Guvernul Republicii Moldova

Ministerul Energiei al Republicii Moldova

PLANUL DE ACȚIUNI PENTRU SITUAȚII EXCEPȚIONALE ÎN SECTORUL GAZELOR NATURALE

I. Planul de acțiuni preventive
II. Planul de urgență

Ministerul Energiei al Republicii Molddova

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UNDP

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Annex 2

to the Government Decision No /2024 of 2024

ACTION PLAN
on emergency situations in the natural gas sector

GENERAL PROVISIONS

1. Action Plan onemergency situations in the natural gas sector aims to increase energy resilience in case of possible natural gas supply limitations /disruptions by setting out preventive measures regarding the security of natural gas supply and emergency measures to be implemented if the natural gas market is no longer able to supply the necessary quantities of natural gas to customers.

2. The Action Plan foremergency situations was developed by specialised central body of public administration in the field of energy (hereinafter referred to as – specialised central body). During the elaboration of the Action Plan foremergency situations, the specialised central body collaborated with ANRE, natural gas, electricity and thermal power undertakings.

3. This Action Plan consist of two parts:

1) Preventive Action Plan (Annex 1 to the Action Plan for emergency situations in the gas sector);

2) Emergency Plan (Annex 2 to the Action Plan for emergency situations in the gas sector).

4. The Action Plan onemergency situations comprises clearly defined, transparent, proportionate, non-discriminatory measures that do not unduly distort competition nor the effective functioning of the natural gas market, nor endanger the security of natural gas supply of other Contracting Parties and Member States.

5. During theemergency situation in the natural gas sector, natural gas undertakings are obliged to implement the measures set out in the Action Plan onemergency situations in the natural gas sector respecting the following conditions:

1) no measures shall be introduced to unduly restrict the flow of natural gas on the internal market of the European Union;

2) no measures that could seriously jeopardise the gas supply situation in another country of the Energy Community and/or in a Member State of the European Union shall be implemented;

3) the to cross-border infrastructure shall be maintained, to the extent technically feasible and safe, in accordance with the Action Plan foremergency Situations in the natural gas sector.

6. This Action Plan shall be updated every 4 years from the date of approval, or more regularly if the situation so requires, or at the request of the Energy Community Secretariat.

7. The Action Plan foremergency situations in the natural gas sector was developed, promoted and approved while respecting the confidentiality of commercially sensitive data.

Annex 1
to the Action Plan on emergency situations in the natural gas sector, approved by Government Decision No of

PREVENTIVE ACTION PLAN

1. General information

The Preventive Action Plan is part of the Action Plan onemergency situations in the natural gas sector), reflects the results of the national assessment of the risks associated with the gas security of supply and includes the preventive measures required to be taken to preventemergency situations, eliminate or reduce the risks identified.

This Preventive Action Plan comprises:
1) the results of the national risk assessment carried out in line with the requirements of the Regulation onemergency situations in the natural gas sector;
2) description of the natural gas system in the Republic of Moldova;
3) information on existing and future interconnections, including those providing access to the European Union's gas networks, on cross-border flows, as well as on cross-border access to storage facilities and bi-directional physical capacity;
4) the natural gas supply standard, criteria for identifying protected customers;
5) the natural gas infrastructure standard, calculation of formula N - 1;
6) the preventive measures to be taken to prevent the risks identified;
7) obligations imposed on natural gas, electricity, heat undertakings and other bodies or authorities which may impact the security of natural gas supply;
8) information on the economic impact, effectiveness and efficiency of the measures set out in the Preventive Action Plan;
9) public service obligations on the security of natural gas supply;
10) the mechanisms to be used in cooperation with other Energy Community Contracting Parties and/or Member States.

The Preventive Action Plan was developed after analysing the existing situation in the natural gas sector, identifying the problems and risks associated with the security of gas supply, using statistical data provided by the National Bureau of Statistics, data held by the specialised central body, as well as information and data submitted by the National Agency for Energy Regulation (hereinafter referred to as ANRE), the natural gas transmission system operator (hereinafter referred to as TSO), other participants in the natural gas, electricity and district heating sector, taking into account the priority directions of state policy, set out in energy strategies and policy papers.

2. Description of the natural gas system in the Republic of Moldova

Natural gas represents about 30% of total primary energy supply, the second largest source of energy after petroleum products. Natural gas plays an important role in the production of electricity and district heat, as well as in direct use by final customers. The Republic of Moldova is totally dependent on natural gas imports. Historically, natural gas was imported only from the Russian Federation and transported through Ukraine and the left bank of the Nistru river.

Moldovan natural gas system is divided between the right and left banks of the Nistru river, which is not controlled by the country's constitutional authorities and hosts the largest natural gas-consuming thermal power plant – Cuciurgan (MGRES), which supplies about 80% of the electricity used on the right bank of the Nistru river.

Natural gas transmission system

The natural gas transmission system of the Republic of Moldova is interconnected with the natural gas transmission systems of neighbouring countries: **Romania** and **Ukraine**

The transmission system operator (TSO) LLC 'Vestmoldtransgaz' (provisionally certified by ANRE[1] on 16 February 2024), manages the entire natural gas transmission system on the right bank of the Nistru river and operates all cross-border interconnection points indicated in Table 1.

Interconnection points/ direction	Technical entry capacity, m^3/day (20^0)	Technical exit capacity, m^3/day (20^0)
IP Alexeevca	7,900,000	12,000,000
IP Ananiev	7,900,000	14,000
IP Grebeniki	36,000,000	3,960,000
IP Căușeni	12,000,000	36,000,000
IP Limanskoe	0	0
IP Ungheni	5,250,725	2,040,159
Total:	**69,050,725**	**54,014,159**

Table 1. List of interconnection points, maximum technical entry/exit capacity, m3/day.

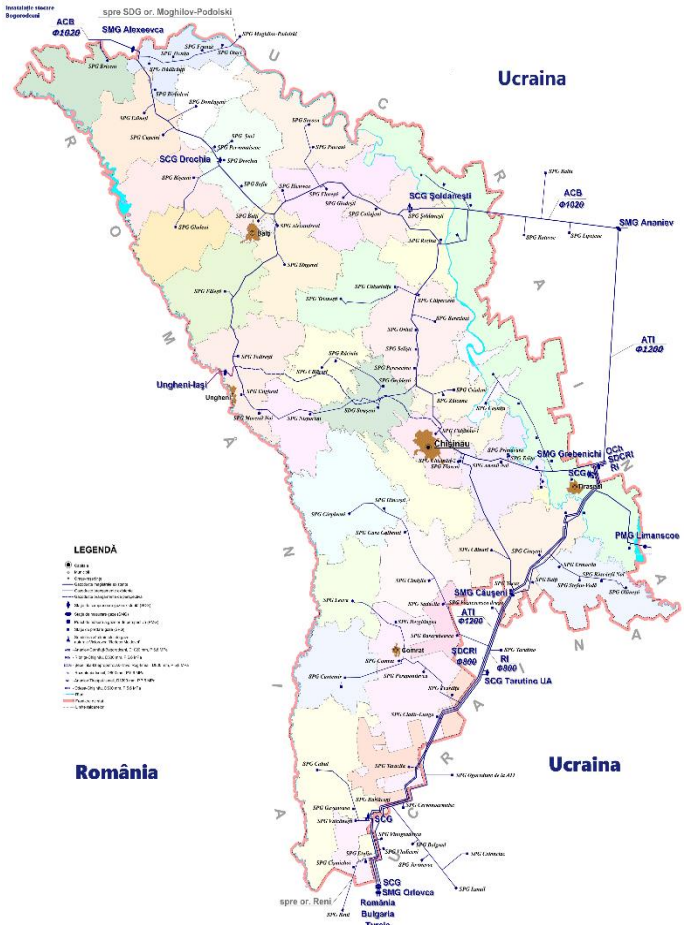

Figure 1. Scheme of natural gas transmission networks in the Republic of Moldova

[1] https://anre.md/registrul-hotararilor-consiliului-de-administrare-al-anre-3-358?decision_number=&month=2&year=&title=&type=1

The list of relevant points[2] and the list of entry/exit points of the natural gas transmission network operated by 'Vestmoldtransgaz'[3] LLC were approved by ANRE and are published on the TSO website.

Alexeevka IP and Ananiev IP connect the natural gas transmission system of the Republic of Moldova with the Ukrainian system in the North. IP Alexeevka is located on the right bank of the Nistru river.

IP Grebeniki and IP Causeni connect the natural gas system of the Republic of Moldova with Ukrainian system in the East. They are mainly used for transit, with entry into the national gas transmission system.

At IP Grebeniki, natural gas enters the transmission system of the Republic of Moldova through the Odessa-Chisinau (OCh) pipeline.

At the IP Căușeni, the Răzdelnaia – Ismail and Șebelinka – Dnepropetrovsk – Krivoi Rog – Ismail (RI/SDKRI) pipeline enters the transmission system of the Republic of Moldova through the Tocuz-Cainari-Mereni (TCM) pipeline, delivering natural gas to Chișinău.

In the southern part of the Republic of Moldova, the Ananiev-Tiraspol-Ismail (ATI) and RI/SDKRI pipelines cross the territory of the Republic of Moldova and Ukraine several times and branch off to deliver natural gas to the delivery stations (SP) in the natural gas distribution networks of the Republic of Moldova.

The Republic of Moldova has significant transit potential. The trans-Balkan pipeline, with a capacity of 36 mcm/day, crosses the territory of Romania, Bulgaria and Turkey and is interconnected with Greece and North Macedonia. The total length of the 3 transmission networks is 343 km. Starting with 2020, a capacity of about 12 mcm/day reverse flow is ensured at the IP Căușeni and about 3.9 mcm/day in reverse flow at the IP Grebeniki. In January 2023, once the backhaul (virtual reverse) is introduced, the availability of additional natural gas transmission capacity was ensured through volume compensation, allowing access to additional natural gas supply routes and sources.

Figure 2. Transbalkan pipeline scheme, SEEGAS [4]

Another interconnection with Ukraine is located in the north of the country and connects the transmission networks of the Republic of Moldova with two parts of the Ukrainian transmission

[2] https://www.vmtg.md/images/Puncte_de_inrareiesire_si_relevante/Puncte_relevante_VMTG.pdf
[3] https://www.vmtg.md/images/Puncte_de_inrareiesire_si_relevante/Puncte_de_intrare-iesire_VMTG.pdf
[4] https://www.energy-community.org/regionalinitiatives/SEEGAS.html

network. This pipeline plays an important role in ensuring security of natural gas supply as it connects Moldova's natural gas system to natural gas storage facilities in Bogorodceni, Ukraine.

The IP Ungheni connects the natural gas transmission system of the Republic of Moldova with the Romanian system and therefore with the EUmarkets. The Iasi-Ungheni-Chisinau natural gas pipeline was put into operation in 2020. After the Iasi – Ungheni natural gas interconnection, with a capacity of 1.91 bcm/year, was put into operation in 2020, and allowed natural gas deliveries from Romania.

Table 2. Natural gas transmission system infrastructure indicators

<table>
<tr><td>Transmission networks (total length).</td><td>1682.521 km
(776.315 km main pipelines, 906,206 km connecting pipes)</td></tr>
<tr><td>Working pressure</td><td>up to 7,5 MPa</td></tr>
<tr><td>Diameter of pipelines</td><td>530-1220 mm</td></tr>
<tr><td>Gas measurement stations (GMS)</td><td>2 (GMS Căușeni; GMS Ungheni)</td></tr>
<tr><td>Gas measurement points (GMP)</td><td>2 (Todirești GMP; Tohatin GMP).</td></tr>
<tr><td>Gas compression stations (GCS)</td><td>3 - GCS Vulcănești (20 MW); GCS Drochia (31.5 MW); GCS Șoldănești (24 MW)[5].</td></tr>
<tr><td>Natural gas transmission capacity of the 5 main transmission networks:</td><td>Total capacity 49.15 mcm/day
Ananiev-Tiraspol-Ismail (ATI) – 30 mcm/day;
Șebelinka-Dnepropetrovsk – Krivoi Rog - Ismail (ȘDKRI), Razdelnaya – Ismail (RI) – 6 mcm/day
Ananiev-Cernăuți-Bogorodceni (ACB) – 7.9 mcm/day;
Iași-Ungheni-Chișinău - 5,25 mcm/day</td></tr>
<tr><td>Total bi-directional capacity</td><td>25.91 mcm/day (23,874 mcm/day with Ukraine and 2.04 mcm/day with Romania).
<table>
<tr><td>IP</td><td>Type</td><td>Direction</td><td>millon m^3/day</td></tr>
<tr><td>IP Alexeevka</td><td>entry</td><td>MD - UA</td><td>7,9</td></tr>
<tr><td>IP Cauşeni</td><td>entry</td><td>UA- MD</td><td>12,00</td></tr>
<tr><td>IP Grebeniki</td><td>exit</td><td>MD - UA</td><td>3,96</td></tr>
<tr><td>IP Ananiev</td><td>entry</td><td>MD - UA</td><td>0,014</td></tr>
<tr><td>IP Ungheni</td><td>exit</td><td>MD -RO</td><td>2,04</td></tr>
<tr><td></td><td></td><td>Total</td><td>25.91</td></tr>
</table></td></tr>
<tr><td></td><td></td></tr>
<tr><td>Total length (ATI, RI, ȘDKRI, ACB, IUC)</td><td>663.01 km (108.93 km are managed by LLC LLC Tiraspoltransgaz.</td></tr>
<tr><td>Number of cross-border interconnection points</td><td>6</td></tr>
<tr><td>Maximum entry capacity</td><td>69.05 mcm/day.</td></tr>
<tr><td>Maximum exit capacity</td><td>54.01 mcm/day.</td></tr>
<tr><td>Peak demand of natural gas</td><td>17.7 mcm/day (IP Grebeniki, 2021).</td></tr>
<tr><td>Number of exit points towards natural gas distribution networks</td><td>96</td></tr>
<tr><td>Number of exit points to final customers, whose usage installations are connected to the natural gas transmission network</td><td>11</td></tr>
</table>

[5] Conserved due to lack of projected volumes.

SRL 'Vestmoldtransgaz' is a licensed TSO[6] that operates natural gas transmission networks, area of activity – the entire territory of the Republic of Moldova[7] and it is responsible for balancing the balancing zone.

All districts of the Republic of Moldova have access to natural gas transmission networks.

The dynamics of natural gas volumes transported in the Republic of Moldova is shown in Figure 3.

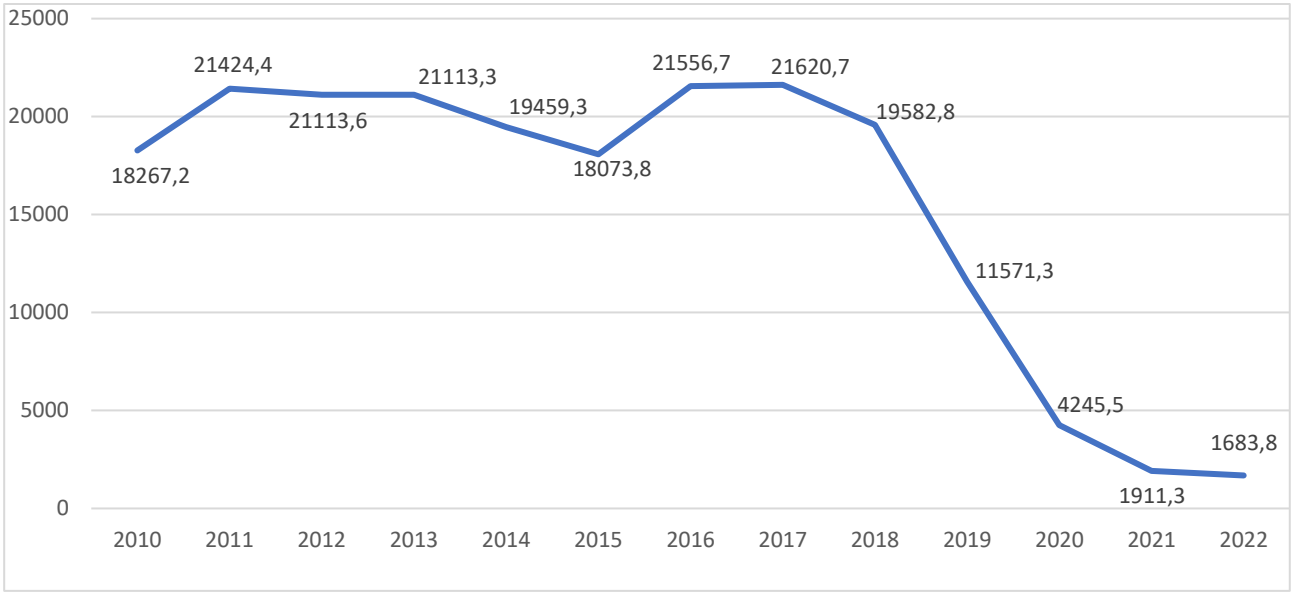

Figure 3. Dynamics of volumes of natural gas transported, mcm ANRE

The main reason for reducing the volumes of natural gas transported through the natural gas transmission system in the Republic of Moldova is the change in the natural gas transmission routes from the Russian Federation to the Balkan countries, the commissioning of the TurkStream transmission network in January 2020. Previously, part of the natural gas from the Russian Federation was delivered to the European Union via the Transbalkan pipeline corridor through Ukraine and the Republic of Moldova. Another factor behind the decreased volumes of natural gas transported in 2022 was the reduction of domestic natural gas consumption by about 47%.

Key infrastructure relevant to the natural gas supply security

Table 3. Key infrastructure relevant to the gas supply security.

Pipeline	Capacity bcm/year	DN, mm	Length, km	Description
Ananiev – Tiraspol - Ismail (ATI)[8]	20.0	1220	62.91	Ensures the transportation of natural gas for cross-border streams to the

[6] According to the ANRE licensing Registry[6], as of 1 January 2024 https://anre.md/registrul-de-licentiere-3-261

[7] Based on the natural gas transmission network lease contract concluded between LLC 'Moldovatransgaz' and LLC 'Vestmoldtransgaz' and delivery – reception contracts for the technical operation of the networks concluded with the District Councils, contract for ensuring the technical operation of the natural gas transmission network managed by LLC 'Moldovatransgaz' and the transmission network managed by LLC 'Moldovatransgaz' under the contract concluded with LLC 'Tiraspoltransgaz'

[8]The ATI, RI, SDKRI pipelines altogether comprise the trans-Balkan corridor on the territory of the Republic of Moldova and Ukraine[8];

				Balkan states
Șebelinka - Dnepropetrovsk - Krivoi - Rog - Ismail (ȘDKRI)	14.6	820	91.817	Ensures the transportation of cross-border natural gas streams to the Balkan states and the transportation of natural gas to final customers in the south of the Republic of Moldova.
Razdelnaia - Ismail (RI)		820	92.24	
Ananiev - Cernăuți - Bogorodceni (ACB)	9.1	1020	184.8	Ensures the transportation of natural gas to the underground gas storage facility in Bogorodceni (Ukraine) and to the final customers in the Republic of Moldova.
Chișinău - Rîbnița (CR)	1.5	530	91,1	Ensures the connection between the ACB and TCM transmission networks, as well as natural gas transmission to final customers in the Republic of Moldova
Tocuz – Căinari - Mereni (TCM)	1.8	530	62.74	Provides the connection between the CR transport network and the trans-Balkan corridor. The flow of natural gas is directed through the TCM transmission network to the center of the Republic of Moldova with the highest consumption, which includes Chișinău and the districts of Căușeni, Anenii Noi and Ialoveni.
Iași – Ungheni - Chișinău	1.91	600	120.008	Ensures the connection with the CR transmission network and the network of the natural gas transmission system operator SNTGN Transgaz JSC (Romania). It is built to transport natural gas to final customers in the Republic of Moldova

Natural gas distribution system

According to the ANRE licensing Registry, 20 natural gas distribution license holders are registered as of 01.01.2024.

12 natural gas distribution system operators (DSOs) are affiliated enterprises of 'Moldovagaz' JSC, functionaly, decisionaly and legaly separated from the vertically integrated natural gas company.

The other 8 DSOs are natural gas companies-holders of natural gas distribution licenses, not affiliated to 'Moldovagaz' SA. In 2022, these DSOs distributed in total about 2,3% of the natural gas used in the Republic of Moldova.

LLC 'Tiraspoltransgaz', is a natural gas TSO and supplier, operating in the Transnistrian Region of Republic of Moldova, being another daughter company of JSC 'Moldovagaz'. On the left bank of the Nistru river, natural gas is distributed by 5 DSOs[9]. The supplier JSC 'Moldovagaz' accumulates debts to PJSC 'Gazprom' for natural gas supplied to LLC 'Tiraspoltransgaz'.

Access to natural gas networks is ensured for 11 municipalities in the Republic of Moldova (100%). In cities, the level of access to natural gas networks is 97.7%, of villages and communes is 61.4%. The only town without access to natural gas networks is the town of Cornești in Ungheni district. In 2022, the rate of access to natural gas distribution networks on the right bank of the Nistru river exceeded 62.7%.

As of 1 January 2023, DSOs affiliated to Moldovagaz JSC operated about 93,94% of the natural gas distribution networks in the Republic of Moldova qnd 6,1 of the distribution networks are operated by other private DSOs

There was a decrease in natural gas deliveries to the final customers served by DSOs in 2022. Natural gas volumes distributed in 2022 by the DSOs affiliated to JSC Moldovagaz are 803.3 mcm, 343.6 mcm or 30% less, compared to 2021. The largest decrease in volumes distributed in 2022, 48.4%, was noted at LLC 'Edineț-gaz', followed by LLC 'Bălți-gaz' with a 43,7 % decrease in volumes distributed and LLC 'Florești-gaz' with 36,6% decrease. Other DSOs in 2022 have distributed 19,2 mcm natural gas, with 31,1 % less then in previous year.

The uneven dynamics of natural gas consumption within the authorised territories of the DSOs in 2022 caused changes in their share of natural gas deliveries to final customers. On average, DSOs saw a 30% decrease in volumes of natural gas distributed.

The maximum natural gas volume distributed in 2022 through the distribution networks of the 3 largest DSOs amounted to: LLC 'Chișinău-gaz' (481.6 mcm or 58,6%), LLC 'Bălţi-gaz' (52.7 mcm or 6.4%), LLC 'Ialoveni-gaz' (68.1 mcm or 8.3%).

The development of natural gas distribution networks is a priority for the DSOs, to secure the long-term capacity of the distribution networks. The largest expansion of natural gas distribution networks in 2022 was recorded at LLC 'Chișinău-gaz' (+76.1 km), LLC 'Orhei-gaz' (+ 66 km), LLC 'Ștefan Vodă-gaz' (+55 km), LLC 'Florești-gaz' (+43.8 km), LLC 'Bălți-gaz' (+42.1 km).

ANRE shall guarantee regulated and non-discriminatory access to the natural gas transmission and distribution networks by approving regulated tariffs set out on the basis of pre-established methodologies. The rules of connection to a natural gas network are set out in the Regulation on connection to the natural gas networks and provision of natural gas transmission and distribution services, approved by ANRE Decision No 112/2019[10].

Natural gas supply

9 Do not have a license issued by ANRE.

[10] https://www.legis.md/cautare/getResults?doc_id=114525&lang=ro

Natural gas is supplied to final consumers by suppliers at negotiated and regulated prices under licences issued by ANRE. According to the ANRE licensing Registry, 24 natural gas supply license holders operating on the wholesale and retail natural gas markets are registered as of 1 January 2024.

According to ANRE Decision No 487/2019, as amended, under Article 89 of the Law on natural gas, ANRE imposed on the suppliers JSC 'Moldovagaz', LLC 'Nord Gaz Sîngerei', LLC 'Lăcătuș', LLC 'Sălcioara-Vascan' a public service obligation to supply natural gas to final customers according to the established quality parameters, at regulated, transparent, non-discriminatory and easily comparable prices, for a period of 7 years.

By ANRE Decision No 444/2021, under Article 90 of the Law on natural gas, ANRE imposed on the supplier 'Moldovagaz' JSC the public service obligation to ensure, for a period of 3 years, the natural gas supply of last resort to final customers who lost their supplier, under regulated conditions, at regulated prices approved by ANRE, throughout the territory of the Republic of Moldova.

The market shares of the main natural gas suppliers in 2023 were:

No.	Natural gas suppliers	Market share, %
1.	SA "Moldovagaz"	92.85
2.	SRL "Rotalin Gaz Trading"	1.11
3.	ÎCS "Nord Gaz Sîngerei"	0.28
4.	SRL "Lăcătuș"	0.04
5.	SRL "Sălcioara – Vascan"	0.06
6.	SRL "Transautogaz"	2.75
7.	SRL "Imas Company"	0.04
8.	SRL "East Gaz Energy Trading"	0.04
9.	SRL "Natural Gaz D.C"	1.97
10.	SRL "SD Energy Engeneering Group"	0.47
11.	SRL "National Power Corp"	0.39
	Total:	**100%**

Table 4. Market shares of the main natural gas suppliers in 2023, ANRE.

In 2022, volume of natural gas purchased by JSC 'Moldovagaz' from Gazprom PJSC amounted to 863.1 mcm, while the volume purchased from JSC 'Energocom' was 96 mcm. The volume of natural gas purchased by JSC 'Energocom' from JSC 'Moldovagaz' in 2022, based on the provisions of the Commission, amounted to 89.9 mcm.

Type of customers	Number of final customers, years		
	2021	2022	2023
household customers	762.789	784.273	798.595
non-household customers	15.789	15.382	15.768
Total:	778.578	799.655	814.363

Table 5. Information on the number of natural gas final customers, 2021-2023.

Natural gas trading

Natural gas trading is the buying and selling of natural gas on the wholesale natural gas market, including the import/export of natural gas.

According to the ANRE Register, as of 1 January 2024 no licenses were issued for natural gas trading activity.

The amendments to the Law on natural gas[11] set out the condition that applicants/holders for natural gas supply and trading licenses must have MDL 1 000 000, upon presentation of supporting documents that prove the origin of the money. Another condition for obtaining natural gas supply and trading licenses is that applicants for licenses shall be positively endorsed by the Security and Intelligence Service and the Office for Prevention and Combating of Money Laundering with regard to risks related to state security, money laundering and terrorist financing.

Natural gas market

The natural gas market of the Republic of Moldova comprises the wholesale and retail markets.

The legal framework for executing sale-purchase transactions of natural gas is established by the Natural gas market rules in the Republic of Moldova approved by ANRE Decision No 534/2019. When adopting the Law on natural gas No 108/2016 (hereinafter referred to as the Law on natural gas), the natural gas market was declared open and every final customer in the Republic of Moldova has the right to choose and change the supplier.

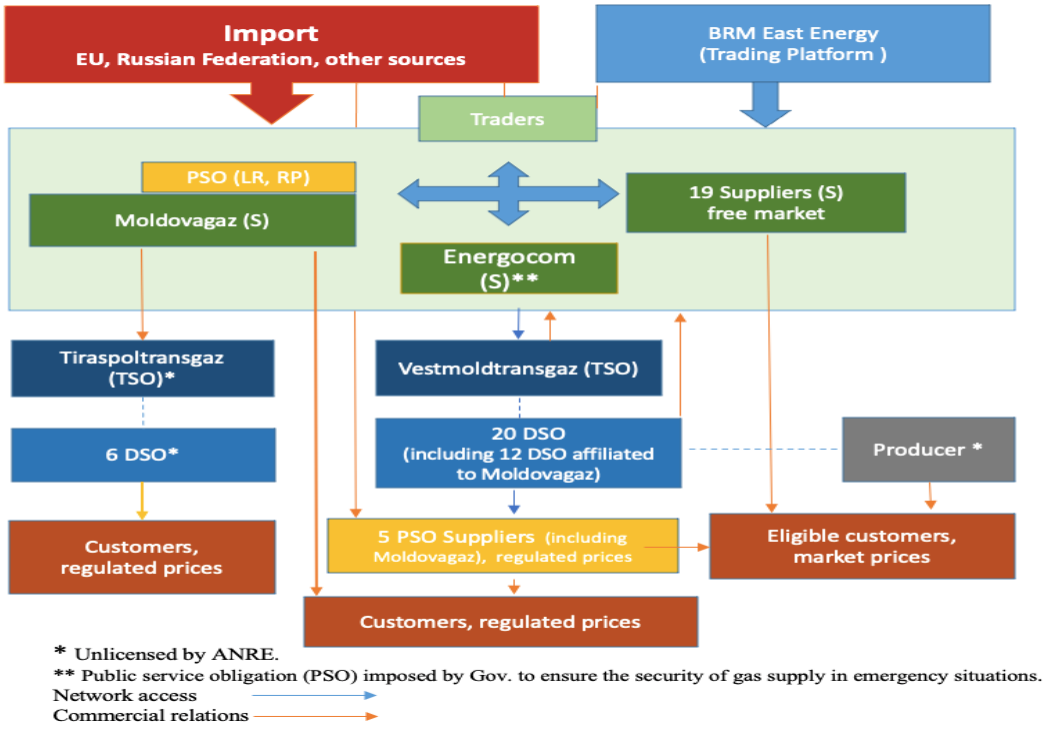

Figure 4. The natural gas market scheme of in the Republic of Moldova, 2024.

The natural gas sector in the Republic of Moldova is largely monopolised. The operation of the natural gas system is directly associated with the enterprises LLC 'Vestmoldtransgaz', JSC 'Moldovagaz' and JSC 'Energocom'.

LLC 'Vestmoldtransgaz' is the natural gas transmission system operator (TSO)[12] that operates all interconnection points in the Republic of Moldova;

[11] Law no. 429/2023 on ammending normative acts

[12] According to the ANRE Decision No 434/2023, starting with 19 September 2023, within the certification process, according to the separation model, LLC 'Vestmoldtransgaz' was designated as a TSO – the independent system operator.

JSC 'Energocom' –state-owned undertaking, which supplies natural gas, including under PSO and is responsible for the creation of natural gas security stocks. According to the Funding Agreement between the European Bank for Reconstruction and Development (EBRD) and the Republic of Moldova, 'Energocom' JSC is the beneficiary of the funds and is responsible for the purchase of natural gas.

JSC 'Moldovagaz' is a vertically integrated undertaking, which supplies natural gas uder PSO obligation (last resortsupplier and supply at regulated prices to certain categories of final customers). Its shareholders are PJSC 'Gazprom' (50%), the Public Property Agency of the Republic of Moldova (35.33%), the authorities of the Transnistrian region (13.44%) and other shareholders (1.23%);

Until 2021 most of the operations (import, wholesale and retail supply, natural gas distribution) were carried out by JSC 'Moldovagaz'[13] and its affiliated companies. JSC 'Moldovagaz' is the sole owner of the share capital of the affiliated natural gas distribution undertakings and the owner of the natural gas transmission networks managed by LLC 'Moldovatransgaz', which until 19 September 2023 held the natural gas transmission license.[14]

In 2021, ANRE authorised the first natural gas trading platform operated by 'BRM East Energy', a subsidiary of the Romanian Stock Exchange. TFirst transactions were made in 2024.

Despite the energy crisis in 2021-2023 caused by the limitation of natural gas supplies by SAP Gazprom and the war in Ukraine initiated by the Russian Federation, the Republic of Moldova made progress in establishing a free natural gas market.

Data on natural gas consumption

The role of natural gas in Moldovan economy is greater than its share in final consumption, as most of the electricity and heat consumed in the country is produced using natural gas, thus leading to a seasonal fluctuation in demand.

The share of natural gas in the total amount of energy consumed in the Republic of Moldova was 28% in 2020-2021, less than a third, while in 2010 it was 34%. About 90% of the electricity produced in the country is generated using natural gas.

In 2021, the total volume of natural gas procured for the Republic of Moldova amounted to 3.221 bcm, which is 5,7 % more than in 2020.

In 2021, natural gas consumption on the left bank of the Nistru river was 62%, compared to 38% on the right bank of the Nistru river, and respectively 64% vs. 36% in 2020. In 2022, the total volume of natural gas procured on the right bank of the Nistru river was 869.2 mcm and decreased by 27.9% compared to 2021 indicator.

[13] The shares of JSC 'Moldovagaz' belong to Gazprom PJSC (50%), the Public Property Agency of the Republic of Moldova (35.33%), the administration of the Transnistrian region (13.44%) and other shareholders (1.23%).
[14] Given the failure to comply with the separation and certification obligations stipulated by Law No 108/2016, ANRE withdrew the natural gas transmission licence of LLC 'Moldovatransgaz' on 19 September 2023.

Total natural gas consumption decreased by about 10% in a decade (-10.8% since 2010). The decrease in natural gas-based electricity generation is even greater (-20%), but was offset by increased the demand for natural gas in the residential and industrial sectors.

According to the data of JSC 'Moldovagaz', the volume of natural gas consumed in December 2022 was 101.8 mcm, which is about 42.2% less than in December 2021.

Final natural gas consumption on the right bank of the Nistru river reached 0.847 bcm in 2022, compared to 1.225 mcm in 2021, showing a decrease of 30.8%.

The 3 main customers of natural gas on the right bank of the Nistru river are JSC 'Termoelectrica', JSC 'CET-Nord' and ICS 'Moldova Zahar' SRL. In 2021, their consumption amounted to 381.9 mcm or 32% of total demand. Other large natural gas customers are: LLC 'Zernoff IM' JSC 'Glass Container Prim IM', JSC 'Glass Container Company IM', LLC 'Sudzuker – Moldova', ÎS 'Fabrica de Sticla din Chișinău' (the Glass Factory from Chișinău), LLC 'KNAUF-GIPS ICS', JSC 'Apa-Canal Chișinău'.

The share of natural gas consumption of the 10 largest final customers in the total natural gas demand on the right bank of the Nistru river in 2021 was 34%, and that of the 20 largest final customers – 35.9%.

Apart from its own consumption of natural gas, the region on the right bank of the Nistru river depends also on the natural gas supply to the left bank of the Nistru river, which consumes about 2 bcm /year and uses most of this volume of natural gas to produce electricity at the Cuciurgan thermal power plant (Moldovan thermal power plant or MGRES). MGRES supplies about 80% of the electricity used on the right bank of the Nistru in the Republic of Moldova, which is therefore vitally dependent on the security of natural gas supply from the left bank of the Nistru.

The level of natural gas consumption of final customers may be influenced by the evolution of various factors: atmospheric air temperature, natural gas purchase prices, whether or not large gas customers run on backup fuel (heavy fuel oil, coal), the level of regulated prices and final customers' payment capacity etc.

Natural gas consumption by type of customer

Total natural gas consumption by household customers on the right bank of the Nistru river decreased to 0.343 bcm in 2022 compared to 0.4616 bcm in 2021, while total demand by industrial and commercial customers reached 0.2139 bcm of natural gas consumed compared to 0.3206 bcm in 2021.

Compared to previous years, both the volumes of natural gas purchased and supplied to final customers decreased considerably. The significant decrease by 138.1 mcm or 35.3% in natural gas consumption in 2022 compared to the previous year was registered in the energy sector, followed by a decrease in natural gas consumption by household customers by 117.8 mcm or 25.5%.

Among other economic agents, in 2022 natural gas consumption decreased by 106.7 mcm or 33.3%. Natural gas consumption in public institutions also decreased by 14.8 mcm or 28.7% compared to 2021.

The most significant factor causing the decrease in natural gas consumption in the energy sector in the 2022 reporting year was that JSC 'Termoelectrica' used both natural gas and alternative fuel (heavy fuel oil) at source 1 (CHP 2) to produce electricity and heat.

Table below describes the structure of gas supply for different categories of final customers, 2020-2022.

Categories of consumers	2020		2021		2022		2021 / 2020		2022 / 2021	
	mcm	%	mcm	%	mcm	%	mcm	%	mcm	%
Natural gas consumption, total	1046.3	100.0	1224.7	100.0	847.3	100.0	+178.4	+17.0	-377.4	-30.8
including household customers	372.7	35.6	461.6	37.7	343.8	40.6	+88.9	+23.8	-117.8	-25.5
public institutions	41.5	4.0	51.5	4.2	36.8	4.3	+10.0	+24.1	-14.8	-28.7
energy sector	371.4	35.5	390.9	31.9	252.8	29.8	+19.4	+5.2	-138.1	-35.3
other economic operators	260.6	24.9	320.6	26.2	213.9	25.2	+60.0	+23.0	-106.7	-33.3

Table 6. Structure of natural gas supply for different categories of final customers, 2020 - 2022, ANRE.

The largest share of 40.6% of the natural gas consumption in 2022 belongs to household customers, with an increase of 2.9 p.p. compared to 2021, followed by the consumption of energy sector companies with a share of 29.8%, a decrease of 2.1 p.p. compared to the previous year.

At the same time, the share of natural gas consumption of other economic operators is 25.3%. The share of gas consumption of public institutions is the lowest in the reference period – 4.3%.

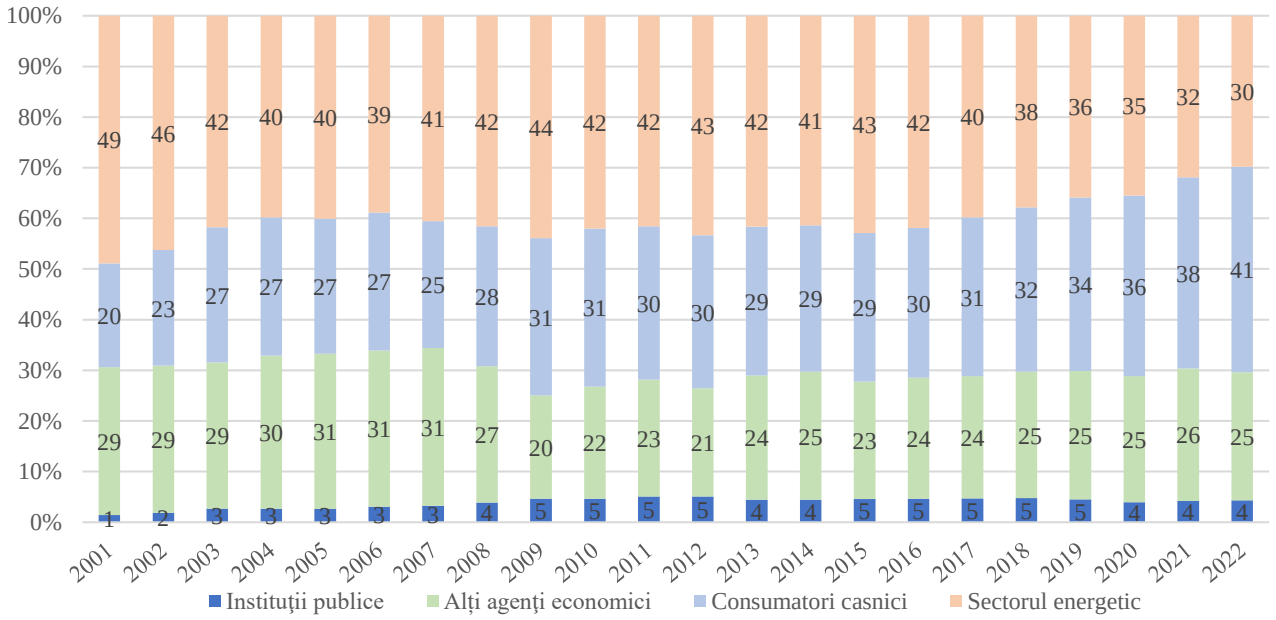

Figure 5 Structure of natural gas consumption by categories of customers, 2001-2022, %, ANRE.

Demand levels during peak periods

In 2021, the level of demand during peak periods was registered in January and reached *191.7 mcm* or 16% of total annual natural gas consumption. February was the second month with the highest natural gas consumption in 2021 (186.6 mcm).

According to JSC 'Moldovagaz' data, the **highest daily demand for natural gas** on the right bank of the Nistru river in the last 20 years was recorded **on 23 January 2006 and reached 9.8 mcm/day.**

Distribution of natural gas import sources by country of origin

About 78% of primary energy sources are imported into the Republic of Moldova, and the country's natural gas supply until 2022 traditionally depended on imports from the main source – PJSC 'Gazprom'. Natural gas imported from the Russian Federation is transported via Ukraine and delivered to the Republic of Moldova

Due to the accumulated debts and the politicisation of natural gas supply conditions by the Russian Federation, the contract between JSC 'Moldovagaz' and PJSC 'Gazprom' on conditions of natural gas supply in the Republic of Moldova is likely to be unilaterally terminated and natural gas deliveries may be limited or completely stopped.

During October 2022-2023, natural gas deliveries from PJSC 'Gazprom' to JSC 'Moldovagaz' amounted to only 5.7 mcm/day, representing a reduction of about 50% compared to the volumes of natural gas contracted for the heating season. In the warm period, the volume of 5.7 mcm/day is sufficient to cover natural gas consumption on both banks of Nistru river. Starting from December 2022, the total volume of natural gas of 5.7 mcm/day delivered to the Republic of Moldova by PJSC 'Gazprom' was allocated by JSC 'Moldovagaz' to cover the natural gas consumption needs of customers on the left bank of the Nistru river and to generate electricity at the Cuciurgan Thermal Power Plant for customers on both banks of the Nistru.

Since December 2022, Moldovan natural gas suppliers no longer purchase natural gas for the needs of the right bank of the Nistru river from PJSC 'Gazprom'.

In a very short period of time, Moldovan suppliers managed to diversify their gas supply sources and routes. According to reports submitted by natural gas suppliers to ANRE, in 2023, natural gas was purchased on international gas markets from traders/suppliers registered in: Greece, Bulgaria, Austria, Romania, Switzerland.

Description of the role of storage facilities, as appropriate

The Republic of Moldova does not have its own natural gas storage and LNG facilities. To enhance the flexibility and resilience of the natural gas supply system, in 2020-2023, the Republic of Moldova began to store natural gas in storage facilities in neighbouring Ukraine and Romania.

Gas storage is important in ensuring the availability of natural gas during peak consumption periods, in increasing the efficiency of the use of natural gas transmission infrastructure and in balancing the system. Creating gas stocks is an effective measure to balance supply and demand to increase the security of gas supply, mitigate sudden increases in gas prices and ensure the safe and reliable operation of the gas market.

Description of the role of natural gas in electricity generation

The main domestic sources of electricity generation in the Republic of Moldova are natural gas-fired combined heat and power plants in Bălţi and Chișinău municipalities. These plants generate electricity according to the demand for heating and domestic hot water. There are also many power plants that generate electricity from renewable sources.

The balance between the demand and electricity generation in the Republic of Moldova is ensured by Ukraine and the left bank of the Nistru river (by the MGRES thermal power plant controled by Russian company 'Inter RAO'), which together meet about 80% of electricity demand.

Dependence on electricity purchased from the MGRES thermal power plant is a vulnerability, due to the risk of disruption of natural gas supply by 'Gazprom' PJSC or transit of natural gas of Russian origin through Ukraine. In both situations, difficulties may arise in the production of electricity by the MGRES thermal power plant. In these circumstances, electricity will be purchased from European markets with risks to its availability and price.

The Republic of Moldova depends on Ukraine both in terms of reserve capacity and power system balancing. This dependence severely limits country's ability to integrate various renewable energy sources into the electric grid. As a result, flexibility of the electricity system is mostly based on the Ukrainian and Romanian electricity systems. Moldavian natural gas-fired power plants' generation capacity, compared to the total generation capacity in the power sector, is essential for balancing the national electricity power system. Electricity is produced primarily by natural gas-fired power plants (the 10-year average share of production was around 90%).

Electricity needs for domestic consumption are not fully covered under the contract signed with the Cuciurgan thermal power plant. For diversification purposes, every month, bilateral contracts are signed with Ukrainian and Romanian producers, depending on their availability and/or electricity is purchased from the Romanian electricity market – from the day-ahead market organised by the Romanian electricity and gas market operator.

There are several public and private undertakings in the power sector in the Republic of Moldova. These include national undertakings specialised in electricity generation, JSC 'Termoelectrica' and JSC 'CET-Nord', which generate electricity at the combined heat and power (CHP) plants, SOE 'Nodul Hidroenergetic' Costești, several private sugar industry companies that produce energy at the CHP and small power plants generating electricity from renewable sources.

The amount of locally produced electricity increased by about 16% in 2021 to 984.7 million kWh, which is 133.3 million kWh more than in 2020.

This increase is due to the higher capacity of the renewable electricity generation facilities (by about 30 MW), as well as the increase of more than 75 million kWh in the amount of electricity produced by JSC 'Termoelectrica'.

In 2021, the main nationwide sources of electricity were:

– CETs owned by JSC 'Termoelectrica' and JSC 'CET-Nord' – 797.9 million kWh or 81% of the total amount of electricity produced;
– wind power plants – 76.3 million kWh or 7.8% of electricity produced;
– photovoltaic power plants – 7.8 million kWh or 0.8% of electricity produced;
– biogas power plants - 32.2 million kWh or 3.3% of electricity produced;
– thermal power plants in sugar factories - 2.9 million kWh or 0.3% of electricity produced.

Total electricity consumption in the Republic of Moldova increased by about 7.5% in 2021 compared to 2020 and reached 4591.7 million kWh. The amount of electricity delivered to final customers in 2021 was 4155.8 million kWh compared to 3866.1 million kWh in 2020. In 2021, electricity consumption by household customers increased by 5.7% compared to the previous year, while electricity consumption by non-household customers increased by 9% compared to 2020.

Urban household customers saw an increase in electricity consumption of around 6.2%, while rural household customers saw a 5.1% increase in consumption. Concurrently, the share of household customers in final electricity consumption decreased by 0.7%, while the share of non-household customers increased by 0.7% in 2021, compared to 2021.

In 2022, due to the use of alternative fuel, fuel oil consumption by JSC "Termoelectrica" increased from 15,833.3 tons in 2021 to 94,288.6 tons in 2022. Thus, the natural gas consumption of JSC 'Termoelectrica' decreased from 340.6 mcm in 2021 to about 211.4 mcm in 2022.

The amount of locally generated electricity decreased by about 13.6% in 2022, compared to the same indicator in 2021, reaching the level of 851.5 million kWh, which is by 133.9 million kWh less than in 2021, of which:

– CET of JSC 'Termoelectrica' and JSC 'CET Nord' – 614 million kWh or 72.10% of the total electricity produced;
– electricity production from renewable sources increased by about 68.4%, accounting for 196.3 million kWh, or 23.06% of the electricity produced;
– electricity produced at the Costești hydroelectric power plant accounting for 41.2 million kWh or 4.84% of the electricity produced;
– power plants of sugar producers delivered 1.4 million kWh to the grid or 0.16% of the electricity produced.

In 2022 electricity consumption in the Republic of Moldova decreased by about 1.69% compared to 2021 and reached 4,514 million kWh. The amount of electricity delivered to final customers in 2022 was 4,051.6 million kWh compared to 4,155.8 million kWh in 2021. Household customers consumed about 1,727.53 million kWh or, in other words, there was a 5% decrease in electricity consumption among household customers in 2022 compared to the previous year. Non-household customers consumed about 2,324.04 million kWh or, in other words, there was a 0.56% decrease in electricity consumption by this category of final customers in 2022 compared to 2021.

During the cold season, the electricity load of the power system (right bank of the Nistru river) ranges between a minimum base load of 330-370 MW and a maximum peak load of 700-760 MW, while during the summer it varies from a minimum of 260 MW to a maximum of 610 MW. The maximum electricity load for both banks of the Nistru river can reach up to 1,100 MW.

Given the insufficient generation capacity and the structure of electricity generation sources (heating demand driven by CET plants and small hydropower plants with a vulnerable hydrological regime), the Republic of Moldova does not have power stations able to fully secure capacity reserves for primary, secondary and tertiary regulation. Moldova must therefore rely on Ukraine's power system for frequency control. The MGRES thermal power plant could supply some additional reserves, but such an agreement was not concluded in 2022.

Description of the role of natural gas in heat production

Centralised heating supply systems provide heating for domestic and non-domestic customers in only nine cities of the Republic of Moldova. More than 99% of heat consumption is registered in Bălţi and Chișinău municipalities. Other customers use other sources for heating, mainly individual stoves, which cover more than 56% of all households. Just a little over 1% of households in the Republic of Moldova do not have heating systems.

The type of fuel used to produce heat has changed insignificantly over the last decade: natural gas remains the main type of fuel (accounting for about 95%). Since 2019, coal practically wasn't used to generate heat. The amount of heavy fuel oil used to generate heat decreased from 5% in 2010 to less than 1% in 2020-2021.

Biofuel-based solutions (solid biofuel, biogas) account for about 4% of heat production and could enable to replace more fossil fuels for heat production.

Centralized Heating Supply System (SACET)	2021	2022	2023
SA “CET – Nord”	0.35	0.36	0.37
SA “Termoelectrica”	0.003	0.003	0.003

Table 7. Share of biomass in heat production by SACETs, %

Heat supply services through centralised heating supply systems were provided by 11 licensees in 2022. The main operators of centralized heating supply systems in the Republic of Moldova are S.A. ‘Termoelectrica’ in Chișinău and JSC "CET-Nord" in Bălţi. Both enterprises are state-owned, produce electricity and heat in combined heat and power plants using natural gas and also supply heat. There are also several small undertakings producing and supplying heat through centralised heating supply systems.

SA ‘Termoelectrica’ owns four sources of heating distributed through the centralised heating supply system in Chișinău. CHP 2 is the main source of centralised heating and is located in the eastern part of the network. The combined heat and power plant operates mainly during the heating season. CHP 1 is an older combined heat and power plant located to the west from CHP 2 and operates mainly during summer, providing hot water to local customers. Heat plants (TP) West and TP South operate independently during the winter months. Hot water needs during summer are covered by CHP 1 or CHP 2 for zones HPP West and HPP South.

SA ‘CET-Nord’ manages three power plants with a total installed electrical capacity of 37.4 MW and a thermal capacity of 155.35 Gcal/h. The undertaking also operates 205.7 km of district heating network for the centralised heating supply in Bălţi. Power plants run on natural gas. JSC ‘CET-Nord’ also owns a biomass-fired heat plant in the western part of the town. This heat plant supplies heating to a small sector of residential buildings.

In 2022, heat generated by combined heat and power plants of the regulated undertakings in the heating and power sector reached 1,539.18 thousand Gcal, of which 1,290.94 thousand Gcal or 78.75% was cogenerated.

The most important heating supplier JSC ‘Termoelectrica’ delivered 1,131.8 thousand Gcal of heat in 2022, or by 289.1 thousand Gcal (-17.16%) less than in 2021. The second largest heat supplier ‘CET-Nord’ JSC delivered 131.7 thousand Gcal in 2022, registering increase of 24.3 thousand Gcal (+12.56%) compared to 2021.

Licence holders within the heating and power sectors provide public heating supply services through centralised heating supply systems to more than 40,392 buildings, including 238 budgetary institutions and 1,674 economic operators.

In 2022, there was a decrease in heat consumption by households by 220.1 thousand Gcal (18.0%). The useful amount of heat supplied to economic operators decreased by 20.3% and heat demand among budgetary institutions decreased by 18.1%.

Disrupted natural gas supply to electricity producers may significantly influence the internal electricity market due to the high share of natural gas-fired generation capacity in total generation capacity.

However, due to a disruption in heat supply through centralised heating supply systems, the population could switch to electric heating, which may overload electricity grids.

The role of energy efficiency measures and their effect on annual final natural gas consumption

Energy efficiency is the first priority for increasing Moldova's energy security and resilience. The amendments introduced in 2023 to Law No 139/2018 on energy efficiency created a favourable legal framework for a more ambitious implementation of energy efficiency projects which contribute to reducing energy consumption and greenhouse gas emissions.

A new energy efficiency target will be set out in the 2025-2030 Integrated National Energy and Climate Plan (NECP) The Republic of Moldova committed to increase energy efficiency by 3% per year in central public administration buildings and to save at least 0.8% of the average energy consumption value per year between 1 January 2019 – 1 January 2022 from 2024.

The implementation of energy efficiency measures can significantly contribute to the reduction of natural gas consumption in the Republic of Moldova.

The main actions to improve energy efficiency in the Republic of Moldova are:

- *upgrade thermal power plants, CHPs and heat plants;*
- *use of renewable energy sources;*
- *reconnect public buildings to centralised heating supply systems;*
- *implement energy efficiency measures in the residential and public buildings sector;*
- *promote energy efficiency improvement measures in natural gas infrastructure;*
- *implement energy efficiency programs;*
- *launch public information and awareness campaigns.*

Another initiative to increase energy efficiency is the implementation of the energy efficiency obligation scheme, which is a legislative mechanism that imposes requirements on obligated parties (including natural gas DSOs and heat suppliers) to implement quantitative energy savings targets in their customer portfolio. Obligated parties will choose the most cost-effective measures and delivery routes to achieve energy savings, such as providing incentives, information or services to their customers or implementing energy efficiency projects.

Increasing energy efficiency by promoting high-efficiency cogeneration (refurbishment of heat plants), taking measures to reduce energy losses and improve energy efficiency in buildings and promoting efficient technologies and those benefiting from RES will help reduce dependence on natural gas imports and increase energy security.

3. Summary of national risk assessment

The national risk assessment of the security of natural gas supply of the Republic of Moldova identified five major groups of risks according to their source:

- political risks;
- technological risks;
- social risks;
- commercial/market/financial risks;
- natural disasters.

In total, 39 specific types of risks able to affect the security of natural gas supply were identified at 5 levels of groups. Some threaten the operation of all elements of the natural gas infrastructure, while others have local impact or are limited to individual components of the natural gas system.

The methodology applied during the national risk assessment identified risks according to the likelihood of their occurrence (frequent, probable, occasional, remote, unlikely, eliminated) and the severity of the risks (catastrophic, critical, non-essential, negligible). Such an approach allows to define different levels of risk probability and to assess their impact on the reliability of the operation of the Moldovan natural gas infrastructure.

The national risk assessment identified 30 risk factors that pose a low or very low threat to the reliable supply of natural gas in the Republic of Moldova. The impact of this group of risks is primarily local and does not pose a long-term threat to the security of natural gas supply. Normally, system operators can overcome the consequences of such risks.

Although most risks are unlikely to occur, they have the potential to affect various elements of the natural gas system infrastructure. Although a single risk with a low probability does not pose a significant threat, several types of risks occurring simultaneously may lead to a rapid worsening of the gas supply situation.

The most serious risks that may affect the natural gas system of the Republic of Moldova are external factors related to the delivery of natural gas from the Russian Federation to Ukraine.

The current geopolitical context, entailing the war in Ukraine and the use of energy resources as a political tool by the Russian Federation, has increased energy supply risks. Thus, the European Union faces rising electricity and gas prices and Moldova’s level of exposure to external shocks is even higher than average and will persist in the long term. The prolonged war in Ukraine and the uncertainty of future events perpetuate the energy crisis in Moldova.

The war in Ukraine, the increased probability of terrorist attacks on gas infrastructure in the region and potential disruptions of natural gas flow from Ukraine indicate a high level of threat to the security of natural gas supply to Moldova.

Commercial disputes with the Russian Federation and the volatility of natural gas prices on regional markets create great risks for the security of natural gas supply in the Republic of Moldova.

The increased probability of regional political instability, supply contracts with third country suppliers, volatility of the national currency exchange rate and increased inflation may also pose considerable risks to Moldova's reliable gas supply.

According to the risk factors under consideration, the risk-based scenarios were developed according to probability of risks and their expected impact on Moldova's natural gas supply.

Eight risk-based scenarios considered the following assumptions:

- disruption of natural gas supply in the Republic of Moldova due to damaged gas system infrastructure caused by the war in Ukraine started by the Russian Federation, or a terrorist attack;
- limitation or interruption of natural gas supply in the Republic of Moldova due to commercial disputes/debts of JSC 'Moldovagaz' to PJSC 'Gazprom', or due to political tensions between the Russian Federation and the Republic of Moldova;
- limitation of natural gas supply to the Republic of Moldova, with the possibility to import only through one interconnection point;
- interruption of gas supply to the left bank of the Nistru river;
- unfavourable weather conditions during the winter period.

The list of relevant risk scenarios and the estimated natural gas deficit is described in Annex 5 to the Plan.

Depending on the scenario, the impact of different events influencing the security of natural gas supply of the Republic of Moldova varies from 72 hours to 180 days depending on the time needed to eliminate the negative consequences of interruptions in gas supply.

Analysis of these eight scenarios shows that if natural gas supply to Moldova is interrupted for various reasons, the potential natural gas deficit may vary between **155 and 190 mcm within 30 days during winter and 30 mcm during other seasons.**

The natural gas deficit for protected customers may range from 71 to 100 mcm within 30 days during winter and from 13 to 38 mcm during other seasons.

In case of a long-term interruption of gas supply (180 days), the deficit may reach 711 mcm, including for protected customers – about 362 mcm.

The risks identified were qualitatively assessed taking into account the probability of occurrence of the risks as well as the possible consequences on the gas supply in case of their occurrence, as follows:

1) the probability of the identified risks occurring:
   a) *very low* – it is very unlikely that the incident will occur within the next 10 years;
   b) *low* – the risk is unlikely to occur over the next 5 years;
   c) *medium* – the risk is likely to occur over the next 5 years;
   d) *high* – the risk is likely to occur over the next 3 years;
   e) *very high* – it is certain that the risk will occur in the near future.
2) the consequence on natural gas supply in case of identified risks:

a) *insignificant* – when the risk occurred causes a small disruption that can be easily managed by the gas undertakings by applying operational measures and the natural gas supply to customers is not affected;

b) *moderate* - when the risk occurred affects the supply of natural gas, but the situation can be resolved by applying measures based on market mechanisms and customers are not significantly affected;

c) *significant* – when the risk occurred significantly affects the supply of natural gas and the measures based on market mechanisms are no longer sufficient and it is necessary to apply emergency measures to ensure the natural gas supply to affected customers;

d) *serious* – when the risk occurred causes serious disruption to the gas supply and emergency measures must be taken to ensure the natural gas supply to at least protected customers;

e) *very serious* – when, due to the risk occurrence, the gas supply is largely or totally affected and emergency measures are necessary to restore the natural gas supply to customers as soon as possible.

The results of the qualitative assessment of the risks identified are represented in the risk matrix in Figure 6.

Probability (axis Y)					
High				Scenario 3 (a,b).	Scenario 4 (a,b) Scenario 6 (a,b) Scenario 8
Medium		Scenario 2 (a); Scenario 7 (c).	Scenario 5	Scenario 7 (b).	Scenario 1 Scenario 6 (c). Scenario 7 (a).
Low	Scenario 7 (d)			Scenario 2 (b).	
Very low					
Consequence (axis X)	**Non-significant**	**Moderate**	**Significant**	**Serious**	**Very serious**

Figure 6. The results of the qualitative assessment of the risks identified.

Each probability-consequence combination (severity) in the risk matrix in Figure 6 is colour-coded green - yellow - red, as follows:

Colour	**Severity**
	Low
	Medium
	High

Note: The X-axis of the matrix shows the consequences (with damage increasing from left to right), which may arise due to the security of natural gas supplyrisks, and the Y-axis shows the probability of occurrence of the risks (with probabilities increasing from bottom to top). The Cartesian product of both axes provides all possible combinations of probabilities and consequences, i.e. the severity of the probability-consequence combination.

4. The infrastructure standard

According to the Regulation onemergency Situations in the Natural Gas Sector, compliance with the infrastructure standard is one of the basic conditions for ensuring security of natural gas supply. According to infrastructure standard, in the event of a disruption of the single infrastructure of the natural gas system, the remaining infrastructure shall have the technical capacity to ensure the total volume of natural gas for calculated area, needed for a day of exceptionally high natural gas demand occurring with a statistical probability of once in 20 years.

N-1 formula at the national level

Formula 'N – 1' describes the technical capacity of the natural gas infrastructure system needed to satisfy total natural gas demand, in accordance with the infrastructure standard.

In the event of a disruption of the single infrastructure of the natural gas system, the infrastructure remained operational after the disruption of any key infrastructure element shall have the technical capacity to ensure the total volume of natural gas for calculated area, needed for a day of exceptionally high natural gas demand occurring with a statistical probability of once in 20 years, i.e. N-1 > 100%, and this appears as follows:

$$N-1\,[\%] = \frac{EPm + Pm + Sm + LNGm - Im}{D\max.} x100, \text{ N-1} \geq 100\%$$

Concurrently, if it is demonstrated that a disruption of natural gas supply may be sufficiently compensated for, in a timely manner, by appropriate natural gas market-based demand-side measures, Preventive Action Plan that a disruption of natural gas supply may be sufficiently compensated for, in a timely manner, by appropriate natural gas market-based demand-side measures, N-1 criterion shall be calculated according to the following formula:

$$N-1\,[\%] = \frac{EPm + Pm + Sm + LNGm - Im}{Dmax - \text{Deff}} x100, \text{ N-1} \geq 100\%$$

Where:

EP$_m$ – technical capacity of entry points (in mcm/day), other than production (*Pm*), storage facilities (Sm) and *GNLm*, means the sum of the technical capacity of all interconnection entry points capable of supplying natural gas to the Republic of Moldova.

P$_m$ – maximal technical production capability (in mcm/day) means the sum of the maximal technical daily production capability of all natural gas production facilities which can supply with natural gas the Republic of Moldova;

S$_m$ – maximal technical storage deliverability (in mcm/day) means the sum of the maximal technical daily withdrawal capacity of all storage facilities that may be delivered to all entry points of the Republic of Moldova, taking into account their respective physical characteristics of each storage facility;

LNG - maximal technical liquefied natural gas (LNG) facility capacity (in mcm/day) means the sum of the maximal technical daily send-out capacities at all LNG facilities in the Republic of Moldova, taking into account critical elements like offloading, ancillary services, temporary storage and re-gasification of LNG as well as technical send-out capacity;

I$_m$ – means the technical capacity of the single natural gas infrastructure (in mcm/day) with the highest capacity to supply the Republic of Moldova. When several natural gas pipelines are connected to a common upstream or downstream infrastructure and cannot be separately operated, they shall be considered as one single infrastructure;

D_{max} – means the total daily natural gas demand (in mcm/day) during a day of exceptionally high natural gas demand, occurring with a statistical probability of once in 20 years;

D_{eff} – means the part (in mcm/day) of D_{max} (in mcm/day)that in the case of a disruption of natural gas supply can be sufficiently and timely covered with market-based demand-side measures (e.g. by concluding interruptible natural gas supply contracts).

The indicators of natural gas infrastructure in the Republic of Moldova used for the calculations according to 'N-1' criterion are included in Annex 1.

By applying the values of the natural gas system infrastructure indicators, the following result was obtained when the calculations were made according to 'N-1' criterion:

$$N-1=\frac{EPm+Pm+Sm+LNGm-Im}{Dmax-\mathrm{Def}}x100=\frac{69.05+0+0+0-30}{9{,}8}x100=398.46\,\%$$

The result of the calculation under criterion "N-1" (398.46%) indicates that the Moldovan natural gas system meets the infrastructure standard requirements and can ensure the delivery of the natural gas volume necessary to meet the natural gas needs during a day of exceptionally high natural gas demand, even if main infrastructure of the natural gas system with the largest technical capacity (Ananiev - Tiraspol - Ismail pipeline) is disrupted.

The Ananiev-Tiraspol-Ismail natural gas pipeline is used to ensure the transit of natural gas to the Balkan countries, but since May 2021 no transit of natural gas took place.

For these reasons, ***Dmax*** value (maximum own consumption capacity registered together with the maximum daily transit capacity) is estimated at 39.05 mcm/day (29.25+9.8), for which the 'N-1' criterion will be equal to 100% according to the formula below:

$$N-1=\frac{EPm+Pm+Sm+LNGm-Im}{Dmax-\mathrm{Def}}x\ 100=\frac{69.05+0+0+0-30}{39.8}x\ 100=100\%$$

A reverse natural gas flow in the Republic of Moldova is available through 5 interconnection points with the following capacities:

IP	Type	Direction	Capacitate mcm/day
IP Alexeevka	entry	MD - UA	7,9
IP Cauşeni	entry	UA- MD	12,00
IP Grebeniki	exit	MD - UA	3,96
IP Ananiev	entry	MD - UA	0,014
IP Ungheni	exit	MD -RO	2,04
		Total	25.14

Bidirectional total capacity with neighbouring countries is 25,91 mcm/day, including 23.87 mcm/day with Ukraine and 2.04 mcm/day with Romania.

We can conclude that in case of disruption of the main natural gas system infrastructure, the Ananiev-Tiraspol-Ismail natural gas pipeline, the remaining available infrastructure has the capacity to supply natural gas to final customers in the country. However, in this case, the N-1 criterion is close to the minimum required value, thus leading to considerable risks for the country's energy security.

5. Natural gas supply standard

According to the Regulation onemergency Situations in the Natural Gas Sector, natural gas suppliers with a public service obligation and system operators shall take the necessary measures to ensure the natural gas supply to protected customers in the following cases:

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

Categories of protected customers

In the Republic Of Moldova, the following categories of customers are considered protected customers:

1) household customers whose natural gas usage installations are connected to the natural gas distribution networks;

2) enterprises and institutions that provide essential social service, the natural gas installations of which are connected to a natural gas distribution or transmission network;

3) small enterprises under the scope of Law No 179/2016 on small and medium-sized enterprises, the natural gas installations of which are connected to the natural gas distribution network, except the licence holders for the sale of compressed natural gas for vehicles at filling stations;

4) combined heat and power plants and/or heat plants connected to the natural gas transmission or distribution network, supplying heat to the centralised heating supply system or supplying heat to consumers referred to in sub-points 1), 2) and 3), provided that they cannot operate on fuels other than natural gas.

Provided that enterprises or services as referred to in points (a) and (b) do not, jointly, represent more than 20 % of the total annual final gas consumption

For places of consumption where the undertakings and institutions referred to in subpoint 2) do not provide essential social services, they shall be deemed to be interruptible customers and measures limiting and/or interrupting the supply of natural gas may be applied for these places of consumption.

Each system operator shall draw up a list of protected customers whose installations are connected to its natural gas networks. Lists of protected customers shall contain, including information on the type of activity (in the case of non-household customers) and monthly volumes of natural gas at each consumption site for the previous calendar year. Suppliers shall present to system operators all the information necessary to draw up those lists. Lists of protected customers shall be kept at the respective system operators, shall be updated every

two months and are presented, upon request, to the specialised central body and/or TSO. When anemergency situation arises, system operators shall immediately submit the lists of protected customers to TSO.

Annually, by 1 August, the TSO, on the basis of the information submitted by the DSOs and suppliers, shall submit to the central specialist body the nominal list of protected customers grouped by category, which includes the information in the reporting format coordinated in advance by the TSO with the specialised central body.

Natural gas consumption of protected customers

According to the data in Annex 2, in 2021 the residential and energy sectors were the two largest categories of natural gas customers, accounting for 39% and 37% of the total natural gas consumption on the right bank of the Nistru river. In 2022, household customers had the largest share of 40.6% of the natural gas consumption, with an increase of 2.9 p.p. compared to 2021, followed by the consumption of energy sector companies with a share of 29.8%, a decrease of 2.1 p.p. compared to the previous year.

According to the data for the 2022-2023 heating season on the right bank of the Nistru river, the minimum monthly natural gas consumption of *household customers* was 12.4 mcm/month, the maximum monthly natural gas consumption was 47.4 mcm/month and the average consumption was 36.2 mcm/month.

S.A. 'Termoelectrica' and S.A. 'CET-Nord' represent the second major category of final customers of natural gas on the right bank of the Nistru river, which use natural gas for the production of electricity and heat at the combined heat and power plants.

Their minimum monthly natural gas consumption in the 2021-2022 heating season was 41.15 mcm/month (35.7+5.45), the maximum monthly value was 59.88 mcm/month (51.69+8.19).

Other key categories of natural gas customers in the Republic of Moldova (on the right bank of the Nistru river) include *industry* – its average monthly consumption during the heating season in 2022-2023 was 8.3 mcm/month, and *budgetary institutions* – 3.4 mcm/month. Centralised heating accounted for 0.5 mcm of average natural gas consumption and other sectors – 15.2 mcm.

The average monthly natural gas consumption of protected customers on the right bank of the Nistru river for the 2022-2023 heating season was estimated at 72 mcm (or about 54.5% of total consumption), while the monthly natural gas consumption of interruptible customers was estimated at 60 mcm (or about 45.5% of total consumption).

The volumes of natural gas required to comply with the natural gas supply standard

The highest consumption of natural gas in the Republic of Moldova occurs during the heating season (70-76% of total annual consumption). In January-February, natural gas consumption accounts for up to 32-36% of total annual natural gas consumption, followed by gas consumption in November, December and March. In 2022, natural gas consumption in January-February was around 22-25% of annual consumption.

The maximum natural gas consumption was recorded on 23 January 2006 and amounted to 9.8 mcm/day.

The following conditions must be met to ensure a reliable natural gas supply to protected customers:

1) in case of extreme temperatures during a 7-day peak period occurring with a statistical probability of once in 20 years – natural gas consumption by protected customers would reach 5.88 mcm/day (compared to 3.85 mcm/day under normal weather conditions). The total volume of natural gas to be delivered to protected customers over 7 days under this scenario amounts to 41.16 mcm.
2) in the case of exceptionally high natural gas demand for at least 30 calendar days – the volume of natural gas required to supply customers is 5.88 mcm /day or 176.4 mcm for 30 days;
3) in the case of disruption of the single natural gas infrastructure under average winter conditions – the minimum volume required to supply natural gas to protected customers is 3.85 mcm/day or 115 mcm for 30 days.

Taking into account natural gas supply and natural gas needs, the following requirements of the natural gas supply standard shall be met:

1) in case of extreme temperatures during a 7-day peak period occurring with a statistical probability of once in 20 years – additional 14.21 mcm *(41.16-26.95(3.85*7))* of natural gas is required to cover the increased demand of protected customers over a 7-day period (or approximately 7.5% of monthly natural gas demand under normal winter weather conditions);
2) in the event of disruption to the main natural gas system infrastructure, the remaining available infrastructure meets the reliability criterion derived from the 'N-1' formula not only for protected customers but also for other categories of natural gas customers;
3) in the case of exceptionally high natural gas demand for at least 30 calendar days – the estimated volume of natural gas necessary for protected customers is 5.88 mcm /day or 176.4 mcm for 30 days; Under this scenario, an estimated additional 60.9 mcm of natural gas is needed to cover the increased demand (or about 32.1% of monthly natural gas demand under normal weather conditions).

In case of exceptionally high natural gas demand on the gas market, or if natural gas supply is limited and the available volumes of natural gas are still insufficient to meet the unsatisfied needs of protected customers, although market mechanisms were applied, the measures set out in the Emergency Plan shall be applied to ensure natural gas supply to protected customers.

6. Preventive measures

Sectoral matrix of actions included in the Preventive Action Plan is provided for in Annex 4.

The preventive measures developed are divided in the following categories:

- Natural gas demand measures;
- Natural gas supply measures;
- Other measures.

A. Market-based preventive measures

Annually, by 1 October, the responsible entities shall submit to the specialised central body information on the progress in the implementation of market-based preventive measures related to natural gas supply (9 measures – 5 mandatory and 4 with recommendation), gas

demand (13 measures – 8 mandatory and 5 with recommendation) and other preventive measures listed in this section.

Natural gas **supply** measures

Measure **1 supply**	*Create and maintain natural gas stocks related to the stockholding obligation under Article 108[2] – 108[3] of the Law on natural gas*
Type of measure	Obligatory
Goal	Ensure availability of natural gas and avoid price shocks for final customers, fulfill Moldova's stockholding obligations as a country member of the Energy Community.
Description	The supplier designated by the Government is obliged to store a certain volume of natural gas in storage facilities in countries that are part of the Energy Community and/or in Member States. On 1 November of each year, the volume of natural gas stored must amount to at least 15% of the average annual natural gas consumption of final customers in the Republic of Moldova connected to the natural gas networks of licensed system operators, determined for the last 5 calendar years. The holder of the stockholding obligation shall submit to ANRE, by 1 October of each year, the application on approving regulated natural gas stocks price and the reasoned and documented calculation of the related costs. By 20 October, ANRE shall approve the regulated price of natural gas stocks and the market share assigned to each supplier on the retail market.
Entities responsible	The holder of the stockholding obligation, ANRE.
Monitoring	Ministry of Energy, ANRE.
Timeframe	Annually

Measure **2 Supply**	*Create and maintain security stocks under Article 108[1] of the Law on natural gas*
Type of measure	Obligatory
Goal	Ensure security of natural gas supply(ensure availability of natural gas and avoid price shocks for final customers).
Description	The entity designated by the Government shall create and maintain natural gas stocks and make them available to suppliers, based on the Commission's decision. The exact volume of natural gas to be accumulated as security stocks is approved annualy by the Government, by 30 April, based on a proposal from the central specialised body, according to ANRE calculations. ANRE annually approves the amount of financial contributions paid by suppliers of the retail natural gas market to cover the costs of natural gas security stocks.
Entities responsible	The entity for creating and maintaining the security stocks (SA 'Energocom').
Monitoring	ANRE, Ministry of Energy
Timeframe	Annually

Measure	Implement the effort sharing mechanism to fulfil

3 Supply	the objective of creating natural gas stocks
Type of measure	Obligatory, upon Government decision.
Goal	Increase flexibility of natural gas system operation, reduce natural gas supply risks.
Description	At the Government's decision, the stockholding obligation may be replaced, fully or partially, through an effort sharing mechanism with one or more countries members of the Energy Community, EU Member States with gas storage facilities established by an inter-state or inter-institutional treaty concluded to this end.
Entities responsible	Government, Ministry of Energy, holder of the stockholding obligation.
Monitoring	Ministry of Energy
Timeframe	According to the Government Decision.

Measure **4 Supply**	*Purchase natural gas on international exchanges from a variety of sources and ensure its transportation through different supply routes.*
Type of measure	Recommendation
Goal	Reduce the probability of occurrence and/or impact of a gas supply crisis. Diversify gas supply sources and routes. Avoid dependence on a single source, procure gas on the basis of price mixes, avoid congestion at the interconnection points.
Description	Purchase natural gas from several sources, from international exchanges and transport it through various interconnection points. Register and examine the opportunity to participate in joint natural gas purchases organised under the EU Energy Platform in accordance with Council Regulation EU 2022/2576.
Entities responsible	Natural gas suppliers.
Monitoring	ANRE
Timeframe	-

Measure **5 Supply**	*Using long-term and short-term natural gas supply contracts to cover variations in natural gas demand*
Type of measure	Recommendation
Goal	Ensure continuity of natural gas supply, cover natural gas demand
Description	Natural gas suppliers conclude various natural gas purchase contracts to cover fluctuations in demand at affordable and predictable prices.
Entities responsible	Natural gas suppliers
Monitoring	ANRE
Timeframe	-

Measure **6 Supply**	*Carry out prospecting works throughout the country to identify natural gas deposits*
Type of measure	Recommendation

Goal	In prospective, exploit natural gas fields and identify natural gas supply sources.
Description	Explore the territory in the southern part of the country to identify natural gas fields.
Entities responsible	State Enterprise 'Expediția Hidro-Geologică din Moldova' (Hydro-Geological Expedition from Moldova) ('EHGeoM'), Ministry of Environment, Agency for Geology and Mineral Resources
Monitoring	Ministry of Environment
Timeframe	-

Measure **7 Supply**	*Invest in natural gas infrastructure by increasing the capacity of transmission networks and interconnection points with neighbouring countries, develop bidirectional capacities at interconnections.*
Type of measure	Obligatory
Goal	Develop the natural gas infrastructure; increase the number of entry routes into the transmission system and ensure the reverse flow of natural gas in the Republic of Moldova.
Description	To meet the needs of ensuring security of natural gas supplyTSO shall invest in natural gas infrastructure according to the Natural Gas Transmission Network Development Plan/ Annual Investment Plan approved by ANRE.
Entities responsible	SRL "Vestmoldtransgaz" ANRE
Monitoring	ANRE
Timeframe	2023-2032

Measure **8 Supply**	*Promote investments in infrastructure and technology needed for biogas production*
Type of measure	Recommendation
Goal	Promote the production and use of gas from renewable energy sources
Description	The Republic of Moldova has biogas production potential due to the country's developed agricultural resources and food industry, which produces a significant amount of animal and plant waste. Investments in infrastructure and technology are needed to fully exploit the potential of biogas production.
Entities responsible	Ministry of Energy, National Center for Sustainable Energy
Monitoring	Ministry of Energy
Timeframe	Ongoing

Measure **9 Supply**	*Develop and launch information campaigns on the importance of using alternative energy resources for heating (e.g. biomass, electricity), where technically possible, to reduce natural gas consumption.*
Type of measure	Obligatory
Goal	Reduce the natural gas consumption
Description	Natural gas suppliers concluded contracts for all the natural gas needs of their customers at affordable and stable prices

Entities responsible	National Center for Sustainable Energy
Monitoring	National Center for Sustainable Energy
Timeframe	-

Preventive measures related to the reduction of natural gas **demand**

Measure **1 Demand**	*Final customers who own combined heat and power plants needed to produce electricity and heating create and maintain stocks of alternative fuels.*
Type of measure	Recommendation
Goal	Reduce natural gas consumption, ensure the continuity of electricity generation and heat supply to final customers.
Description	Sugar factories purchase alternative fuels needed for electricity and heat production.
Entities responsible	ICS "Moldova-Zahar" SRL SRL "Südzucker Moldova"
Monitoring	Ministry of Energy
Timeframe	Annually

Measure **2 Demand**	*Create and maintain stocks of alternative fuels for heat production, where technically feasible.*
Type of measure	Recommendation
Goal	Reduce natural gas consumption
Description	Build up stocks of alternative fuels for heat generation where technically feasible.
Entities responsible	SA "Termoelectrica" SA CET- Nord Other heat suppliers, holding license issued by ANRE
Monitoring	Ministry of Energy, ANRE.
Timeframe	

Measure **3 Demand**	*Producers that operate fossil fuel power plants create and maintain reserve stocks where technically feasible.*
Type of measure	Recommendation
Goal	Reduce the natural gas consumption;
Description	Build up stocks of alternative fuels for heat production where technically feasible to ensure security of electricity supply under conditions set by the Government.
Entities responsible	Producers operating fossil fuel power stations
Monitoring	Ministry of Energy, ANRE.
Timeframe	-

Measure **4 Demand**	*Interruptible customers of natural gas create and maintain stocks of alternative/backup fuels to ensure their operation;*
Type of measure	Recommendation

Goal	Reduce the natural gas consumption, ensure
Description	Large and medium-sized enterprises may switch to other types of fuel or purchase back-up fuel if they deem appropriate to operate during emergencies when there is a risk of limiting or interrupting gas supply.
Entities responsible	Interruptible customers
Monitoring	Ministry of Energy
Timeframe	Ongoing

Measure **5 Demand**	*Promote the conclusion of contracts for natural gas transmission service for interruptible capacity so that the TSO is entitled to limit/interrupt the transmission service provision*
Type of measure	Recommendation
Goal	Ensure the balance of the natural gas networks, ensure safe operation of the national transmission system.
Description	The conclusion of natural gas transportation contracts for interruptible capacity products with a reduction coefficient applied to the transportation tariff
Entities responsible	SRL "Vestmoldtransgaz" System users
Monitoring:	ANRE
Timeframe	-

Demand-side measures – improving energy efficiency

Measure **6 Demand**	*Promote the implementation of energy efficiency measures aimed to reduce natural gas, heat and electricity consumption*
Type of measure	Obligatory
Goal	Reduce the natural gas demand and import dependency.
Description	Energy efficiency measures aimed to reduce the natural gas, heating and electricity consumption by final customers shall be implemented following energy audits and the use of modern energy-efficient technologies and equipment that will reduce the natural gas, heat and electricity consumption generated using natural gas. These energy efficiency measures shall be implemented in line with the actions set out in the Integrated National Energy and Climate Plan.
Entities responsible	National Center for Sustainable Energy
Monitoring:	National Center for Sustainable Energy
Timeframe	-

Measure **7 Demand**	*Reconnect public buildings to centralised thermal energy supply systems where technically feasible; take the necessary steps to increase the number of public buildings that could be connected to centralised thermal energy supply systems;*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	Connection/reconnection of public buildings to centralised thermal energy supply

	systems according to Government Decision No 489/2023.
Entities responsible	SA “Termoelectrica” SA “CET-Nord”
Monitoring:	Ministry of Energy
Timeframe	Ongoing

Measure **8 Demand**	*Appoint a person responsible for each subordinate institution, who will monitor, check and ensure the rational consumption of energy resources, and ensure that the recommended indoor temperature is maintained in the building specific to the type of activity*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	Monitoring of the rational and efficient use of energy resources carried out by persons responsible
Entities responsible	State Chancellery; Public Property Agency; Central government authorities; Local government authorities
Monitoring:	State Chancellery, CALM (Congress of Local Authorities in Moldova), Ministry of Energy
Timeframe	Ongoing

Measure **9 Demand**	*Accelerate the implementation of energy efficiency programs with a focus on vulnerable customers and the residential sector, develop and implement new programs*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	The implementation of energy efficiency programs, with a focus on vulnerable customers and the residential sector, the development and implementation of new programs shall be carried out by using the sources collected under the energy efficiency obligation scheme, according to the Law No 139 of 19 July 2018 on energy efficiency.
Entities responsible	National Center for Sustainable Energy
Monitoring:	Ministry of Energy
Timeframe	-

Measure **10 Demand**	*Monitor the energy resource consumption in buildings in the public domain of the state and submit, where appropriate, proposals on the development/adjustment of national energy efficiency and/or renewable energy funding programs.*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	Appoint individuals within each public authority/institution, who will ensure the submission of information necessary for energy resource consumption monitoring in public buildings, based on the national energy efficiency information system, to the public institution National Center for Sustainable Energy, submitting, where appropriate, proposals on developing/adjusting

	national energy efficiency and/or renewable energy sources funding programs to the specialised central body of public administration in energy area.
Entities responsible	National Center for Sustainable Energy
Monitoring:	Ministry of Energy
Timeframe	Ongoing

Measure **11 Demand**	*Implement energy efficiency measures in public buildings in line with the recommendations of the authority responsible for implementing energy efficiency policies*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	Reduce the energy consumption in public buildings, according to the targets set by the Law no. 139/2018 on energy efficiency and the Energy and Climate Action Plan (draft).
Entities responsible	Public Property Agency; State Chancellery; Central government authorities
Monitoring:	State Chancellery, Ministry of Energy
Timeframe	Ongoing

Measure **12 Demand**	*Launch public awareness-raising campaigns about measures citizens should take to reduce energy consumption in households (thermal insulation of buildings, use of thermostats for radiators, reducing indoor temperatures, etc.).*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	Inform final customers about measures that can be taken to reduce the energy consumption of equipment used to satisfy energy demand, including the need to purchase household appliances complying with energy labelling requirements and ways of comparing energy efficiency of various appliances and equipment.
Entities responsible	National Center for Sustainable Energy; Central government authorities Local government authorities.
Monitoring	State Chancellery, Ministry of Energy, CALM
Timeframe	Ongoing

Measure **13 Demand**	*Organise thematic seminars, working meetings with district energy managers, operators of heating plants, administrators of public institutions, biomass producers, etc. on the need to produce thermal energy using biomass and the need to reduce energy consumption in public buildings.*
Type of measure	Obligatory
Goal	Reduce the natural gas demand.
Description	The National Sustainable Energy Center organises thematic seminars, working meetings with district energy managers, operators of thermal power plants, administrators of public institutions, biomass producers
Entities	The National Sustainable Energy Center; Central government authorities, Local

responsible	government authorities.
Monitoring:	National Center for Sustainable Energy;
Timeframe	-

Measures to enhance interconnections between neighbouring countries

Over the last few years, the Republic of Moldova has made notable progress in diversifying natural gas supply routes and adopting EU legislation to liberalise the natural gas market[15]. Given the cross-border and domestic transmission infrastructure, the increasing market liquidity in neighbouring countries and the reshaping of regional energy flows, the Republic of Moldova gained access to several new opportunities to improve energy security.

1) Interconnection to the Romanian natural gas transmission network through the Iași-Ungheni-Chișinău interconnection. The completion of the Iași-Ungheni-Chișinău pipeline and strengthening of the internal transmission network on Romanian territory created an important alternative natural gas supply route and considerably improved the security of natural gas supply to the Republic of Moldova. By late 2022, natural gas imports from Romania allowed higher diversification of natural gas supply.
2) The approval by ANRE of the 10-year 2023-2032 development plan of the natural gas transmission system operator LLC 'Vestmoldtransgaz';
3) Promote investment in bidirectional capacity at interconnections;
4) Bidirectional (reverse) natural gas transmission through the Isaccea GMS via the Trans-Balkan pipeline created additional opportunities for diversification of natural gas sources and supply routes, including potential access to LNG reserves in Greece.
5) Promotion of the use of existing reverse natural gas transmission network capacities, in particular natural gas flows to storage facilities in Ukraine within the Trans-balkan corridor;
6) Adoption of a primary and secondary legislative package, which progressed the natural gas sector reform towards a competitive market and integration into the EU internal market;
7) Transposition and implementation of the EU gas network codes;
8) The allocation of natural gas transmission network capacities by the TSOs through the Regional Booking Platform (RBP);
9) Adoption of the list of relevant entry/exit points and regulated entry-exit tariffs for natural gas transmission services by ANRE;
10) TSO concluded interconnection agreements with the Ukrainian TSO and SNTGN Transgaz JSC (Romania) according to the interoperability and data exchange provisions of the Natural Gas Networks Code;
11) Accession to the SEEGAS regional cooperation initiative;
12) Signing of the Memorandum of Understanding for the Development of the Vertical Corridor.

Other preventive measures:

[15] According to Moody's, the rating of the Republic of Moldova was changed to B3 stable, given the improved energy security (use of the Iași-Ungheni-Chișinău interconnection, significant reduction of natural gas consumption due to the use of alternative fuel (fuel oil), creation of natural gas stocks).

Measure 1	Apply an appropriate pricing policy that ensures that regulated natural gas tariffs and prices fully cover the minimum, actual and necessary costs of natural gas undertakings incurred as a result of their activities in the natural gas market, and avoid and even prevent the accumulation of debts to external suppliers;
Type of measure	Obligatory
Goal	Natural gas supply to protected customers
Description	Regulated prices and tariffs must be constantly updated in line with the relevant methodologies.
Entities responsible	ANRE
Monitoring	ANRE
Timeframe	Ongoing

Measure 2.	*Continuous updating of protected and interruptible customers' lists by system operators*
Type of measure	Obligatory
Goal	Ensure the natural gas supply standard
Description	Natural gas suppliers with a public service obligation and system operators shall take the necessary measures to ensure the natural gas supply to protected customers and update de lists of protected customers
Entities responsible	SRL "Vestmoldtransgaz" DSO
Monitoring	Ministry of Energy
Timeframe	-

Comparative analysis of measures in the Preventive Action Plan looking at the risks in the Republic of Moldova and in the member-states of the European Union and Great Britain is set out in Annex 6.

B. Non-market-based measures

Under the Preventive Action Plan, securing natural gas supply is achieved through a market-based measures approach only. If market-based measures are not sufficient to prevent a crisis situation and the supply of natural gas to protected customers, the measures set out in the Emergency Plan shall be applied.

The economic impact, effectiveness and efficiency of the measures of the Preventive Action Plan

The economic impacts and effects of the implementation of the measures proposed in the Preventive Action Plan take into account the following factors:

- sectoral structure of natural gas consumption in the Republic of Moldova;
- the number of undertakings using natural gas, employment, their production value and turnover;
- the number of households that use natural gas for cooking, hot water supply and heating;
- the costs of purchasing gas for different categories of customers.

Given that, as of 2021, the average production volume of all natural gas consuming sectors in the Republic of Moldova is about USD 848 milllion monthly, with around 585 thousand employees, ensuring a reliable supply of natural gas is essential for the sustainable functioning of the country's economy.

Nearly 814,363 households in the Republic of Moldova depend on a reliable natural gas supply used for cooking, heating and hot water supply. The proposed preventive measures in the residential sector therefore target the majority of the country's population.

The effects of preventive measures on the operation of the internal energy market of the European Union and the Energy Community and on the national market

The proposed preventive measures will bring the following positive impact on the operation of the national energy market and the energy markets in neighbouring countries:

- development of a competitive internal energy market;
- ensuring natural gas supply security;
- further integration of the Moldovan natural gas market into regional energy markets;
- increased flexibility and adaptability of the national energy system to energy supply risks;
- stimulation of investments in energy infrastructure;
- strengthening cooperation with EU financial institutions on energy security issues;
- further liberalisation of the wholesale and retail natural gas market.

Impact of preventive measures for the environment

The proposed preventive measures will impact the environment both positively and negatively.

The overall positive effects on the environment resulting from the implementation of the proposed preventive measures are:

- reduced emissions of air pollutants due to lower natural gas consumption (in absolute volume);
- reduced greenhouse gas emissions due to lower natural gas consumption (in absolute volume);
- reduction of natural gas leaks due to the implementation of proper maintenance of the natural gas supply infrastructure.
- The possible negative environmental impacts related to the implementation of the proposed preventive measures are:
- increased emissions of air pollutants and deterioration of air quality due to the switch from natural gas to coal or fuel oil;
- increased greenhouse gas emissions as a result of switching from natural gas to coal or fuel oil (fuels with higher greenhouse gas emission factors).

Effects of preventive measures on final customers

The effects on final customers caused by the implementation of the proposed preventive measures are:

- increased reliability of energy infrastructure for different categories of final customers;
- reliable operation of power plants and high-capacity cogeneration facilities;
- The minimisation of negative impacts on manufacturing production and employment;
- reduced energy costs in the medium and long term as a result of investments in switching from natural gas to renewable energy sources and implementing energy efficiency measures;

– increased public and staff awareness about energy efficiency (including behavioural changes in energy use).

– The possible negative effects for final natural gas customers related to the implementation of the proposed preventive measures are:

– the potential increase in regulated natural gas tariffs and prices;

– the potential increase in regulated electricity and heating tariffs and prices;

– potential short-term increase in the burden of energy costs for the Moldovan economy (due to higher demand for loans from international financial institutions to implement energy security projects).

Monitoring the implementation of provisional measures

Ensuring security of natural gas supply is a shared responsibility of natural gas undertakings, of the Government (through the Commission foremergency Situations of the Republic of Moldova, of the specialised central body of the public administration in the energy area) and ANRE according to institutional and functional competences, and involves establishing, monitoring the implementation of preventive measures necessary for the prevention ofemergency situations.

7. Infrastructure Projects

Main Natural Gas Supply Infrastructure:**:**

The Ananiev-Tiraspol-Ismail (ATI) natural gas pipeline has the greatest technical capacity among the national natural gas infrastructures of the Republic of Moldova.	Length: 62.91 km; Diameter: 1220 mm; Capacity: 20 bcm/year.

Below, the Republic of Moldova is shown on the ENTSO-G Capacity Map, which allows for the visualization of the main European gas pipelines at cross-border points, Figure 7.

Figure 7. ENTSO-G Capacity Map, January 1, 2014

Main Natural Gas Infrastructure Projects:

The Republic of Moldova has taken concrete steps towards diversifying its natural gas and electrical energy supply, including by establishing interconnections with Romania, which has improved energy security.

Major investment projects proposed to enhance the security of natural gas supply in the Republic of Moldova according to *the Development Plan of the national natural gas transmission system for the period 2023 – 2034* by LLC "Vestmoldtransgaz"[16] are described in Table 8.

Project	Description
1) ***Extension of the Iași – Ungheni – Chișinău interconnection, Phase II (completed).***	Extension of the cross-border Iași – Ungheni interconnection (Romania – Republic of Moldova) towards the direction of Ungheni – Chișinău.
2) *Construction of the Natural Gas Transmission Network along the Ungheni - Bălți - Drochia route, with connection to* ***the suction*** *pipeline of SC Drochia located on the Ananiev-Cernăuți -Bogorodiceni natural gas transmission network.* Estimated commissioning year: 2027.	Project objectives are: (1) strengthening the natural gas transmission infrastructure in the North-South direction and avoiding physical congestion, considering the major change in the direction of natural gas flows and the requirements for creating natural gas stocks; (2) providing an alternative natural gas supply solution for the city of Bălți, as well as the northern regions of the Republic of Moldova; (3) developing the regional natural gas market and strengthening the role of the Republic of Moldova as a natural gas transit corridor; (4) Interconnecting the natural gas transmission networks in the Romania-Moldova-Ukraine direction, enhancing the security of natural gas supply by increasing transport capacities and attracting new potential system users.
3) *Designing and construction of the natural gas transmission network in the direction of the Prut River – GMS Ungheni – GMP Todirești, 11 km.*	The purpose of the project is to strengthen the natural gas transmission infrastructure from the western direction of Europe and to avoid possible physical congestion due to changes in the natural gas supply flows to the Republic of Moldova.
4) *Designing and construction the natural gas transmission network in the NE-SE direction of Chișinău (Bypass of Chișinău) 60.00 km*	Strengthening and completing the natural gas transmission infrastructure in the NE-SE direction of Chișinău and avoiding physical congestions found in the natural gas supply to customers in the Republic of Moldova.
5) *Reconstruction and modernization of the Tocuz gas consumption measurement point.*	One of the natural gas supply routes for the city of Chișinău is made through the Tocuz-Căinari-Mereni (TCM) pipeline. The TCM pipeline can be fed from 3 main pipelines: ATI, RI, ȘDKRI.
6) *Reconstruction of GMS Căușeni to ensure operation in reverse mode.*	The purpose of the project is to ensure the supply of natural gas in reverse mode to the natural gas transmission system through main pipelines from the South, namely CM, RI, and ȘDKRI via GMS Orlovka from the Balkan

[16]Development Plan of the national natural gas transmission system for the period 2023 – 2034 by LLC "Vestmoldtransgaz", approved by ANRE Decision No. 820/2023. https://anre.md/planuri-de-dezvoltare-3-333

	countries or the Turkish stream.
7) *Reconstruction of the Drochia gas compression station to ensure bidirectional capacity.*	GCS Drochia compresses gas in the main pipeline in two directions: Ananiev-Bogorodiceni and Bogorodiceni-Chișinău. The connection of the Ungheni-Bălți-Drochia main pipeline is expected to be made through GCS Drochia. This investment will enable the compression station to operate at lower input pressures, consequently reducing operating costs by ensuring efficient, loss-free performance.
8) *Construction of the CM RI- CM ȘDKRI connection in the SC Vulcănești region, km 292-293* 9) *Construction of the CM RI- CM ȘDKRI connection in the GMS Căușeni region, km 173-174*	Purpose: to ensure the possibility of gas flow interchange between lines on the Trans-Balkan corridor and the flexibility of the natural gas transmission system.

Table 8. The main investment projects proposed to enhance the security of the natural gas supply to the Republic of Moldova

According to **the Development Plan of the national natural gas transmission system for the period 2021 – 2030 by SNTGN Transgaz JSC (Romania)**[17], the key investment projects relevant to the security of natural gas supply to the Republic of Moldova are detailed in Table 9:

1) *The project "Development of the SNT in Northeast Romania to improve the natural gas supply to the area and ensure transmission capacities to/from the Republic of Moldova"* Put into operation in 2021.	**The project involves the construction of new natural gas transmission pipelines in the direction of Onești – Gherăești and from Gherăești to Lețcani (165 km) and two compression stations at Onești and Gherăești to ensure the bidirectional flow of natural gas to the Republic of Moldova. The new pipeline can transport up to 6.5 mcm/day to the Republic of Moldova**
2) *Development in Romania of the National Natural Gas Transmission System on the Bulgaria–Romania–Hungary–Austria (BRHA) Corridor – (Phase I, II, III).*	Project aimed at securing natural gas supply, developing natural gas transmission capacities between the interconnections of the Romanian natural gas transmission system and similar systems in Bulgaria and Hungary. Phase I - completed.
3) *Development in Romania of the Southern Corridor for the transportation of natural gas from the Black Sea coast*	The natural gas transmission pipeline will connect the natural gas resources available at the Black Sea coast to the Bulgaria–Romania–Hungary–Austria (BRHA) corridor, ensuring the possibility of transporting natural gas to Bulgaria and Hungary through the existing interconnections Giurgiu–Ruse (with Bulgaria) and Nădlac–Szeged (with Hungary). This pipeline will interconnect with the natural gas transmission pipeline T1. Estimated completion - 2025.
4) *Interconnection of the national natural gas transmission system with the international natural gas transmission pipeline T1 and reverse flow at Isaccea;*	
5) *Developments of the SNT for gas extraction from the Black Sea coast (put into operation in 2021).*	
6) *The project "Modernization of MGS Isaccea 2 and MGS Negru Vodă 2 to achieve bidirectional*	

[17] https://www.transgaz.ro/sites/default/files/PDSNT%202021-2030.pdf

flow on pipeline T2". Estimated completion: 2024	
7) *The project "Modernization of MGS Isaccea 3 and MGS Negru Vodă 3 to achieve bidirectional flow on pipeline T3". Estimated completion: 2028*	
8) *The project "Storage Unit – Depomureș".* Project completed.	The project involves the development of an underground natural gas storage facility in Târgu Mureș.
9) *Increasing the capacity of underground natural gas storage at the Sărmășel depot (Transylvania).* Estimated completion, 2026	Increasing the storage capacity of natural gas to ensure the security of natural gas supply.
10) *New underground natural gas storage facility in Fălticeni (Moldova).* Estimated completion, 2030.	The project aims to develop a new underground storage depot in northeastern Romania. Capacity - approximately 200 mcm/cycle; injection capacity of approximately 1.4 mcm/day; extraction capacity of approximately 2 mcm/day.

Table 9. Investment projects from the Development Plan of the national natural gas transmission system for the period 2021 – 2030 of SNTGN Transgaz SA.

A significant infrastructure project for ensuring the security of natural gas supply to the Republic of Moldova is *the LNG terminal in Alexandroupolis, Greece.* Once completed in December 2023, it provides new opportunities for diversifying sources and supply routes to Greece, Bulgaria, Romania, Republic of Moldova, Ukraine, and the Western Balkans.

In this context, the construction of *the Greece-Bulgaria interconnection* holds strategic importance for implementing *the Vertical Gas Corridor, Greece-Bulgaria-Romania-Hungary*, offering access to natural gas from the Southern Gas Corridor and LNG to Southeast and Central Europe, as well as Ukraine.
The commissioning of the Iași-Ungheni-Chișinău natural gas pipeline, along with the potential to use the Trans-Balkan corridor in reverse flow, provides the technical capacities necessary for diversifying natural gas supply sources.

Recent changes in the regional and internal natural gas supply infrastructure and national market reforms could lead to a new reality where the security of natural gas supply can be significantly improved.

The Republic of Moldova, which until recently was supplied exclusively through Ukraine, will have potential access to a number of supply options in cooperation with Member States and Ukraine. These include the following:

- purchasing natural gas from European Union markets to be delivered through Ukraine or Romania;
- purchasing natural gas from the Russian Federation with delivery through Ukraine[18];
- purchasing natural gas from the Russian Federation delivered via TurkStream and through the Trans-Balkan corridor in reverse flow at the border between Romania and Ukraine (GMS Isaccea/GMS Orlovca);
- access to LNG markets, especially following the completion of the LNG terminal at Alexandroupolis and the Bulgaria-Greece interconnection.
- Using natural gas storage facilities in Ukraine and Romania to cover demand inemergency situations or peak consumption as happened in 2022.

[18]The transit contract between the Russian Federation and Ukraine expires at the end of 2024.

Improving the security of natural gas supply can be achieved by including hydrogen in the energy mix. According to the project of the Energy Strategy of the Republic of Moldova until 2050, it is anticipated that the natural gas infrastructure will be planned and developed in accordance with the technical, legal, and investment framework that the EU will implement to support the integration of hydrogen. Hydrogen can be transported through pipelines, but also by transportation options that do not rely on the network.
Romania can cover part of the domestic consumption of the Republic of Moldova during a disruption of gas supply through Ukraine, given its significant indigenous natural gas production which can increase when offshore gas fields in the Black Sea are exploited. Romania also serves as an alternative route for Russian gas and, in the future, for other gas sources such as Caspian and Mediterranean fields. *In the event of a total disruption of supply through Ukraine, the other supply corridors for Romania (and therefore also for Moldova) pass through Hungary and Bulgaria.* In 2021, Romania began to import gas from the Russian Federation through Bulgaria, and the former corridor is currently not used.
For safety of supply reasons, the Republic of Moldova relies on access to storage facilities in Romania and Ukraine. In the north of the country, a pipeline with a capacity of 9.1 bcm/year passes through the Republic of Moldova to connect two parts of the Ukrainian network and connects the natural gas storage facilities from Bogorodceni, Ukraine at the Oleksiivka connection point.
In the natural gas sector, the commissioning of TurkStream in 2020 led to the loss of the transit role of the Trans-Balkan pipeline and the associated transit revenues. This has increased supply risks. On the other hand, it has led to changes in the traditional use of the Trans-Balkan pipeline route and, by the end of 2020, for the first time, gas was exported from Moldova to Ukraine.

Virtual reverse flow (backhaul) allows exchanges between system users and reduces the need for actual physical transmission of gas. In the context of the Republic of Moldova, backhaul would allow the transit of approximately 3 bcm/year through the Trans-Balkan pipelines in reverse, enabling the Republic of Moldova to purchase gas on the Central European markets through Ukraine and offsetting it with the volumes imported from the Balkans or Turkey. The first nomination of volumes in a virtual reverse mode to offset volumes with Ukraine was recorded in September 2022. [19]This constituted a major step forward towards improving the long-term energy security of the Republic of Moldova. Most of the natural gas consumption in the Republic of Moldova can be secured through backhaul. Natural gas purchased and imported through natural gas terminals in Turkey or Greece can be stored in facilities in Ukraine, and additional natural gas can be purchased at the border between Slovakia and Hungary.

In 2019, reconstruction works were carried out at the Căușeni natural gas measuring station to facilitate reverse flow conditions through the Trans-Balkan pipeline, which was considered one of the main alternative options for supplying natural gas to the Republic of Moldova if a gas transit agreement between the Russian Federation and Ukraine was not concluded. The technical capacity in reverse mode on the main transit pipeline is 12 mcm/day.

The Republic of Moldova collaborates with Ukraine to enhance the physical capacity and economic appeal of the Trans-Balkan route for transporting natural gas in reverse from southern Europe, through the Republic of Moldova, to the underground storage facilities in Ukraine. The mechanism applies only in the case of transporting natural gas through Moldova

[19]Sabadas Aura from the Independent Commodity Intelligence Service reported that Moldova-Ukraine will unlock the Trans-Balkan gas corridor, https://www.icis.com/explore/resources/news/2022/09/30/10811127/moldova-ukraine-backhaul- a-debloca-coridorul-trans-balcanic-gaz/ .

to the underground storage facilities in Ukraine along the Trans-Balkan route, following the interconnection points Orlovka - Căușeni - Grebeniki - Ananiev - Alexeevka, and the volumes at entry must equal the volumes at exit.

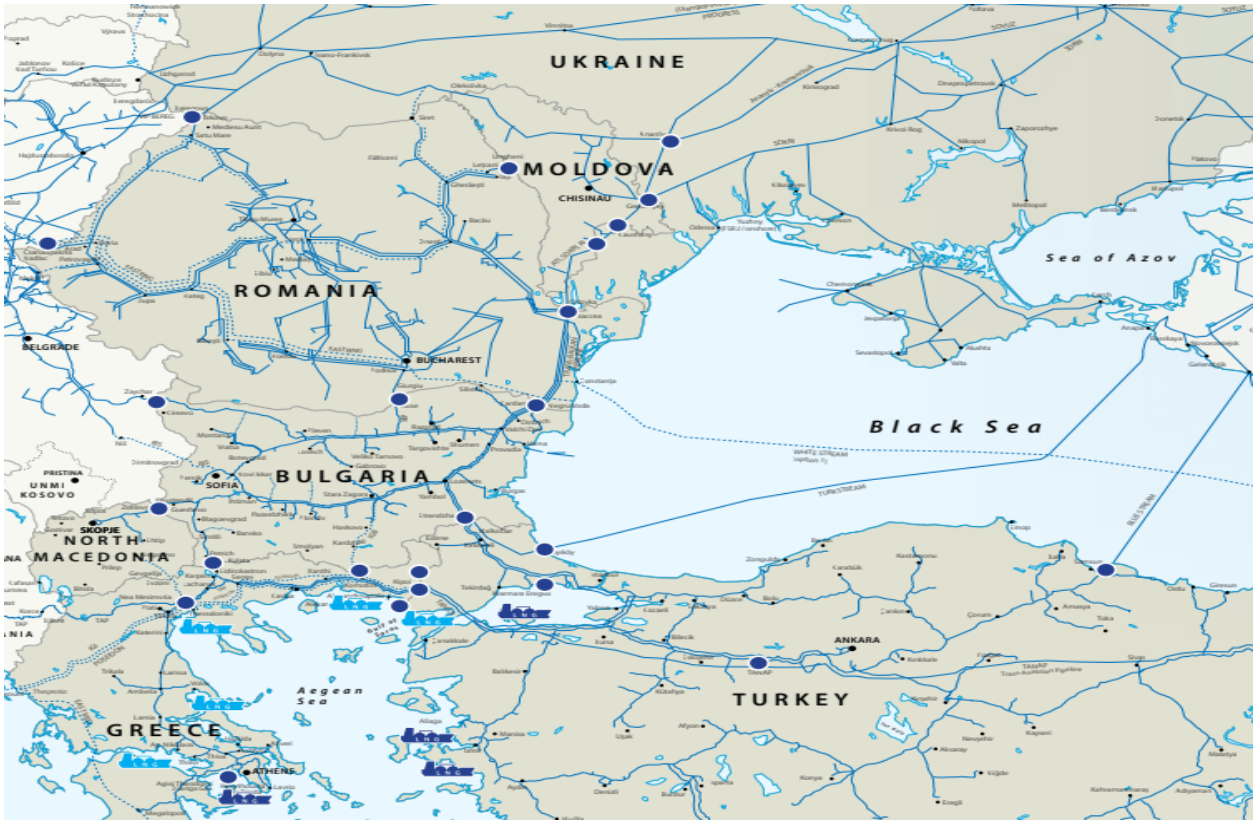

Figure 8. Map of the regional natural gas infrastructure[20], SEEGAS.

Potential natural gas supply routes originating from LNG terminals in the region.

1. LNG terminals in Greece (Revithoussa, Alexandroupolis);
2. LNG terminals in Poland (Swinoujscie, Gdansk);
3. Klaipeda LNG terminal in Lithuania;
4. Krk LNG terminal in Croatia;
5. Marmara LNG terminal in Turkey.

8. Public service obligations on the security of natural gas supply

According to Article 2, and Article 11 of the Law on natural gas, the public service obligation is an obligation imposed on the natural gas undertaking, in the general economic interest, for a limited period of time, is non-discriminatory and does not distort competition, except to the extent strictly necessary to carry out the public service obligation in question.

Public service obligations shall be imposed by the Government or the National Agency for Energy Regulation. Obligations shall be imposed as a measure that is limited in time, in a non-discriminatory manner and shall be reviewed regularly, ex officio, to determine the need to maintain those obligations.

Imposition of public service obligations must guarantee equal and reciprocal access of natural gas undertakings from Contracting Parties , and/or EU Member States to final customers in the Republic of Moldova.

[20] https://www.energy-community.org/regionalinitiatives/SEEGAS.html

Public service obligations may be imposed in particular on natural gas undertakings performing the following regulated activities:

- natural gas transportation;
- natural gas distribution;
- natural gas supply;
- natural gas trading.

In order to ensure security of natural gas supply, natural gas undertakings may be imposed public service obligations relating to:

- security of natural gas supply;
- quality parameters and quality indicators;
- setting of regulated prices and tariffs;
- environmental protection and increasing energy efficiency;
- protection of health, life and property;
- protection measures for final customers;
- accelerating the opening of the natural gas market.

The list of public service obligations imposed by the Government/ANRE is described below.

Legal basis	**Undertakings**	**Public service obligations**
Article 11	SA "Energocom" Government Decision No 589 /2023 Timeframe: 3 years	*Ensuring security of natural gas supply in an emergency situation by making purchases and/or securing stocks of natural gas*, within the territory authorised by the system operators' licences, in the following cases: 1) the supply on the natural gas market under the current contracts of suppliers with a public service obligation in accordance with Article 89 of the Law on natural gas is stopped and/or limited; 2) it is necessary to supply customers with quantities of natural gas additional to those laid down in the current contracts concluded by the suppliers of last resort; 3) the price of natural gas delivered by JSC 'Energocom' is lower than the price of natural gas contracted by suppliers of last resort.
Article 89	"Moldovagaz" SA "Nord Gaz Sîngerei" SRL "Lăcătuș" SRL "Sălcioara-Vascan" LLC ANRE Decision No 487 /2019 Timeframe: 7 years	Supply of natural gas of specified quality parameters at regulated, transparent, non-discriminatory and easily comparable prices to final customers *Pending the determination by the specialised central body, on the basis of the opinion of ANRE, of the existence on the natural gas market of the necessary preconditions for the purchase of natural gas by non-household customers at negotiated prices, and the adoption of the relevant Decision by the Government, all final customers of natural gas may benefit from the public service of gas supply at regulated prices by the natural gas supply licence holders established by ANRE, within the limits of the territories authorised by the DSO licences serving those final customers.
Article 90	SA "Moldovagaz" ANRE Decision	Ensuring natural gas supply of last resort (SLR). The supplier with the SLR obligation is obliged to supply natural gas at regulated prices for a certain period of time to

	No 444 /2024 Timeframe: 3 years	final customers who have lost their supplier in certain circumstances (the supplier ceases its business activity, the supplier's licence has been suspended or withdrawn, the supplier is unable to supply natural gas).

Table 10. The list of public service obligations imposed by the Government/ANRE.

The Law on natural gas defines the obligations of participants in the natural gas market in the Republic of Moldova to ensure the safety and reliability of the natural gas system, in particular in situations of disruption of natural gas supply and in crisis situations.

System operators have an obligation to provide access to the network and to operate, maintain, upgrade and develop natural gas networks in a secure and reliable manner. TSOs contribute to security of natural gas supply through the natural gas transmission networks; manage natural gas flows, taking into account exchanges with other interconnected systems; manage congestion; ensure efficient use of natural gas transmission network capacities, including interconnections. The functions and obligations of system operators are laid down in Articles 39 and 46 of the Law on natural gas.

In the event ofemergency situations in the natural gas sector, system operators shall give priority to the provision of natural gas transmission and distribution services to protected customers.

The measures guaranteeing the protection of final customers (including vulnerable customers) by natural gas suppliers are stipulated in the Law on natural gas, the Regulation on natural gas supply, approved by ANRE Decision No 113/2019, the Regulation on the procedure for changing natural gas suppliers No 363/2020, and the tariff methodologies approved by ANRE.

9 . Stakeholder consultations

Considering the importance and effect of the Preventive Action Plan on ensuring the secure supply of natural gas to natural gas customers, in particular to protected customers, the specialised central body shall initiate public consultations on the Preventive Action Plan, in accordance with the terms and conditions laid down in the Law on Transparency in Decision-Making, in order to collect the information and proposals necessary for the adoption of reasoned decisions.

The specialised central body shall publish the draft Preventive Action Plan on the official website and consult natural gas market participants and competent authorities on its main provisions.

The following stakeholder groups shall contribute to the review of the Preventive Action Plan local government authorities;

- natural gas undertakings;
- electricity suppliers;
- organisations representing the interests of household consumers;
- organisations representing the interests of industrial natural gas customers, including electricity producers;
- other stakeholders.

Comments received during public consultations shall be reflected in the summary of objections.

10 Cooperation mechanisms with other countries

According to Article 108 of Law on natural gas, in order to ensure security of natural gas supply, the competent authorities of the Republic of Moldova shall cooperate with the competent authorities of the Contracting Parties , promoting bilateral and regional cooperation. Cooperation refers to situations that cause or may cause serious disruptions in the natural gas supply both to the Republic of Moldova and to another country that is part of the Energy Community.
Bilateral and regional cooperation aims in particular to:

- coordinate measures on security of natural gas supply inemergency situations;
- identify the interconnections, develop and upgrade them, including ensuring bidirectional capacities;
- identify the conditions and practical arrangements for mutual assistance.

Regional cooperation:

According to the provisions of EU Regulation 2017/1938 transposed into the Regulation onemergency Situations in the Natural Gas Sector, the Energy Community Secretariat coordinates the actions of the competent authorities on security of supply in Contracting Parties, including the Republic of Moldova, through the *Energy Community Security of Supply Coordination Group*.

In terms of the preventive action planning process, there are several important steps the Republic of Moldova can take to enhance cooperation with other Contracting Parties:

- organising joint trainings and exercises with other Energy Community Contracting Parties to ensure adequate preparedness to respond to emergency situations. These exercises can help identify gaps in the plan and improve communication and coordination;
- exchange best practices and lessons learned from previous emergency situations.

In January 2024, LLC "Vestmoldtransgaz" has acceded to the *Memorandum of Understanding for the development of the Vertical Corridor*[21]. The aim of the Memorandum is to strengthen national transmission systems, and analyse technical needs such as new pipelines and interconnections. The vertical corridor is integrated into the Trans-Balkan pipeline and allows the transportation of natural gas from Greece to the Republic of Moldova and storage facilities in Ukraine. The pipeline can transport both natural gas from Azerbaijan and liquefied gas from the Revitusa and Alexandroupolis terminals in Greece.

In July 2021, the TSO of the Republic of Moldova acceded to the *Memorandum of Understanding about trans-regional cooperation on the development of an integrated South-Eastern and Eastern European gas (SEEGAS) market*. The aim was to coordinate efforts at the level of the signatory states' governments and the European Commission to facilitate the swift completion of cross-border and trans-European projects that diversify gas supplies in the region, the development of regional gas markets and the implementation of harmonised EU rules to ensure the optimal functioning of energy infrastructure, including the creation of hydrogen corridors.

[21] Memorandum of Understanding for the development of the Vertical Corridor, signed in 2017 in Bucharest by: SNTGN Transgaz SA, Bulgartransgaz, DESFA JSC (Greece), FGSZ Ltd (Hungary) and ICGB AD (Bulgaria).

The Memorandum of Understanding about trans-regional cooperation on the development of an integrated South-Eastern and Eastern European gas (SEEGAS) market under the auspices of the Energy Community Secretariat was signed in 2021 by the regional natural gas exchanges BRM (Romania) UEEX (Ukraine), TGE (Poland), CEEGEX (Hungary) and ECG (Austria) and transmission system operators from the Republic of Moldova, Ukraine, Romania, Hungary, Poland. The Memorandum is aimed specifically at creating the preconditions for the functioning of a liquid competitive market and ensuring access to those natural gas markets for all market participants and service providers on a non-discriminatory basis and on equal terms, in line with the Community acquis. The signatories aim to cooperate on the development of cross-border natural gas trade, e.g. on trading platforms, and to introduce transparent and competitive market-based inter-regional pricing mechanisms as well as efficient cross-border gas transportation and interoperability.

From 2023, natural gas suppliers from the Republic of Moldova, as a country of the Energy Community, have the right to purchase natural gas from the common EU Energy Platform. The EU mechanism for demand aggregation and the joint purchasing of natural gas and hydrogen is important to improve security of natural gas supply. All natural gas undertakings established in the Energy Community which fulfil the criteria set out in Council Regulation (EU) No 2022/2576 may participate in the EU mechanism.

Despite high tariffs for natural gas transmission service for cross-border flows, there is interest from private companies in Ukraine and Romania that could increase the volumes of natural gas transited, with associated reductions in transmission costs. As of 01.01.2024 LLC "Vestmoldtransgaz" has concluded 42 contracts for the provision of natural gas transmission service, including with international traders.

The Republic of Moldova is working with Ukraine to increase the physical capacity and economic attractiveness of the Trans-Balkan natural gas transportation route in reverse mode from southern Europe through the Republic of Moldova to underground storage facilities in Ukraine.

The activation of the Trans-Balkan natural gas transportation route means increasing the role of the Republic of Moldova as a country contributing to regional energy security.

SRL "Vestmoldtransgaz" uses the Regional Booking Platform (RBP), developed by FGSZ, when allocating natural gas transmission capacity at the interconnection points.

FROM November 2022, capacity allocation auctions are conducted in accordance with the the Natural Gas Network Code approved by ANRE Decision No 420/2019 transposing Commission Regulation (EU) No 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems, which allows fair and non-discriminatory access for all system users through an electronic platform certified by ENTSO-G.

Bilateral cooperation:

Bilateral cooperation of the Republic of Moldova with neighbouring countries at intergovernmental level to ensure security of natural gas supply and prevent emergency situations is carried out through the following mechanisms:

1) Memorandum of Understanding between the Government of the Republic of Moldova and the Government of Romania on the implementation of projects necessary for the interconnection of natural gas and electricity networks in the Republic of Moldova and Romania, May 2015.

Parties have agreed to carry out as a priority the complementary works of the Iași – Ungheni interconnection which will ensure the construction of the Ungheni – Chișinău gas pipeline on

the territory of the Republic of Moldova, and the Onești – Iași gas pipeline and related compressor stations on the territory of Romania.

2) Memorandum of Understanding between the Ministry of Economy and Infrastructure of the Republic of Moldova and the Ministry of Energy and Environmental Protection of Ukraine on cooperation in the field of security of natural gas supply, December 2019.
Parties have agreed to cooperate in the implementation of activities and measures for the prevention and management of emergency situations and natural gas supply crises by: exchanging information, coordinating actions to ensure the continuous and secure supply of natural gas, without replacing cooperation platforms and mechanisms within the Energy Community or the European Union.

3) Memorandum of Understanding between the Ministry of Infrastructure and Regional Development of the Republic of Moldova and the Ministry of Energy of Romania on cooperation in the field of energy security, February 2022.
The Memorandum establishes cooperation mechanisms for joint actions to contribute to risk assessment, prevention and management of energy and/or gas supply crisis situations by exchanging information, coordinating actions to ensure continuity of electricity/natural gas supply. Cooperation to prevent energy crises is achieved by drawing up a Joint Action Plan and establishing solidarity measures. The Joint Action Plan shall be activated in the event of an energy crisis in any of the Parties, at the request of one of the Parties, and shall aim at ensuring the continuity of electricity and natural gas supply, as well as the following measures:
- maintaining the balance in the electricity and natural gas transmission networks;
- mutual provision of alternative fuels for the production of heat to centralised heating systems producing electricity and heat in cogeneration;
- access of Moldovan companies to natural gas storage facilities in Romania;
- access of Moldovan companies to the Romanian electricity market and gas market;
- ensure compatibility of the means of transporting fuel oil by rail for operational transportation between the two countries, including by temporary using facilities for national fuel oil reserves;
- establishing measures to involve banking institutions with export guarantee powers (export guarantee agencies) to guarantee payment of mutual trade obligations in the context of energy security cooperation;
- establishment of a cross-border Crisis Coordination Group with the participation of the Parties, regulatory authorities and natural gas and electricity TSOs. The group shall provide a platform for the rapid and efficient exchange of information at a high level, where necessary, such as adopting appropriate measures as set out in the Joint Action Plan.

4) Memorandum of Understanding between the Government of the Republic of Moldova and the Government of Romania on the implementation of projects necessary for the interconnection of the natural gas and electricity networks of the Republic of Moldova and Romania, 11 December 2023.
Parties have agreed to cooperate in order to ensure the energy security of the Republic of Moldova by diversifying the sources and routes of supply, aiming to create the preconditions for its integration into the single European energy market and to implement the projects necessary for the long-term energy exchange between the Republic of Moldova and Romania by the end of 2031 by:
- carrying out the complementary works of the Iași – Ungheni – Chișinău interconnection by ensuring the flow and pressure regimes for the transportation of natural gas in both

directions, taking into account the requests of the Republic of Moldova to store natural gas in Romania, for its own national consumption;
- ensuring the signing of a Collaboration agreement on the effort sharing to achieve the stock development goal (Burden Sharing Agreement);
- supporting the development of the natural gas storage system in Romania;
- cooperating to ensure the transposition and implementation by the Republic of Moldova of the provisions of Directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products.
- ensuring the coordination and signing during 2024 of a bilateral Agreement providing for the identification of storage facilities to develop emergency stocks of the Republic of Moldova on the territory of Romania.

Inter-TSO cooperation

In order to ensure secure and reliable operation of the natural gas transmission networks, the transmission system operator shall cooperate with transmission system operators in neighbouring countries to ensure interoperability of natural gas transmission networks and congestion management, including by applying a continuous information exchange mechanism.

In order to ensure the interoperability of the natural gas transmission networks of adjacent TSOs, 'Vestmoldtransgaz' has concluded interconnection agreements with adjacent TSOs.

1) *Interconnection Agreement with SNTGN Transgaz SA*, for the interconnection point with Romania IP Ungheni, in 2020.

2) *Interconnection agreement concluded with Ukraine's OGTSU*, for the interconnection points with Ukraine (IP Grebeniki, IP Căușeni, IP Limanskoe, IP Alexeevca, IP Ananiev), in 2019. Until the conclusion of a new Interconnection Agreement LLC "Vestmoldtransaz" is the successor to the rights and obligations of LLC "Moldovatransgaz"[22].

Over the last few years, the Republic of Moldova has made notable progress in diversifying natural gas supply routes and adopting EU legislation to liberalise the gas market.

The Republic of Moldova has taken concrete measures to diversify natural gas supply in cooperation with the Member States by building the interconnection with Romania. *The use of the Iași-Ungheni-Chișinău interconnection*, together with the possibility of *using the Trans-Balkan corridor* for reverse flows, are the main technical options for diversifying natural gas supply sources in cooperation with EU Member States.

In August 2020, Ukraine's transmission system operator (GTSOU) carried out a south-north transmission test to enable the delivery of natural gas from the Revithoussa LNG terminal in Greece via the Balkan pipeline through Bulgaria and Romania to Ukraine. The technical viability of this route has been proven, although the commercial viability is still unclear. The above developments point to a solid political basis for regional cooperation and integration with regional markets to make the Republic of Moldova an important transit centre for the region.

Thanks to new national and cross-border natural gas transmission and distribution infrastructure, increased access to energy markets in neighbouring countries and changing regional energy flows, the Republic of Moldova now has access to a number of new options to mitigate its high dependence on natural gas supply.

[22] According to ANRE Decision No 434/2023 on the provisional designation of LLC "Vestmoldtransgaz" as the natural gas transmission system operator (TSO) in the Republic of Moldova.

EU Gas Network Codes have been transposed, allowing reverse virtual flow (backhaul). Overall, this creates a positive trend for increased interoperability and regional market integration in cooperation with Romanian and Ukrainian TSOs.

Strengthening cooperation with EU institutions and neighbouring countries is an essential factor to enhance cooperation mechanisms in the natural gas sector, to ensure exchange of good practices, information and coordination of preventive and emergency response planning efforts.

By way of continued active restructuring of the natural gas sector, liberalisation of the national market and harmonisation with EU legislation, the Republic of Moldova is successfully moving towards achieving a higher connectivity and interoperability needed to capitalise on these opportunities.

Annex 1.
To the Preventive Action Plan

List of natural gas infrastructure indicators in the Republic of Moldova which are used to determine the 'N – 1' criterion

No	Indicator	Amount, MDL m3/zi	Comments
1	Technical capacity of all border entry points of the Republic of Moldova (***(EPm, total)***	69.05	
	Including:		
a.	The Shebelinka – Dnepropetrovsk – Kryvyi Rih – Ismail (SDKRI) and Razdelnaya – Ismail (RI) natural gas pipelines	18	
	IP Grebeniki	*6*	
	IP Căușeni	*12*	
b.	Ananiev – Tiraspol – Ismail (ATI) natural gas pipeline	30	
	IP Grebeniki	*30*	
	IP Căușeni	*0*	
c.	Ananiev – Cernăuți – Bogorodceni (ACB) natural gas pipeline	15.8	
	IP Ananiev	*7.9*	
	IP Alexeevka	*7.9*	
d.	Iasi-Ungheni natural gas pipeline		
	IP Ungheni	5.25	
2	Maximal technical production capability ***(Pm)***	0	The natural gas production capability is insignificant in the Republic of Moldova and is not considered in calculating the 'N – 1' criterion.
3	Maximal technical storage deliverability ***(Sm)***	0	There are no natural gas storage facilities in the Republic of Moldova.
4	Maximal technical LNG facility capacity *(LNGm)*	0	There are no LNG facilities in the Republic of Moldova.
5	Technical capacity of the single largest gas infrastructure ***(Im)***	30	Ananiev - Tiraspol - Ismail
6	Extra high daily natural gas demand (Dmax)	9,8	According to S.A 'Moldovagaz', the largest daily consumption in 20 years was registered on 23 January 2006.
7	The amount of gas demand that can be covered with market-based demand-side measures ***(Deff)***	0	There are no interruptible contracts with final customers in the Republic of Moldova.

Annex 2.
To the Preventive Action Plan

Main categories of natural gas customers in the Republic of Moldova in 2021

Sector	Natural gas consumption in 2021, mcm	The share of the total natural gas consumption, %, of:
Residential sector	481	39.0
Combined heat and power plants (CHP) (main activity)	337	27.3
Utilities	111	9.0
Non-metalic minerals	57	4.6
Heat plants of serlf-producers	55	4.5
Heat plants (main activity)	50	4.1
Road transport	37	3.0
Food and tobacco industry	29	2.4
Combined heat and power plants of self-producers	18	1.5
Trade and public services	13	1.1
Agriculture/ forestry/ fishing	7	0.6
Chemical and petrochemical industry	3	0.2
Textiles and leather industry	2	0.2
Paper, cellulose and printing industry	2	0.2
Construction	1	0.1
Pipeline transport	1	0.1
Other sectors (not elsewhere specified)	1	0.1
LOSSES (–)	29	2.4
GROSS CONSUMPTION	**1234**	**100.0**

Note: Data refer to the right bank of Nistru river

High impact of the sector on the natural gas consumption
Average impact of the sector on the natural gas consumption
Low impact of the sector on the natural gas consumption

Annex 3.
To the Preventive Action Plan

Sectoral matrix of actions included in the Preventive Action Plan

Sector	Natural gas consumption in 2021, mil.m3*	Planning	Natural gas supply and storage	Alternative fossil fuels	Renewable energy	Heating infrastructure	Energy efficiency	Interruptible and protected customers	Monitoring and safety of natural	Capacity-building and information campaigns
Residential sector	481	X	X	X	X	X	X	X	X	X
Combined heat and power plants (CHP) (main activity)	337	X	X	X	X	X	X	X	X	
Utilities	111	X	X	X	X	X	X	X		X
Non-metalic minerals	57	X		X	X		X			X
Self-producer Heat plants of self-producers	55	X		X	X	X	X			X
Heat plants (main activity)	50	X		X	X	X	X			X
Road transport	37	X		X	X		X			X
Food and tobacco industry	29	X		X	X		X			X
Combined heat and power plants (CHP) of self-producers	18	X		X	X	X	X			X
Trade and public services	13	X		X	X		X			X
Agriculture/ forestry/ fishing	7	X		X	X		X			X
Chemical and petrochemical industry	3	X		X	X		X			X
Textiles and leather industry	2	X		X	X		X			X
Paper, cellulose and printing industry	2	X		X	X		X			X
Construction	1	X		X	X		X			X
Pipeline transport	1	X		X	X		X			X
Other sectors (not elsewhere specified)	1	X		X	X		X		X	X
LOSSES (–)	29	X							X	
Gross consumption	**1234**									

Note: Data refer to the right bank of Nistru river

High impact of the sector on the natural gas consumption
Average impact of the sector on the natural gas consumption
Low impact of the sector on the natural gas consumption

Annex 4.

Impact of preventive measures in the Preventive Action Plan on the sectors using natural gas

Economic activity	Number of undertakings	Value of production, mil. USD	
		Annually	monthly (average)
Production and delivery of power and heat, gas, domestic hot water and air conditioning	146	659	55
Food industry	915	1 143	95
Transportation and storage	-	545	45
Manufacture of other non-metallic mineral products	336	349	29
Wholesale and retail sale; professional, scientific and technical activities; activities related to administrative and support services; public administration and defence; compulsory social insurances; education; human health and social assistance; arts, performances and leisure activities; other services	-	4 600	383
Agriculture/ forestry/ fishing	-	1 449	121
Construction	-	1 092	91
Manufacture of textiles	115	178	15
Manufacture of chemical substances and products	73	124	10
Manufacture pf paper and cardboard articles	115	52	4

**Note. Data refer to the right bank of Nistru river*

High impact of the sector on the natural gas consumption
Average impact of the sector on the natural gas consumption
Low impact of the sector on the natural gas consumption

Annex 5

To the Preventive Action Plan

The list of relevant risk scenarios and the estimated natural gas deficit.

Risk scenario	**Scenario description**	Risk scenario duration	**Estimated natural gas deficit**	**Estimated natural gas deficit/month**			
				Total		**Protected consumers**	
				MIN	**MAX**	**MIN**	**MAX**
Scenario 1	Disruption of natural gas supply in the Republic of Moldova due to damaged natural gas infrastructure caused by the war in Ukraine started by the Russian Federation, or a terrorist attack over the natural gas infrastructure in Russian Federation or Ukraine	Up to 30 days	Winter: 155-190 mil. m^3	155	190	71	100
			Rest of the year: 30-89 mil. m^3	30	89	13	38
Scenario 2	a) adverse climatic events with an average outdoor temperature of -15 °C (on short-term)	Up to 7 days	15 mil. m^3	4	4	0	0
	a) adverse climatic events with an average outdoor temperature of -15 °C (on long-term)	Up to 30 days	30.1 mil. m^3	30.1	30.1	8.3	8.3
Scenario 3	a) Limiting natural gas supply in the Republic of Moldova due to commercial disputes/debts of JSC 'Moldovagaz' to PJSC 'Gazprom'	Up to 30 days	Per every 10% restriction, the natural gas supply deficit amounts to:				
			winter: 16-18 mil. m^3;	16	18	7	7
			the rest of the year: 3-8 mil.m3.	3	8		
	b) Limiting the natural gas supply due to political tensions between the Republic of Moldova and the Russian Federation	Up to 30 days	Per every 10% restriction, the natural gas supply				

Risk scenario	Scenario description	Risk scenario duration	Estimated natural gas deficit	Estimated natural gas deficit/month			
				Total		Protected consumers	
				MIN	MAX	MIN	MAX
			deficit amounts to:				
			winter: 16-18 mil. m^3;	16	18	7	7
			the rest of the year: 3-8 mil. m^3.	3	8		
Scenario 4	a) Disruption of natural gas supply of the Republic of Moldova due to commercial disputes/debts of JSC „Moldovagaz" to PJSC'Gazprom'.	Up to 30 days	winter: 155-190 mil. m^3	155	190	71	100
			the rest of the year: 30-89 mil. m^3	30	89	13	38
	b) Disruption of natural gas supply of the Republic of Moldova due to political tensions between the Republic of Moldova and the Russian Federation	Up to 30 days	winter: 155-190 mil. m^3	155	190	71	100
			the rest of the year: 30-89 mil. m^3	30	89	13	38
Scenario 5	Disruption of natural gas supply of the Republic of Moldova due to the limited capacity/incapacity of energy customers in Moldova to pay high prices for energy (market prices) if an energy crisis or a negative macroeconomic situation occurs in the country (increased inflation or devaluation of the national currency).	Up to 30 days	winter: 155-190 mil. m^3	155	190	71	100
			the rest of the year: 30-89 mil. m^3	30	89	13	38
Scenario 6	a) Total disruption of natural gas supply in the Republic of Moldova from other sources for a specific reason (on short-term);	Up to 30 days	Winter: 155-190 mil. m^3	155	190	71	100
			Rest of the year: 30-89 mil. m^3	30	89	13	38
	a) Total disruption of natural gas supply in the Republic of Moldova from other sources for a specific reason (on mid-	Up to 90 days	Winter: 465 mil. m^3	155	190	71	100
			Rest of the year: 90-	30	89	13	38

Risk scenario	Scenario description	Risk scenario duration	Estimated natural gas deficit	Estimated natural gas deficit/month			
				Total		Protected consumers	
				MIN	MAX	MIN	MAX
	term);		267 mil. m^3				
	a) Total disruption of natural gas supply in the Republic of Moldova from other sources for a specific reason (on long-term);	Up to 180 days	Autumn-winter 710 mil. m^3	35	190	14	100
			Winter -spring 711 mil. m^3	36	190	18	100
			Spring-summer 317 mil. m^3	35	126	12	64
			Summer-autumn: 307 mil.m3	35	123	12	80
Scenario 7	Limitation of natural gas supply to the Republic of Moldova, with the possibility to import only through one interconnection point:	Up to 30 days	Winter: 9-44 mil. m^3	27	46	0	0
	a) Natural gas import is available only via Ungheni IP (interconnection point)		Rest of the year: 0	0	0	0	0
	b) Natural gas import is available only via Alexeevca IP (interconnection point)	Up to 30 days	Winter: 0	0	0	0	0
			Rest of the year: up to 113 mcm	0	0	0	0
	c) Natural gas import is available only via Căuşeni IP (interconnection point)	Up to 30 days	Winter: 27-46 mil. m^3	27	46	0	0
			Rest of the year: 0	0	0	0	0
	d) Natural gas import is available only via Căuşeni IP (interconnection point)	Up to 30 days	Winter: 0	0	0	0	0
			Rest of the year: 0	0	0	0	0
Scenario 8	Interruption of gas supply to the left bank of the Nistru river	Up to 30 days	Winter: 193-217 mil. m^3	193	217	123	199
			Rest of the year:	123	186	115	137

Risk scenario	**Scenario description**	Risk scenario duration	**Estimated natural gas deficit**	**Estimated natural gas deficit/month**			
				Total		**Protected consumers**	
				MIN	**MAX**	**MIN**	**MAX**
			123-186 mil. m^3				

Annex 6

To the Preventive Action Plan

Benchmarking of measures in the Preventive Action Plan looking at the risks in the Republic of Moldova and in the member-states of the European Union and United Kingdom

Scope	Measure	**Republic of Moldova**	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	UK
Production	Flexibility of production																		x				x							x
Delivery	Diversifying natural gas supply sources and routes	**x**		x	x				x			x	x			x	x		x	x	x		x	x		x	x	x		x
	Import flexibility	**x**		x									x			x	x		x				x	x						x
	LNG terminals			x	x									x		x			x		x		x	x				x	x	
	Interconnections	**x**	x	x	x			x	x	x			x			x	x	x	x				x	x		x		x	x	
Storage	Storage	**x**	x	x	x			x	x			x	x		x	x		x	x				x		x	x			x	
Contracts and operation	Coordinated dispatching by transmission system operators	**x**	x	x									x			x	x		x							x				
	Using interruptible contracts			x												x									x					
	Increased market integration	**x**							x					x				x												

Scope	Measure	**Republic of Moldova**	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	UK
	Long-term contracts	**x**	x													x			x				x	x		x				
	Short-term contracts	**x**														x			x				x	x						
Investments	Investments in infrastructure	**x**														x			x			x	x	x	x			x		
Measures in the energy sector	Possibility to change fuels, including the use of alternative reserve fuels in industrial and power generation plants	**x**		x	x											x		x									x			
	SRE	**x**														x			x	x	x				x			x	x	
	Energy reserve	**x**	x								x	x												x						
	Regulation of electricity generation												x		x						x									
Energy efficiency	Energy efficiency	**x**			x											x		x							x		x			
	Natural gas compressors	**x**	x						x											x				x						
Monitoring and reliability	Monitoring of infrastructure	**x**	x														x			x		x								
	Diagnosis of	**x**								x										x		x								

Scope	Measure	**Republic of Moldova**	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	UK
	pipelines																													
	Equipment reserve	**x**									x													x					
	Precautions specific for facilities	**x**							x																				
Planning	Voluntary and strong reduction of the load/task			x												x													
	Emergency plans	**x**							x				x																
	Preparedness plans and exercises	**x**																												
	Regulation	**x**													x		x													

Annex 2
to the Action Plan foremergency Situations
in the in the Natural Gas Sector
approved by Government Decision No _2024

EMERGENCY PLAN

Section 1
General information

1. The Emergency Plan, as part of the Action Plan foremergency Situations in the Natural Gas Sector, is developed on the basis of the Preventive Action Plan, in accordance with the results of the national risk assessment, and includes specific measures to be applied in the event of anemergency situation in the natural gas sector when the natural gas market cannot ensure the necessary quantities of natural.

2. The scope of the Emergency Plan is to identify the measures that are to be implemented in order to eliminate or minimise the impact of a disruption of natural gas supply on natural gas final customers and to liquidate the consequences ofemergency situations.

3. The Emergency Plan shall be activated when one of the crisis levels identified in the Plan is ascertained, which can impact the proper operation of the natural gas sector and/or the security of natural gas supply.

4. The Emergency Plan sets out:

1) the crisis levels, the procedures and the measures applicable for each crisis level set in the Plan, including the measures involving the exchange of information;

2) the criteria for assessing the risks associated with security of natural gas supply;

3) the role and responsibilities of natural gas undertakings, transmission system operator for electricity and of industrial natural gas customers including relevant electricity producers, in the event of a disruption of natural gas supply, and their interaction with the specialised central body, the Commission foremergency Situations of the Republic of Moldova (hereinafter referred to as – *Commission*) and where appropriate, the National Agency for Energy Regulation (hereinafter referred to as – *ANRE*), as well as with other bodies and local and central public authorities involved in the implementation of the Emergency Plan, for each of the crisis levels identified.

4) the market-based measures necessary to manage the situation in the case of an alert situation, as well as to ensure the natural gas supply in the case of an emergency situation, contribution to the management of theemergency situation;

5) the non-market-based measures and those that should be applied in the case of an emergency situation when the market-based measures are no longer sufficient to ensure the supply of natural gas to final customers and primarily to protected customers, contribution to the management of theemergency situation;

6) the measures and actions to be taken to mitigate the potential impact of a disruption of natural gas supply on district heating and the supply of electricity generated from natural gas;

7) the contribution of non-market-based measures planned or to be implemented, the assessment of the effects of non-market based measures and the procedures necessary for their implementation.

8) the crisis manager and its role;

9) the obligations concerning the reporting of natural gas undertakings and where appropriate, of electricity undertakings, in the event of anemergency situation, regardless the crisis level;

10) the technical or legal arrangements in place to prevent undue or above the limit of natural final gas consumption of customers who are connected to a natural gas distribution or natural gas transmission network but not protected customers;

11) list of predefined actions for making natural gas available in the event of an emergency situation, the mechanisms used for cooperation with other Energy Community countries and/or Member States.

Section 2
Definition of crisis levels

5. To ensure a coherent approach in relation to the assessment of anemergency situation, as well as in order to take appropriate measures in response to the threats, it is important to properly determine the crisis level and the possible consequences associated with that crisis level.

6. The three crisis levels associated withemergency situations in the natural gas sector are described in Table 1.

Crisis level	Characteristics
Early warning level (hereinafter referred to as – *early warning situation)*	There are information about the fact that an event may occur that **would significantly affect the natural gas supply** and could trigger the warning or emergency situation.
Alert level (hereinafter referred to as – *alert situation)*	**An exceptionally high demand of natural gas** occurred, or **the natural gas supply was disrupted** and the circumstances impact significantly the natural gas supply; the natural gas marked is still able to manage that disruption or demand without the need for non-market based measures.
Emergency level (hereinafter referred to as – *emergency situation)*	An exceptionally high natural gas demand or a significant disruption of supply of imported natural gas or in other situations where **the supply in the natural gas on the territory of the Republic of Moldova has been significantly affected, and the supply of natural gas is insufficient to meet the remaining unsatisfied demand for natural gas,** although all market-based measures have been implemented, which requires the introduction of additional non-market-based measures to ensure the supply of natural gas, in particular to protected customers.

Table 1. Characteristics of the three crisis levels associated withemergency situations in the natural gas sector.

Section 3
Procedure for establishing each crisis level

7. Natural gas undertakings shall inform the TSO when they face any event that may affect the natural gas supply. If TSO identifies signs of crisis levels set out in point 6, which can trigger a potentialemergency situation in the natural gas sector, it shall immediately notify the Commission and the specialised central body.

8. The Commission may also establish anemergency situation in the natural gas sector upon notification by the specialised central body. To establish one of the crisis levels, the specialised

central body may convene for consultation the Commission foremergency Situations of the specialised central body (hereinafter referred to as – SCB Commission), established according to point 4 of the Government Decision No 1340/2001 on the Commission foremergency Situations of the Republic of Moldova.

9. SCB Commission has advisory role when assessing the conditions for the existence of anemergency situation, preventing anemergency situation, determining the possible associated consequences and proposing the necessary measures for managing each level of crisis. The members and the Regulation of SCB Commission shall be approved by Order of the specialised central body. The SCB Commission is made of representatives of ANRE, natural gas, electricity and thermal and power companies. Independent experts with relevant experience in the situations under consideration may be invited to the meetings of the SCB Committee.

10. In the event of anemergency situation in the natural gas sector or of a situation for the liquidation of its consequences, the work of the Commission shall be ensured by the Operational Center for Emergencies Management, established under the General Inspectorate for Emergency Situations.

11. The Commission, within 12 hours of notification, shall verify whether the conditions for the ascertaining of anemergency situation and the corresponding crisis level are met, according to point 6.

12. In order to conduct a full assessment of the situation, the Commission may use the information from Annex 1.

13. If, after verification, the Commission finds no signs of anemergency situation, natural gas undertakings shall immediately resume normal operation.

14. If the conditions concerning the situations set out in point 6 are met, the Commission shall ascertain the existence of theemergency situation and the appropriate crisis level.

15. TSOs shall notify the system operators, the producers, the operators of storing facilities, natural gas suppliers, as well as adjacent TSOs from the neighbouring countries, about the ascertainment by the Commission of theemergency situation in the natural gas sector an shall order, depending on the situation, the application of measures set in the Emergency Plan.

16. If the Commission finds one of the crisis levels associated with theemergency situations in the natural gas sector referred to in point 6, the specialised central body shall immediately inform the Energy Community Secretariat, as well as the competent authorities of the neighbouring countries and shall provide them with all necessary information, in particular information on the actions the Commission intends to take.

17. When the causes of theemergency situation disappear, the TSO shall immediately notify the specialised central body and the Commission via the General Inspectorate for Emergency Situations.

18. The Commission shall, within 12 hours at the latest, stablish the cessation of theemergency situation and shall notify the TSO and the specialised central body.

19. After the end of theemergency situation, the system operators, as well as other participants in the natural gas market, shall resume immediately the normal operation.

20. If the Commission finds the cessation of theemergency situation, the specialised central body shall notify immediately the Energy Community Secretariat as well as the competent authorities from the neighbouring countries.

21. After an emergency, the specialised central body shall, as soon as possible and at the latest six weeks after the lifting of the emergency, provide the Energy Community Secretariat with *a detailed assessment of the emergency* and the effectiveness of the measures implemented, including an assessment of the economic impact of the emergency, the impact on the electricity sector and the assistance provided to or received from Contracting Parties . Such assessment shall be made available to the Security of Supply Coordination Group under the Energy Community and shall be reflected in the updates of the Action Plan foremergency Situations in the Natural Gas Sector

22. The information flow diagrams in case ofemergency situations are shown in Figures 1-2.

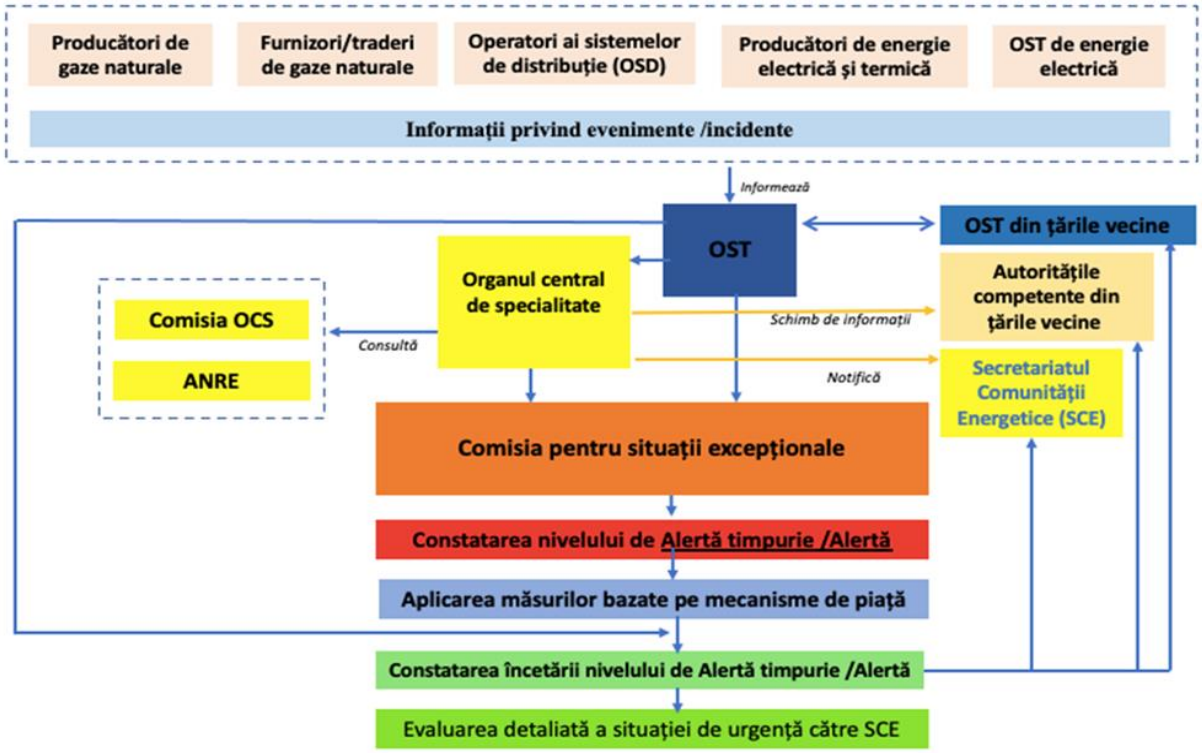

Figure 1. Scheme of the information flow in the event of anemergency situations – early warning level and alert level.

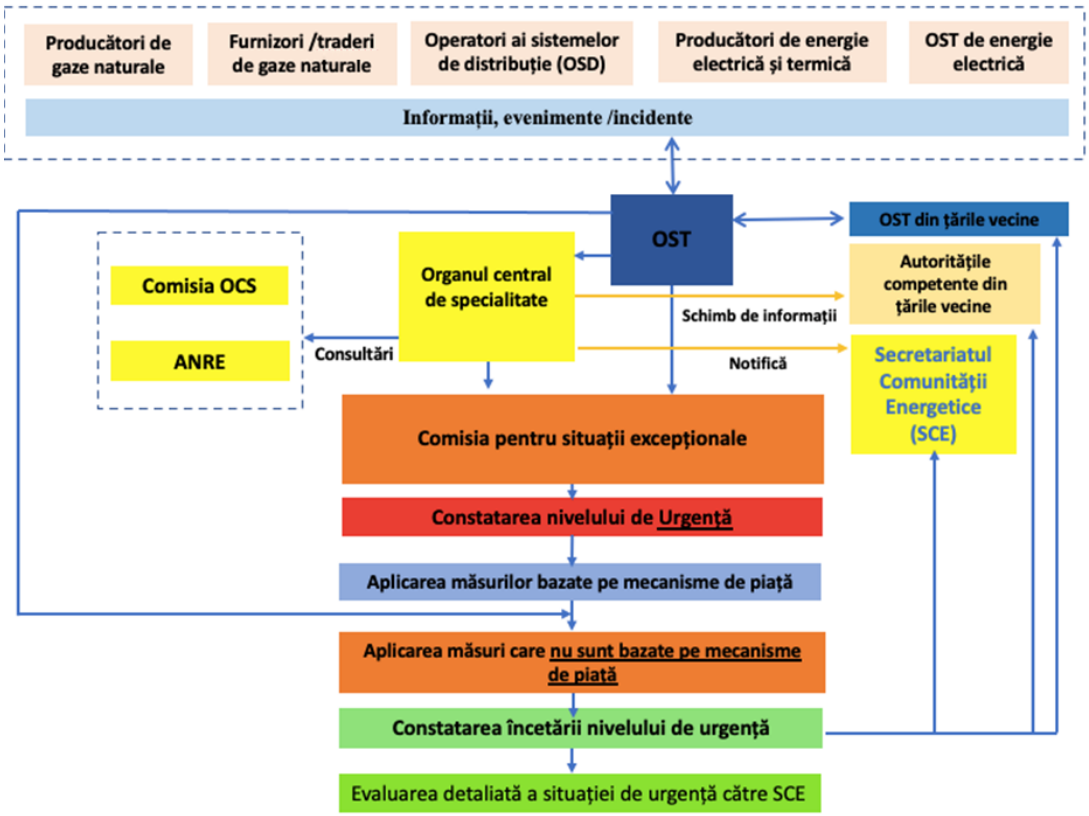

Figure 2. Scheme of the information flow in the event of anemergency situation – emergency level.

Section 4
Incidents that can trigger anemergency situation in the natural gas sector

23. Anemergency situation in the natural gas sector may be triggered by incidents related to the natural gas supply chain or by external threats and hazards that may have an impact on natural gas supply.

24. The non-exhaustive list of incidents/events that may trigger anemergency situation in the natural gas sector are:

- forecast abnormal (extremely low) outdoor temperatures affecting natural gas supply;
- deficit in natural gas (insufficient quantities to meet the demand);
- faults in the national natural gas transmission system;
- faults in the natural gas transmission system routes to the Republic of Moldova;
- failure/incapacity of natural gas market participants to meet natural gas demand, including the supplier of last resort;
- major imbalances in the natural gas system;
- lack of contractual relationships;
- emergencies resulting from a complicated international situation, military conflicts, crises, terrorist actions;
- disruptions in supply of electricity, water, fuel, telecommunications services.

25. The main indicators for declaring the crisis level are described below:

Early warning level (hereinafter referred to	Alert level (hereinafter referred to as	Emergency level (hereinafter referred to as –

as – *early warning situation)*	*– alert situation)*	*emergency situation*)
▪ Limiting or stopping the flow of natural gas at the main physical entry points to the Republic of Moldova ▪ Termination of natural gas supply from basic sources to the Republic of Moldova ▪ Technical problem/technical failure of major natural gas infrastructure (pipelines, compressor stations) ▪ Extreme weather conditions and high demand for natural gas **Risk in long-term natural gas supply**	▪ Limiting significantly or stopping the flow of natural gas at the main physical entry points to the Republic of Moldova; ▪ Termination of natural gas supply from basic sources to the Republic of Moldova ▪ Technical problems or technical failures of natural gas infrastructure over a long period of time (pipelines, compressor stations); ▪ Extreme weather conditions and increased demand for natural gas; **Increased risk for long-term natural gas supply.**	▪ In the long-term further large-scale gas supply disruptions can be expected and there is no suitable alternative supply option. ▪ There is no natural gas available on the gas market to ensure the balance and it cannot be purchased on the market in short-term ▪ The supply with natural gas of protected customers to cover their critical needs is in danger. ▪ Technical problem or technical failure of transmission networks and/or compressor stations without a fast alternative supply option. ▪ Market-based measures have been exhausted in order to eliminate or mitigate the negative consequences of gas supply disruption. Market-based measures are no longer sufficient for the stable operation of the natural gas system of the Republic of Moldova.

Table 2 Main indicators for declaring the crisis level.

26. The incidents/events included in Table 2 can be grouped in two main categories:

1) developing – an event that develops over several days or even weeks, which does not have an immediate effect, but which, in a relatively short period of time, could have a serious impact on natural gas supply. In this case, the specialised central body and the natural gas undertakings shall monitor the situation and take the necessary measures to prevent the onset of an emergency situation. Moreover, the specialised central body may establish a working group in order to implement the expected measures;

2) sudden shock – an event that occurs instantaneously or develops within a few hours and has an immediate negative impact on natural gas supply. In this case, the specialised central body and the natural gas undertakings shall inform immediately the Commission through the General Inspectorate for Emergency Situations and shall take measures to remove or minimise the consequences of natural gas supply disruption to customers and primarily to protected customers.

Section 5
Reporting obligations and information exchange

27. Where signals for the ascertainment of theemergency situation – alert level or emergency level, are identified, the TSO notification to the Commission shall also include the following information:

1) a description of the incident/event:
   a) date, time and duration of the event;

b) type of event;
c) location of the event;
d) estimated natural gas deficit;
e) potential impact.

2) Information on natural gas networks state.

28. Where one of theemergency situations set out in Point 6 is identified by the Commission, the natural gas undertakings concerned shall, through the TSOs, provide the following information in particular to the Commission's specialised central body on a daily basis:

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

2) the daily flows of natural gas at all cross-border entry and exit points as well as at all points connecting a natural gas production facility, a storage facility or an LNG terminal to the natural gas network, in million cubic metres per day (mcm/zi);

3) the period, expressed in days, for which it is expected that supply of natural gas to protected customers can be ensured.

29. During theemergency situation, the central public administration bodies and authorities, public authorities, local public authorities shall report daily to the Commission on the measures taken.

30. The information exchange between the Commission and the specialised central bodies of public administration, local public authorities and other institutions, and between the Commission and TSO, respectively, shall be carried out according to Government Decision No 1076/2010 on the classification of emergency situations and the manner of accumulation and presentation of information in the field of protection of the population and territory in case of emergency situations.

31. During theemergency situations the TSO shall submit daily, to the Commission, ANRE the specialised central body, information about the measures taken by them, other system operators, other natural gas undertakings and other participants in the natural gas market in accordance with the Emergency Plan. System operators as well as other participants on the natural gas market shall collaborate with TSO and shall present the requested information.

32. All the information, mentioned above shall be provided by the natural gas undertakings in a format agreed with TSO.

33. Information obligations of stakeholders engaged for each level of crisis shall be set out in Annex 7.

34. In Figure 3 is shown the scheme of information flows and reporting obligations duringemergency situations.

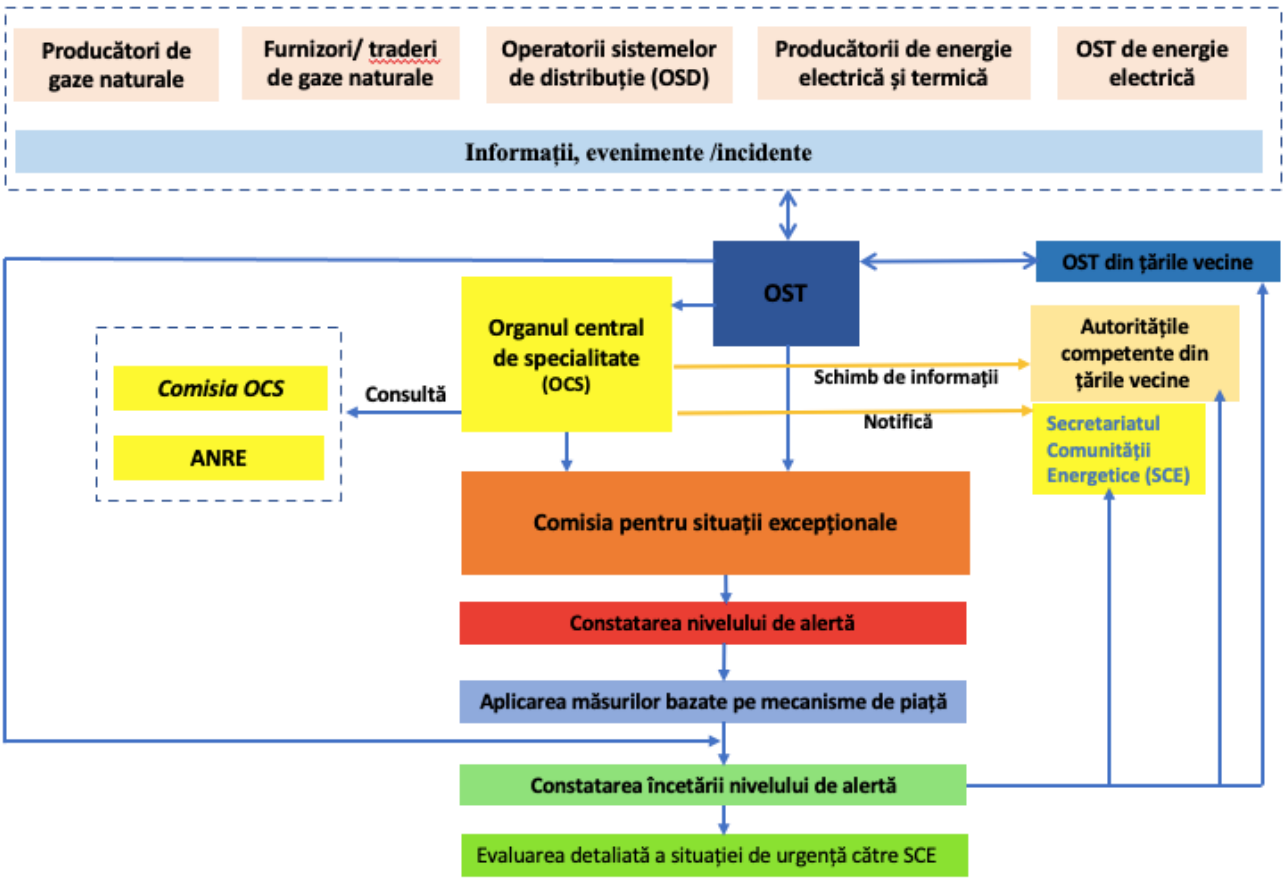

Figure 3. General information flows duringemergency situations in the natural gas sector in the Republic of Moldova

Section 6
Measures applied for each crisis level

35. In the event of anemergency situation, regardless the crisis level, all natural gas undertakings shall fulfil their obligations according to Law on natural gas, Regulation onemergency Situations in the Natural Gas Sector, Emergency Plan and shall execute the decisions of the Commission and TSO's instructions.

36. Any measures established in accordance with this Plan shall apply on a temporary basis in order to reduce the level of disruption to the operation of the natural gas market. At the same time, the measure must be limited to what is strictly necessary in order to remedy the threat to the safety, physical integrity of persons or the natural gas networks.

37. To ensure the natural gas supply of protected customers in the event of anemergency situation in the natural gas sector, the following categories of measures may be applied:

1) *voluntary measures:* information campaigns, reducing voluntarily the natural gas consumption;

2) *market-based measures:* reducing the natural gas demand;

3) *non-market-based measures:* using alternative fuels, limiting the natural gas consumption by final customers, mandatory reducing the natural gas demand.

38. The detailed scope of the above measures is determined by the sectoral structure of natural gas consumption in the Republic of Moldova.

39. To ensure the natural gas supply of final customers, and primarily to protected customers, in the event of anemergency situation, irrespective of the crisis level, in addition to the categories of measures set out above, other market-based or non-market-based measures (in the event of an emergency situation) may be applied.

40. During theemergency situation in the natural gas sector, at the request of TSO, all system operators shall give priority to the provision of natural gas supply services to protected customers.

41. Regardless the crisis level, system operators shall ensure the normal operation of natural gas networks they manage, shall monitor their technical parameters and the system imbalances.

42. In duly justifiedemergency situations, the competent authority may take action deviating from the Emergency Plan. The specialised central body shall immediately inform the Energy Community Secretariat and the competent authorities of the countries of Energy Community, of any such action and shall provide a justification for the deviation from the Emergency Plan.

Section 7
Early warning measures

43. Where an early warning situation is found, public authorities, TSOs and natural gas undertakings in cooperation with heating and power undertakings shall identify market-based measures that may be used.

Measure 1. Early warning	**The Commission informs the media and the public about the situation in the natural gas sector and about the risk of events that could significantly affect the country's natural gas supply.**
Involved parties	The Commission foremergency Situations, the media.
The procedures to follow	The Commission shall ensure the regular publication of press releases, of information about the natural gas sector in the media.
Measure's	Increase general customer awareness of the need to reduce natural gas

contribution	consumption; Inform the customers about the alert situation in the natural gas sector.

Measure 2. Early warning	**Increase imports/purchases of natural gas from several sources, diversify the suppliers and the supply routes.**
Involved parties	Natural gas suppliers, the supplier who is obliged to make purchases and/or ensure stocks of natural gas, external suppliers, natural gas trading platforms.
The procedures to follow	Natural gas suppliers are proactive in purchasing natural gas from natural gas trading platforms. Suppliers shall ensure that external suppliers will supply the volumes of natural gas as contracted.
Measure's contribution	Diversify the natural gas supply sources; Increase the quantities of natural gas purchased; Ensure the availability of natural gas quantities on the basis of contracts closed.

Measure 3. Early warning	**TSOs continuously monitors technical parameters and imbalances in the natural gas system.**
Involved parties	TSOs, natural gas undertakings, system users.
The procedures to follow	During theemergency situation, natural gas undertakings, through TSOs, shall, through the TSOs, provide the Commission and the specialised central body with the information set out in this Plan and in the Regulation onemergency Situations in the Natural Gas Sector
Measure's contribution	System operators, national authorities have access to relevant information about any incident/event that may affect the natural gas supply.

Section 8
Alert level measures

44. Where an **alert** situation is found, public authorities, TSOs and natural gas undertakings in cooperation with heating and power sector undertakings shall, in addition to the measures established for the early warning level, apply other market-based measures **available at this crisis level.**

Measure 1. Alert	**The Commission adopts the decision on the release of part or all of the available quantity of natural gas subject to the stockholding obligation, in accordance with Article 108[3](14) of the Law on natural gas.**
Involved parties	The Commission, the holder of stockholding obligation. Suppliers on the retail natural gas market.
The procedures to follow	Following the Commission's decision, the holder of the stockholding obligation shall release the stocks of available natural gas onto the natural gas market. When determining the quantities to be sold to each retail supplier, account shall be taken of its share of the natural gas market.
Measure's contribution	Ensure the safe and reliable operation of the natural gas market. Ensure the security of natural gas supply.

Measure 2. Alert	**Adopts the Decision on the total or partial use the natural gas that is subject to security stocks according to Article 108[1] (8) of the Law on natural gas**
Involved parties	The Commission, the entity for creating and maintaining the security stocks, retail suppliers.
The procedures to follow	Where an alert or emergency situation is found, following the Commission's decision, natural gas that is subject to security stocks created by the Entity for creating and maintaining the security stocks shall be made available to the suppliers on the retail natural gas market.
Measure's contribution	Mitigate sudden increases in natural gas prices; ensure security of natural gas supply.

Measure 3. Alert	***The use of alternative fuels, where technically feasible, by heating undertakings owning gas-fired combined heat and power plants.***
Involved parties	SA "Termoelectrica" SA "CET Nord" ICS "Moldova-Zahar" SRL SRL "Südzucker Moldova"
The procedures to follow	Shifting gas-fired combined heat and power plants from Chișinău municipality and from other settlements to the use of alternative fuels, where technically feasible, taking into account the reliability of the operation of the heating equipment and the limitations on environmental protection.
Measure's contribution	Reduce the natural gas consumption.

Measure 4. Alert	**TSO ensures the maximum amount of available natural gas stored in the transmission network (linepack).**
Involved parties	Transmission system operator

The procedures to follow	TSO purchases and stores natural gas in its networks within available capacity.
Measure's contribution	Ensure an optimal level of operation of natural gas system; Ensure the physical balance of the system.
Measure 5. Alert	**Apply an increased imbalance payment to incentivise system users to balance their balancing portfolios**
Involved parties	TSO, system users, parties in charge of ensuring the balance.
The procedures to follow	The TSO increases the daily imbalance payment by applying a coefficient to incentivise system users to balance their portfolios earlier as a measure to maintain balance in the natural gas transmission system, in accordance with the Methodology on calculating the payments for imbalance approved by ANRE.
Measure's contribution	Ensures the balance of the natural gas transmission system; Stimulate the system users to balance their portfolios themselves without the TSO performing balancing actions.

Measure 6. Alert	**Supply final customers with natural gas without exceeding the limits of the contracted quantities**
Involved parties	Natural gas suppliers, natural gas customers.
The procedures to follow	Natural gas suppliers shall not exceed the quantity of natural gas supplied as pre-determined in the Annexes to the natural gas supply contracts concluded.
Measure's contribution	Reduce the natural gas consumption.

Measure 7. Early warning	**Suppliers inform customers about the need to reduce the consumption of energy resources, especially natural gas.**
Brief description	Natural gas suppliers take measures to inform customers about the need to reduce the natural gas consumption, including about: - the possibility to limit the natural gas supplies by reducing voluntarily the natural gas consumption; - the way they can help to reduce the natural gas consumption; - the need to create stocks of alternative fuels.
Involved parties	Natural gas suppliers, natural gas customers.
The procedures to follow	Natural gas suppliers shall inform the final customers through electronic pages, information materials, invoices, customer service centres or through the media.
Measure's contribution	Reduce the natural gas demand/consumption.

Measure 8. Alert	**Natural gas customers reduce voluntarily the natural gas consumption and take measures to purchase alternative and/or reserve fuels.**
Involved parties	Natural gas customers, including industrial customers; Electricity and heat producers:
The procedures to follow	Natural gas customers reduce voluntarily the natural gas consumption, shift to alternative fuels, purchase reserve fuels.
Measure's	Reduce the natural gas consumption/demand.

contribution	

Measure 9. Alert	**Inform the population through the media about the causes and extent ofemergency situations, about the measures taken by natural gas undertakings and the responsible authorities**
Involved parties	Commission foremergency Situations
The procedures to follow	The Commission informs the population through the media, publishes on its webpage the press releases, the reports about the causes and extent ofemergency situations, about the measures taken by natural gas undertakings and the responsible authorities to prevent and liquidate their consequences, to protect the population and property, to familiarise the population with the rules of behaviour inemergency situations, and about the measures taken to ensure the natural gas supply to protected customers
Measure's contribution	Reduce the natural gas consumption/demand.

Measure 10. Alert	**Increase in the level of natural gas production**
Involved parties	Natural gas producers
The procedures to follow	mobilise the entire natural gas production capacity within the limits of the maximum extraction capacities.
Measure's contribution	Increase in the natural gas offer.

Section 9
Emergencylevel measures

45. During the emergency situation, the actions of public authorities, TSO and of natural gas undertakings in cooperation with the heating and power sector undertakings shall focus on the decrease in the natural gas consumption by implementing non-market-based measures.

46. In the event of anemergency situation – an emergency situation – being identified by the Commission, the following predefined supply and demand based actions for making gas available shall be applied:

No	**Pre-defined actions**	**Compensation mechanisms**
1.	Use the natural gas stocks that is subject to the stocking obligation under Article 108^{2}-108^{4} of the Law on natural gas	The holder of stockholding obligation may use their own resources or benefit from external loans contracted directly by them – financial sources re-credited from the account of external state loans contracted by the Government on behalf of the Republic of Moldova, and/or from financial resources allocated from the state budget, with their recovery after the release of natural gas in accordance with paragraphs (5) to (12) of the Law on natural gas. To achieve the stockholding obligation, the holder of stockholding obligation may benefit from grants or form other non-repayable sources that are not taken into account when the Agency sets the regulated price.

		The holder of the stockholding obligation on whom the stockholding obligation has been imposed may receive financial incentives or compensation for the revenue shortfall or costs incurred by them as a result of complying with the stockholding obligation if that shortfall or costs cannot be covered by the revenue from the activity carried out in connection with the performance of the stockholding obligation. Financial incentives or compensation shall be determined in accordance with the mechanism laid down by Government Decision, based on Agency calculations.
2.	Total or partial use the natural gas that is subject to security stocks according to Article 108^1 (8) of the Law on natural gas.	The costs related to the creation and maintenance of security stocks shall be covered from financial resources allocated from the state budget and/or from external financial assistance, and/or from financial contributions paid by suppliers on the retail natural gas market. In order to ensure the collection of the financial means necessary for the creation and maintenance of security stocks, the Government may also impose public service obligations on other natural gas undertakings. ANRE shall establish the method for determining the size of the financial contributions to be paid by suppliers on the retail gas market, taking into account the need to cover the costs of security stocks incurred by the entity for the creation and maintenance of security stocks during the previous 12-month period, as well as the periodicity of their payment. The financial contributions shall be determined in proportion to their shares of the retail natural gas market and shall be approved by a decision of ANRE, which shall be adjusted as necessary.
3.	Ensure the natural gas stocks in emergency situations by the supplier who was imposed PSO to purchase natural gas and create stocks.	Own resources or loans contracted directly or financial sources refinanced from the account of external state loans contracted by the Government on behalf of the Republic of Moldova, and/or financial resources allocated from the state budget, with their recovery after putting natural gas into circulation
4.	Use the natural gas stored in the country's transmission networks	Apply the balancing rules and settle the imbalances. Where appropriate, use the flexibility mechanism by

		storing in the pipeline.
5.	Switch the CHP-1 of "Termoelectrica" JSC to alternative fuel	The costs are covered by the tariff according to the Methodology for the calculation, approval and application of regulated prices and tariffs for the production of electricity and heat, and the heat distribution and supply services.
6.	Switch the sugar factories' combined heat and power plants (ÎCS "Moldova-Zahăr" LLC and ÎM "Südzucker Moldova" SA) to alternative fuel	-
7.	Decrease by 10% the temperature of the heating delivered in the centralized heat energy supply systems	-
8.	Limitation/disruption of natural gas supply for interruptible customers.	-

47. The results of the assessment of the decrease in monthly natural gas consumption due to the implementation of the predefined measures included in the Emergency Plan, are presented in Annex 2.

48. Market-based preventive measures applicable in emergency situations are:

1. The TSO shall require all system users who have contracts for the transmission of natural gas to provide the maximum daily quantities agreed with external suppliers;
2. The TSO shall cooperate with TSOs in neighbouring countries through a continuous information exchange mechanism to ensure the security and reliability of the gas transmission networks and congestion management;
3. Suppliers shall use the natural gas purchased from the holder of the stockholding obligation, subject to the stockholding obligation;
4. Suppliers shall purchase and supply additional quantities of natural gas to meet exceptionally high natural gas demand and/or to cover natural gas demand.
5. Producers shall take steps to increase natural gas production levels.
6. Natural gas suppliers shall reduce the quantities of natural gas supplied to final customers who have concluded natural gas supply contracts with interruptible clauses.

49. In the case of an emergency situation, where all market-based measures have been used but demand for natural gas remains unsatisfied, the Commission shall decide on the application of the following **non-market-based measures:**

Measure 1 Emergency	**Limit and/or disrupt the supply of natural gas to interruptible customers**
Involved parties	The Commission, TSOs, DSOs, natural gas suppliers The TSO is responsible for the implementation of the measure.

The procedures to follow	The Commission shall adopt the decision to apply the measure limiting and/or disrupting the supply of natural gas, the TSO is responsible for implementation. If there are no quantities of natural gas to cover the natural gas demand of protected customers, the TSO shall inform the Commission, the specialised central body. Once the Commission has adopted that decision, the TSO shall notify the DSOs, the natural gas suppliers that have signed gas supply contracts with interruptible customers, of the need to limit and/or disrupt the supply of natural gas to interruptible customers. The measure limiting the supply of natural gas shall apply to customers who, by virtue of the technological process, cannot completely interrupt their activity.
Measure's contribution	Reduce the natural gas consumption.
Information flows	According to Section 12 of the Emergency Plan.

Measure 2 Emergency	**Limit and/or disrupt the supply of natural gas to non-household customers included in the category of protected customers**
Involved parties	The Commission, the system operators (TSOs, DSOs), natural gas suppliers The TSO is responsible for the implementation of the measure.
The procedures to follow	If the application of the supply interruption measures to interruptible customers is not sufficient to meet the demand of all protected customers. At the Commission's request, the TSO and the supplier shall notify customer of the need to limit and/or disrupt natural gas consumption. If they do not comply, the customer shall be disconnected. The measure limiting the supply of natural gas shall apply to customers who, by virtue of the technological process, cannot completely interrupt their activity.
Measure's contribution	Reduce the natural gas consumption.
Information flows	According to Section 12 of the Emergency Plan.

Measure 3 Emergency	In the case of an emergency, the Commission may decide to **give priority to the supply of natural gas** over the supply of natural gas to certain categories of protected customers to the following thermal power station and/or combined heat and power plants producing electricity and/or heat from natural gas and or ceasing the supply of thermal energy for the preparation of domestic hot water; 1. Thermal power plant - Cuciurgan (MGRES); 2. Combined heat and power plants - "Termoelectrica" SA; 3. Combined heat and power plants - "CET-Nord" SA.
Main parties involved	The Commission, the electricity/natural gas TSO, thermal power stations or thermal plants.

The procedures to follow	During an emergency situation and on reasonable grounds, upon a request of the relevant electricity or natural gas TSO, the Commission may decide to prioritise the natural gas supply to certain thermal power stations and/or thermal plants over the gas supply to certain categories of protected customers, if the lack of natural gas supply to those power or thermal plants either: 1) could result in severe damage in the functioning of the electricity system and/or of centralised power supply systems; or 2) would hamper the production and/or transportation of natural gas.
Anticipated contribution	Ensure the energy security of the state.

Measure 4 Emergency	Impose certain public service obligations on energy sector undertakings in accordance with the provisions of sectoral laws in the field of natural gas and electricity in order to ensure the security of electricity and/or natural gas supply of the Republic of Moldova
Main parties involved	The Commission, the Government, ANRE.
The procedures to follow	Public service obligations shall be imposed by the Government or by ANRE. Obligations shall be imposed as a measure that is limited in time, in a non-discriminatory manner and shall be reviewed regularly, ex officio, to determine the need to maintain those obligations. Before imposing public service obligations, the Government or, where appropriate, the Agency shall inform the Energy Community Secretariat thereof, unless there is an imminent danger to the security of natural gas supply of the Republic of Moldova. During an Emergency situation, the Commission may impose public service obligations to energy sector undertakings to ensure the security or electricity and/or natural gas supply of the country.
Anticipated contribution	Ensure the energy security of the state.

Section 10
Specific measures for the power and thermal power sectors

50. If PJSC “Gazprom” interrupts the natural gas supply, there are still major risks for the security of natural gas supply to the left bank of the Nistru river and for ensuring stability of the power system of the Republic of Moldova. Basically all the electricity needed in addition to that produced locally will have to be covered from sources other than MGRES (import of electricity from the Ukrainian power system and ENTSO-E, Continental Europe).

51. The continuity of natural gas supply is an important element in ensuring energy security for protected customers connected to the centralised heat supply system, especially during the heating season.

52. The centralised heating supply systems deliver heat to households and businesses in different cities of the Republic of Moldova, but more than 99% of heat consumption is concentrated in Chișinău and Bălți municipalities (which have a total population of more than 800,000 people). The rest of the country gets heat from other sources, primarily individual stoves, accounting for over 64% of all households. The structure of thermal energy production has changed only slightly over the last decade, with natural gas remaining the primary fuel (accounting for about 95%).

53. In 2022, due to the use of alternative fuel, fuel oil consumption by JSC "Termoelectrica" increased from 1 1631.11 tons in 2021 to 68 660,98 tons in 2022 and 100 161,86 tons in 2023.

54. Domestic biofuel solutions (solid biofuels, biogas) account for about 4% of heat production and could allow more imported fossil fuels to be substituted for heat production.

55. Given the critical role of the power and thermal power sectors in natural gas consumption in the Republic of Moldova, the following sectoral measures could be implemented according to the Emergency Plan:

Measure 1 Emergency	**Switch the combined heat and power plant Source 1 of "Termoelectrica" JSC to use alternative fuel.**
Main parties involved	The Commission, CHP-1 of "Termoelectrica" SA.
The procedures to follow	The Commission shall decide the switch of CHP-1 of "Termoelectrica" JSC to alternative fuel. The share of combined use of natural gas – heavy fuel oil shall be decided by "Termoelectrica" JSC and shall be applied according to the evolution of energy resource prices, availability of energy resources and impact on customer and environmental vulnerability.
Anticipated contribution	Reduce the natural gas consumption;
Information flows	According to Section 12 of the Emergency Plan.

Measure 2 Emergency	**Shift to use alternative fuel**
Main parties involved	The sugar factories' combined heat and power plants (ÎCS "Moldova-Zahăr" LLC and ÎM "Südzucker Moldova" SA).
The procedures to follow	Combined heat and power plants of sugar factories shall decide about the type of fuel used, quantities stored period of use.
Anticipated contribution	Reduce the natural gas consumption

Measure 3 Emergency	**Decrease by 10% the temperature of the heating agent delivered into the centralized heating supply systems (SACET);**
Main parties involved	Heat plants SACET, housing fund managers.
The procedures to follow	The Commission shall decide on the decrease by 10% the temperature of the heating agent delivered into the centralized heating supply systems.
Anticipated	Reduce the natural gas consumption

<table>
<tr><td>contribution</td><td></td></tr>
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<table>
<tr><td>Measure 4
Emergency</td><td>In the case of an emergency, the Commission may decide to give priority to the supply of natural gas over the supply of natural gas to certain categories of protected customers, the following thermal power stations that produce electricity and/or heat from natural gas:
4. Thermal power plant - Cuciurgan (MGRES);
5. Combined heat and power plants - “Termoelectrica” SA;
6. Combined heat and power plants - “CET-Nord” SA.</td></tr>
<tr><td>Main parties involved</td><td>The Commission, the electricity/natural gas TSO, thermal power stations or thermal plants.</td></tr>
<tr><td>The procedures to follow</td><td>During an emergency situation and on reasonable grounds, upon a request of the relevant electricity or natural gas TSO, the Commission may decide to prioritise the natural gas supply to certain thermal power stations and/or thermal plants over the gas supply to certain categories of protected customers, if the lack of natural gas supply to those power or thermal plants either:
3) could result in severe damage in the functioning of the electricity system and/or of centralised power supply systems; or
4) would hamper the production and/or transportation of natural gas.

<table>
<tr><td>Thermal power plants and/or heat plants</td><td>Average minimum consumption/day, mcm/day (2021)</td><td>Average maximum consumption/day, mcm/day (2021)</td></tr>
<tr><td>Thermal power plant - Cuciurgan (MGRES)</td><td>2.8 (April)</td><td>4.7 (July)</td></tr>
<tr><td>“Termoelectrica” SA</td><td>0.115 (August)</td><td>2.6 (February)</td></tr>
<tr><td>S.A “CET-Nord” SA</td><td>0.020 (August)</td><td>0.277 (February)</td></tr>
</table>
</td></tr>
<tr><td>Anticipated contribution</td><td>Ensure the energy security of the state.</td></tr>
</table>

Comparative analysis of the measures included in the emergency plans of the Republic of Moldova, EU Member States and UK is set out in Annex 8.

Section 11
Interruptible customers

56. Interruptible customers are non-household customers who do not belong to the category of protected customers for whom it is possible to apply measures to limit and/or disrupt the supply of natural gas in the event of an emergency situation as determined in accordance with the Action Plan foremergency Situations.

57. Each system operator shall draw up a nominal list of interruptible customers whose natural gas installations are connected to its natural gas networks. Lists of interruptible customers shall contain, including information on the type of activity and monthly volumes of natural gas at each consumption site for the previous calendar year. Suppliers shall present to system operators all the information necessary to draw up those lists. Lists of interruptible customers shall be kept at the respective system operators, shall be submitted, upon request, tothe specialised central body and/or TSO.

58. Annually, by 1 August, the TSO, on the basis of the information received from DSOs and suppliers, shall submit with the central specialist body the nominal list of interruptible customers, which includes the information in the reporting format coordinated in advance by the TSO with the specialised central body. Lists of interruptible customers shall be published on the webpages of system operators. During the emergency situation, the list of interruptible customers shall be updated monthly by TSO and shall be submitted tothe specialised central body by the 20th of that month.

System operators and suppliers are responsible for the correctness of the data submitted with the TSO and/or the specialised central body.

59. Given the impact on the natural gas consumption in the context of ensuring the security of natural gas supply of protected customers, the sequence of limitation and/or disruption of natural gas supply to interruptible customers is set out in Table 3.

Interruptible customers	**Activity codes CAEM-2[23]**	**Sequence of limitation and/or disruption of natural gas supply[24]**	**Consumption during winter (October-March), m³**	**Consumption summer (April-March), m³**	**Annual consumption[25], m³**
CHP and TP installations, the heating installations of which can operate on other types of fuels than natural gas	D3530	1.	88 850 285	16 846 667	105 696 952
Sugar production	C1081	2.	3 831 308	749 152	4 580 460
Filling stations with compressed natural gas for vehicles (GNCV)	GNCV	3.	3 131 827	3 442 117	6 573 944
Manufacture of glass items	C2313	4.	7 523 356	5 674 140	13 197 496
Manufacture of tobacco products	C1200	5.	217 460	281 217	498 677
Manufacture of cement	C2351	6.	6 610 452	5 636 407	12 246 859
Manufacture of lime and plaster	C2352	7.	1 434 097	2 543 378	3 977 475
Manufacture of bricks, tiles and other construction products out of baked clay	C2332	8.	449 254	967 321	1 416 575
Manufacture of other basic organic chemicals	C2014	9.	2 697 766	379 811	3 077 577
Manufacture of cellulose, paper, paperboard and chemical products	C1721, C1723, C1729, C1812, C2016, C2030, C2060	10.	960 649	522 342	1 482 991
Manufacture of carpets and rugs	C1393,	11.	99 087	87 843	186 930
Manufacture of cocoa products, chocolate and sugar confectionery	C1082	12.	1 392 466	642 598	2 035 064
Manufacture of non-alcoholic	C1032, C1107	13.	3 497 108	2 419 559	5 916 667

[23] Classification of Economic Activities in Moldova (CAEM-2) - https://statistica.gov.md/ro/clasificari-si-nomenclatoare-9881.html.

[24] When setting the order of limitation and/or disruption of natural gas supply to final interruptible customers the following was taken into account: the impact of disruption of natural gas supply on final customers from different sectors of national economy; the obligation of certain categories of final natural gas customers to own alternative fuels; the natural gas consumption of final natural gas customers from different sectors of national economy.

[25] Estimated natural gas consumption data for interruptible customers in 2023 have been aggregated based on information submitted by system operators.

beverages					
Manufacture of wine and alcoholic beverages	C1101, C1102, C1105	14.	3 391 330	2 176 133	5 567 463
Manufacture of construction materials, plastics	C2221, C2222, C2223, C2229, C2312, C2314, C2331, C2361, C2363, C2370, C2399, C2511, C2562, C2572, C2593, C2599, C2651, C2711, C2732, C2813, C2822	15.	1 228 674	1 662 510	2 891 184
Construction, extraction and manufacture of building materials	E3832, F4120, F4211, F4221, F4299, F4321, F4322, F4331, F4399, B0812	16.	2 402 366	2 614 732	5 017 098
Other activities	Interruptible customers	17.	-	-	-

Table 3. Sequence of limitation and/or disruption of natural gas supply to final customers in the case of an emergency situation on the natural gas market in the Republic of Moldova

60. If there are no quantities of natural gas necessary to ensure the consumption of protected customers, measures to limit and/or interrupt the supply of natural gas shall be applied according to the sequence set out in Table 4.

Protected consumers	**Sequence of limitation and/or disruption of natural gas supply[26]**
Small enterprises for the purpose of Law No 179/2016 on small and medium-sized enterprises, the installations of which are connected to the natural gas distribution network, except the holders of licence for the sale of compressed natural gas for vehicles at filling stations	1
Enterprises and institutions that provide essential social service, the installations of which are connected to a natural gas network	2
CHP and TP installations that provide thermal energy in SACET to household customers, small and medium-sized enterprises or entities and institutions that provide essential social services, heating installations that can operate on other types of fuels than natural gas	3
Household customers whose installations are connected to the natural gas distribution network	4

Table 4. Sequence of interruption of natural gas supply to protected customers in case of an emergency situation in the natural gas sector of the Republic of Moldova

61. If a protected customer in the category of undertakings and institutions providing essential social services has places of consumption where essential social services are not supplied,

[26] When setting the order of limitation and/or disruption of natural gas supply to final customers the following was taken into account: the impact of disruption of natural gas supply on final customers from different sectors of national economy; the obligation of certain categories of final natural gas customers to own alternative fuels; the natural gas consumption of final natural gas customers from different sectors of national economy; groups of protected customers.

measures to limit and/or disrupt the supply of natural gas may be applied to those places of consumption in accordance with Section 12.

Section 12
The procedure for implementing the measures limiting and/or interrupting the supply of natural gas

62. In the event of an emergency situation, the Commission may decide on the application of the measure limiting and/or interrupt the supply of gas to interruptible customers in accordance with the nominal list of interruptible customers submitted by the TSO to the specialised central body and in the order set out in Tables 3-4.

63. No later than 6 hours after the adoption of the Commission's provision on the application of the measure limiting and/or interrupting the supply of natural gas to interruptible customers, TSO shall notify DSO and natural gas suppliers of the obligation to interrupt natural gas consumption.

64. For the purpose of monitoring natural gas consumption TSO shall determine daily:

1) total natural gas demand;
2) available quantity of natural gas;
3) demand for natural gas of protected and interruptible customers;
4) deficit of natural gas (the difference between total demand and available natural gas);
5) the quantity of natural gas available to interruptible customers (the difference between the available quantity and the demand for natural gas of protected customers);
6) the percentage of reduction in natural gas consumption by interruptible customers. determined as the ratio of the amount of natural gas available to interruptible consumers to the natural gas demand of interruptible consumers multiplied by 100.

65. The limiting procedure can only be applied for customers where the interruption of natural gas supply may affect the technological process (e.g. glass production, metallurgical industry).

66. Following the notification referred to in Point 63, gas suppliers shall notify interruptible customers of the obligation to disrupt their natural gas consumption, by mail (registered letter), e-mail, telephone or even by physical delivery, so as to ensure receipt of the notification within the set time limit.

67. The supplier's notification of the limitation and/or interruption of gas consumption shall contain at least the following information:

1) name of interruptible customer;
2) the address of the place of consumption at which the supply of natural gas will be limited/disrupted;
3) the limited daily volume (m^3/day) /flow of natural gas to be interrupted, in m^3/h;
4) the (gas) day and time at which the limitation/disruption will take place;
5) estimates of when the emergency situation will end.

68. Interruptible customers are obliged to reduce or interrupt natural gas consumption as notified by the natural gas supplier in accordance with Points 66-67, and not to endanger the safe and reliable operation of natural gas equipment, machinery and installations, or switch to the use of alternative fuel where appropriate.

69. If interruptible customers do not reduce or interrupt their gas consumption, the system operator shall, at the request of the supplier, disconnect the natural gas consumption installations of those customers from the natural gas network.

70. Interruptible customers, whose facilities have been forcibly disconnected from the natural gas network by the system operator, shall pay the reconnection tariff and can be reconnected to the network after the emergency situation has ended.

71. System operators shall monitor the natural gas consumption of interruptible customers and shall apply the measures set out in Section 13.

Section 13
Measures concerning unauthorised/excessive consumption of natural gas by interruptible customers

72. If an unauthorized connection to the natural gas network of the user's facilities (appliances) is found after having been disconnected from the network according to point 69 of the Plan and/or detection of consumption of natural gas in violation of the obligation to limit and/or disrupt the consumption of natural gas set out in Point 68 of the Plan by interruptible customers, the system operator's staff shall be obliged to draw up the *act of detection* of unauthorized/excessive consumption (detection act) in 2 copies, one copy for each party.

The staff of the system operator shall indicate in the act the manner in which the provisions of the regulatory acts have been breached resulting in unauthorised/excessive consumption of natural gas from the natural gas network. The detection act shall be signed by the system operator's staff and the interruptible customer. If the interruptible customer refuses to sign the detection act, the system operator's staff shall indicate in the document the fact and the reasons for the refusal. Once unauthorised/excessive consumption of natural gas is detected, the system operator's staff shall remove the detected violations and keep the evidence.

73. On the basis of the accumulated materials, the system operator shall calculate the natural gas consumption on the basis of the indications of the measuring equipment or as appropriate according to the tariff system (in the absence of measuring equipment) for the period of time from the date indicated in the supplier's notification to reduce/disrupt the natural gas consumption until the end of the emergency situation. The supplier shall charge the customer for triple the amount of natural gas consumption.

74. If the interruptible customer does not pay the equivalent of the gas consumption, the supplier shall address to court to recover the damage caused.

Section 14
Crisis management

75. The general management ofemergency situations in the natural gas sector, the coordination of the necessary measures by public authorities and participants in the natural gas market, as well as the monitoring of the implementation of these measures shall be carried out by the Commission foremergency Situations of the Republic of Moldova (manager ofemergency situations in the natural gas sector).

Section 15
Roles and responsibilities of parties involved

76. Ensuring security of natural gas supply is a shared responsibility of natural gas undertakings and of public authorities in charge of proper functioning of the natural gas sector, in accordance with their functional and institutional competences. Natural gas undertakings shall be responsible for ensuring the secure, reliable and efficient operation of the natural gas system so as to guarantee uninterruptible supplies of natural gas and the satisfaction of final customers' demand for natural gas, within the set quality parameters and quality indicators, and for taking measures to ensure security of supply of natural gas to final customers.

77. During theemergency situation, the Commission, the specialised central body, the public administration bodies and authorities, the natural gas undertakings and other participants in the natural gas market shall apply the Emergency Plan as an operational working document. The measures taken by the parties involved according to the Emergency Plan shall be binding and shall prevail over contractual provisions and relevant legislation.

78. A detailed analysis of the roles and responsibilities of public authorities and natural gas undertakings for each crisis level during anemergency situation in the natural gas sector is provided in Annexes 3-6.

Section 16
Emergency response tests

79. According to the Regulation onemergency Situations in the Natural Gas Sector, the measures, actions and procedures contained in the Emergency Plan shall be tested at least once between its four-year updates. In order to test the Emergency Plan, the specialised central body shall simulate high and medium impact scenarios and responses in real time according to that Emergency Plan.

80. The specialised central body shall model high and medium impact scenarios and interventions in real time according to the Emergency Plan. Modelled emergency scenarios are unique and dynamic in nature, depending on the magnitude and potential impact of the emergency situation, and real-time response may vary depending on the nature of the emergency situation. Emergency scenarios involve a series of events that rank potential problems in the operation of natural gas systems up to the event requiring the declaration of an emergency, i.e. up to the objective need to launch non-market based measures.

81. The specialised central body shall be in charge of preparing and organising the emergency response tests. The emergency response tests shall take place at least once in four years and the date and the entity in charge of organising them shall be set by order of the specialised central body. The first response tests shall be carried out no later than one year after the Energy Community Secretariat has given its opinion on the Emergency Plan. Emergency response testing is done to test the effectiveness of the plan and of the operational measures included in it.

82. In order to ensure the safe supply of natural gas to final customers in the Republic of Moldova, the responsible authorities shall implement emergency response simulations. The operational parameters of at least the following undertakings in the natural gas, power and heat sectors shall be simulated:

- LLC “Vestmoldtransgaz”;
- JSC “Moldovagaz”;
- JSC “Energocom”;
- LLC “Chișinău-gaz”
- LLC “Bălți-gaz”
- JSC “Termoelectrica”;
- JSC “CET-Nord”;
- JSC “Apă Canal Chisinau”;
- Apă canal
- SE “Moldelectrica”;
- JSC “RED-Nord”;
- JSC “Premier Energy Distribution”;
- LLC “Premier Energy”;
- JSC “FEE-Nord”.

83. The situations modelled for the natural gas sector of the Republic of Moldova shall include the following high and medium impact scenarios:

1) disruption of natural gas supply in the Republic of Moldova due to damaged natural gas infrastructure caused by the war in Ukraine started by the Russian Federation, or a terrorist attack over the natural gas infrastructure in Russian Federation or Ukraine;

2) unfavourable weather conditions;

3) limitation of disruption of natural gas supply to the Republic of Moldova by PJSC “Gazprom” following the commercial disputes/debts of JSC “Moldovagaz” to PJSC “Gazprom”;

4) disruption of natural gas supply to the Republic of Moldova due to the unacceptable level of natural gas price from the suppliers available on the regional market or due to the negative situation of the macroeconomic situation in the country (high inflation or devaluation of the national currency);

5) total disruption of natural gas supply to the Republic of Moldova from all sources;

6) limitation of natural gas supply to the Republic of Moldova, with the possibility to import only through one interconnection point;

7) disruption of natural gas supply to the left bank of the Nistru river.

84. After emergency response testing, a summary of the results achieved, including an action plan detailing improvements to existing emergency measures, shall be prepared and presented to all stakeholders.

Section 17
Cooperation mechanisms with other Contracting Parties

85. The specialised central body shall ensure the regional collaboration with the competent authorities from the neighbouring countries in order to implement the measures for preventing and mitigating the impact of possibleemergency situations in natural gas supply. TSOs shall ensure cooperation with adjacent TSOs in order to prevent possible disruptions in the natural gas supply and to minimise the damage that may be caused in such a situation.

86. To ensure the security of natural gas supply, the specialised central body together with TSO shall collaborate with the relevant public authorities and with adjacent TSOs from the neighbouring countries (Romania and Ukraine) as well as from other countries, if appropriate, particularly in relation to:

a) coordinate measures on security of natural gas supply inemergency situations;

b) identify the interconnections, develop and upgrade them, including ensuring bidirectional capacities;

c) identify the conditions and practical arrangements for mutual assistance.

87. The specialised central body, together with the TSO, shall participate, in collaboration with the relevant public authorities and adjacent TSOs in neighbouring countries, in the development of joint preventive action plans and joint emergency plans.

88. The specialised central body, shall identify, where appropriate, the interaction and correlation of risks among neighbouring countries of Energy Community and/or the Member States.

89. To enhance the flexibility and resilience of the natural gas supply system, the Republic of Moldova stores natural gas in neighbouring countries of Energy Community and/or in the Member States.

90. Effort-sharing mechanisms to meet the objective of creating stocks with these neighbouring countries will increase the flexibility of operation of natural gas system of the Republic of Moldova, providing additional options for mitigating natural gas supply risks.

Annex 1.
To the Emergency Plan

Annex 1. Main sources of information for managing anemergency situation in the natural gas sector

Information	**Information providers**
Cause of theemergency situation	Specialised central body, natural gas undertakings, TSO
Extent and duration of theemergency situation	Specialised central body, natural gas undertakings, TSO
Deadlines for restoring natural gas supply	Specialised central body, natural gas undertakings, TSO, DSO
Required government powers and actions	Specialised central body TSO
Actions taken to eliminate or mitigate the negative consequences	Specialised central body, natural gas undertakings, TSO
Consumer issues, including protected consumers	Specialised central body, TSO, DSO
Issues on the natural gas market	Specialised central body, ANRE
Increasing the natural gas supply	Specialised central body, TSO, DSO
Actions to reduce the demand for natural gas	Specialised central body TSO, DSO
Socio-economic impact of natural gas supply disruptions	Specialised central body
Security issues	Specialised central body Ministry of Internal Affairs
Communication with the media	Commission

Annex 2.
To the Emergency Plan

Decrease in monthly natural gas consumption due to the implementation of the predefined measures stated in the Emergency Plan, mcm

No	Measures	Limitation of natural gas supply, %											
		0%	35%	50%	100%	0%	35%	50%	100%	0%	35%	50%	100%
		Minimum per month, mcm/day				Maximum per month, mcm/day				Average per month, mcm/day			
1	Use the natural gas stocks related to the stockholding obligation under Article 108^3 of the Law on natural gas	0	0	0	0	0	0	0	0	0	0	0	0
2	Use the natural gas that is subject to security stocks under Article 108^1 (8) of the Law on natural gas.	0	0	0	0	0	0	0	0	0	0	0	0
3	Conclude/access loan agreements, by the Government, with financial institutions in order to secure natural gas stocks in emergency situations by suppliers obliged to purchase natural gas and build up stocks	0	0	0	0	0	0	0	0	0	0	0	0
3	Use the natural gas stored in the country's transmission networks	0.0	0.0	0.5	19.0	0.0	0.0	6.8	19.0	0.0	0.0	4.8	19.0
4	Switch the CHP-1 of "Termoelectrica" JSC to alternative fuel (fuel oil)	0.0	8.6	7.1	7.1	0.0	41.5	51.1	51.1	0.0	25.8	37.0	37.7
5	Switch the sugar factories' heating power plants (ÎCS "Moldova-Zahăr" LLC and ÎM "Südzucker Moldova" SA) to alternative fuel	0.0	0.5	0.5	0.5	0.0	8.0	8.0	8.0	0.0	2.5	2.5	2.5
6	Decrease by 10% the temperature of the heating elivered in the centralized heat energy supply systems	0.0	0.5	0.5	0.5	0.0	2.4	2.4	2.4	0.0	1.9	1.9	1.9
7	Limit or interrupt deliveries of natural gas to interruptible customers.	0.0	0.0	0.0	4.7	0.0	0.0	0.0	33.4	0.0	0.0	0.0	16.4
	Total	**0.0**	**9.6**	**8.6**	**31.8**	**0.0**	**51.9**	**68.3**	**113.9**	**0.0**	**30.2**	**46.2**	**77.5**

Note: If the stocks of natural gas related to the stockholding obligation/security stocks are used, then there will be no problems in case of natural gas limitation during one month because the maximum consumption of natural gas is covered. Respectively, the consumption reduction is 0 for all 3 scenarios.

Annex 3.
To the Emergency Plan

Roles and responsibilities of the entities involved in the Early Warning situation.

Entity	Roles and responsibilities
Commission foremergency Situations	Review the notification of occurrence/ establish the existence/termination of an early warning situation.
	Coordinate the actions of natural gas undertakings, natural gas market participants, the specialised central body, other public bodies or authorities in relation to the occurrence and management of an early warning situation.
	Issue orders on the implementation of the measures set out in the Emergency Plan, as well as additional measures that are not set out in the Plan.
Specialised central body	Where appropriate, notify the Commission of the existence of conditions for establishing/terminating of the early warning situation.
	Consolidate and evaluate the information received from natural gas undertakings. Provide up-to-date information to the Commission/Government.
SCB Commission	Consult the specialised central body on assessing the conditions for anemergency situation, analyse information on the possible occurrence of an event that could affect the supply of natural gas.
ANRE	Provide information to the specialised central body and the Commission on the functioning of the natural gas market during anemergency situation.
TSO	Notify the Commission of the existence of conditions for establishing/terminating an early warning situation.
	Ensure normal operation of the natural gas transmission system, monitor the technical operating parameters of the natural gas transmission networks and imbalances in the system.
	Provide binding instructions for natural gas market participants when carrying out the measures included in the Emergency Plan.
	Participate in the work of the SCB Crisis Evaluation Commission.
	Collaborate with TSOs in neighbouring countries.
DSO	Ensure the normal operation of the networks, monitor the technical parameters of the operation of its networks and imbalances in the system.
Natural gas suppliers/traders	Provide natural gas, carry out market-based measures set out in the plan. They are responsible for keeping their balancing portfolios in balance, reporting any incident that may cause a disruption in natural gas supply and informing final consumers of the measures applicable inemergency circumstances in the natural gas sector.
Electricity and heat producers	Provide information to the specialised central body, TSO and the electricity TSO on natural gas consumption, electricity and heat production.
	Inform the specialised central body and natural gas undertakings about the operating parameters of natural gas power plants.
	Participate in the work of the SCB Commission
Electricity TSO	Implement and coordinate measures affecting the electricity sector.

	Participate in the work of the SCB Commission

Annex 4.

To the Emergency Plan

Roles and responsibilities of the entities involved **in the Alert situation** .

Entity involved	Roles and responsibilities
Government	Impose public service obligations.
Commission	Review the notification of occurrence/ establish the existence/termination of an alert situation.
	Coordinate the actions of natural gas undertakings, natural gas market participants, the specialised central body, other public bodies or authorities in relation to the occurrence and management of an alert situation.
	Issue orders on the implementation of the measures set out in the Emergency Plan, as well as additional measures that are not set out in the Plan.
Specialised central body	Where appropriate, notify the Commission of the existence of the circumstances for declaring /terminating an alert situation;
	Consolidate, evaluate and monitor the information received from natural gas undertakings. Provide updates to the Commission /Government.
	Coordinate actions taken by natural gas undertakings, in particular TSOs, other natural gas market participants, other public bodies or authorities in relation to the occurrence and management of an alert situation.
	Organise meetings of the SCB Committee and participate in its work.
SCB Commission	Consult the specialised central body on assessing the conditions for the existence of anemergency situation, and on the measures required to manage the level of crisis in question.
ANRE	Monitor the functioning of the gas market and the implementation of measures to ensure security of natural gas supply. Approve/update regulated tariffs and prices, impose public service obligations, sanction licence holders.
TSO	Notify the Commission of the existence of conditions for establishing/terminating an alert situation.
	Monitor the technical operating parameters of the natural gas system and imbalances in the system.
	Provide binding instructions for natural gas market participants when carrying out the measures included in the Emergency Plan.
	Compile and analyse data received from natural gas undertakings and natural gas market participants
	Participate in the work of the SCB Commission
	Collaborate with TSOs in neighbouring countries.
DSO	Inform the TSO of the occurrence of the event that may lead to an alert situation.
	Implement the measures adopted in an alert situation.
Natural gas suppliers/traders	They are responsible for keeping their balancing portfolios in balance, reporting any incident that may cause a disruption in natural gas supply and

	informing final consumers of the measures applicable inemergency circumstances in the natural gas sector.
	Implement the measures adopted in an alert situation, which are based on market mechanisms
Electricity and heat producers	Implement and comply with the contracts concluded with the electricity TSOs and/or electricity suppliers, as well as the emergency measures set out in the Emergency Plan.
	Participate in the work of the SCB Committee
	Implement and coordinate measures affecting the electricity and energy sector, in particular as regards restrictions on the operation of natural gas-fired power plants
Natural gas producers	Mobilise the entire natural gas production capacity within the limits of the maximum extraction capacities.
	Operate and maintain production facilities, increase their capacity so as to ensure their safe and continuous operation; Provide TSO, DSO with the necessary data for the management of the natural gas system; Have access to the natural gas transmission and distribution networks on a non-discriminatory basis; Sell the natural gas produced on the wholesale and retail natural gas market.
Industrial consumers	Take measures to optimise the natural gas consumption.

Annex 5.
To the Emergency Plan

Roles and responsibilities of entities involved in an **Emergency situation**

Entity involved	Roles and responsibilities
Government	Impose public service obligations with regard to security of natural gas supply.
Commission foremergency Situations	Review the notification of occurrence/ establish the existence/termination of an alert situation.
	Coordinate the actions of natural gas undertakings, natural gas market participants, the specialised central body, other public bodies or authorities in relation to the occurrence and management of an early warning situation.
	Issue orders on the implementation of the measures set out in the Emergency Plan, as well as additional measures that are not set out in the Plan.
Specialised central body	Where appropriate, notify the Commission of the existence of the circumstances for declaring /terminating an emergency situation;
	Analyze and evaluate the information received from natural gas undertakings on the existence of preconditions for declaring an emergency situation and, where appropriate, organise the meeting of the SCB Committee
	Oversee the management of the emergency situation, coordinate the actions of natural gas undertakings, in particular TSOs, other natural gas market participants, other public bodies or authorities in relation to the occurrence

	and management of the emergency situation
	Ensure regional cooperation with the competent authorities of neighbouring countries and adjacent TSOs in order to ensure measures to prevent and mitigate the impact of possibleemergency situations for natural gas supply. 1) coordinate measures on security of natural gas supply inemergency situations; 2) identify the conditions and practical arrangements for mutual assistance.
	Prepare decisions on measures not based on market mechanisms, prepare proposals on measures to be taken for the emergency level and consult with TSO on the necessary restrictions.
SCB Commission	Consult the specialised central body on assessing the conditions for the existence of anemergency situation, and on the measures required for the level of crisis in question.
ANRE	Monitor the functioning of the natural gas market, implementation of measures to ensure security of natural gas supply.
	Impose public service obligations within the limits of competence.
	Sanction licence holders who do not comply with Commission decisions.
TSO	Notify the Commission of the existence of the circumstances for declaring /terminating an emergency situation;
	Untill the Commission finishes verifying the conditions for the existence of anemergency situation, if theemergency situation requires immediate response, the TSO shall take all necessary measures to reduce the impact or eliminate the emergency situation in accordance with the Emergency Plan.
	Monitor the technical parameters of the natural gas networks and imbalances in the system, restore technical faults in the natural gas transmission system in the shortest possible time.
	Provide binding instructions to natural gas market participants when undertaking the measures included in the Emergency Plan.
	Submit operational information to the Commission, the specialised central body.
	Compile and analyse data received from natural gas undertakings and send relevant information to the specialised central body
	Participate in the work of the SCB Committee
	Collaborate with TSOs in neighbouring states by applying a mechanism of continuous exchange of information and temporarily exceed the limits of the OBA account in order to ensure the security of the national transmission system.
	Take measures to limit and/or interrupt the supply of natural gas to interruptible customers.
DSO	Ensures the safe and reliable delivery of natural gas through distribution networks to end-users' facilities. Take measures to limit and/or interrupt the supply of natural gas to interruptible customers.
Natural gas suppliers and traders	Natural gas suppliers and traders are responsible for keeping their balancing portfolios in balance, reporting any incident that may cause a disruption in natural gas supply and informing final customers of the measures applicable inemergency circumstances in the natural gas sector. Implement the measures set out in the Plan.

Electricity and heat producers	Implement and coordinate measures affecting the electricity and energy sector, in particular as regards restrictions on the operation of natural gas-fired power plants
Local government authorities	Take the necessary measures set out in the Emergency Plan, as directed by the Commission. If necessary, the Commission shall request the support of the local public administration authorities, the territory of which is affected by theemergency situation, in dealing with the consequences of theemergency situation and restoring the normal operation of the natural gas market.
Natural gas consumers	Reduce or limit natural gas consumption at the request of the System Operator/natural gas supplier; Ensure the safety of natural gas equipment, machinery and installations and, where appropriate, switch to the use of alternative fuels.
	Avoid unauthorised consumption of natural gas/exceeding the limit without creating technically dangerous situations.
Electricity TSO	Monitor the impact of reduced natural gas deliveries on the electricity grid.

Annex 6.
To the Emergency Plan

Rights and obligations of system operators concerning the secure operation of the natural gas system

Entity	Roles and responsibilities
TSO	operate, maintain, upgrade and develop natural gas transmission networks in a safe, reliable and efficient manner. restore technical faults in the natural gas transmission system as quickly as possible. provide natural gas transmission services, including cross-border flows. ensure capacity allocation and congestion management of natural gas transmission networks; perform dispatching functions for the management of volumes of natural gas delivered through the natural gas transmission networks and ensure the balancing of the natural gas system and the provision of system services. ensure the interoperability of natural gas networks, conclude interconnection agreements with TSOs in neighbouring countries. ensure third party access to the transmission system, place daily on its website operational and technical information on the operation of the natural gas transmission networks. exchange information with other adjacent system operators. interrupt or limit the transmission of natural gas under the conditions of Article 70(1) of the Law on natural gas. Perform balancing actions to ensure the physical balance and maintain the operational parameters of the natural natural gas system.
DSO	operate, maintain, upgrade and develop natural gas distribution networks

	in a secure, reliable and efficient manner manage natural gas flows in natural gas distribution networks; submit to TSOs and related DSOs information for coordinated operation and development of systems, network interoperability. provide the information necessary for system users to gain efficient access to natural gas distribution networks; perform connection, disconnection and reconnection to natural gas distribution networks; ensure non-discriminatory third-party access to distribution systems within the limits of distribution capacities and technological regimes. interrupt or limit the transmission of natural gas under the conditions of Article 70(1) of the Law on natural gas.

Annex 7.
To the Emergency Plan

Information obligations for each level of crisis.

A. Early warning			
Rapporteur	**Recipient of information**	**Information obligation**	**timeframe**
TSO	The Commission, (through the General Inspectorate for Emergency Situations) The specialised central body and ANRE	Notify of the occurrence of circumstances for declaring an early warning situation. Compile and analyse data received from natural gas undertakings and natural gas market participants and send relevant information Inform about the fulfilment of their legal and contractual obligations during the existence of the early warning situation; Inform on the measures taken during the early warning situation. Based on information received from natural gas undertakings, submit the following information: - forecast of daily demand and daily supply of natural gas for the following 3 days, in mcm/day; - daily natural gas flows at all cross-border entry and exit points and at all points connecting a natural gas production facility, storage facility or LNG terminal to the natural gas network, in mcm/day; - the period, expressed in days, for which it is expected that supply of natural gas to protected customers can be ensured.	when needed daily daily daily
	Natural gas market participants	Provide binding instructions when carrying out the measures included in the Emergency Plan.	daily
	TSOs from neighbouring countries.	Exchange operational information	ongoing
	Specialised central body	List of protected consumers List of interruptible consumers	On receipt of the early warning notification.
DSO	TSO	Submit any factual and reliable information on the possible occurrence of an	when needed

		event that could affect the supply of natural gas to end customers in its area of operation.	
	TSO	Submit the list of protected and interruptible customers, whose natural gas installations are connected to the natural gas distribution networks they operate.	On receipt of the early warning notification
	TSOs, the specialised central body and ANRE	Inform on the fulfilment of its legal and contractual obligations during the early warning situation.	daily
		Inform about measures taken on the basis of market mechanisms.	daily
Natural gas suppliers	TSO	Provide relevant information on the possible occurrence of an event that could affect the natural gas supply,	
	Consumers	Inform about the measures to be applied in an Early Warning situation.	daily
	TSOs, the specialised central body and ANRE	Inform on the fulfilment of its legal and contractual obligations.	daily
		Takes measures based on market mechanisms.	daily
Specialised central body	Commission	Where appropriate, notify of the occurrence of an early warning situation	
	Commission, Government	Send updates based on the information received from natural gas undertakings.	daily
		Send information on measures taken during the early warning situation.	daily
	Energy Community Secretariat	Notify that the Commission established anemergency situation - early warning level.	
	Chairman of the Security of Supply Coordination Group under the Energy Community,	If the situation cannot be adequately managed by applying measures at the national level, as directed by the Commission, inform and request the convening of a meeting of the Group to examine the situation created and, where appropriate, assist the Republic of Moldova in coordinating measures implemented at the national and regional levels to deal with the crisis.	as needed
ANRE	Specialised central body and Commission	Provide information on the operation of the natural gas market and the implementation of measures to ensure security of natural gas supply.	when needed
Natural gas suppliers Electricity and heat	TSO	Provide information on the possible occurrence of an event that could affect the supply of natural gas, and on any measures taken on the basis of market mechanisms.	
	TSOs, the specialised central	Inform on the fulfilment of its legal and contractual obligations.	daily

producers Electricity TSO	body and ANRE	Information on measures taken during the early warning situation	Upon request.

B. Alert			
TSO	The Commission, (via the General Inspectorate for Emergency Situations, the specialised central body and ANRE)	Notify of the occurrence of circumstances for declaring / terminating anemergency situation - alert level. Send relevant information following the compilation and analysis of data received from natural gas undertakings and natural gas market participants Inform on the fulfilment of their legal and contractual obligations during the existence of the alert situation Information on measures taken during the alert situation	when circumstances arise daily daily daily
	Commission Specialised central body	TSOs, based on information received from natural gas undertakings provide the following information: - the daily natural gas demand and natural gas supply forecasts for the following three days, in million cubic metres per day (mcm/d); - the daily flows of natural gas at all cross-border entry and exit points as well as at all points connecting a natural gas production facility, a storage facility or an LNG terminal to the natural gas network, in million cubic metres per day (mcm/d); - the period, expressed in days, for which it is expected that supply of natural gas to protected customers can be ensured.	daily
	Specialised central body	Submit: List of protected consumers and List of interruptible consumers	upon receipt of the Alert notification
	TSOs from neighbouring countries	Exchange of information to ensure the security and reliability of natural gas transmission networks in the context of congestion management	ongoing
DSO	TSO	Information on the event that caused anemergency increase in demand for natural gas, interrupted the supply of imported natural gas or affected the supply of natural gas to customers in its area of operation, and on the measures based on	upon receipt of the Alert notification

		market mechanisms taken in this context; Submit the list of protected customers, whose natural gas installations are connected to the natural gas distribution networks they operate Submit the list of interruptible customers, whose natural gas installations are connected to its natural gas networks.	
ANRE	Specialised central body and Commission	Provide information on the operation of the natural gas market during anemergency situation, monitor the implementation of measures to ensure security of natural gas supply.	as needed
Natural gas suppliers	TSO	Provide relevant information regarding the possible occurrence of an event that could affect the supply of natural gas.	
	TSOs, the specialised central body and ANRE	The measures taken in this context, which must be based on market mechanisms.	daily
	Consumers	Inform about the measures applicable in an Alert situation	daily
	Specialised central body, Commission	Submit relevant information receoived from natural gas undertakings, other natural gas market participants and ANRE.	daily
Specialised central body	Energy Community Secretariat	Notify that the Commission established anemergency situation - alert level.	
	Chairman of the Security of Supply Coordination Group under the Energy Community	If the situation cannot be adequately managed by applying measures at the national level, as directed by the Commission, inform and request the convening of a meeting of the Group to examine the situation created and, where appropriate, assist the Republic of Moldova in coordinating measures implemented at the national and regional levels to deal with the crisis.	as needed
Electricity suppliers / Electricity and heat producers * Electricity TSO	TSO TSOs, the specialised central body and ANRE	Provide information on natural gas consumption, electricity and heat production where applicable, and the fulfilment of contractual obligations. Information on the operating parameters of the main natural gas-fired power plants Inform on the fulfilment of its legal and contractual obligations	daily daily upon request;

C: Emergency			
TSO	Commission, (via the General Inspectorate for Emergency Situations, the specialised central body and ANRE)	Notify about the occurrence of circumstances for declaring /terminating anemergency situation - emergency level (caused an exceptionally high increase in demand for natural gas, interrupted the supply of imported natural gas or affected the supply of natural gas on the territory of the Republic of Moldova), situations that could not be remedied by applying measures based on market mechanisms, requiring additional measures not based on market mechanisms in order to supply natural gas to consumers, in particular, protected consumers; The notification shall contain a description of the incident/event: - date, time and duration of the event; - type of event; - location of the event; - estimated natural gas deficit; - potential impact.	daily
		Send relevant information following the compilation and analysis of data received from natural gas undertakings and natural gas market participants	daily
		Inform on the fulfilment of their legal and contractual obligations during the existence of the emergency situation	daily
		Inform on the measures taken during the emergency situation (based and not based on market mechanisms)	daily

	Specialised central body	Provide information on changes in the level of supply and demand in the natural gas market based on the information received from natural gas undertakings and the likelihood of an imbalance between supply and demand.	When circumstances arise
		Submit the List of protected consumers and the List of interruptible consumers	upon receipt of notification of emergency occurance
	Commission Specialised central body	TSOs, based on information received from natural gas undertakings provide the following information on a daily basis: - the daily natural gas demand and natural gas supply forecasts for the following three days, in million cubic metres per day (mcm/d); - the daily flows of natural gas at all cross-border entry and exit points as well as at all points connecting a natural gas production facility, a storage facility or an LNG terminal to the natural gas network, in million cubic metres per day (mcm/d); - the period, expressed in days, for which it is expected that supply of natural gas to protected customers can be ensured.	daily
	TSOs from neighbouring countries	Continuous exchange of information to ensure the security and reliability of natural gas transmission networks in the context of congestion management	ongoing
DSO	TSO	Information on the event that caused anemergency increase in demand for natural gas, interrupted the supply of imported natural gas or affected the supply of natural gas to customers in its area of operation, and on the measures based on market mechanisms taken in this context; Submit the list of protected customers, whose natural gas installations are connected to the natural gas distribution networks they operate Submit list of interruptible customers, whose natural gas installations are connected to natural gas distribution networks	upon receipt of notification of emergency occurance
Natural gas suppliers	TSO	Provide relevant information regarding the possible occurrence of an event that could affect the supply of natural gas	When circum-stances arise

Commission	Population, via the media	Inform about the causes and extent ofemergency situations, about the measures taken by natural gas undertakings and the responsible authorities to prevent and liquidate their consequences.	daily
Specialised central body	Commission, via the General Inspectorate for Emergency Situations	Report on the measures taken	daily
	Specialised central body, Commission	Submit relevant monitoring information received from natural gas undertakings, other natural gas market participants and ANRE.	daily
	Energy Community Secretariat and competent authorities of neighbouring countries	Notify the Commission of theemergency situation - emergency level.	-
		Inform immediately the Commission, in duly justified cases, of the measures not based on market mechanisms that deviate from the Emergency Plan, and provide rationale for deviating from the Emergency Plan.	-
	Chairman of the Security of Supply Coordination Group under the Energy Community,	If the situation cannot be adequately managed by applying measures at the national level, as directed by the Commission, inform and request the convening of a meeting of the Group to examine the situation created and, where appropriate, assist the Republic of Moldova in coordinating measures implemented at the national and regional levels to deal with the crisis.	when needed.
ANRE	Specialised central body and Commission	Provide information on the operation of the natural gas market during anemergency situations, monitor the implementation of measures to ensure security of natural gas supply.	
Natural gas suppliers / Electricity and heat producers	TSO	Provide information on natural gas consumption, electricity and heat production, and the fulfilment of contractual obligations. Provide information on the operating parameters of the main natural gas-fired power plants	daily daily
Electricity TSO	TSOs, the specialised central body and ANRE	Provide information on the fulfilment of its legal and contractual obligations Provide information on the impact of reduced natural gas deliveries on the electricity grid	upon request; daily

Annex 9
To the Emergency Plan

Comparative analysis of the measures included in the emergency plans of the Republic of Moldova, EU Member States and UK

Scope	Measure	Moldova	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	United Kingdom	Level
Production	Increase domestic gas production				x																				x						early warning
Supply	Increase the import of natural gas	**x**		x	x	x		x		x	x		x	x		x			x	x	x		x	x	x				x		early warning
	Increase the procurement of natural gas from natural gas hubs	**x**		x								x				x				x							x	x			early warning
	Decrease the exports of natural gas			x															x									x			early warning
	Reverse flow of natural gas	**x**						x																							early warning
	Supply biogas (SRE)	**x**								x			x			x									x						early warning
	Supply LNG	**x**		x						x	x			x		x			x		x			x				x			early warning
Storage	Extract natural gas from the own storage			x	x			x	x				x	x		x		x	x	x	x		x	x	x				x	x	early warning

Scope	Measure	Moldova	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	United Kingdom	Level
	Stop injecting natural gas into storage facilities			x					x							x				x											early warning
Diversification	Switch to reserve fuel	x						x		x			x			x			x			x	x	x		x	x		x		early warning
Contracts and operation	Demand-side interruptible contracts	x	x	x				x	x		x		x			x			x	x			x	x	x	x	x	x	x		alert
	Coordinated action by TSOs in neighbouring countries	x	x		x			x		x	x		x		x	x			x	x					x	x	x	x	x	x	alert
Information	Inform consumers and the media about the situation in the natural gas sector	x			x								x	x			x	x	x	x		x		x	x	x	x	x	x	x	alert
Decrease in consumption	Compulsory shutdown of electricity production	x	x		x							x			x						x		x	x	x	x	x	x	x	x	emergency
	Final priority of consumption	x	x						x	x			x						x						x				x		emergency
	Penalties for consuming over the limit	x	x												x				x												emergency
	Control the temperature in buildings	x										x			x										x	x	x				emergency
	Control the heating of public buildings	x										x													x	x	x				emergency
	Interrupt or limit the natural gas supply	x	x		x	x		x			x			x	x			x	x	x		x	x			x	x	x	x	x	emergency