



ORDER no. 7 of January 7, 2016
on approving the preventive action plan and the emergency plan

Whereas:

- Decree no. 857/2015 of the President of Romania on appointing the Government of Romania,
- Article 3 of Government Emergency Ordinance 55/2015 on establishing reorganisation measures of central public administration and on amending certain laws;

Subject to:

- Article 102 letter 1) of Law no. 123/2012 on electricity and natural gas, as subsequently amended and supplemented;
- Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC;
- Article 3, paragraph (1), point 2 and Article 8 paragraph (6) of Government Decision no. 980/2015 on the organization and operation of the Ministry of Energy

The Energy Minister issues the following

ORDER

Art. 1 – approves the Preventive Action Plan, provided in Annex 1, constituting an integral part of this order.

Art. 2 - approves the Emergency Plan, provided in Annex 2, constituting an integral part of this order.

Art. 3 – This order is published in the Official Journal of Romania, Part I.

This order ensures the implementation framework of Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC.

ENERGY MINISTER
Victor Vlad GRIGORESCU

Preventive Action Plan

Romania

Prepared according to Article 4 paragraph(1) a) and Article 5 of (EU) Regulation 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC

1. Introduction

Romania prepared in 2012, through the Ministry of Economy, the “The Assessment of Risks Associated with Natural Gas Security of Supply”. This document was prepared in accordance with Article 9 of (EU) Regulation 994/2010.

In line with the compliance with the above mentioned Regulation, “The Preventive Action Plan” contains the measures required to remove or mitigate the risks identified in “The Risk Assessment”.

The Preventive Action Plan was elaborated and updated by the Competent Authority after consultation with the main players on the Romanian natural gas market. The authority to implement the measures provided by EU Regulation no. 994/2010 resides with the Ministry of Energy as Competent Authority, in accordance with the provisions of Article 102 paragraph 1) of Law 123 of 2012.

The main topics addressed during the elaboration of the Plan were as follows: the risk matrix, the main risk scenarios which could impact Romania’s natural gas security of supply, and of the member states in the Region, implicitly, natural gas infrastructure standards, obligations of the undertakings operating in the natural gas sector related to safe operation of natural gas networks and interconnection with the countries in the Region, members or non-members of the European Union.

“The Risk Assessment” demonstrated by N-1 concept that, in Romania, the standards related to natural gas infrastructure are met, and the result of the calculation based on the formula is 100.681%. This concept (N-1) indicates the gas infrastructure technical capacity to meet the total gas demand of the considered area if the sole main gas infrastructure is affected during one day of exceptionally high demand that is statistically occurring once every 20 years.

Romania’s gas infrastructure, according to “The Risk Assessment” results, could sustain almost any supply risk scenario or main transmission infrastructure failure.

2. Legal Framework

The Preventive Action Plan has been drafted in compliance with (EU) Regulation 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC.

Article 4, paragraph 1, a) of the Regulation provides as follows:

The Competent Authority of each Member State, after consulting the natural gas undertakings, the relevant organisations representing the interests of household and industrial gas customers and the national regulatory authority, where it is not the Competent Authority, shall, without prejudice to paragraph 3, establish at national level Preventive Action Plan containing the measures needed to remove or mitigate the risks identified, in accordance with the risk assessment undertaken pursuant to Article 9;

Article 5 of the same regulation specifies as well the following:

(1) The national and joint Preventive Action Plans shall contain:

(a) the results of the risk assessment as laid down in Article 9;

(b) the measures, volumes, capacities and the timing needed to fulfil the infrastructure and supply standards, as laid down in Articles 6 and 8, including where applicable, the extent to which demand-side measures can sufficiently compensate, in a timely manner, for a supply disruption as

referred to in Article 6(2), the identification of the single largest gas infrastructure of common interest in the case of application of Article 6(3) and any increased supply standard under Article 8(2);

(c) obligations imposed on natural gas undertakings and other relevant bodies, including for the safe operation of the gas system;

(d) the other preventive measures, such as those relating to the need to develop interconnections between neighbouring Member States and the possibility to diversify gas routes and sources of supply, if appropriate, to address the risks identified in order to maintain gas supply to all customers as far as possible;

(e) the mechanisms to be used for cooperation with other Member States for preparing and implementing joint Preventive Action Plans and joint Emergency Plans, as referred to in Article 4(3), where applicable;

(f) information on existing and future interconnections, including those providing access to the gas network of the Union, cross-border flows, cross-border access to storage facilities and the physical capacity to transport gas in both directions (bi-directional capacity), in particular in the event of an emergency;

(g) information on all public service obligations that relate to security of gas supply.

(2) The national and joint Preventive Action Plans, in particular the actions to meet the infrastructure standard as laid down in Article 6, shall take into account the Union wide 10-year network development plan to be elaborated by the ENTSO for Gas pursuant to Article 8(10) of Regulation (EC) No 715/2009.

(3) The national and joint Preventive Action Plans shall be based primarily on market measures, and shall take into account the economic impact, effectiveness and efficiency of the measures, the effects on the functioning of the internal energy market and the impact on the environment and on consumers, and shall not put an undue burden on natural gas undertakings, nor negatively impact on the functioning of the internal market in gas.

(4) The national and joint Preventive Action Plans shall be updated every 2 years, unless circumstances warrant more frequent updates, and shall reflect the updated risk assessment. The consultation provided for between Competent Authorities under Article 4(2) shall be carried out before the adoption of the updated Plan.

The document was drafted also in accordance with Annex II of Regulation 994/2010.

The main pieces of national legislation that were considered for the elaboration of this plan are:

- *Law 123/2012* – electricity and natural gas law, as subsequently amended and supplemented;
- *ANRE Order no. 161, of 19 December 2014* – on the approval of the Allocation Methodology for the gas production required for household customers and thermal energy producers, only for the gas volumes used for thermal energy production in the cogeneration power plants and in the thermal plants for household consumption;
- *ANRE Order no. 16 of 27 March 2013* – on the approval of Network Code of the Natural Gas Transmission System, as subsequently amended and supplemented;
- *ANRE Order no. 42 of 12 December 2012* - on the approval of the Regulation on natural gas supply to final customers, as subsequently amended and supplemented;

- *ANRE Resolution no. 824/9 June 2004* - on the approval of the Regulation concerning the regulated access to underground gas storages.

3. Risk Assessment Results

From the perspective of domestic supply sources, possible incidents affecting the production process upstream the National Transmission System can be remedied in due time (at most 48 hours, the average time to restore the normal status is 8 hours) without significant impact on the natural gas supply to final customers.

The producers' internal procedures provide increased flexibility of supply, due to the re-directing/compensation mechanisms available during the intervention period.

The risks associated with the underground storage activities (injection and withdrawal) are mainly of commercial nature, as the difference between the internal production price and the imported gas price may lead to unfavourable circumstances for the underground storage process. Because the stored natural gas is the current consumption source during the winter – not only for peak shaving - the future storages should be operational under multicycle regime.

As related to the National Transmission System, the technical risks are not master factors in initiating natural gas supply crisis.

The Transmission System Operator (SNTGN Transgaz SA) has all the means and procedures to intervene in due time in order to restore the gas supply in the affected region within 48 hours in average.

The National Transmission System “sensitivity” is caused mainly by external factors, especially on the Russian Federation import directions.

Risk Matrix

Risk matrix is the proper mean to represent the results of a quality assessment. On the x axis are represented the consequence classes (damages increase from left to right). On the y axis are represented the probability classes, with the risk increasing from down to up. The Cartesian product of both axes provides all possible combinations of probability and consequences.

The colour code (green-yellow-red) indicates the severity of the probability-consequence combination. Every scenario is represented in the risk matrix using a code (numbers, letters, acronyms, etc).

<i>Probability</i>	<i>Average frequency of occurrence</i>
Very low	Less than once every 20 years
Low	Once every 10 years
Medium	Once every 3 years
High	Once a year
Very high	More often than once a year

	Probability				
Consequence	<i>Very low</i>	<i>Low</i>	<i>Medium</i>	<i>High</i>	<i>Very high</i>
<i>Minor</i>					
<i>Low</i>					
<i>Significant</i>		Imbalance of the underground gas storage activity	Extreme weather conditions		
<i>Major</i>		Failures on the Russian Federation transmission directions	Technical failures of the National Transmission System	Ceasing the natural gas supply from the Russian Federation to the EU	
<i>Extreme</i>					

Colour	Meaning
	Very low severity
	Low severity
	Severe
	High severity
	Extreme severity

4. Risk Scenarios

Risk scenarios referring to the natural gas supply in Romania

Scenario 1: Failures on the import transmission routes

(Failures on the import transmission routes, other than the national transmission system, before taking over import gas volumes into the national transmission system)

Scenario 2: Technical failures of the National Transmission System

(Failures of the national transmission system for taking over gas volumes from underground gas storages, namely from the UGS with the highest daily withdrawal rate)

Scenario 3: Imbalances of the underground gas storage activity

(failures of the surface facilities related to UGS activity before taking over gas volumes from UGS into the national transmission system).

Scenario 4: Extreme weather conditions

(Very low temperatures during the cold season, namely average temperatures below -15⁰C, for long term intervals of at least 7 days, without any failure of the national transmission system, import transmission systems or imbalances of the underground gas storages).

Scenario 5: Ceasing of natural gas supply from the Russian Federation to the EU

(ceasing of import gas supply for reasons other than technical failures of the import gas transmission systems)

Note:

Referring to scenarios 1 to 5, in Romania, according to Article 124 paragraph 1 e) of Law 123/2012, by 1 July 2021 the natural gas supply to protected customers is guaranteed and, therefore, secured even under the above presented scenarios.

In case of an exceptionally high demand or a significant supply interruption, or if the deliveries are significantly affected, and if all the market mechanisms have been implemented but the gas offer is insufficient to satisfy the uncovered demand of protected customers, Romania will adopt, for the scope of securing the gas supply to protected customers, the measures provided by the Emergency Plan for the level of emergency under crisis situations.

Scenarios	Risk Categories	Consequence	Probability	Period	Origin	Season	Estimated deficit of supply against the total forecasted consumption	Estimated deficit of supply of protected customers
Scenario 1	Technical Risk	Major	Low	Short term (24 – 48 hours)	External	Cold season	Min: 0 mil m ³ <i>(normal winter conditions, average temperature -5⁰C)</i> Max: 11 mil m ³ /day <i>(normal winter conditions, average temperature -15⁰C)</i>	0 mil m ³ /day
						Warm season	Min: 0 mil m ³ Max: 0 mil m ³	0 mil m ³ /day
Scenario 2	Technical Risk	Major	Low	Short term (maximum 48 hours)	Internal	Cold season	Min: 9 mil m ³ /day <i>(normal winter conditions, average temperature -5⁰C)</i> Max: 20 mil m ³ /day <i>(normal winter conditions, average temperature -15⁰C)</i>	0 mil m ³ /day
						Warm season	Min: 0 mil m ³ /day Max: 0 mil m ³ /day	0 mil m ³ /day
Scenario 3	Technical Risk	Notable	Low	Short term (maximum 48 hours)	Internal	Winter	Min: 9 mil m ³ /day <i>(normal winter conditions, average temperature -5⁰C)</i> Max: 20 mil m ³ /day <i>(normal winter</i>	0 mil m ³ /day

							<i>conditions, average temperature -15⁰C</i>	
Scenario 4	Climate Risk	Notable	Medium	Short term (7 days)	Internal	Winter	Min: 0 mil m ³ (winter conditions, average temperature -5 ⁰ C) Max: 5 mil m ³ /day (winter conditions, average temperature -15 ⁰ C)	0 mil m ³ /day
Scenario 5	Political/ Commercial Risk	Severe	Medium	Medium term (up to 30 days)	External	Winter	Min: 0 mil m ³ (normal winter conditions, average temperature -5 ⁰ C) Max: 11 mil m ³ /day (normal winter conditions, average temperature -15 ⁰ C)	0 mil m ³ /day

Scenarios	Operational Preventive Actions	Investment Preventive Actions	Reactive Actions
Scenario 1	Identification of alternative import routes and/or sources Identification of consumers who could switch to alternative fuels Securing alternative fuels stocks Concluding contracts to guarantee natural gas security of supply Concluding interruptible supply contracts Build up minimum natural gas stock	Increasing the UGS daily withdrawal rate Diversification of gas sources Developing bidirectional flow interconnections	Withdrawal from underground gas storages Commercial balancing Energy production from alternative fuels or renewable energy Commercial interruptibility
Scenario 2	NTS maintenance program Concluding contracts to guarantee natural gas security of supply Concluding interruptible supply contracts	NTS development program Developing bidirectional flow interconnections	Technical intervention to repair NTS failures Commercial balancing Rerouting the gas in the NTS Increasing the current natural gas production capacity
Scenario 3	Identification of additional import sources Identification of consumers who could switch to alternative fuels Securing alternative fuel stocks Concluding contracts to guarantee natural gas security of supply Concluding interruptible supply contracts Build up a minimum natural gas stock Build up strategic storages (promote legislative initiatives to build up such storages)	Increasing the UGS daily withdrawal rate Increasing the UGS working capacity Diversification of gas sources Developing bidirectional flow interconnections	Technical intervention to repair UGS failures Maximum daily withdrawal rate from underground gas storages not affected by failures Commercial balancing Producing energy from alternative fuels
Scenario 4	Identification of alternative or additional import sources Identification of consumers who could switch to alternative fuels Securing alternative fuel stocks Concluding contracts to guarantee natural gas security of supply Concluding interruptible supply contracts Build up a minimum natural gas stock	Increasing the UGS daily withdrawal rate Increasing the UGS working capacity Diversification of gas sources Developing bidirectional flow interconnections	Maximum daily withdrawal rate from underground gas storages Commercial balancing Producing energy from alternative fuels Increasing the current natural gas production capacity
Scenario 5	Identification of alternative import sources Securing alternative fuel stocks Identification of consumers who could switch to alternative fuels	Increasing the UGS withdrawal rate Increasing the UGS working capacity Build up strategic storages (depending on promotion of the legislative initiative to regulate such build up)	Withdrawal from underground gas storages Commercial balancing Energy production from alternative fuels or

	Concluding contracts to guarantee natural gas security of supply Concluding interruptible supply contracts Build up a minimum natural gas stock Build up strategic storages (promote legislative initiatives for build up)	Multicycle storages Diversification of gas sources Developing bidirectional flow interconnections	renewable energy Commercial interruptibility Implementing measures that are not based on the market mechanisms, according to the Emergency Plan
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5. Infrastructure Standards

a) Definition of the N – 1 formula

The N – 1 formula describes the ability of the technical capacity of the gas infrastructure to satisfy total gas demand in the calculated area in the event of disruption of the single largest gas infrastructure during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years. Gas infrastructure includes the gas transmission network including interconnectors as well as production, LNG and storage facilities connected to the calculated area.

The technical capacity¹ of all remaining available gas infrastructure in the event of disruption of the single largest gas infrastructure should be at least equal to the sum of the total daily gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

The results of the N – 1 formula, as calculated below, should at least equal 100 %.

b) Calculation method of the N – 1 formula

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

c) Definitions of the parameters of the N – 1 formula:

‘Calculated area’ means a geographical area for which the N – 1 formula is calculated, as determined by the Competent Authority.

Demand-side definition

¹ in compliance with article 2 paragraph (1) point 18 of (EC) Regulation no. 715/2009, „technical capacity” means the maximum firm capacity that the transmission system operator can offer to the network users, taking account of system integrity and the operational requirements of the transmission network;

‘Dmax’ means the total daily gas demand (in mcm/d) of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

Supply-side definitions

‘EPm’: technical capacity of entry points (in mcm/d), other than production, LNG and storage facilities covered by Pm, Sm and LNGm, means the sum of the technical capacity of all border entry points capable of supplying gas to the calculated area.

‘Pm’: maximal technical production capability (in mcm/d) means the sum of the maximal technical daily production capability of all gas production facilities which can be delivered to the entry points in the calculated area.

‘Sm’: maximal technical storage deliverability (in mcm/d) means the sum of the maximal technical daily withdrawal rate of all storage facilities which can be delivered to the entry points of the calculated area, taking into account their respective physical characteristics.

‘LNGm’: maximal technical LNG facility capacity (in mcm/d) means the sum of the maximal technical daily send-out capacities at all LNG facilities in the calculated area, taking into account critical elements like offloading, ancillary services, temporary storage and re-gasification of LNG as well as technical send-out capacity to the system.

‘Im’ means the technical capacity of the single largest gas infrastructure (in mcm/d) with the highest capacity to supply the calculated area. When several gas infrastructures are connected to a common upstream or downstream gas infrastructure and cannot be separately operated, they shall be considered as one single gas infrastructure.

d) Calculation of the N – 1 formula using demand-side measures

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

$$N - 1[\%] = \frac{39.38 + 29.60 + 27.10 + 0 - 23.59}{72.0 - 0} \times 100, N - 1 \geq 100\%$$

$$N-1[\%] = 100.681\%$$

Results: N-1>100%

Demand-side definition

‘Deff’ means the part (in mcm/d) of Dmax that in case of a supply disruption can be sufficiently and timely covered with market-based demand-side measures in accordance with Article 5(1)(b) and Article 6(2).

e) Explanations on the used values

Terms related to demand

Terms related to demand [mil.m ³ /day]		Explanations
D _{max}	72.0	
D _{eff}	0	There aren't any contracts concluded with safety interruptible clients

Terms related to (capacity) offer

Terms related to offer [mil.m ³ /day]		Explanations
EP _m	39.38	
P _m	29.60	
S _m	27.10	
LNG _m	0	
I _m	23.59	The value is the capacity at Isaccea Import point

For the determination of EP_m the following entry points have been considered: Isaccea Import, Mediesul Aurit Import and Csanadpalota as presented below:

Entry Points	Capacity of the Point [m ³ /day]	Capacity of the Point [mil. m ³ /day]
Isaccea Import entry point	23,590,656	23.59
Mediesu Aurit Import entry point	10,992,000	10.99
Csanadpalota entry point	4,800,000	4.80
Total		39.38

Note: For the term P_m it was considered the production capacity and not the technical capacity, which is around 70.22 mil. m³/day. We consider this as the only approach reflecting correctly the N-1 standard view, because the mentioned capacity could not be met due to the decline of the domestic production.

6. Information on Romania's measures for safeguarding security of gas supply as set by EU Regulation no. 994/2010

Law 123/2012

According to provisions contained in Article 124 paragraph 1) letter e) of Law 123/2012, *natural gas producers are required to make available to suppliers as a matter of priority gas volumes resulting from production operations for covering the consumption of households including volumes needed for heating but only gas volumes required for heating generated in cogeneration plants and district heating installations supplying the population, in accordance with ANRE regulations, the price deregulation calendar and gas supply schedule for the above-mentioned categories; the suppliers and non-households who benefit from these quantities are required to observe the destination of such volumes; the remaining internal production obtained by producers less the volumes representing technological consumption, shall be made available on the free market.*

Definition of protected customer in accordance with EU Regulation no. 994/2010

“Protected customer” means all household customers connected to a gas distribution network and, in addition, where the member states concerned so decide, may also include:

- a) small and medium-sized enterprises, provided that they are connected to a gas distribution network, and essential social services, provided that they are connected to a gas distribution or transmission network, and provided that all these additional customers do not represent more than 20% of the final use of gas; and/or*
- b) district heating installations to the extent that they deliver heating to household customers and to customers referred to in point (a) provided that these installations are not able to switch to other fuels and are connected to a gas distribution or transmission network.*

Definition of protected customer according to the Romanian law

Law 123/2012 does not define the protected customer and for this reason, *de jure*, according to the provisions of EU Regulation 994/2010, *the protected customer means all household customers connected to a gas distribution network.*

Natural gas consumption in Romania

The natural gas consumption in Romania is as follows:

Year	Total consumption/MWh*
2013	132,603,324
2014	127,556,673

**Source: ANRE gas market reports for 2013 and 2014*

Gas consumption on the Romanian regulated market segment is as follows:

YEAR	Total consumption/MWh*
2013	50,863,980
2014	43,785,650

*Source: ANRE gas market reports for 2013 and 2014

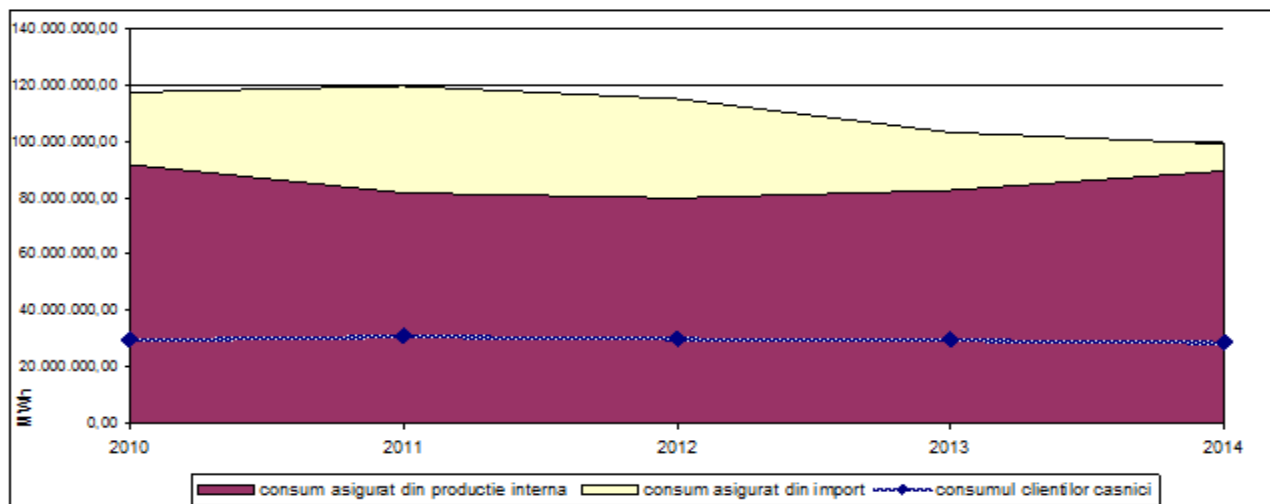
In terms of customer categories, until December 31, 2014 the following were part of the regulated market:

- *household customers* who did not exercise their eligibility right, meaning that they did not chose to select a supplier and to directly negotiate sale-purchase contracts;
- *non-household customers* for whom the natural gas supply was secured at regulated price and based on framework supply contracts, namely the non-household customers who did not exercise the eligibility right (they did not chose to select a supplier and to directly negotiate sale-purchase contracts).

The share of household customers against the total consumption is the following:

YEAR	Total consumption/MWh*	Household customers %*	Household customers/MWh
2013	132,603,324	22.53%	29,623,583
2014	127,556,673	22.34%	28,738,518

*Source: ANRE gas market reports 2013 and 2014



*The source of consumption and the share of households against the total consumption: ANRE reports on gas market monitoring

In terms of natural gas customers on the regulated market, as of January 1, 2015 there are only household customers for which gas supply is ensured at regulated price and based on framework contract.

As of July 2021, this customer category shall belong to the free market segment.

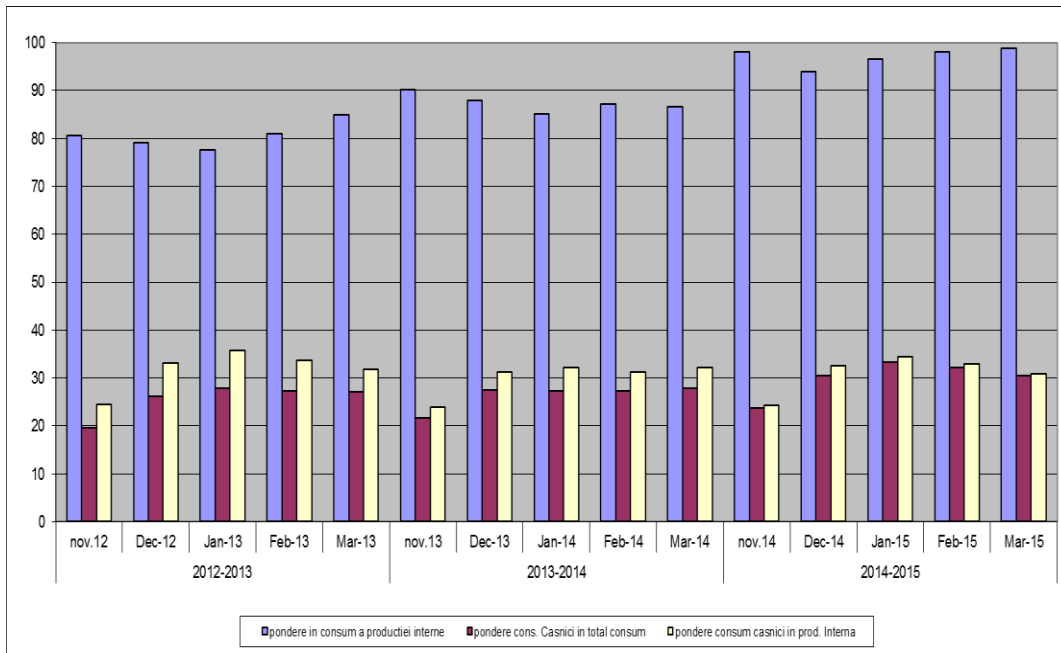
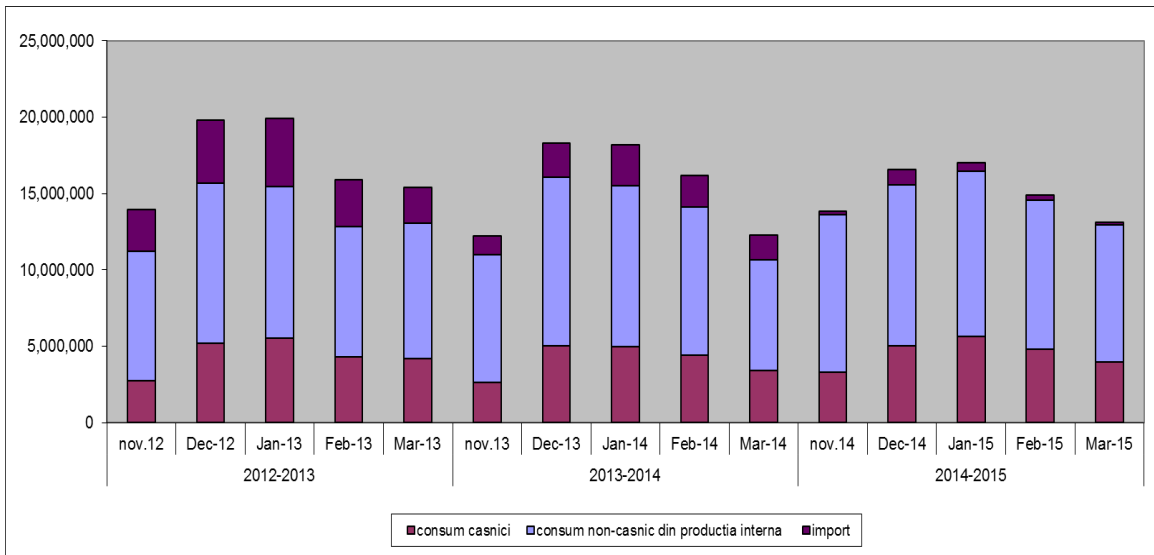
The table below shows the information related to the share of households consumption against the total domestic production, the share of non-households consumption against the total domestic production and import, as well as the share of domestic production against the total consumption during the last three winter seasons, based on ANRE data and presentations.

INDICATOR	2012-2013					2013-2014					2014-2015				
	nov.12	Dec-12	Jan-13	Feb-13	Mar-13	nov.13	Dec-13	Jan-14	Feb-14	Mar-14	nov.14	Dec-14	Jan-15	Feb-15	Mar-15
total consum	13,935,394	19,774,861	19,878,824	15,865,788	15,365,747	12,198,086	18,278,777	18,188,597	16,171,232	12,258,245	13,853,447	16,558,420	17,014,124	14,883,333	13,089,991
pondere in consum a productiei interne	80.59	79.17	77.59	80.97	84.98	90.14	87.99	85.15	87.18	86.68	98.14	93.87	96.54	97.97	98.78
pondere cons. Casnici in total consum	19.68	26.17	27.8	27.21	27.07	21.64	27.53	27.35	27.23	27.89	23.77	30.49	33.25	32.17	30.45
pondere consum casnici in prod. Interna	24.42	33.06	35.83	33.61	31.85	24.01	31.29	32.12	31.23	32.18	24.22	32.48	34.44	32.84	30.83
productie interna	11,230,534	15,655,757	15,423,980	12,846,529	13,057,812	10,995,355	16,083,496	15,487,590	14,098,080	10,625,447	13,595,773	15,543,389	16,425,435	14,581,202	12,930,293
consum casnici	2,742,486	5,175,081	5,526,313	4,317,081	4,159,508	2,639,666	5,032,147	4,974,581	4,403,426	3,418,825	3,292,964	5,048,662	5,657,196	4,787,968	3,985,902
import	2,704,860	4,119,104	4,454,844	3,019,259	2,307,935	1,202,731	2,195,281	2,701,007	2,073,152	1,632,798	257,674	1,015,031	588,689	302,132	159,698
consum non-casnic din productia interna	8,488,048	10,480,676	9,897,666	8,529,448	8,898,304	8,355,689	11,051,349	10,513,009	9,694,654	7,206,622	10,302,809	10,494,727	10,768,239	9,793,233	8,944,391

The diagrams from below present information related to the following:

- households consumption;
- consumption provided from import gas;
- consumption provided from domestic production;
- the share of households consumption against the total consumption;
- the share of households consumption against the total domestic production;
- the share of non-households against the total domestic production and import,
- the share of domestic production against consumption

during the last three winter seasons, based on ANRE data and information.



Considering that:

- in Romania, against the background and according to the interpretation of EU Regulation no. 994/2010, protected customers are represented by household customers connected to the distribution network;
- in Romania, in accordance with the provisions of Law 123/2012, natural gas producers are required to make available to gas suppliers, as a matter of priority, gas

- volumes resulting from production operations for covering the consumption of households;
- in Romania, the share of domestic production against the total consumption is approximately 90%,
 - for household consumers the gas volumes from domestic production are secured according to Article 124 paragraph 1, letter e) of Law 123/2012;

as provided at Article 124 paragraph 1, letter e) of Law 123/2012, by July 2021, and in conjunction with the measures provided under point 10 of the Emergency Plan, *the natural gas supply for the protected customers is guaranteed, and consequently secured.*

7. Obligations imposed to natural gas undertakings and to other bodies including obligations related to a safe natural gas network operation

a. Implementing interim measures in compliance with Regulation (EU) 312/2014 establishing a network code on gas balancing of transmission networks

In the absence of sufficient liquidities of the short term wholesale gas market, as provided in art. 45 paragraph 1 of Regulation (EU) 312/2014, TSO shall implement the interim measures provided at articles 47 – 50 of the Regulation.

The interim measure which, the TSO is able to implement and to manage, is to create an alternative to the balancing platform (ABP), as described below:

- The possibility of the NU (network user) to make daily balanced/imbalanced nominations and re-nominations on D-1 for day D, and to trade in order to reduce/eliminate the forecasted imbalance until the end of the trading period of day D-1;
- The possibility of the NU to make intra-day balanced/imbalanced nominations on day D, for day D and to enter into transactions for reducing/eliminating the forecasted imbalance until the end of the trading period of day D;
- OTS shall determine the daily initial and final imbalance produced by the NU;
- Possibility of the NU to balance its portfolio through Gas Transfer Facility;
- Apply a 3% tolerance;
- Possibility of the TSO to purchase/sell natural gas for the physical balance of the NTS (national transmission system).

ABP's role is to ensure:

- Balancing of NU's individual portfolios as well as maintaining the overall balancing status of the NTS in order to ensure continuity and security of gas transmission services;
- that the TSO has the possibility to physically balance the system when it is required.

ABP facilitates trading of gas quantities dedicated for balancing the following:

- Trading the daily imbalance between the NU;
- Trading the imbalance through TSO.

b. The network code for the national gas transmission system

Legal provision: *ANRE Order no. 16 of March 27, 2013 on approving the Network Code for the National Gas Transmission System, as subsequently amended and supplemented*

The network code regulates the conditions and rules for operating the Romanian National Gas Transmission System.

ANRE monitors the implementation of the Network Code by the transmission system operator, by the users of the national transmission system (network users), by natural gas suppliers, as well as by distribution operators, direct clients and storage operators.

b1) Commercial balancing

According to the Network Code, commercial balancing is the set of actions taken by the NU to balance its gas quantities delivered into or taken from the NTS, as well as all activities necessary for an accurate accounting and allocation of the transmitted gas, including a taxation system to drive the NU to maintain the balance between the gas quantities delivered into and taken from the NTS.

The difference between the gas quantities actually delivered at the entry points and those actually taken from the NTS exit points, by each NU separately, on a certain gas day, by considering the transactions notified at the VTP (virtual trading point), is a daily imbalance.

Daily and monthly balancing activities are regulated by the Network Code.

b2) Balancing procedures

Balancing procedures are described in the Network Code.

	Procedure	Reply to NU	Implications
Daily	TSO calculates the daily initial imbalance based on the initial allocation for the previous gas day	Until 14:15 the latest on gas day D+1, TSO informs the NU on the its initial imbalance for gas day D	Informal
Monthly	TSO calculates the daily imbalance based on the final allocation for each gas day of such calendar day	Until 14:30 the latest, on the 10 th day of the following month, the TSO informs the NU on the final imbalance of each gas day of such calendar month	For each gas day with imbalance the NU may use GTF
The interval between the 10 th and 13 th day of the month M+1	Possible use of GTF	The GTF shall be executed from the 10 th calendar day, starting with 14:30 until the 13 th calendar day 14:30. TSO shall recalculate and display final daily imbalances starting with the 13 th day between 14:30 and 18:00.	For each gas day with daily imbalance, the daily imbalance tariff shall be calculated for the NU

b3) Imbalance tariffs

The daily imbalance expressed in energy units is calculated for each NU.

For the daily imbalance exceeding the tolerance level, the NU shall buy/sell less gas at a purchase/sale price set by the TSO or a marginal one, as the case may be, plus an adjustment component according to the methodology of the TSO and approved by ANRE.

b4) Physical balance

Physical balance means managing and balancing natural gas quantities transmitted through the NTS by monitoring and control of parameters such as flow rate, pressure and gross calorific value at the entry and exit points, respectively, as well as at other NTS control points.

TSO is entitled to own natural gas only for NTS balancing and for safe operation purposes.

The Network Code provides obligations for the actual balancing activity of the NTS.

The TSO must have sufficient system balancing gas as line pack and as balancing gas stored into underground storages, in order to maintain the line-pack, as well as gas trading for balancing purposes.

The procedures implemented by the TSO for the NTS physical balancing mainly include the balancing of the differences occurred between intakes and off-takes caused by some unexpected circumstances.

Gas purchases by the TSO for technological consumption are not considered balancing activities.

The TSO purchases/sells natural gas for daily balancing and a safe NTS operation.

c. Contracts for ensuring the safety of gas supplies

Legal provision: *art. 124 paragraph 1) letter e) of Law 123/2012*

Producers have the obligation to make available to suppliers as a matter of priority the natural gas quantities resulted from the production activities, required for covering consumption of household customers, including for heat producers only for the gas amounts used for heat production in cogeneration plants and in thermal plants intended for household consumption, in compliance with ANRE regulations and with the observance of the price liberalization schedule and provision of natural gas for such customers, the suppliers and non-household customers which benefit from such quantities have the obligation to observe the destination of such gas.

Contracts concluded by producers with suppliers of households aim to ensure the safety of supply.

d. Supply contracts that can be interrupted

Legal provision: *art. 124 paragraph 1) letter e) of Law 123/2012*

Producers have the obligation to make available to suppliers as a matter of priority the natural gas quantities resulted from the production activities, required for covering consumption of the customers provided by the law. Such contracts cannot be interrupted.

The rest of the own production, except for gas amount for the technological consumption, remained further to complying with the obligation to make available as a matter of priority according to legal provisions, shall be made available on the competitive market.

Contracts concluded by producers for the supply of gas from domestic production may be interrupted by producers if the gas quantity from domestic production cannot ensure more than the priority obligation, as provided by law.

e. Transmission contracts that can be interrupted

Legal provision: *ANRE Order no. 16 of March 27, 2013 on approving the Network Code for the National Gas Transmission System, annex 1 to the Network Code for the National Gas Transmission System – provisions of the gas transmission framework contract*

The transmission system operator, acting prudently and correctly, has the right to limit/interrupt the interruptible transmission capacity booked by the network user, in order to ensure the operation of the NTS in safety and balance conditions, as follows:

- a) At the entry/exit point into/out of the NTS, if the difference between the gas consumption and the available sources to cover such demand is higher than 4 million m³ for one or several consecutive days, or a gas pressure drop at the nodes and NTS extremities by 3 to 6 bar as compared to the previous period, generated by the following unpredictable causes:
 - a major decrease in the domestic gas supply sources, as a consequence of accidents, or in imports, by more than 20% as compared to the scheduled amounts;
 - excessive gas consumption as a consequence of extremely low temperatures all over the country or in significant regions, over long periods of time.

- b) at the interconnection points where physical bidirectional flow is enabled, if the sum of the matched nominations for flows exiting Romania is higher than the sum of the matched nominations for flows entering Romania by more than the firm capacity offered in the Romania exit direction.

TSO shall notify the NU on the interruptible capacity restriction / interruption and of its estimated duration stating the causes thereof, within 12 hours before the actual interruption / restriction of the interruptible transmission capacity.

f. Commercial storages – build up a minimum gas stock – volume of stored gas

Legal provision: *ANRE Order no. 14 of March 11, 2015, on approving the Methodology for establishing the annual minimum gas stock for titleholders of gas supply licenses and for TSO license titleholders*

- a) Gas supply license titleholders having in their portfolio household customers, are obliged to build up each year a minimum stock in underground storages in order to ensure the safety and continuity of gas supply for household/final customers (protected clients);
- b) TSO license titleholders are obliged to build up each year a minimum stock in underground storages in order to ensure the physical balance of the gas transmission systems during the cold season.

The obligations mentioned under a) and b) are set in compliance with the methodology on establishing the annual minimum gas stock for titleholders of gas supply licenses and for TSO license titleholders, approved by ANRE Order no. 14 on March 11, 2015.

In order to ensure the safety of gas supplies to households/final customers (protected), titleholders of gas supply licenses have the obligation to build up in the storages a minimum stock, in each year “n” until October 31 inclusively.

ANRE establishes annually the level of the minimum national natural gas stock, sets the obligations related to build up the national gas stock for each titleholder of a supply license, monitors and inspects the fulfilment of such obligation, in compliance with an internal procedure.

The natural gas stock is expressed in MWh and is set for each supply license titleholder based on the gas quantities actually delivered to each final customer category of its own portfolio, during the previous year, in compliance with the methodology approved by ANRE Order no. 14 on March 11, 2015.

For implementing ANRE Order 14, of March 11, 2015, related to the storage cycle 2015-2016, ANRE Order no. 149 of October 1, 2015 approved the level of the minimum gas stock for the storage cycle 2015- 2016 at the level of 17,477,030.807 MWh, divided as follows:

- a) Stock for final households – 7,535,760.006 MWh;
- b) Stock for final customers heat producers, only for gas amounts used for heat production in cogeneration plants and in thermal power plants intended for household consumption – 3,198,492.786 MWh;
- c) Stock for the final non-households – 6,742,778.015 MWh.

The same order approved the gas stock which the TSO is obliged to have in the underground storage on October 31, 2015 inclusively, namely 95,000 MWh.

g. Commercial Storages – Allocation of the Available Capacities

Legal provision – *ANRE Decision no. 824/2004 on approving the Regulation related to the regulated access to underground gas storages*

Allocation of the storage capacities is made by the storage operators, based on a methodology established in accordance with the provisions of the ANRE Decision no. 824/2004.

The order of capacity allocation is made by the storage operators. Priority order:

- a) NTS operator – for the natural gas capacities necessary ensuring continuous NTS balance;
- b) natural gas producers – for the natural gas quantities necessary for the technological processes;
- c) suppliers – for the natural gas quantities necessary to supply the final customers (households);
- d) eligible customers – for the volumes necessary for own consumption;
- e) suppliers on the free market;
- f) other applicants.

h. Commercial storages – establishing withdrawal schedules

Legal provision: *ANRE Decision no. 824/2004 on approving the Regulation related to the regulated access to underground gas storages*

When establishing natural gas withdrawal schedules, the storage operators shall allocate withdrawal rates having in mind the following order of priority:

a) NTS operator – for gas volumes required to permanently ensure the physical balance of NTS;

b) producers – for gas volumes required for performing technological processes, in case such cannot be made available from current production;

c) heat suppliers and producers who fulfilled their obligation to set up a minimum stock established by ANRE president's order, and suppliers authorised for setting up the minimum stock of other suppliers, as follows:

(i) withdrawal rates for minimum stocks set up for the regulated market segment and for CPET (households and heat producers only for the amounts used for heat production in cogeneration plants and in power plants intended for household consumption) from the free market segment/for volumes purchased from storages from other suppliers for creating the minimum stocks for the regulated market segment and for CPET from the free market segment, to meet the withdrawal request;

(ii) withdrawal rate for minimum volumes set up for NH (non-household customers) from the free market segment, to meet the withdrawal request;

(iii) in case the withdrawal requests of suppliers and heat producers exceed the technical withdrawal rates, the capacities shall be allocated pro rata depending on the share of the remaining level of minimum stock against the total minimum stock for each supplier and heat producer which chooses to purchase directly from producers gas volumes required for heat production in cogeneration plants and in district heating plants for the population's consumption, and, within the minimum stock set up by each supplier/mandated supplier, depending on the structure of each of the two customer categories, namely CPET and NH;

d) suppliers who have set up stocks higher than the minimum stock obligation level, for the gas volumes exceeding the minimum stock obligation level for each supplier, eligible customers and other applicants, to the extent of their request – in case there is enough available withdrawal rate after allocation is made to the first priority levels, namely pro rata with the share of the stock remaining in storages for each supplier – in case the remaining withdrawal rate is insufficient.

In case that after the allocation of withdrawal rates according to the mentioned provisions there is available withdrawal rate and subsequent requests exceed such level, the remaining available capacity shall be allocated by order of priority to NTS operator and then to CPET.

i. Gas supplies to final customers - (commercial quality, quality of supplied gas and supply continuity of contracted gas)

Legal provision: *ANRE Order no. 42 of December 12, 2012 on approving the Regulation related to gas supplies to final customers, as subsequently amended and supplemented*

According to ANRE Order no. 42 of December 12, 2012 the parties to supply contracts and system operators are obliged to fulfil the provisions of the order, ANRE shall monitor its implementation. The regulation sets the relations between the gas supplier and the final customer on contracting and conditions of gas supplies, as well as related relations of the supplier with the system operators on the evolution of the gas supply contract.

With respect to the relation with the final customer, the natural gas supplier is responsible for the quality of the gas supply activity, in compliance with the provisions of the supply contract. The quality of the supply activity includes: the commercial quality, quality of supplied natural gas and supply continuity of contracted gas.

The commercial quality reflects the relation between the gas supplier and its final client related to the gas supply services.

The natural gas supplier has the obligation to ensure the final customer the quality of all services performed in such purpose.

The natural gas supplier has the obligation to ensure the final customer the supply continuity of the contracted gas, except for the interruptible customers, according to legal provisions.

The natural gas supplier has the obligation to ensure natural gas storage, in compliance with ANRE regulations, and to conclude gas purchase contracts so as to cover the consumption of its clients.

In compliance with the provisions of the Regulation on gas supplies to final customers, gas interruptions may be:

- a) Planned interruptions, when gas supply to final customers is interrupted temporarily due to the need of the system operator to perform maintenance and / or repair works according to a planned schedule, by previously notifying the final customers;
- b) Unplanned interruptions, when gas supply to the final customer is temporarily interrupted further to an emergency situation or other unplanned cause;
- c) Interruptions for noncompliance of obligations;

j. Last resort natural gas supply

Legal provision:

- *Law 123 /2012, as subsequently amended and supplemented, (art. 144)*
- *ANRE Order no.42 of December 12, 2012 on approving the Regulation concerning gas supplies to final customers, as subsequently amended and supplemented*

The last resort supplier is the supplier appointed by ANRE to provide supply services under specific regulated conditions.

If the supply license is withdrawn during the performance of the activity or in any other case identified by ANRE when final customers have no gas supply ensured from any other source, ANRE shall appoint for such final customers a last resort supplier, in compliance with ANRE regulations.

The last resort supplier has the obligation to ensure gas supply to final customers, in compliance with ANRE regulations at prices regulated by ANRE.

The last resort supplier has the obligation to supply, in compliance with ANRE regulations, natural gas to final customers whose supplier has had the license withdrawn during the performance of the activity or in any other case identified by the ANRE when final customers have no gas supply ensured from any other source.

k. Obligations of natural gas producers

Legal provision: *art. 124 (1) of Law 123/2012, as subsequently amended and supplemented*

In general terms, natural gas producers are required to comply with the following:

- a) to be licensed for the construction of upstream supply pipelines relating to natural gas production activity;
- b) to operate the upstream supply pipelines relating to natural gas production activity under safe, efficient and environment protection conditions;
- c) to ensure third party access to supply pipelines under non-discriminatory conditions, in accordance with the legislation in force;
- d) to carry out activities in connection with the operation of upstream supply pipelines, in accordance with specific regulations of ANRE within the limits of rights granted through the validity conditions of the license;

- e) to ensure the odorization of natural gas according to the legislation in force for natural gas delivered at the commercial sites for handover-takeover of natural gas to customers directly connected to upstream pipelines and to distribution networks;

Legal provision: *methodological norms for the implementation of the Petroleum Law – Law 238/2004*

The title holder of the petroleum agreement, performing development and exploitation works, has the following obligations:

- a) to start development and exploitation works only for confirmed reserves and based on technical-economic exploitation studies prepared in compliance with the provisions of the petroleum agreement and endorsed by the ANRM;
- b) to observe the provisions of the technical-economic exploitation studies, to elaborate annual exploitation programs and to submit these to ANRM for approval until December 31 of the year prior to the one it refers to;
- c) to keep daily records of produced oil, condensate and gas quantities, per well, reservoir and production field, in compliance with the technical instructions issued by ANRM;
- d) to use only the production techniques approved by ANRM;
- e) to report to ANRM any significant change of the reservoir behaviour during production, as compared to the provisions of the studies or of the technical production plans;
- f) to inform ANRM within 24 h of any free flow at wells;
- g) to request ANRM approval for the underground injection of waste water, if it is performed through other wells than those provided in the technical-economic study, endorsed by ANRM;
- h) to abandon production wells only with the approval of ANRM and by taking all measures to protect the reservoir and the surface.

l. Obligations of the System and Transmission Operator

Legal provision: *art. 130, paragraph 1) of Law 123/2012*

The system and transmission operator has mainly the following obligations:

- a) to operate the transmission system and ensure the physical residual balance of such, namely the scheduling, dispatching and functioning of the transmission system under safety conditions;
- b) to maintain, refurbish, upgrade and develop the transmission system under safety, efficiency and environmental protection conditions;
- c) to perform, maintain and develop a computer system for data monitoring, order and acquisition which would enable the monitoring and operative management of the natural gas transmission system functioning;
- d) to secure third party access to the transmission system, according to specific regulations, under non-discriminatory conditions, within the limits of transmission capacities and in compliance with the technological regimes;
- e) to secure third party connection to the transmission system, according to specific regulations under non-discriminatory conditions, within the limits of transmission capacities and in compliance with technological regimes;

- f) to conduct activities related to the system operation activity, as per the specific regulations approved by ANRE within the limits of the rights granted by the validity conditions associated to the license;
- g) to draft and implement optimal transmission and delivery regimes for the amounts of natural gas notified by the grid beneficiaries, for a certain period of time, according to the agreements concluded;
- h) to draft and update the technical approvals for exploitation in the border area and send such for endorsement to ANRE, prior to the entry into force;
- i) to draft and follow up the balance of the natural gas input and output, as per the regulations of ANRE;
- j) to hold in the underground storage facilities or to ensure natural gas acquisition inclusively from import, for the amounts needed for operation and for securing the physical balance of the transmission system, as per specific regulations approved by ANRE;
- k) to perform the information exchange with other interconnected transmission system operators, with LNG storage and distribution operators and with other collaborators in the energy field, in compliance with the ENTSO-G regulations regarding the protocols for exchange of information, the reports, the structure and the procedures for access to database;
- l) to secure the assignment of capacities in the interconnection pipelines;
- m) to ensure implementation of the rules on the management of congestions, including on the interconnection pipelines as well as of the norms for the award of capacities on such pipelines.

m. Obligations of the Distribution Operator

Legal provision: *art. 138, paragraph 1) of Law 123/2012*

The natural gas distributor has mainly the following obligations:

- a) To operate, maintain, repair, modernize and develop the distribution system under safety, economic efficiency and environmental protection conditions, the activities being conducted based on specific permits for design and execution of the natural gas distribution system and the operation must be conducted based on the distribution license;
- b) To develop interconnections with other systems, as applicable, and to ensure long term distribution system capacity;
- c) To ensure third party connection to the distribution system, according to certain specific regulations, within the limits of distribution capacities and in compliance with technological regimes;
- d) To draft and follow up the natural gas input and output balance in its own system;
- e) To take over for a determined period of time, however not exceeding 2 years, upon the request and according to the regulations of ANRE, the operation of a distribution system in the event the initial operator was suspended the distribution license or the concession agreement was terminated;
- f) To ensure permanent balance of the operated system;

- g) To ensure safety conditions in the natural gas supply;
- h) To conduct activities related to system operation, as per the specific regulations drafted by ANRE, within the limits established by the validity conditions associated to the license;
- i) To draft and send to ANRE the investment plans for 5 years of the system operated by such; such plans are updated on a yearly basis by the operator until the end of December and approved by ANRE.

n. Obligations of the Natural Gas Supplier

Legal provision: *art. 143, paragraph 1) of Law 123/2012*

The natural gas supplier has mainly the following obligations:

- a) To conclude natural gas purchase agreements so as to cover consumption of its customers.
- b) To pay the amount of the natural gas purchased, as per the agreements concluded;
- c) To supply natural gas based on commercial agreements concluded as per ANRE regulations;
- d) To comply with the performance standards for the natural gas supply activity;
- e) To promptly make available to end-customers on a free of charge basis the relevant data regarding the consumption of such by using, upon the request of such, the presentation format easily understandable and harmonized at national level, as established by the ANRE;
- f) To enable customers, on a free of charge basis, to actually change the natural gas supplier within 21 days upon request and to send to such a final liquidation settlement within maximum 42 days as of change of the supplier;
- g) To send end-customers transparent information regarding the prices/tariffs charged, as applicable, as well as with regard to the general conditions for access and use of the services provided by such;
- h) Not to use erroneous or misleading business practices;
- i) To duly notify the end-customers with regard to their actual natural gas consumption and to the actual related costs, frequently enough for such to have the possibility to adjust the own natural gas consumption. Such information is communicated at appropriate time intervals taking into consideration the capacity of the measurement equipment of the end-customer and cost-benefit ration of such measures, without charging end-customers additional costs for such service.
- j) To store natural gas at the levels required for ensuring continuity in the natural gas supply of its customers, in compliance with the legal applicable provisions.

o. Obligations of the Natural Gas End-Customer

Legal provision: *art. 145 of Law 123/2012*

End-customers have the obligation to pay invoices representing the amount of services provided by the system supplier/operator, within the term and under the conditions provided in the agreement concluded with such.

For the failure to fulfil the contractual obligations, other than the payment obligation of the end-customer, the party in default pays to the other party damages up to the full coverage of the damage caused, in compliance with the provisions of the agreement.

In the event of an intervention on a natural gas system, including a usage of installation which endangers the safety of natural gas supply, the system/installation operator is entitled to interrupt supply, as per the specific regulations of ANRE. In the event of finding, as per legal provisions, an action intended to distort in anyway the reading of the measuring equipment or to steal natural gas by bypassing measurement equipment, the supplier is entitled to request the end-customer to establish financial securities for consumption period equivalent to maximum one year. The refusal to establish such securities entitles the supplier to request the transmission/distribution operator to interrupt the supply of the end-customer.

p. Obligations of the Electricity and Heat Producers

Legal provision: *art. 28 of Law 123/2012*

Electricity producers have mainly the following obligations:

- a. to ensure the supply of electricity and ancillary services, in compliance with the terms imposed by licenses, contractual clauses and the regulation in force;
- b. for dispatchable units, to bid for the entire electric capacity available on the balancing market, as defined in the regulations issued by the competent authority;
- c. to bid all the available electricity publicly and non-discriminatorily on the competitive market;
- d. to bid non-discriminatorily for ancillary services;
- e. not to send to the transmission system operator physical notifications in negative imbalance as to ongoing contracts, except for producers benefiting from support schemes in compliance with this title;
- f. to maintain appropriate fuel stock reserves, or as applicable, water reserves, in order to fulfil the obligations regarding the uninterrupted generation and supply of electricity provided by the regulations in force;
- g. to operatively comply with the requirements of the transmission system operator and to set up, as applicable, their own level of operative control;
- h. to submit to ANRE competent authority an annual activity report according to the regulations, even if not licensed for production or if such capacities are transferred to another undertaking.

The measures to ensure safety stocks of the National Power System with respect to fuels for the cold season and the volumes of water in the storage lakes, called the Winter Power Program to ensure safe and sustainable operation of the National Power System during the cold season, as

well as other measures on the safe and secure operation of the National Power System are set by Government Decision.

The Winter Power System for the period January 1 – March 31, 2016 on ensuring operation of the National Power System under safe and secure conditions during the cold season, as well as other measures on the safe and secure operation of the National Power System were approved by Government Decision no. 1019/2015.

In compliance with Government Decision no. 1019/2015:

- the ancillary service “slow tertiary reserve” is purchased in a regulated manner by the National Electricity Transmission Company “Transelectrica” S.A. as transmission and system operator, from the producers provided in the annex to the Government Decision;
- the Natural Gas Transmission Company “Transgaz” S.A. together with the National Electricity Transmission Company “Transelectrica” S.A. prepare a joint measure plan to ensure the operation of the gas fuelled power plants in case of gas pressure drops for the period January 1 – February 29, 2016, such plan is submitted for information to the Ministry for Energy;
- for the predictable cases when the consumption increases and gas imports decrease, the power plants with alternative fuel operation are started timely to prevent imbalance of the National Gas Transmission System, by previously notifying the National Authority for Energy Regulation;
- the public administration authorities provided in the annex to the decision, fulfil according to their attributions, the provisions of the approved program in compliance with the effective legal provisions.

The stocks build up until the end of December 2015 for the period January 1 – March 31, 2016 for performing activities under good conditions during this period, in compliance with the Government Decision 1019/2015, are:

fuel/ water	- lignite	thousand tons	1,377.197
	- black coal	thousand tons	necessary stocks for fulfilling the obligation derived from Government Decision no.138/2013 on adopting measures for the safety of the electricity supply, as subsequently amended and supplemented
	- fuel oil	thousand tons	143.221
	- Water volume in lakes – degree of filling	%	40.0 ***
	- Electricity equivalent in lakes	thousand MWh	1,178.049
	- stored gas volume (at the end of the storage cycle) *, **	bln.Nm ³	1.700

* active stock

** minimum mandatory stock, according to ANRE order no.15/2015

*** minimum value

8. Information on current interconnections, cross-border access to storage facilities, cross-border flows, physical capacity for bidirectional flow

a. Current interconnections

Currently the natural gas import in Romania is performed through three cross-border interconnection points:

i. Orlovka (UA) – Isaccea (RO)

$D_n = 1000\text{mm}$

Capacity = 8.6 bcm/year

$P_{\max} = 70 \text{ bar}$

ii. Tekovo (UA) – Mediesu Aurit (RO)

$D_n = 700\text{mm}$

Capacity = 4.0 bcm/year

$P_{\max} = 70 \text{ bar}$

iii. Szeged (HU) – Arad (RO) - Csanadpalota

$D_n = 700\text{mm}$

Capacity = 1.75 bcm/year

$P_{\max} = 63 \text{ bar}$

Note: Starting with November 1, 2014 at Arad RO – Szeged HU interconnection point bidirectional flow is ensured at following parameters: pressure $p = 20 \text{ bar}$, firm transmission capacity - $Q = 10,000 \text{ m}^3/\text{h}$ and interruptible transmission capacity $40,000 \text{ m}^3/\text{h}$.

b. Storage capacity

The table below shows the Romanian storage capacities and their operators:

Storage	Operator	Natural gas working storage capacity/million m^3
Bilciuresti	Romgaz	1,310
Urziceni	Romgaz	360

Balaceanca	Romgaz	50
Sarmasel	Romgaz	800
Ghercesti	Romgaz	150
Cetatea de Balta	Romgaz	100
Tg. Mures	Depomures	300
TOTAL	-	3,070

c. Average and maximum withdrawal potential from the underground gas storages

The maximum withdrawal potential from the storage facilities operated by Romgaz was at the beginning of the withdrawal cycle of 28 million m³/day.

The maximum withdrawal potential from the storage facility operated by Depomures was at the beginning of the withdrawal cycle of 2 million m³/day.

The average withdrawal potential from the storage facilities is of 18 million m³/day.

d. Projects for the development of new storage facilities and of storage capacities

Underground gas storage GHERCESTI – phase II

Project objectives:

- Increasing safety of gas supply in Romania and South-East Europe by securing higher storage gas volumes;
- Increasing the daily production capacity and the natural gas delivery flexibility;
- Reducing dependence on import gas during winter;
- Contributing to fulfilment of rule N-1 in terms of conformity with Article 6(3) of EU Regulation 994/2010.

Ghercesti UGS expansion project may greatly contribute to increasing the overall UGS capacity in South-East Europe by connecting Ghercesti UGS to “Bulgaria-Romania-Hungary-Austria Corridor”, this project is included in SNTGN Transgaz SA Medias Development Plan, consisting in the phased building of a new gas transmission pipeline between the node Podisor and Horia Gas Metering Station.

Target market: internal and regional market

Underground gas storage MOLDOVA

Project objectives

- Increase of gas supply safety in Romania and South-East Europe by ensuring higher volumes of stored gas;
- Increasing the daily production capacity;
- Increasing natural gas delivery flexibility;
- Reducing dependency on gas imports during winter;
- Contributing to fulfilment of rule N-1 in terms of conformity with Article 6(3) of EU Regulation 994/2010.

Contribution of the project to the regional, European energy security: Moldova UGS shall contribute to the enhancement of the energy security in Romania and South-East Europe by connecting the UGS to internal consumption areas with current gas supply deficit, making thus gas volumes available for use on other consumption directions. The project shall also have a contribution in terms of supply on the regional market in the Republic of Moldavia, a country associated to EU via Iasi-Ungheni interconnector.

Target market: internal and/or regional

Increase in underground storage capacities at Buglovian VI + VII Sarmasel – phase II

Project objectives

- Increase of gas supply safety in Romania and South-East Europe by ensuring higher volumes of stored gas;
- Increase of daily production capacity and natural gas delivery flexibility;
- Reducing gas imports during winter;
- Contributing to fulfilment of rule N-1 in terms of conformity with Article 6(3) of EU Regulation 994/2010.

Contribution of the project to the regional, European energy security: UGS Sarmasel storage facility may greatly contribute to increasing the overall UGS capacity in South-East Europe by connecting Sarmasel UGS to “Bulgaria-Romania-Hungary-Austria Corridor” through Corridor 3 north, that consists in the phased building of a new gas transmission pipeline between the node Podisor and Horia gas metering station.

Target market: internal and regional

e. Access to storage facilities

Access to underground gas storages is granted in compliance with the “Regulation on the regulated access to the underground gas storages” approved by Decision no. 824 of June 9, 2004 issued by ANRE.

The Regulation applies to storage operators and to applicants for access to storages, such as:

- a) natural gas producers;
- b) economic operators licensed by ANRE for natural gas transmission;
- c) economic operators licensed by ANRE for natural gas supply;
- d) eligible natural gas consumers authorized by ANRE;
- e) other applicants.

Granting access to storage facilities gives the right to applicants to book a storage capacity and to benefit from the provision of the storage service.

The request for access is made on the basis of a written request addressed to storage operators together with supporting documents, in compliance with the methodology provided in the regulation.

Storage operators grant access to applicants under following criteria:

- priority:
 1. NTS operators – for the natural gas quantities necessary for ensuring the permanent physical balance of the NTS;
 2. producers – for the natural gas quantities necessary for technological processes;
 3. suppliers, titleholders of distribution licenses, for the natural gas quantities necessary for ensuring the mandatory public services;
 4. eligible consumers – for the natural gas quantities necessary for own consumption, suppliers on the wholesale market and other applicants;
- "first come – first served": within each priority level, storage operators shall allocate capacities in the order of recording applications.

Depending on the criteria “priority” and "first come – first served", storage operators allocate storage capacities in ascending order of the regulated tariffs applicable thereto.

Upon the substantiation of the economic operators, ANRE approves the natural gas quantities requested.

9. **Measures related to the need to develop interconnections between member states and the possibility to diversify routes and supply sources, if feasible, in order to ensure gas supply for all consumers**

a. AGRI Project

AGRI Project has been initiated to enable gas transmission from reservoirs located in the Caspian Sea, crossing Azerbaijan and Georgia towards a liquefaction terminal on the Georgian shore of the Black Sea, along the Black Sea using tankers to a regasification terminal on the Romanian shore. The gas shall be further transmitted through pipelines on the Romanian territory and to Hungary, having the possibility to connect to the transmission systems of other EU member states. AGRI route gives access to new gas sources from the Caspian Sea, where besides the gas from Azerbaijan, there is the possibility to connect to gas sources from Turkmenistan and Kazakhstan, leading to a significant diversification of gas supply sources of the EU.

The maximum volume, considered by the feasibility study, in case of implementing this project is of 8 bcm/year.

The gas market: Romania and Hungary, as primary markets, as well as Serbia, Croatia, Bulgaria, Moldova and Ukraine, as secondary markets.

b. Romania – Bulgaria Interconnector (Giurgiu – Ruse)

Works at this interconnection are in progress; at commissioning the technical parameters that can be ensured on both flow directions are:

- Romania – Bulgaria: capacity - 0.5 bcm/year;
- Bulgaria - Romania: capacity - 1.5 bcm/year;

Maximum bidirectional flow capacity shall be obtained until the end of 2019.

c. Ancillary project reverse flow on Romania – Hungary interconnection



Note: the project is represented by the continuous red line on the map

The project is part of the central corridor that shall be developed in Romania intending to double the cross-border capacity between the Romanian and Hungarian systems. The project implies building a new gas transmission pipeline of 220 km on the route Bacia- Hateg – Horia and two new gas compressor stations placed along the route (Hateg and Horea Compressor Stations).

The estimated cost of the investment is Eur 190 million, having as deadline year 2023.

The project contributes significantly to the increase of the Romanian, Hungarian and Austrian markets interconnection and to the diversification of gas sources.

d. Interconnection between the national gas transmission system and the international transmission system and ensuring reverse flow at Isaccea



Note: the project is represented by the green line on the map

Further to implementing this project, continuous bidirectional flows may be ensured between the NTS and the 1st transit line, under normal operating conditions. Therefore, the requirements for member states related safety of supply and third party access to gas transmission networks provided in European regulations will be fulfilled; the project contributes significantly to the increase of the interconnectivity between the Romanian and Bulgarian markets, as well as to improving safety of supply.

The project implies following works:

- Upgrade and extension of Silistea compressor station
- Upgrade and extension of Onesti compressor station
- Upgrade within the metering station Isaccea
- Rehabilitation of pipe sections Cosmesti – Onesti and Silistea – Sendreni

The estimated project value is EUR 65 million, and works shall be completed in Q1 2018.

e. Development of the Romanian NTS of the corridor Bulgaria – Romania- Hungary- Austria (BRUA)



Considering the possibility of achieving new projects that aim to diversify gas transmission routes from the Caspian Sea to Central Europe, as well as the new gas sources from the Black Sea off-shore, the transmission system operator proposes to build a new corridor for transmission of such gas volumes on the Romanian and European market and the possibility to ensure continuous bidirectional physical flow on the interconnection with Bulgaria and Hungary.

This project implies the development of a gas transmission pipeline between the existing interconnection points with the Bulgarian and Hungarian (Csanadpalota) transmission systems by building a new pipeline of 550 km on the route Giurgiu- Podisor-Corbu-Hurezani-Hateg-Recas-Horia and three new compressor stations on the pipeline route.

In compliance with the development plan of SNTGN Transgaz SA the project shall ensure the continuous bidirectional physical flow between the interconnections with Bulgaria and Hungary. Upon project completion the maximum natural gas transmission capacity shall be of 1.5 bcm/year to Bulgaria and 4.4 bcm/year to Hungary.

The project implementation term is year 2019 and the estimated value rises to EUR 560 million.

f. Development on the Romanian territory of the Southern Transmission Corridor for taking over the Black Sea gas (Black Sea shore – Podisor pipeline)



Note: the project is represented by the red line on the map

Taking into account the natural gas resources recently discovered in the Black Sea as well as the importance of trading such gas on central European markets, the transmission system operator considers building the necessary infrastructure to grant the access of central European markets to the gas reserves from the Black Sea.

The project is highly important for Europe due to its contribution to the diversification of gas supply sources granting access to European gas sources through a route crossing exclusively EU countries.

The importance of this project for Europe consists in the possibility of directing the off-shore gas to Bulgaria and Hungary through the existing interconnection Giurgiu-Ruse (with Bulgaria) and Arad – Szeged (with Hungary).

Project completion is estimated between 2019 – 2020 and the investment rises to EUR 250 million.

g. Project for NTS developments in North-East Romania for enhancing gas supply to the area and for ensuring transmission capacities to the Republic of Moldova

Taking into account the need for improving gas supply to the North-East Romania and also keeping in mind the perspective offered by the new interconnection pipeline between Romania and Moldova to offer transmission capacities to Moldova, a series of developments need to be performed in the Romanian gas transmission system to ensure the required technical parameters.

Stage I - Gherăești – Lețcani gas transmission pipeline

Stage II – Development of the NTS transmission capacity for ensuring gas flow in the Romania – Moldova direction (building two compressor stations – Onesti and Gheraiesti and building Onesti – Gheraesti gas transmission pipeline).

By this project, a transmission capacity of 1.5 bcm/year will be ensured at the interconnection point between the gas transmission systems of Romania and Moldova.

The interconnector Romania Moldova (Iasi – Ungheni) is operational since August 27, 2014 and has a transmission capacity of 1.5 bcm/year.

10. Conclusions

In Romania, natural gas supply is guaranteed for protected consumers and therefore ensured even in case of the risk scenarios mentioned at point 4.

In case of an exceptionally high demand or a significant supply interruption, or if the deliveries are significantly affected, and if all the market mechanisms have been implemented but the gas offer is insufficient to satisfy the uncovered demand of protected customers, Romania will adopt, for the scope of securing the gas supply to protected customers, the measures provided by the Emergency Plan for the level of emergency under crisis situations.

11. Glossary

Competent Authority - ME through the Competent Authority Office

EU Regulation no. 994/2010 – EU Regulation no. 994/2010 of the European Parliament and of the Council of October 20, 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC

ME - Ministry of Energy

Law 123/2012 – electricity and natural gas law published in Romania's Official Journal on July 19, 2012, as subsequently amended and supplemented

ANRE – National Authority for Energy Regulation

ANRM – National Agency for Mineral Resources

NTS – National Transmission System

CPET – households and heat producers, only for natural gas volumes used for producing heat in cogeneration plants and in heating plants for the population's consumption

EC – European Commission

NH – non-households

NU – transmission system network user

EMERGENCY PLAN

ROMANIA

Prepared according to Article 4 paragraph(1) a) and Article 10 of (EU) Regulation 994/2010 of the European Parliament and of the Council of 20 October 2010 on the measures to guarantee security of natural gas supply and repealing Council Directive 2004/67/EC

1. Introduction

EU Regulation no. 994/2010 provides at Article 4 paragraph 1) that the Competent Authority of each Member State, after consulting the natural gas undertakings, the relevant organisations representing the interests of household and industrial gas customers and the national regulatory authority, where it is not the Competent Authority, shall draft:

- a) a preventive action plan containing the measures needed to reduce the risks identified in accordance with the risk assessment undertaken; and
- b) an emergency plan containing the measures to be taken to remove or mitigate the impact of a gas supply disruption.

In Romania, the authority to implement the measures provided by EU Regulation no. 994/2010 resides with the Ministry of Energy, Small and Medium Sized Enterprises and Business Environment as Competent Authority, in accordance with the provisions of Article 102 paragraph 1) of Law 123 of 2012.

According to the provisions contained in EU Regulation no. 994/2010, the Competent Authority drafted a preventive action plan containing the measures needed to reduce the risks identified in accordance with the risk assessment undertaken, and filed it with the Commission on December 4, 2014.

This Emergency Plan is drafted based on the risk assessment and preventive action plan.

2. Legal Framework

The establishment of an Emergency Action Plan is regulated by article 10 of EU Regulation no. 994/2010.

The national and joint Emergency Plans shall:

- (a) be built upon the crisis levels set out in paragraph (3);*
- (b) define the role and responsibilities of natural gas undertakings and of industrial gas consumers including relevant electricity producers, taking account of the different extents to which they are affected in the event of gas supply disruptions, and their interaction with the Competent Authorities, where applicable, with the national regulatory authorities at each of the crisis levels defined in paragraph 3;*

- (c) define the role and responsibilities of the Competent Authorities and of the other bodies to which tasks have been delegated as referred to in Article 2 paragraph 2 at each of the crisis levels defined in paragraph 3 of this Article;*
- (d) ensure that natural gas undertakings and industrial gas customers are given enough opportunity to respond at each crisis level;*
- (e) identify, if appropriate, the measures and actions to be taken to mitigate the potential impact of gas supply disruption on district heating and the supply of electricity generated from gas;*
- (f) establish detailed procedures and measures to be followed for each crisis level, including corresponding schemes and information flows;*
- (g) designate a crisis manager or team and define its role;*
- (h) identify the contribution of market-based measures especially those listed in Annex II for coping with the situation at alert level and mitigating the situation at emergency level;*
- (i) identify the contribution of non-market based measures planned or to be implemented for the emergency level, notably those listed in Annex III, and assess the degree to which the use of such non-market based measures is necessary to cope with a crisis, assess their effects and define the procedures to implement them, taking into account the fact that non-market based mechanism alone can no longer ensure supplies, in particular to protected customers;*
- (j) describe the mechanisms used to cooperate with other member states for each crisis level;*
- (k) detail the reporting obligations imposed on natural gas undertakings at alert and emergency levels;*
- (l) establish a list of predefined actions to make gas available in event of an emergency, including commercial agreement between the parties involved in such actions and the compensation mechanisms for natural gas undertakings where appropriate, taking due account of the confidentiality of sensitive data. Such actions may, for example, involve cross border agreements between Member States and/or natural undertakings.*

The Emergency Plan shall be updated every 2 years, unless circumstances warrant more frequent updates and shall reflect the updated risk assessment.

3. Emergency situation – definition

The occurrence of events which may cause the following consequence:

- a) exceptionally high demand; or
- b) significant supply disruption; or
- c) significant deterioration of supply situation,

and only in the event that all relevant market measures have been implemented but the supply of gas is not sufficient for meeting 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.

4. Risk scenarios

Scenario 1	Failures on Russian Federation gas transmission routes
Scenario 2	Technical failure of the NTS
Scenario 3	Imbalances of the UGS activity
Scenario 4	Extreme weather conditions
Scenario 5	Disruption of gas supply from the Russian Federation to EU

5. Crisis levels

- a) **Early warning level (early warning):** when there is concrete, serious and reliable information that an event might occur which is likely to result in significant deterioration of the supply situation 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):** 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.
- c) **Emergency level (emergency):** in the event of exceptionally high gas demand, significant supply disruption or other significant deterioration of the supply situation 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 to safeguarding supplies of gas to protected customers.

6. Information on Romania's measures for safeguarding security of gas supply as set by EU Regulation no. 994/2010

Law 123/2012

According to provisions contained in Article 124 paragraph 1) letter e) of Law 123/2012, *natural gas producers are required to make available to suppliers as a matter of priority gas volumes resulting from production operations for covering the consumption of households including volumes needed for heating but only gas volumes required for heating generated in cogeneration plants and district heating installations supplying the population, in accordance with NRA regulations, the price deregulation calendar and gas supply schedule for the above-mentioned categories; the suppliers and non-households who benefit from these quantities are required to observe the destination of such volumes; the remaining internal production obtained by*

producers less the volumes representing technological consumption, shall be made available on the free market.

Definition of protected customer in accordance with EU Regulation no. 994/2010

“Protected customer” means all household customers connected to a gas distribution network and, in addition, where the member states concerned so decide, may also include:

- c) small and medium-sized enterprises, provided that they are connected to a gas distribution network, and essential social services, provided that they are connected to a gas distribution or transmission network, and provided that all these additional customers do not represent more than 20% of the final use of gas; and/or
- d) district heating installations to the extent that they deliver heating to household customers and to customers referred to in point (a) provided that these installations are not able to switch to other fuels and are connected to a gas distribution or transmission network.

Definition of protected customer according to the Romanian law

Law 123/2012 does not define the protected customer

According to the provisions of EU Regulation 994/2010, the protected customer means all household customers connected to a gas distribution network, which may include also the two categories of customers mentioned under Art. 2, paragraph 1, a) and b).

Natural gas consumption in Romania

The natural gas consumption in Romania is as follows:

Year	Total consumption/MWh*
2013	132,603,324
2014	127,556,673

*Source: NRA gas market reports for 2013 and 2014

Gas consumption on the Romanian regulated market segment is as follows:

YEAR	Total consumption/MWh*
2013	50,863,980
2014	43,785,650

*Source: NRA gas market reports for 2013 and 2014

In terms of customer categories, until December 31, 2014 the following were part of the regulated market:

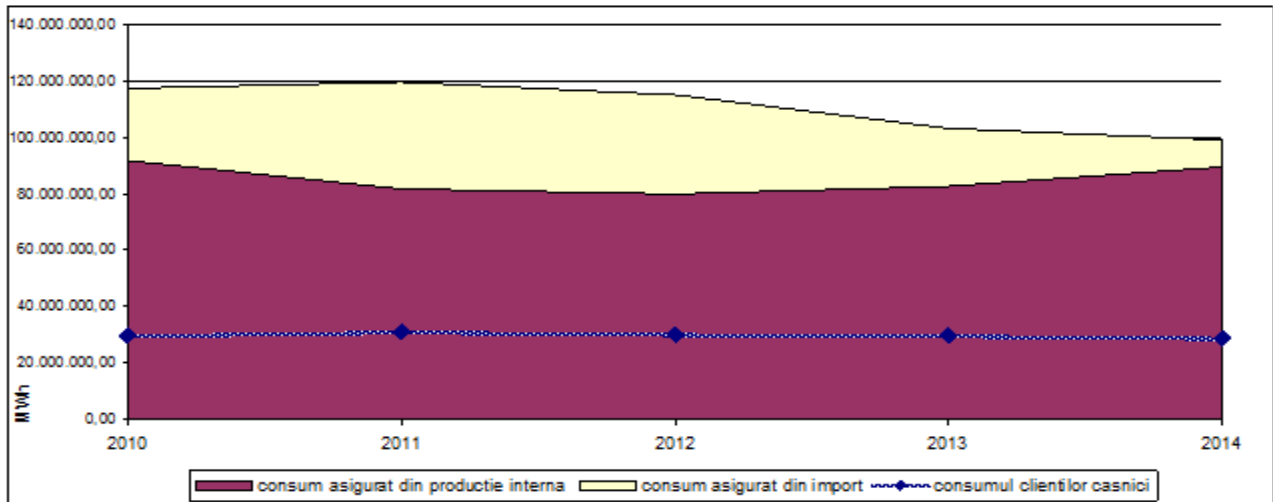
- household customers who did not exercise their eligibility right, meaning that they did not chose to select a supplier and to directly negotiate sale-purchase contracts;
- non-households customers for whom the natural gas supply was secured at regulated price and based on framework supply contracts, namely the non-household customers

who did not exercise the eligibility right (they did not chose to select a supplier and to directly negotiate sale-purchase contracts).

The share of household customers against the total consumption is the following:

YEAR	Total consumption/MWh*	Household customers %*	Household customers/MWh
2013	132,603,324	22.53%	29,623,583
2014	127,556,673	22.34%	28,738,518

*Source: NRA gas market reports 2013 and 2014



*The source of consumption and the share of households against the total consumption: NRA reports on gas market monitoring

In terms of natural gas customers, as of January 1, 2015 on the regulated market segment are only the household customers for which gas supply is ensured at regulated price and based on framework contract.

As of July 2021, this customer category shall belong to the free market segment.

Considering that in Romania:

- against the background and according to the interpretation of EU Regulation no. 994/2010, protected customers are represented by household customers connected to the distribution network;
- in accordance with the provisions of Law 123/2012, natural gas producers are required to make available to gas suppliers as a matter of priority gas volumes resulting from production operations for covering the consumption of households;
- the share of domestic production against the total consumption is approximately 90%;
- for household consumers the gas volumes from domestic production are secured according to Article 124 paragraph 1, letter e) of Law 123/2012;

- in addition to the producers' obligation to make available to suppliers as a matter of priority gas volumes resulting from production operations needed for covering the consumption of household customers the measures indicated under point 10 of this Emergency Plan have also been adopted,

in Romania, as provided at Article 124 paragraph 1, letter e) of Law 123/2012, by July 2021, and in conjunction with the measures provided under point 10 of the Emergency Plan, *the natural gas supply for the protected customers is guaranteed and consequently secured.*

7. Role and responsibilities of the competent authority, central public authorities, natural gas undertakings, inclusive of relevant electricity and heat producers during emergency levels

In case of early warning and alert levels, the natural gas undertakings shall have obligations in compliance with the legal provisions, described at point 6 above.

Additional to the legal obligations mentioned at point 6 above, during early warning, alert and emergency, the roles and responsibilities of the competent authority, public central authority, natural gas undertakings, including of electricity and heat producers, are the following:

Early Warning Level

Natural Gas Producers

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

Storage Operators

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

Transmission and System Operators

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries

- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

TRANSGAZ (DOPGN and DNGN)

- shall inform the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

Distribution System Operators

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

Electricity and Heat Producers

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

Natural Gas Suppliers

- shall inform Transgaz and the Competent Authority with respect to any concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall inform Transgaz, NRA and the Competent Authority on the manner of fulfilling legal and contractual obligations during the early warning period

The Competent Authority

- shall centralize the concrete, serious and reliable information that an event may occur which is likely to result in significant deterioration of deliveries
- shall analyse together with Transgaz the information related to events that may occur which are likely to result in significant deterioration of deliveries, and as the case may be, shall declare the early warning
- Shall notify the EC on activating the early warning mechanism
- Shall monitor together with Transgaz and NRA the manner of fulfilling legal and contractual obligations of each natural gas undertaking

- Based on the information supplied by the natural gas undertakings and public authorities it shall declare the cease of the early warning
- Based on the information supplied by the natural gas undertakings and public authorities it shall declare the alert

Alert Level

Natural Gas Producers

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to cope with that situation without having to resort to non-market measures
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Storage Operators

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Transmission and System Operators

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

TRANSGAZ

- shall inform Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall inform NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Distribution System Operators

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high

demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures

- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Electricity and Heat Producers

- shall inform DEN, Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall inform DEN, Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Natural Gas Suppliers

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of alert

Competent Authority

- shall summarize the concrete, sound and reliable information about the occurrence of supply disruption or an exceptionally high demand which results in significant deterioration of the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall, together with Transgaz, analyse the notified information about the occurrence of a supply disruption or an exceptionally high demand that significantly deteriorates the supply situation but the market is still able to manage that situation without having to resort to non-market measures
- shall, together and with the support of Transgaz and NRA, monitor the manner in which the legal and contractual obligations are met by each undertaking in the natural gas sector
- based on the information supplied by the undertakings in the natural gas sector, and the public authorities, as the case may be, the termination of the alert level shall be declared and, as the case may be, the emergency level shall be declared.
- shall notify the EC about the activation of the alert mechanism

Emergency Level

Natural Gas Producers

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation, and all market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Storage Operators

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation, and all market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Transport and System Operators

- shall inform Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation, and all market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

TRANSGAZ

- shall inform the Competent Authority and NRA about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Distribution System Operators

- shall inform DEN, Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand

- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Electricity and Heat Producers

- shall inform DEN, Transgaz and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Natural Gas Suppliers

- shall inform Transgaz, NRA and the Competent Authority about any concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall inform Transgaz, NRA and the Competent Authority about the manner in which the legal and contractual obligations are met during the period of emergency level

Competent Authority

- shall summarize all concrete, sound and reliable information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall, together with Transgaz and NRA, analyse the notified information on the occurrence of an exceptionally high demand, significant supply disruption or significant deterioration of the supply situation. All market-based measures have been implemented but the supply of gas is insufficient to meet the remaining gas demand
- shall, together and with the support of Transgaz and NRA, monitor the manner in which the legal and contractual obligations are met by each undertaking in the natural gas sector
- based on the information supplied by the undertakings in the natural gas sector, and the public authorities, as the case may be, the termination of the alert level shall be declared and, as the case may be, the emergency level shall be declared.
- shall notify the EC about the activation of the emergency level
- shall take, in accordance with the legal provisions, any necessary and useful measure to manage the emergency level, namely one or several measures as listed under item 11
- shall notify, in due time, NRA and Transgaz, as well as the undertakings in the natural gas sector about any measure taken to manage the emergency level

- shall request NRA and Transgaz as well as the undertakings in the natural gas sector to comply with the legal provisions and implementation of measures taken to manage the emergency level
- shall notify EC about any measure taken to manage the emergency level

8. Crisis Manager

The Crisis Manager is the Competent Authority having competence for safeguarding the energy security of Romania in the field of natural gas, i.e. ME through the Competent Authority Department for safeguarding the security of natural gas supply.

Competent Authority contact details:

Address: Splaiul Independentei, nr. 202 E, sector 6, Bucharest

e-mail: cornel.zeveleanu@energie.gov.ro and office.cabinet@energie.gov.ro

The Competent Authority may establish by decision a crisis team to manage the emergency situations.

The crisis team may include one designated representative of the undertakings in the natural gas sector and the central public authorities, with the prior agreement of such.

9. Preventive measures regulated by legal provisions required for safeguarding the security of natural gas supply

Agreements concluded with the aim of safeguarding the security of natural gas supply

Legal provisions: Article 124 par.1) letter e) of Law 123/2012

The producers have to make available, with precedence to the suppliers, the gas volumes obtained from the production activity that are necessary to meet the consumption of household customers, including the volumes intended for heat producers, exclusively for gas volumes used to generate heat in cogeneration plants and in power plants, intended for household consumption, in accordance with the NRA regulations and by compliance with the price liberalization schedule and securing gas supply of such; suppliers and non-household customers benefiting from those volumes have to keep the destination of such gas volumes.

The agreements between the producers and the suppliers of household customers for the gas volumes necessary to meet the consumption of such customer category are concluded with the aim of safeguarding the security of natural gas supply.

Legal provisions: NRA Order no. 161 of December 19, 2014 for the approval of the methodology to allocate gas volumes obtained from the production activity required for meeting the consumption of households and heat producers, exclusively for gas volumes used to generate heat in cogeneration plants and in power plants, intended for population consumption

Natural gas producers have to allocate the gas volumes obtained from the production activity that are necessary to meet the consumption of household customers, including the volumes intended for heat producers, exclusively for gas volumes used to generate heat in cogeneration plants and in power plants, intended for household consumption, in accordance with the provisions of the NRA Order no. 161 of 19 December 2014.

Interruptible Supply Agreements

Legal provision: article 124 par. 1) letter e) of Law 123/2012

The producers have to make available, with precedence to the suppliers, the gas volumes obtained from the production activity that are necessary to meet the consumption of the customers provided by law. Such agreements are not interruptible.

The remaining gas volumes from own production obtained by the producers, except for the gas volumes related to its own consumption and remaining after complying with the obligation to make available with precedence gas volumes in accordance with the legal provisions, will be made available to the competitive market.

The gas supply agreements of producers having as source domestic production may be interrupted by the producers when the gas volumes from domestic production cannot ensure but the precedence obligation as provided by law.

Interruptible Gas Transmission Agreements

Legal provision: NRA Order no. 16 of March 27, 2013 on the approval of the Network Code for the Natural Gas Transmission System, annex 1 to the Network Code for the National Transmission System – provisions of the natural gas transmission framework contract

The transmission system operator, acting in a prudent and sound manner, has the right to limit/interrupt the interruptible transmission capacity booked by the network user, with the aim of ensuring the operation of the National Transmission System SNT in terms of safety and balance as follows:

- a) at the entry/exit points in/from the SNT, in case the difference between gas consumption and available sources to meet consumption is higher than 4 billion m³ over one or more consecutive days, namely a gas pressure drop in the nodal points and extremities of SNT by 3 up to 6 bar as compared to the immediate previous period, triggered by the following unpredictable causes:
 - major reduction of supply sources from domestic production caused by accidents, or from import by more than 20% as compared to the scheduled volumes;
 - excessive gas consumption, as a consequence of extremely low temperatures across the entire country or significant areas of the country, over long periods of time.

- b) at the interconnections points where the bidirectional physical flow is ensured, when the sum of nominations correlated on the exit flow from Romania is higher than the sum of nominations correlated on the entrance flow to Romania by more than a firm capacity offered on the exit flow from Romania.

The transmission system operator shall notify the Network User on the limitation/ interruption of the interruptible transmission capacity, as well as on the estimated duration of the limitation/ interruption, specifying the causes that led to such limitation/ interruption, at least 12 hours before the effective limitation/ interruption of the interruptible transmission capacity.

Commercial Storages – Building up a Minimum Gas Stock – Volume of Stored Gas

Legal provisions:

- NRA Order no. 14 of 11 March 2015 for the approval of methodology for the yearly determination of the minimum gas stock for the titleholders of natural gas supply licenses and for the titleholders of natural gas transmission system operation licenses
 - NRA Order no 110 of July 17, 2015 on the approval of minimum natural gas stock for titleholders of supply licenses and of natural gas transmission system operation licenses for the 2015-2016 storage cycle
- c) The titleholders of natural gas supply licenses having in their portfolio household customers have to build up, in each year, a minimum gas stock in the gas storages to safeguard security and continuity of supply to household/ final customers (protected customers);
- d) The titleholders of natural gas transmission system operation licenses have to build up, in each year, a minimum gas stock in the gas storages to ensure the physical balance of the natural gas transmission systems during the cold season.

The obligations mentioned at items a) and b) are established in accordance with the methodology on the yearly determination of the minimum gas stock for the titleholders of natural gas supply licenses and for the titleholders of natural gas transmission system operation licenses, approved under the NRA Order no. 14/11 March 2015.

To secure natural gas supply to the household/ final customers (protected), the titleholders of natural gas supply licenses have to build up in the gas storages a minimum gas stock, in each year “n”, until the 31st of October inclusively.

NRA determines annually the level of the national minimum gas stock, establishes the obligation to build up the national minimum gas stock for each titleholder of natural gas supply licenses and monitors and verifies the fulfilment of such obligation to build up the minimum gas stock by those, in accordance with an internal procedure.

The natural gas stock is determined in MWh and is established for each titleholder of a natural gas supply license, based on the natural gas volumes effectively supplied to each category of

final customers within its own portfolio in the year prior to determining the natural gas stock, in accordance with the methodology approved under the NRA Order no. 14/11 March 2015.

NRA Order no. 149 of October 1st, 2015:

- approved the minimum level of natural gas stock for 2015-2016 storage cycle, namely 17,477,030.807 MWh distributed among the final customer categories as follows:
 - a) for households – 7,535,760.006 MWh;
 - b) for heat producers, exclusively for gas volumes used to generate heat in cogeneration plants and in power plants, intended for population consumption – 3,198,492.786 MWh
 - c) for non-households – 6,742,778.015 MWh.
- approved the minimum level of natural gas stock which titleholders of supply licenses are required to hold at the end of 2015 injection cycle in underground storages, inclusive, as specified in the attachment representing an integrated part of the Order;
- approves the natural gas stock which Societatea Națională de Transport Gaze Naturale "Transgaz" - S.A. is required to hold in storages on October 31, 2015, inclusive - 95,000 MWh.

The natural gas supply license titleholders and Societatea Națională de Transport Gaze Naturale "Transgaz" - S.A. are obliged to implement the provisions of NRA Order no. 149 of October 1st, 2015, and the specialised departments within NRA shall monitor their compliance with such order..

Commercial Storages – Allocation of the Available Capacities

Legal provisions: NRA Decision no. 824/2004 approving the Rules of regulated access to the natural gas underground storages.

Allocation of the storage capacities is made by the storage operators, based on a methodology established in accordance with the provisions of the NRA Decision no. 824/2004.

The order of capacity allocation is made by the storage operators. Priority order:

- g) NTS operator – for the natural gas capacities necessary to secure permanently the NTS balance;
- h) natural gas producers – for the natural gas quantities necessary for the technological processes;
- i) suppliers – for the natural gas quantities necessary to supply the final customers (household customers);
- j) eligible customers – for the volumes necessary for own consumption;
- k) suppliers on the free market;
- l) other applicants.

Commercial storages – establishing withdrawal schedules

Legal provision: NRA Decision no. 824/2004 approving the Rules of regulated access to the natural gas underground storages.

When establishing natural gas withdrawal schedules, the storage operators shall allocate withdrawal capacities having in mind the following order of priority:

- a) NTS operator – for gas volumes required to permanently ensure the physical balance of NTS;
- b) producers – for gas volumes required for performing technological processes, in case such cannot be made available from current production;
- c) suppliers and heat producers who fulfilled their obligation to set up a minimum stock established by NRA president's order, and suppliers mandated for setting up the minimum stock of other suppliers, as follows:
 - (i) withdrawal capacities for minimum stocks set up for the regulated market segment and for CPET from the free market segment/for volumes purchased from storages from other suppliers for creating the minimum stocks for the regulated market segment and for CPET from the free market segment, to meet the withdrawal request;
 - (ii) withdrawal capacity for minimum volumes set up for NH from the free market segment, to meet the withdrawal request;
 - (iii) in case the withdrawal requests of suppliers and heat producers exceed the technical withdrawal capacities, the capacities shall be proportionately allocated depending on the share of remaining level of minimum stock against the total minimum stock for each supplier and heat producer which chooses to purchase directly from producers gas volumes required for heat production in cogeneration plants and in district heating plants for the population's consumption, and, within the minimum stock set up by each supplier/mandated supplier, depending on the structure of each of the two customer categories, namely CPET and NH;
- d) suppliers who have set up stocks higher than the minimum stock obligation level, for the gas volumes exceeding the minimum stock obligation level for each supplier, eligible customers and other applicants, to the extent of their request – in case there is enough available withdrawal capacity after allocation is made to the first priority levels, namely proportionately to the share of remaining stock in storages for each supplier – in case the remaining withdrawal capacity is insufficient.

In case that after the allocation of withdrawal capacities according to paragraph (1) there is available withdrawal capacity and subsequent requests exceed such level, the remaining available capacity shall be allocated by order of priority to NTS operator and then to CPET.

10. Non-market measures for emergency level

The Competent Authority shall promote the need to adopt the following non-market measures for emergency level with the scope of safeguarding gas supply to protected customers especially when the demand is exceptionally high or the supply is significantly disrupted or the supply

situation is significantly affected, and in case all market measures were implemented and the gas offer is not sufficient to cover the outstanding demand of protected customers, which are:

- a) defining “protected customer” in Law 123/2012, to the extent provided in Regulation 994/2010.
- b) protected customers shall be identified and recorded in compliance with regulations issued by NRA.
- c) natural gas producers shall make available to suppliers who have protected customers in their portfolio or to protected customers within their own portfolio natural gas volumes resulting from production activities required for covering the consumption of protected customers in accordance with NRA regulation and in compliance with the price deregulation calendar applicable to this category; suppliers and protected customers benefitting from such volumes are obliged to observe the destination of such volumes; the remaining internal production obtained by producers less the volumes representing their own consumption, shall be made available on the free market;
- d) natural gas producers shall be obliged to conclude with suppliers separate supply contracts for natural gas volumes for the consumption of protected customers;
- e) natural gas suppliers shall be obliged to conclude separate natural gas supply contracts with protected customers;
- f) system users shall be obliged to conclude with system operators separate contracts for the gas volumes destined to protected customers;
- g) natural gas suppliers and customers not included in the protected customer category shall be obliged to conclude separate contracts for gas volumes required for maintaining the physical integrity of operated installations and/or environmental safety, which shall produce effects during the period of emergency level (such contracts will enter into force on the day the emergency level occurs and will terminate the day immediately following the ceasing of emergency level).
- h) during crisis situation, the Competent Authority shall declare the occurrence and ceasing of the emergency level by order issued by the competent ministry published in the official journal;

- i) in crisis situation, during the emergency level period, with the purpose of securing the supply of natural gas for protected customers, the performance of supply, transmission, UGS and distribution contracts is suspended, except for those provided at article d), f), e) and g) above.
- j) in crisis situation, during the emergency level period, gas producers shall make available with priority to gas suppliers having protected customers in their portfolio or to protected customers such natural gas volumes resulting from production activity required for covering the consumption of protected customers, according to NRA provisions.
- k) in crisis situation, during the emergency level period, the suppliers who have no contracts concluded with protected customers and who have available natural gas volumes shall make available with priority to the suppliers who have protected customers in their portfolio or to protected customers such gas volumes required for covering the consumption of protected customers, according to NRA regulations.
- l) suppliers who have contracts concluded with the protected customers and who have additional gas volumes available for protected customers' consumption from their own portfolio shall make available to suppliers who have protected customers in their portfolio or to protected customers such gas volumes required for covering the consumption of protected customers, according to NRA regulations.
- m) in case that following the implementation of paragraphs j)-k) during emergency level period there are any available natural gas volumes, such volumes may be traded on centralised markets (day-ahead market) and/or on the balancing market, according to NRA regulations.
- n) consumption of natural gas during emergency level period without the existence of a contract under performance according to legal provisions shall constitute a criminal offence;
- o) failure by the suppliers or by the customers to observe the destination of natural gas volumes procured from internal production in accordance with NRA regulation for the consumption of protected customers shall constitute a criminal offence.

The Competent Authority may adopt the measures provided at paragraphs a) to l) above in case legal national provisions allow for such measures to be adopted.

Because of this reason, the Competent Authority analyses the proposal to amend some legal provisions in force with the view to ensure required premise for adopting non-market measures for emergency level.

Moreover, the Competent Authority analyses the proposal to amend some legal provisions with the view to establish an order of priority for securing the natural gas supply safety within and among the protected consumers for the case when natural gas volumes available on the market do not ensure the consumption requirements of this consumer category.

11. Glossary

Competent Authority - ME through the Competent Authority Office

EU Regulation no. 994/2010 – EU Regulation no. 994/2010 of the European Parliament and of the Council of October 20, 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC

ME - Ministry of Energy

Law 123/2012 – electricity and natural gas law published in Romania’s Official Journal on July 19, 2012, as amended from time to time

NRA – National Authority for Energy Regulation

Transgaz – National Natural Gas Transmission Company “Transgaz” S.A. Medias

NTS – National Transmission System

DEN – National Energy Dispatch

CPET – households and heat producers, only for natural gas volumes used for producing heat in cogeneration plants and in heating plants for the population’s consumption

EC – European Commission

NH – non-households

NU – natural gas transmission network users

12.

ANNEX

The role and responsibilities of natural gas undertakings and industrial customers, including relevant electricity and heat producers, according to the legal provisions in force

1. Natural gas producers

In general terms, natural gas producers are required to comply with the following:

- f) to be licensed for the construction of upstream supply pipeworks relating to natural gas production activity;
- g) to operate the upstream supply pipeworks relating to natural gas production activity under safe, efficient and environment protection conditions;
- h) to ensure third party access to supply pipeworks under non-discriminatory conditions, in accordance with the legislation in force;
- i) to carry out activities in connection with the operation of upstream supply pipeworks, in accordance with specific regulations of NRA within the limits of rights granted under the license;
- j) to make available to suppliers as a matter of priority gas volumes resulting from production operations for covering the consumption of households including volumes needed for heating but only gas volumes required for heating generated in cogeneration plants and district heating installations supplying the population, in accordance with NRA regulations, the price deregulation calendar and gas supply schedule for the above-mentioned categories; the suppliers and non-households who benefit from these quantities are required to observe the destination of such volumes; the remaining internal production obtained by producers less the volumes representing their own consumption, shall be made available on the free market;
- k) to ensure the odorization of natural gas according to the legislation in force for natural gas delivered at fiscal points directly to customers connected to upstream pipelines and distribution networks;

In general terms, natural gas producers have the following rights:

- a) to draft specific technical/commercial norms for their activity;
- b) to market natural gas resulting from production activities to the extent of the supply license;
- c) to shut-down installations only for the time period required for performance of maintenance and repair works and in other situations as provided by the law with prior notification of the dispatchers of the affected systems, and of the clients, as the case may be;

2. Storage operators

Storage operators have the following main obligations:

- a) to operate, maintain, refurbish and upgrade the storage surface facilities under safety, efficiency and environment protection conditions;
- b) to ensure third party access to storages based on objective, transparent and non-discriminatory conditions;
- c) to publish the list of storage installations, or of parts of such which are offered for access to third parties;
- d) to provide information to the storage system beneficiaries required for an efficient access to the system;
- e) to draft and send to NRA 5 year investment plans for the systems it operates; annually, by the end of December, the operators update such plans, which are to be approved by NRA.

Storage operators have the following main rights:

- a) to receive a tariff for the supply of underground gas storage services, to interrupt or limit the supply of service in accordance with specific regulations;
- b) to draft specific technical/commercial norms for their activity and to submit it to NRA for approval;
- c) to shut-down installations only for the time period required for performance of maintenance and repair works and in other situations as provided by the law with prior notification of the dispatchers of the affected systems, and of the clients, as the case may be;
- d) to reasonably deny the access of third parties to the storages, as provided by the law.

3. Transmission and system operators

Transmission and system operators have the following main obligations:

- a) to operate the transmission system and ensure its physical residual balance namely the scheduling, dispatching and operation of the transmission system, under safety conditions;
- b) to maintain, refurbish, upgrade and develop the transmission system under safety, efficiency and environment protection conditions;
- c) to create, maintain and develop an information system for data supervision, control and acquisition which facilitates the monitoring and operational management of the natural gas transmission system;
- d) to secure third party access to the transmission system, according to specific regulations under non-discriminatory conditions within the limits of transmission capacities and in compliance with the technological regimes;
- e) to secure third party access to the transmission grid according to specific regulations and under non-discriminatory conditions to the extent of transmission capacities and in accordance with technological regimes;
- f) to perform activities in connection with the system operation, according to specific regulations approved by NRA, within the limits set by the validity conditions of the license;

- g) to draft and implement optimum transmission and delivery conditions for natural gas volumes notified by the network users for a specific period in accordance with concluded contracts;
- h) to draft and update cross border technical operation agreements and to send such to NRA for endorsement, prior to their entering into force;
- i) to prepare the balance of gas entered/exited into/from the system, according to NRA regulations;
- j) to hold in storages or to secure gas procurements, including imports of gas, for gas volumes required for the operation and security of the transmission system's physical balance, in accordance with specific regulations approved by NRA;
- k) to perform an exchange of information with other interconnected transmission and system operators, LNG storage operators, distribution network operators and other collaborating parties from the energy sector, in compliance with ENTSO-G regulations on exchange of information, reporting, data base structure and access proceedings;
- l) to secure capacity allocation for interconnecting pipelines;
- m) to secure the enforcement of rules on congestion management, including interconnection pipelines, and the capacity allotment norms for such pipelines;

The transmission and system operator has the following main rights:

- a) to charge non-discriminatory tariffs corresponding to the services supplied, to limit and/or interrupt the supply of services, according to specific regulations;
- b) to deny third party access to the transmission network, in accordance with the legal provisions;
- c) to interrupt or limit gas transmission in case transmission system safety and integrity are endangered, in accordance with specific regulations;
- d) to shut-down the operation of installations for the time period required for performance of maintenance and repair works and in other situations as provided by the law with prior notification of the dispatchers of the affected systems, and of the clients, as the case may be;
- e) to store gas in the transmission network, in accordance with a specific regulation approved by NRA;
- f) to manage the balancing market with a view of securing physical balance and maintaining the system in operation parameters, by performing specific commercial operations; commercial evidence on such operations are to be distinctively kept from the transmission activity records.

4. Distribution system operators

Distribution system operators have the following main obligations:

- a) to operate, maintain, repair, modernize and develop the distribution system under safety conditions, economic efficiency and environmental protection conditions, the activities will be performed based on specific permits for design and execution of natural gas distribution systems, and operation will be performed based on the distribution license;
- b) to perform interconnections with other systems, as applicable, and to ensure the long term distribution system capacity;

- c) to ensure third party connection to the distribution system, according to specific regulations, within the limits of distribution capacities and by complying with technological regimes;
- d) to monitor and to draft the natural gas distribution system input and output balance;
- e) to take over for a fixed period, but not exceeding 2 years, upon the request of and according to NRA regulations, the operation of a distribution system if the initial operator has the license withdrawn or the concession agreement has been terminated;
- f) to ensure permanent balance of the operated system;
- g) to ensure gas supply security;
- h) to perform activities related to system operation, according to specific regulations drafted by NRA, within the limits set under the validity conditions of the license;
- i) to draft and send to NRA the 5 years investment plans of the operated systems; such plans will be updated on a yearly basis until the end of December and approved by NRA;

Distribution system operators have the following main rights:

- a) to conduct business activities related to the natural gas distribution services;
- b) to receive payment for the services provided, to limit and/or interrupt the provision of services, as per the specific regulations;
- c) to interrupt operation of the distribution system facilities and the gas supply of customers strictly during maintenance and repair works or during force majeure events, with the prior notification of the dispatchers of the affected system and as applicable, of customers;
- d) to store natural gas in the distribution systems in compliance with regulations approved by NRA;
- e) if unauthorized persons operate the regulating - metering facilities within the property limit boundary, that endanger the gas supply security, the distribution operator is entitled to disconnect supply, in compliance with specific regulations of NRA;

5. Gas Suppliers

Gas suppliers have the following main obligations:

- a) to conclude natural gas purchase contracts so as to cover gas demand of its customers;
- b) to pay for the purchased natural gas according to the concluded contracts;
- c) to supply natural gas in compliance with commercial contracts concluded as per NRA regulations;
- d) to observe performance standards for the natural gas supply activity ;
- e) to promptly make available to end-customers the data on consumption, using at their request the easy understandable form, nationally harmonized, set by the NRA;
- f) to enable customers to change their natural gas supplier, free of charge, within 21 days from the date of the request and to send them the final liquidation settlement note within 42 days as of the change of the supplier;
- g) to inform the end-customers transparently on prices/tariffs charged, as well as on general conditions related to access and use of services provided by such;
- h) not to use dishonest or misleading business practices;

Natural gas suppliers of last resort have the following main obligations:

- a) to ensure gas supply to end-customers, in compliance with NRA regulations at prices regulated by NRA;
- b) to supply, as per the regulations issued by NRA, natural gas to the end-customers the supplier of which is likely to have the supply license withdrawn during the performance of the activity or in any other case identified by the NRA, situation in which the natural gas supply is not secured for end-customers from any other source.

6. Electricity and heat producers

Electricity producers have the following main obligations:

- a) to ensure electricity deliveries and ancillary services by complying with the conditions required by licenses, contractual clauses and effective regulations;
- b) for dispatchable units, to bid for the entire available power capacity on the balancing market, as defined according to regulations issued by the competent authority;
- c) to bid publicly and in a non-discriminatory manner on the competitive market all electricity available;
- d) to bid in a non-discriminatory manner the ancillary services;
- e) not to send to the transmission and system operator physical notifications on negative imbalances relating to concluded contracts, except for producers benefiting from support schemes in compliance with legal provisions;
- f) to maintain appropriate fuel reserves or water reserves, as applicable, in order to fulfil the obligations regarding the uninterrupted generation and supply of electricity provided by the regulations in force;
- g) to operatively comply with the requirements of the transmission and system operator and to set up, as applicable, their own levels of operative control;
- h) to submit to NRA an annual report in accordance with the applicable regulations, even if not licensed for production or if such capacities are transferred to another undertaking.

Measures related to safety stocks of National Power System with respect to fuel for the cold season and water volume from storage lakes, called the Energy Winter Plan for National Power System safe operation and stability during the cold season as well as any other measures on the safety and security level of National Power System are established by Romanian Government Decision.