



Republic of Serbia  
Ministry of Mining and Energy

**Preventive Action Plan  
and  
Emergency Plan  
For Safeguarding The Security Of Natural Gas Supply**

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## **LEGISLATIVE FRAMEWORK**

Energy Law („Official Gazette of the Republic of Serbia“, No. 145/2014)

The Energy Sector Development Strategy of the Republic of Serbia until 2025 with projections up to 2030 („Official Gazette of RS“, No. 101/2015)

The Program of the energy sector development strategy of the Republic of Serbia for the period to 2025 year with projections to 2030, the year of the period 2017 to 2023 year (2Official gazette of RS“, No. 104/2017)

### Gas pipeline system of the Republic of Serbia

- 2 interconnections with other gas pipeline systems:
  - one entry point at the border with Hungary (Kiskundorozsma)
  - one exit point at the border with Bosnia and Herzegovina
- The total length of the transmission system 2.459 km, 243 exit points  
2 TSO: Transportgas Srbija d.o.o. Novi Sad and Yugorrosgaz-transport d.o.o. Niš
- The total length of the distribution network in the Republic of Serbia 16,961 km,  
267,000 active delivery points  
34 distribution system operators
- Underground gas storage Banatski Dvor 450 million m<sup>3</sup>  
PSG BANATSKI DVOR DOO NOVI SAD

### **NATURAL GAS CONSUMPTION AND SUPPLY**

- The total planned amount of natural gas in 2019 required for consumption 2420 million Sm<sup>3</sup> (17.1% of domestic production and 82.9% from imports)
- In the total primary energy consumption natural gas participated with 15.7%, and in the total consumption of final energy for energy purposes with 11.3%.
- The Law on Energy stipulates that from January 1, 2015 all final natural gas customers have the right to freely choose a supplier on the market.
- The supply of natural gas is performed by 66 suppliers and 33 public suppliers.
- Supplier of last resort - PE Srbijagas
- Supplier of suppliers - PE Srbijagas

**Priority buyers** - Customers for whom a special regime of supply or protection should be provided, in cases where the security of gas supply is threatened

Trends and factors in the consumption of natural gas that can have an impact on the conditions of supply in crisis situations are the following:

- heating plant consumption is highly dependent on winter outdoor temperatures, but without significant changes if it is reduced to average winter temperatures;
- variable consumption in households, dependent on winter outdoor temperatures and parity prices, but still lower than at the beginning of this decade;
- considerably lower consumption in industry in the last four years (with a slight growth), compared to the previous period;
- very variable non-energy consumption.

### **PREVENTIVE ACTION PLAN**

Decree on establishment of Preventive action plan for safeguarding of security of natural gas supply („Official Gazette of the Republic of Serbia“, No. 102/2018)

This plan includes a risk analysis, based on which measures and activities for the mitigation or elimination of risks have been established, in order to ensure safe, efficient and quality supply and support in the long term:

- development of the national gas pipeline system;
- development of the gas market at the national and regional level;
- linking with the systems of neighboring countries and diversifying directions and sources of supply.

<http://www.mre.gov.rs/doc/nafta-i-gas/2019/Uredba-o-utvrdjivanju-preventivnog-plana-za-snabdevanje-prirodnim-gasom.pdf>

### RISK ASSESSMENT

- The risk assessment carried out in accordance with internationally recognized standards
- Analysis of the risk of occurrence of events that can significantly jeopardize the security of natural gas supply in the Republic of Serbia, scenarios that correspond to each of the observed risks (total 19 scenarios), possible causes of occurrence of adverse events as well as possible responses to risks (ways of their reduction or elimination) are defined.
- All adverse events are the result of technical, political, social, information-management-communication, economic and natural factors and may arise as a result of disruptions to national infrastructure, supply or demand for natural gas.
- In the process of risk analysis, the present system of gas supply of the Republic of Serbia was considered, with the restriction of the analysis to its transport subsystem and its connection to the gas storage and production part, as a key to ensuring the security of supply.



### **Supply standard**

For the purpose of this plan, the starting point was the assumption that measures should be taken to ensure the delivery of natural gas to the priority customers in the following cases:

- extreme temperatures during a seven-day peak period occurring with a statistical probability of once in 20 years;
- for any period of at least 30 days of extremely high demand for gas, occurring with a statistical probability of once in 20 years;
- a period of at least 30 days in case of interruption of one of the largest gas infrastructure, under average winter conditions.

To determine the probability of the occurrence of scenarios, the effect of several factors of different character was taken into account: technical, political, social, information-management-communication (including cyber), economic and natural.

### 19 different scenarios were considered

- Group of scenarios “Market Disruption without Applying Measures” – As the starting point for the development of this plan was used, which implies the occurrence of disruptions in the natural gas market of the Republic of Serbia without the application of any measures to reduce the risk of their occurrence and was used for comparison with groups of scenarios with the application of measures
- Group of scenarios "Market Disruption with Applying Market Measures"  
In the case of the Republic of Serbia, it is possible to apply the following measures:
  - replacement of natural gas with heating oil;
  - interruption of supply under "discontinuous supply contracts";
  - increase of import flexibility;
  - increase of commercial gas reserves;
  - increase of the capacity of the gas infrastructure;
  - diversification of sources of supply;
  - interconnectors with return flow and
  - long-term contracting.

### MEASURES FOR ENSURING SECURE NATURAL GAS SUPPLY

Taking into account all the listed characteristics of the natural gas market of the Republic of Serbia, the obligations of energy entities prescribed by the Energy Law and the results of the performed risk analysis in order to mitigate the identified risks and ensure safe gas supply, it is necessary to implement the following measures:

- 1) creating interconnections with the countries in the region, construction of a new direction of natural gas supply, expansion and construction of new storage capacities, as well as execution of other projects that influence the reduction of consumption of natural gas in accordance with the Energy Strategy and the Regulation on the establishment of the Program for the implementation of the Energy Development Strategy of the Republic of Serbia by 2025 with projections until 2030 for the period from 2017 to 2023;
- 2) establishment of operational reserves of energy products in accordance with Article 345 of the Law on Energy;
- 3) ensuring required natural gas reserves in accordance with Article 346 of the Law on Energy;
- 4) establishing regional cooperation in crisis situations.

The implementation of these measures also increases the security of supply of transit routes to Bosnia and Herzegovina and improves the security of supply of natural gas throughout the region.

### **EMERGENCY PLAN**

Decree on establishment of Emergency plan for safeguarding of security of natural gas supply („Official Gazette of the Republic of Serbia“, No. 102/2018)

This plan identifies measures, energy entities that will be in charge of ensuring the security of the transmission system operation and the security of supply of certain groups of end customers, the volumes and capacity of natural gas in case of a general shortage of natural gas.

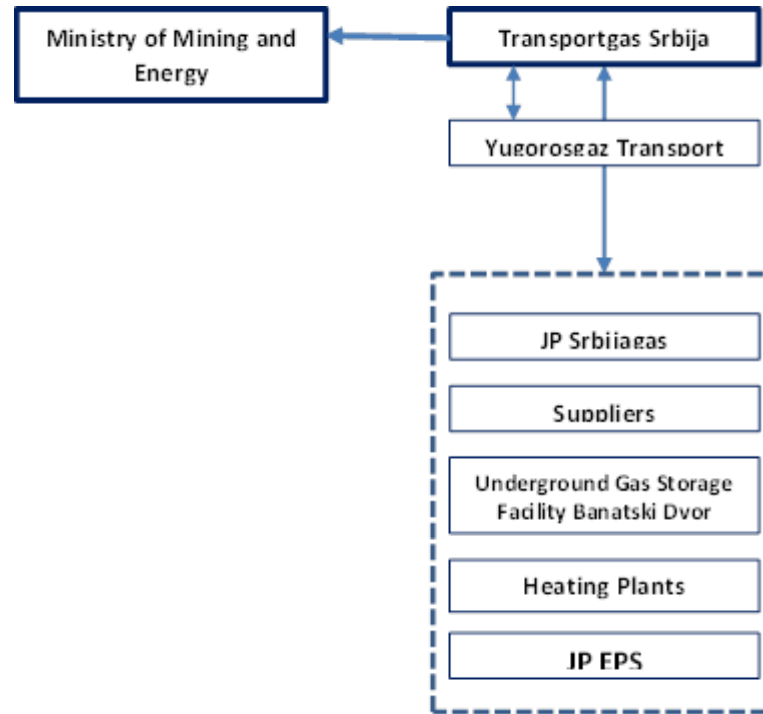
The plan shall be implemented in situations that affect or may affect the normal functioning of the natural gas market in the Republic of Serbia and/ or jeopardize the security of supply, whereby the crisis may be caused by external or internal risks, defined by the regulation establishing the Preventive Action Plan

<http://www.mre.gov.rs/doc/nafta-i-gas/2019/Uredba-o-utvrđivanju-kriznog-plana-radi-sigurnosti-snabdevanja-prirodnim-gasom.pdf>

### Crisis levels

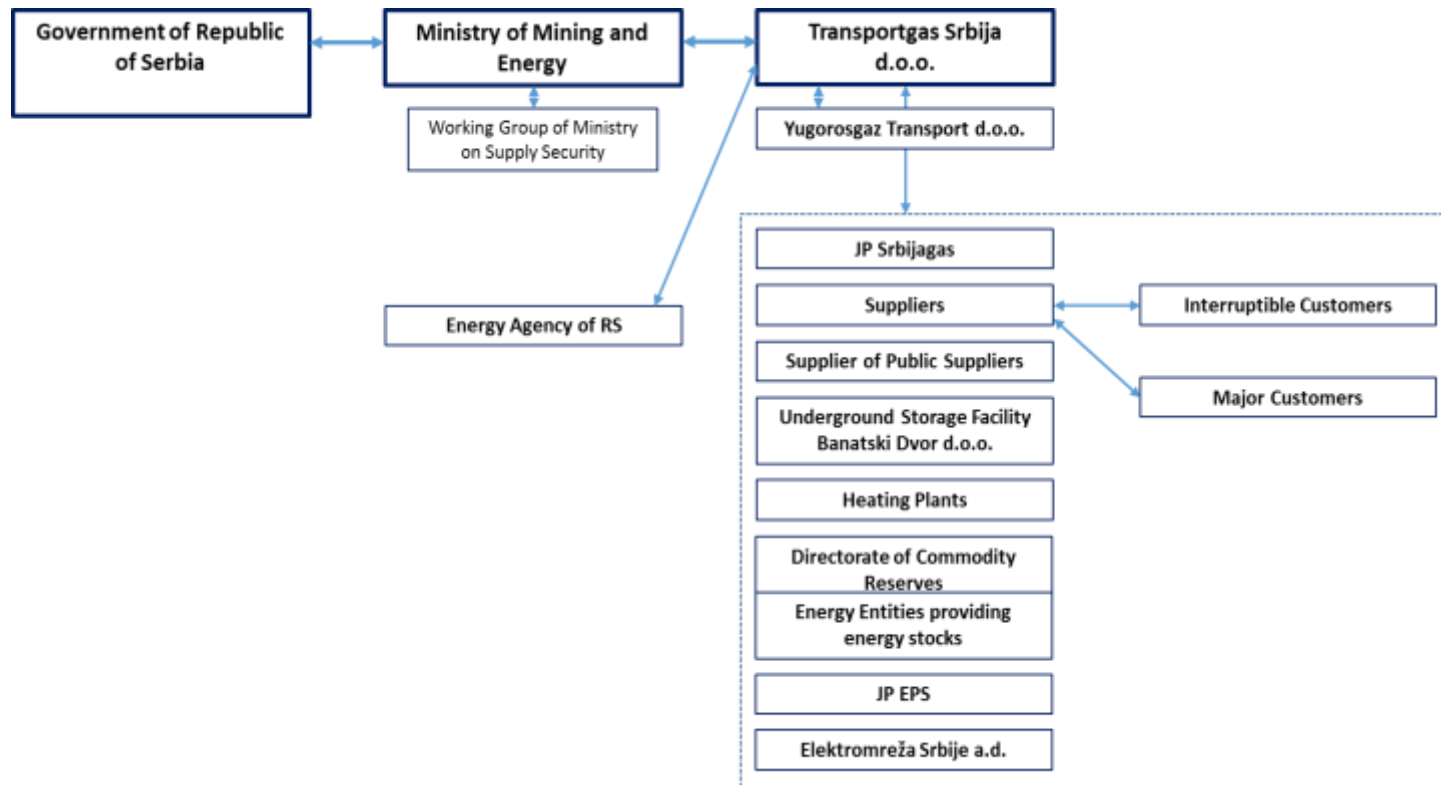
- **Level 1 - Early Warning:** when there is concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of the supply situation and is likely to lead to the Level 2 or Level 3 being triggered.
- **Level 2 - Alert Level:** when a supply disruption or exceptionally high gas demand occurs which results in significant deterioration of the supply situation, but the market is still able to manage that disruption or demand without the need to resort to non-market measures.
- **Level 3 - Emergency Level:** a situation of exceptionally high gas demand, significant supply disruption or other significant deterioration of supply and in the event that all relevant market measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand so that non-market measures have to be additionally introduced with a view, in particular, to safeguard supplies of gas to protected customers.
- The introduction of the Level 1 crisis is declared by the transmission system operator Transportgas Srbija d.o.o, after consulting with the transmission system operator Yugorosgaz Transport d.o.o, Niš.
- The activation of the Level 2 and Level 3 crises is announced by the Government based on the proposal of the Ministry.
- This plan determined criteria for their activation, responsible parties and measures to be taken during crisis.

- The measures to be taken in the event of a crisis are carried out on the basis of the plans on restriction of natural gas supply adopted by the operator of the system.
- The basis for restriction of natural gas supply to which the percentage of restriction will be applied is the contracted volume for the month in which the restriction is made, that is, the average daily and hourly consumption in that month.
- The operator of the transmission or distribution system is obliged to inform the customers about the maximum hourly and daily consumption of natural gas during the supply restriction as soon as possible after the date of the adoption of the natural gas consumption restriction plan.
- The decision on plan implementation and the supply restriction plan shall be published in the public media no later than 24 hours before the implementation of the measures to which the decision applies.



Responsible parties and information flow in Level 1 of the crisis

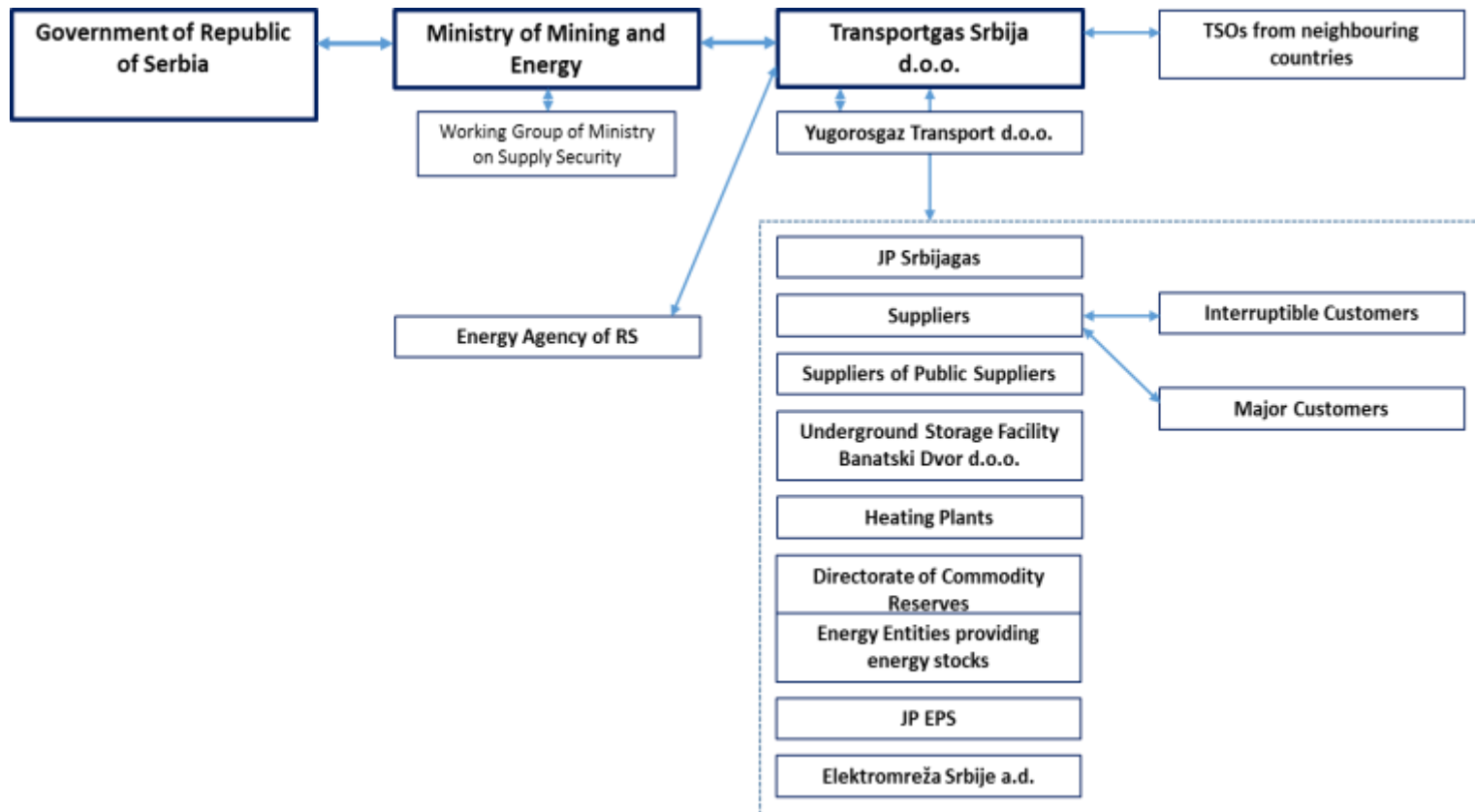
# Emergency plan



Responsible parties and information flow in Level 2 of the crisis



# Emergency plan



Responsible parties and information flow in Level 3 of the crisis

### COOPERATION WITH OTHER COUNTRIES

- In case of a natural gas supply crisis, a joint operation with Hungary and Bosnia and Herzegovina shall be coordinated and the transmission of natural gas to Bosnia and Herzegovina shall be coordinated and unlimited as long as there are technical possibilities for it.
- In case of occurrence of crisis of Level 2 and Level 3 the Republic of Serbia may require strict adherence to the principles of European solidarity, in accordance with Regulation 2017/1938 of the European Parliament and the Council on measures to protect the security of natural gas supply.
- The Ministry shall report on the undertaken measures to the competent bodies in accordance with the obligations arising from the ratified international treaties.

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