisis level:

When the competent body of a Member State participating in the risk group declares an alert, it must notify the crisis level within one day to all other Member States in the risk group, and provide information about of each measure taken.

The competent authority of the declaring Member State updates all other Member States belonging to the risk group on the situation every two days, communicating all adopted or discontinued measures, if any.

Emergency crisis level:

When the competent body of a Member State participating in the risk group declares an emergency, it must notify the crisis level within one day to all other Member States in the risk group, and provide information about of each measure taken. The competent authority

of the declaring Member State updates all other Member States belonging to the risk group on the early warning situation every four days, communicating all adopted or discontinued measures, if any.

In accordance with Article 11(7) of Regulation (EU) 2017/1938 during an emergency, upon a request of the relevant electricity or gas transmission system operator, a Member State may decide to prioritise the gas supply to certain critical gas-fired power plants over the gas supply to certain categories of protected customers.

9.3. Solidarity among Member States

The Emergency Plan envisages that the solidarity measure is to be taken as a last resort and only if the requesting Member State has:

- not been able to cover the deficit in gas supply to its solidarity protected customers despite the application of the measure referred to in Article 11(3) of Regulation 2017/1938.

- exhausted all market-based measures and all measures provided in its Emergency Plan;

- has notified an explicit request to the Commission and to the competent authorities of all Member States with which it is connected either directly or in accordance with Article 13(2) of Regulation (EU) 2017/1938 via a third country, accompanied by a description of the implemented measures referred to in Article 13(3)(b) of Regulation (EU) 2017/1938;

- undertaken to pay fair and prompt compensation to the Member State providing solidarity in accordance with Article 13(8) of Regulation 2017/1938.

When a Member State has requested the application of the solidarity measure pursuant to Article 13 of the Regulation, a Member State which is directly connected to the requesting State or its competent authority or transmission system operator or distribution system operator, as far as possible without creating unsafe situations, takes the necessary measures to ensure that the gas supply to customers other than solidarity protected customers in its territory is reduced or does not continue to the extent necessary and for as long as the gas supply to solidarity protected customers in the requesting Member State is not satisfied. The requesting Member State shall ensure that the relevant volume of gas is effectively delivered to solidarity protected customers in its territory.

Where there is more than one Member State that could provide solidarity to a requesting Member State, the requesting Member State, after consulting all Member States that can provide solidarity, seeks the most advantageous offer on the basis of cost, speed of delivery, reliability and diversification of supplies of gas. The Member States concerned shall make such offers on the basis of voluntary demand-side measures as much as and for as long as possible, before resorting to non-market-based measures.

Where market-based measures prove insufficient for the Member State providing solidarity to address the deficit in gas supply to solidarity protected customers in the requesting Member State, it may introduce non-market-based measures in order to comply with the obligations laid down in Article 13(1) and (2) of the Regulation.

The Member State, which has requested solidarity promptly pays, or ensures the prompt payment of, fair compensation to the Member State providing solidarity.

Fair compensation includes all reasonable costs that the Member State providing solidarity incurs from an obligation to pay compensation by virtue of fundamental rights guaranteed by Union law and by virtue of the applicable international obligations when implementing Regulation and further reasonable costs incurred from payment of compensation pursuant to national compensation rules.

9. ANNEXES:

Annex No. 1: Scheme for announcing crisis level to natural gas undertakings;

Annex No. 2: Information flows at Early Warning level between Bulgartransgaz EAD's Physical Dispatching and Regimes Department and the gas undertakings under Article 2 of Directive 2009/73;

Annex No. 3: Information flows at Alert level between Bulgartransgaz EAD's Physical Dispatching and Regimes Department and the gas undertakings under Article 2 of Directive 2009/73;

Annex No. 4: Information flows at Emergency level between Bulgartransgaz EAD's Physical Dispatching and Regimes Department and the gas undertakings under Article 2 of Directive 2009/73;

Annex No. 5.1. National consumption and average temperature (Sofia) in January in 2017, 2018 and 2019, 2020 2021;

Annex No. 5.2. Relation between temperature and consumption in January 2017, 2018 and 2019, 2020 and 2021;

Annex No. 6: Scenarios for limiting the gas supply at the main entry point of the system;

Annex No. 7: Current operational parameters of Chiren UGS;

Annex No. 8: Protected customers