



GAMA A.D. Skopje

**NETWORK CODE
FOR TRANSPORT OF NATURAL GAS**

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Pursuant to Article 86, paragraph 5 of the Act on Energy (Official Gazette of the Republic of Macedonia, no. 63/2006 and 36/07) and to Article 53 of the Statute of GA-MA AD from Skopje, the Board of Directors of GA-MA AD Skopje, upon the suggestion of the Operator of the natural gas transport system, and approval received from the Energy Regulatory Commission of the Republic of Macedonia, no. 02-839/1 dated 30.03.2009, brought the following

NETWORK CODE FOR TRANSPORT OF NATURAL GAS

1. GENERAL PROVISIONS

1.1 Subject of regulation and application

Article 1

This Network Code on the transport of natural gas (hereinafter referred to as: the Network Code) regulates the basic technical rules and conditions referring to the planning, operational guidance, access of users and connection of customers to the gas transport system in the Republic of Macedonia, and especially:

- the conditions and the way of access to the natural gas transport system by third entities,
- the technical conditions for safe and secure operation of the system of transport of natural gas,
- the planning, maintenance and development of the transport system,
- the measures, the activities and the procedures in cases of failure and state of crisis,
- the functional requirements and the precision class of the measurement devices,
- natural gas quality standards,
- criteria on the system service supplies,
- the natural gas quantities and the planning procedures,
- the data and communication protocol acquisition,
- the supervision and control of the operational management systems.

Article 2

The performer of the activity of transport of natural gas (hereinafter referred to as the Transporter), and the operator of the natural gas transport system (hereinafter referred to as the Operator) as well as all parties who use the natural gas transport system (hereinafter referred to as the System), assume the responsibility to observe this Network Code as follows:

- the entities which carry out the activity of distribution of and management with the natural gas distribution system,
- the traders of natural gas,
- the suppliers of natural gas to tariff customers connected to the natural gas transport system,
- the direct customers (either eligible or tariff) of natural gas.

1.2 Meaning of the expressions

Article 3

The specific expressions used in this Network Code shall have the following meaning:

- **“entry point”** – the point within the System where the Transporter, as pursuant to a contract signed with the user, takes over for transport the contracted quantities of natural gas with the agreed quality and under contracted conditions,
- **“performer of the activity of distribution of natural gas”** – holder of licenses on the performance of the activity of distribution of natural gas, which is entitled to carry out the activities of management with the system for distribution and supply of natural gas to customers connected to the distribution network on a certain area on the territory of the Republic of Macedonia,
- **“performer of the activity of transport of natural gas”** – holder of a license which carries out the activity of transportation or transit of natural gas throughout the natural gas transportation system on the territory of the Republic of Macedonia,
- **“border station”** – point where the quantity of natural gas is measured upon its entering into the System,
- **“year”** – period that starts at 08.00 AM of the first day of the calendar year and ends at 08.00 AM of the first day of the next calendar year,
- **“day”** – period of 24 consecutive hours that starts at 08.00 AM each calendar day and ends at 08.00 AM of the following calendar day,
- **“direct customer of natural gas”** – end customer which receives its supplies of natural gas directly from the System,
- **“connection contract”** – an agreement concluded between the applicant of the request for connection and the enterprise for transport and management of the System regulating the legal, technical and commercial terms and conditions for execution of connection of the System,

- **“contract on access to and transport of the natural gas”** – contract by which the relations regarding the transport of natural gas are settled between the company for transport and management of the System and the supplier to the tariff customers directly connected to the System, as well as a contract between the company for transport and management of the System and the trader with natural gas or with the eligible customer directly connected to the System,
- **“lower calorific value”** – quantity of heat released upon total combustion of 1 nm³ of natural gas whereby the quantity of water as a combustion product remains in its gas phase,
- **“gas pipeline protection area”** – area 30 m wide on each side of the axis of the gas pipeline, wherein the Transporter is entitled to control the activities of the owners that is, of the users of that area, which could influence the secure operation of the System,
- **“exit point”** – the point within the System where the Transporter qualitatively and quantitative delivers natural gas to the user,
- **“eligible natural gas customer”** – customer entitled to normally purchase natural gas from a trader or a manufacturer of its own choice,
- **“quarter”** – period of three consecutive months starting at 08.00 AM on January 1st, April 1st, July 1st, and October 1st, until the 08.00 AM on April 1st, that is, of July 1st, October 1st, January 1st, Central European Time,
- **“user of the natural gas transportation system”** – any physical or legal entity which supplies the System or is provided with natural gas from the System and which has signed a contract on access to and transport of the natural gas with the company for transport and management of the System,
- **“measurement and regulating station”** – point where the delivered quantity of natural gas is measured and where the pressure of the natural gas is regulated,
- **“month”** – period from 08.00 AM on the first day of a calendar month until 08.00 AM on the first day of the next calendar month,
- **“nomination”** – a notice by which a user provides advance notification to the Operator concerning the quantity of natural gas which he intends to deliver into or to withdraw from the System,
- **“week”** – period of seven consecutive days starting at 08.00 AM on Monday morning until 08.00 AM on the next Monday morning,
- **“normal cubic meter (nm³)”** – unit of measurement of the quantity of natural gas which refers to the quantity of natural gas in the volume of 1 m³ at absolute pressure of 1.01325 bar and the temperature of 20°C (293.15K),
- **“obligation to take”** – an obligation of the user to take from the System the quantity of gas equal to the quantity nominated by the particular user for the relevant day at the exit points,
- **“obligation to supply”** – an obligation of the user to supply into the System the quantity of gas equal to the quantity nominated by the particular user for the relevant day at the entry points,
- **“line pack of the natural gas transport system”** – refers to the quantity of natural gas stored in the System by compression, but does not include the technological capacities used exclusively by the Transporter,
- **“operator of the natural gas transport system”** – holder of a license who carries out the activity of operating the System on the territory of the Republic of Macedonia,
- **“firm capacity”** – the agreed and guaranteed natural gas transportation capacity, which is not possible to be interrupted by the Transporter,
- **“interruptible capacity”** – natural gas transportation capacity, which can be interrupted by the Transporter under the conditions defined in the contract on access to and transport of natural gas,
- **“natural gas transport”** – transport of natural gas through high-pressure (25 bar to 54 bar) pipeline from its entry into the Republic of Macedonia, through the city gate stations and the urban gas pipeline networks (from 8 bar to 12 bar) until the low pressure stations of the direct customers, including the measurement and regulating stations (with exit pressure higher than 3 bar),
- **“transport capacity of the natural gas transport system”** – the maximum flow of the gas pipeline expressed in nm³/h,
- **“connection”** – equipment, the appliances and the materials by which, in compliance with the decision on the connection, the customer physically connects with the System at the nearest point at which the connection is technically and legally feasible, including the measurement device,
- **“connecting”** – procedure of the installation by means of which, the customer is connected with the System,
- **“natural gas”** – mixture of carbohydrates, in which the main component is methane provided from the Earth in natural condition or together with liquid carbohydrates,
- **“access”** – right to use the System by the all the participants on the market,
- **“gas pressure”** – difference between the absolute and atmospheric pressure,

- **“available capacity”** – part of the technical capacity of the System which has not been assigned among the users,
- **“allocation”** – the procedure for the allocation of the total or the individual measured quantities of natural gas at the entry or at an exit point of the System for one or several users,
- **“natural gas transport system”** – buildings and the facilities for natural gas transport, which are functionally interconnected and represent a unique technical and technological whole to which the direct natural gas customers are connected,
- **“system services”** – services indispensable for providing secure, reliable and stable operation of the System,
- **“supplier to tariff customers directly connected to the natural gas transport system”** – natural gas trader, holder of a license for supplying of natural gas to tariff customers directly connected to the System,
- **“tariff customer of natural gas”** – customer which purchases natural gas at an agreed price, that is, at prescribed tariffs,
- **“Technical Agreement on the delivery of natural gas from the Russian Federation to the Republic of Macedonia”** – a document prescribing the conditions of the delivery of natural gas, the equipment and the exploitation of the Border Station, the methodology of measurement and calculation of the quantity and the determination of the quality of the natural gas, measurement accuracy, the documentation, the dispatching and the connections,
- **“technical capacity”** – the maximal permanent capacity of natural gas, which the Company for transport and management of the System, may offer to the users, taking into account the integrity and the operative requirements of the System,
- **“natural gas trader”** – holder of a license which carries out the activity of trading with natural gas and supplies natural gas to direct customers,
- **“balancing”** – the procedure of balancing of the overtaken quantity of natural gas on one or on several entry points and the delivered quantity of natural gas at one or at several exit points within the System.

1.3 Authorizations and responsibilities of the Transporter and of the Operator

Article 4

1. The Transporter assumes the obligation to maintain, upgrade and expand the System and to connect it with the systems of the neighboring countries, as pursuant to the law and to the technical regulations and rules referring to the natural gas transportation.
2. Upon managing the System, the Transporter must provide the following:
 - secure, reliable and high-quality delivery of natural gas from the entry to the exit point throughout the whole System,
 - running, maintenance and development of the System aiming at its secure and reliable functioning,
 - plan on the development and expansion of the System in the course of the following five years, elaborated in cooperation with the Operator,
 - connection of the users of the transport network as pursuant to this Network Code,
 - transit of natural gas through the System on the territory of the Republic of Macedonia, if the capacity allows it and until the security of the supply in the Republic of Macedonia is not hindered,
 - the timely and efficient elimination of deficiencies and obstacles during the System operation,
 - organization of a permanent service for urgent Interventions on the System,
 - permanent training and enabling of the expert and management personnel for maintenance, development and handling of the System.

Article 5

The Operator is responsible for the following:

- to provide for operational management of the System,
- to provide for transportation of natural gas on non-discriminatory and transparent basis,
- to provide for conditions for the transport of natural gas with a firm or interruptible capacity, as pursuant to the Contracts referred to in Article 7 of this Network Code (short-term and long-term services of access to the System),
- to publish detailed information on the services and the conditions under which they are provided,
- to confirm the nominations referring to the quantities of natural gas which should be transported through the System and to elaborate a transport schedule according to this Network Code,
- to elaborate protocols and release to disposal the data pertaining to the available capacity of the System,
- to sign interconnection contracts and contracts on transport of natural gas with owners and operators of the natural gas transport from the neighboring countries and from the region,

- to cooperate with other operators of the region and to provide for the necessary conditions for synchronized operation with the systems within the framework Region,
- to elaborate a loading schedule of the System in accordance with this Network Code,
- to provide for reliable and confident operation of the System,
- to decide on the loading of the System in an objective, non-discriminatory and transparent way,
- to establish and to calculate the balance and the deviations from the nominations pertaining to the received and delivered natural gas,
- to calculate the received and the transported quantity of natural gas,
- to coordinate the differences between the actual and the planned consumption of gas in conformity with transparent, non-discriminatory and market-oriented procedures,
- to provide for maintenance and development of the system of supervision and management of the System,
- to provide for confidentiality of the commercial and business-related data of the users of the System,
- to record the signed contracts pertaining to supplying with natural gas,
- to measure the quantity and the quality of the natural gas, to read the meters and to process the thus acquired data,
- to provide access to and use of the line pack in the System,
- to provide to the Energy Regulatory Commission of the Republic of Macedonia a final Balance of the System referring to the transported quantities of natural gas,
- to keep records received from the users and treated as business secret.

2. ACCESS TO THE NATURAL GAS TRANSPORT SYSTEM

2.1 Rules for contracting the access to the System

Article 6

1. The Operator is obliged to provide for equal, transparent and non-discriminatory conditions related to the access to the System for all the users according to the Act on Energy and to this Network Code.
2. The right to access to the System is acquired by signing of an access and transport of natural gas contract upon the request of the user, after a previous decision reached according to Article 10 of this Network Code.
3. The contracts on access and transport of natural gas may be concluded separately for transport capacities of entry and exit points of the System.
4. The Operator shall ensure a transport of natural gas without any limitations in the quantity of the agreed capacities as long as there is a free transport capacity of the System.

2.2 Types of contracts on the transport of natural gas

Article 7

1. The Operator can sign annual or monthly contracts referring to the transport of natural gas with all the users that require it according to Article 9 of this Network Code.
2. An annual contract is the contract signed for the period of at least one, and for the maximum of five years. The Contract is always signed in the validity, which commences on January 1 and period of validity until the January 1 the following year. The transport of the natural gas can begin no later than one year from the date of its signing according to Article 13 of this Network Code.
3. A monthly contract is the contract signed for the period of validity of at least one, and for the maximum of 11 months. This contract is always signed as for the period of validity starting from the first day of the month in which the transport of the natural gas should begin, and expires on the last day of the last month of the period of the validity of the contract. The transport of the natural gas can begin on the first day of the month following the month when the contract is signed.

2.3 Types of capacities for transport of natural gas

Article 8

1. From the viewpoint referring to the type of the capacities for transport of natural gas, the Operator can provide for the System users a contract with firm and interrupted capacity.
2. Contract on access and transport of natural gas with firm capacity is a contract subject of which the Operator assumes the obligation to transport from the point of entry into the System to the point of exit from the System, for the entire period of the Contract, the quantity of natural gas up to the level of the transport capacity reserved at entry or exit point, and by which the user assumes the responsibility to pay the price of the transport service and to fulfill the obligations to supply and to take the quantity up to the level of the reserved capacity at the entry or exit point.
3. Contract on access and transport of natural gas with interruptible capacity is a contract subject of which the Operator assumes the obligation to transport from the point of entry into the System to the point of exit from the System, for the entire period of the Contract, the quantity of natural gas up to the level of the transport capacity reserved at entry or exit point, with the right of the natural gas transport restriction or interruption by the Operator and by which

the user assumes the responsibility to pay the price of the transport service and to fulfill the obligations to supply and to take the quantity up to the level of the reserved capacity at the entry or exit point. The procedure and the conditions of the restriction or interruption of the delivery, as well as the information on such events are specified in Articles 27, 28, 52 and 58 of this Network Code.

2.4 Procedure on submission of a request on access and transport of natural gas

Article 7

1. The users seeking access to the System or the actual users, which tend to increase the transport capacity, submit a request for access to the Operator. The Operator shall inform the Transporter about the same in writing and within the period of 24 hours.
2. The request for access submitted in writing shall include as follows:
 - applicant's contact details (name, address, contact person, telephone, e-mail),
 - proof of financial eligibility,
 - duration of the contract,
 - required capacity along with expected monthly consumption schedule,
 - minimum, maximum and average hourly flow and maximum and average daily flow,
 - requested entry and exit points,
 - natural gas operating pressure,
 - quality of the natural gas.
3. If the applicant is a performer of an energy activity, the request shall include a copy of the license on the performance of the respective energy activity.
4. If the request is incomplete, the Operator shall require from the applicant to submit the additional data within the period not longer than eight days from the date of the receipt of the information.

2.5 Assessment of a request for the access and transport of natural gas

Article 10

1. Upon the reviewing of the access requirement, the Transporter and the Operator shall especially take into consideration the following elements and conditions:
 - the scope and the type of the required transport capacity,
 - the pressure of the natural gas at the entry and the exit points of the System should be such as to provide for unhindered transport of the natural gas,
 - the natural gas shall be considered as of acceptable quality if, at all entry points into the System, it possesses the qualities which do not require any adjustment or alteration measures in view of the acquisition of the gas quality established by this Network Code at all its separate sections until the exit points from the System,
 - necessary quantities of natural gas for operation of the compressor station, for technological pre-heating of the natural gas, for providing actuation gas, gas for ventilation and drainage of the plants as well as for the permitted technical losses of the System,
 - if, while acting in compliance with the access request, it is estimated that there might be some justifiable reasons for the rejection of the said requests, and if the reasons therefore can be eliminated by the applicant, the Operator shall, by a separate Conclusion, indicate to the applicant the necessary actions which it should take and shall appoint a period which can not be shorter than 30 days from the date of the submission of the conclusion.
2. Fifteen days from the day of the submission of the complete request, the Operator shall bring a Solution on access and shall inform the access applicant in writing about the acceptance or refusal of the application.
3. If the application is accepted, the access user shall be responsible at the latest by 1st of December to provide a document proving that it has supplied the natural gas quantities at the entry points of the System, as pursuant to the request, as well as instruments by which it can guarantee the regular and complete settlement of its financial obligations referring to the use of the transport system.
4. Together with a positive Solution on access to the System, the Operator shall provide to the applicant a draft contract for access and transport of the natural gas.
5. If Operator is unable to fully assign the required capacity as firm capacity due to lack of the same, the procedure described in Article 11 shall be applied.
6. The Operator can refuse the access request in the following cases:
 - in the case of any deficiency in the transport capacity of the System,
 - if the access user has not acquired the permission referring to the performance of the energy-related activity as pursuant to the Act on Energy,
 - if the quality of the natural gas that shall be taken over at the entry points of the System does not conform to the characteristics given in Attachment 1.

7. If the access request is refused, the Operator within the period determined as per the paragraph 2 of this Article, assumes the obligation to inform the applicant thereof in writing and to provide a detailed description of the reasons for such refusal.

8. A complaint can be lodged against the Solution of the paragraph 2 of this Article. The complaint should be submitted to the Energy Regulatory Commission within the period of 15 days from the day of its submission.

2.6 Congestion management

Article 11

1. Operator shall conclude a contract on natural gas transport with interruptible capacity provided that user require this and if there is not enough of firm capacity available due to the already concluded contracts.

2. If Operator announces the lack of required transport capacity to satisfy the requests of firm capacity, the concerned user will be allowed to conclude a contract on access and transport of natural gas with an interruptible capacity.

3. The priority in assigning of firm transport capacity will be ensured to the users who asked for an annual contract for transport. After assigning of the annual transport capacities, the firm transport capacity will be assigned to those users who have asked for a contract on transport for a period shorter than one year.

4. If all requirements for conclusion of appropriate contracts cannot be met, the transport capacity will be assigned proportionally based on the requested firm transport capacities. Should the user request to sign a contract for the transport of natural gas with firm capacity, which is above the remaining free capacity, then the requested capacity shall be reduced to the amount of the free capacity before the assigning of the capacities.

5. The Energy Regulatory Commission of the Republic of Macedonia follows the mechanisms applied to deal with congested capacities within the System.

2.7 Obligations of the contracting parties

Article 12

1. The Operator undertakes:

- to take at the entry points of the System agreed quantities of natural gas and deliver the same at the exit points,
- to monitor the quality of the transported natural gas according to Attachment 1 of this Network Code,
- to monitor the pressure of the natural gas at the entry and the exit points of the System in accordance with the interconnection contracts with the operators for transport from the neighboring countries and the distributors,
- to provide sufficient, well-timed and reliable information, within the framework of its technical capacities, on the balancing status of users to enable them to take timely corrective action,
- to balance the allowed deviations between the overtaken and delivered quantity of natural gas,
- to communicate with the users and observe the conditions for transport, the condition of the plants and inform about the expected reductions in the transport capacity.

2. The user undertakes:

- to meet the obligation to supply and obligation to take,
- at the entry points into the System to maintain the natural gas quality pursuant to the provisions of Attachment 1 of this Network Code,
- at the entry points into the System to maintain the pressure of the natural gas pursuant to the provisions of Attachment 2 of this Network Code,
- not to exceed the agreed transport capacity at the entry and exit points of the System,
- to perform the balancing of its own system on a daily basis, according to the Articles 16, 17 and 18 of this Network Code,
- to pay the regulated price for transport service according to the invoice submitted by the Operator,
- to provide to Operator with any and all necessary information related to this Network Code,
- to guarantee the regular payment of the service during the entire duration of the transport contract.

3. The user, which supplies the natural gas to the System, assumes the obligation to fulfill the obligations referred to in the Technical Agreement signed with the seller of natural gas in the Republic of Macedonia, Gazprom Export from Moscow. The user, in cooperation with the seller of natural gas, is responsible for the coordination of the quarterly and the monthly programs on the delivery and receipt of natural gas, as well as the planned limitations in the delivery and the technical questions connected with the operation at the entry point on the System. The coordination and the control of the delivery and receipt of natural gas at the entry point is carried out by the representative of the user and the seller, which exchange information on a daily basis about the operating regime and the plan of the deliveries of natural gas and submit them to the dispatching services of the seller and of the Operator.

2.8 Content of the Contract on access and transport of natural gas

Article 13

1. The signing of the contract on access and the transport of natural gas to the System provides the access user with the right to use a certain transport capacity expressed in nm³/h, referring to a certain period. Entering into the contract is based on the Solution according to the Article 10 of this Network Code.
2. The user shall conclude an annual contract on access and transport of quantities of natural gas for the coming year with the Operator within 15 days prior to the expiration of the current year.
3. The monthly contracts shall be signed according to Article 7, paragraph 3 of this Network Code.
4. The contract on access and transport of natural gas shall specify the obligations and the rights of the contracting parties as follows:
 - to provide the contracted transport capacity within the contracted period of time,
 - safe and secure transport of natural gas from the point of entry into the System to the point of exit from the System, management and control of the gas pipeline network, metering and determination of the quantities, the hourly flow, the pressure and the quality of the natural gas,
 - metering of the maximal daily consumption per each metering point,
 - balancing of the System due to the difference between the quantities of natural gas fed into the entry points and taken at the exit points of the transport system, by which the other contracting party is enabled to deliver at the entry points quantities of gas which are bigger than those simultaneously taken at the exit points, and, on the exit points to take quantities of natural gas bigger than those simultaneously delivered at the entry points of the System.
5. The Contract on access and transport of natural gas determines the details about the following:
 - the transport capacity and the pressure of the natural gas, with the definition of the type of the capacity and the allowed deviations, the highest hourly and the highest daily gas flow, the minimum allowed gas flow, the pressures at the entry and at the exit points where the natural gas transport is possible,
 - services which are provided by the Operator, as are the metering and the settlement of the quantities and the quality of the natural gas, system services and the prices thereof,
 - the balancing of the System, the allowed and the non-allowed deviation from the daily and the monthly capacities and the fees that the user is supposed to pay,
 - nominations of the quantities of natural gas that the user intends to deliver at the entry and take over at the exit point of the System, regular information thereby as well as notification procedures,
 - determination and allocation of quantities which are delivered by the user at the entry point and transported by the Operator to the exit point of the System,
 - method, conditions and means of payment,
 - responsibility of the Operator in case of any damage incurred to the user as a result of deliberate or careless Operator operation,
 - testing of metering equipment,
 - settlement of possible disputes,
 - method of delivery of information and notifications,
 - signing, commencement, duration and termination of the Contract.
6. The signing of the contract on access and transport of natural gas shall be completed prior to commencement of the System usage.

3. NOMINATIONS OF THE NATURAL GAS QUANTITIES

3.1 Nomination procedure

Article 14

1. Each user is obliged to submit a written notice to the Operator about the natural gas quantities which it intends to deliver on entry or to take at the exit points of the System during the particular periods, as follows:
 - quarter nomination: the user submits the natural gas quantities that it intends to deliver or to take during the forthcoming quarter at least 45 days before the quarter starts, referring to each month separately, so that the nominated quarter quantities can not be bigger than agreed quantities in such quarter,
 - monthly nomination: the user submits the natural gas quantities that it intends to deliver or to take at the exit points on the System during the forthcoming month, the deadline thereof being the period of ten days before the beginning of that month, so that the nominated monthly quantities can not be bigger than the quantities delivered in the quarter nomination,
 - weekly nomination: the user submits the natural gas quantities that it intends to deliver or to take every day in the following week beginning on Monday, at least every Thursday until the tenth hour AM,
 - daily nomination: the user submits the daily nomination in the framework of a weekly nomination. The daily nominated quantity for any day in the week and at any exit point cannot be bigger than the daily maximum

consumption, which is agreed between the Operator and the user on any day of the week and on any exit point.

2. The minimum nominated quantity indicated by each user (including the direct customer of natural gas) submitted to the Operator includes as follows:

- identifier (name and location) at the entry i.e. exit point,
- capacity type: firm or interrupted one,
- daily quantity of natural gas in nm³ for delivery and takeover,
- minimum and maximum hourly flow in nm³/h.

3. The user is obliged to respect, upon the nominations, the signed contracts on the natural gas transmission and is responsible about the correctness of the submitted data.

4. The nominations can be only in the framework of the agreed transport capacities and must not exceed the maximum transport capacity, which is agreed between the Operator and the user. The nomination that exceeds the transport capacity will not be confirmed.

5. The weekly nomination of the quantities from the previous week shall be deemed as valid if the Operator does not receive a weekly nomination during the period mentioned above in paragraph 1 of this Article.

3.2 Change of daily nomination

Article 15

1. In order to adjust the quantities of natural gas at the entry point with the ones at the exit point of the System, the user may submit a written request to the Operator for a change of the daily quantities at the latest by 10 a.m. in the previous day.

2. The contents of the changed daily nomination must correspond to the required contents indicated in paragraph 2 of Article 14.

3. On the same day after the receipt of the request, the Operator shall inform the user in writing on the acceptance or the refusal of the change in the daily nomination.

4. The change of daily nomination shall be valid after the Operator agrees to such change in writing.

4. BALANCING OF THE SYSTEM

4.1 Rules of balancing

Article 16

1. The balancing is a process conducted each day by which the Operator maintains balance between the quantity of natural gas delivered to the System and natural gas off-taken from the System.

2. All System users are responsible for balancing of their systems.

3. The task of the Operator is to coordinate and to maintain the daily balancing of the System. The users are responsible to monitor the balancing of their systems and to carry out the measures for maintaining balance of the System imposed by the Operator.

4. For the purpose of balancing the System, users shall provide Operator with data about their planned natural gas delivery and natural gas off-take. These quantities shall be submitted in the form of nominations.

5. As a key concept for the operation of the System, the daily balancing shall provide as follows:

- safe and efficient operation of the System,
- satisfying transport capacity requirements with optimum utilization of the System,
- providing non-discriminatory services for transport of natural gas,
- correct allocation of the quantities and the costs among the users.

6. In order to comply with the principle of reasonably respected care, operation and optimization, Operator shall maintain System balance in a way so that the least possible quantity of balancing gas is used at the lowest capacity level.

4.2 Physical balancing procedures

Article 17

1. Physical balancing means maintaining the balance between the quantities of natural gas at the entry and at the exit point of the System. During the physical balancing of the System, the Operator's dispatching center conducts many activities in real time in order to control the transport parameters of the natural gas, such as the flow and the pressure. The physical balancing is conducted in order to have at any time safe and effective transport of the gas from the entry and to the exit points of the System.

2. Based on the weekly estimated requirements, and on the daily announcement submitted by the user, the Operator shall prepare a daily program of transport of natural gas, which will be further adjusted with the operators of the systems connected to System and depending on the estimated nominations, shall determine the daily transport regime of the System.

3. The Operator shall continuously monitor the physical balance of the System and by measuring natural gas turnover of input and delivery points on the System, estimates the balancing of the System analyzing the following:
 - balancing of the entry and the exit gas quantities,
 - expected daily consumption,
 - available source quantities at the entry point of the System (import, another source etc.),
 - expected accumulation of the System at 8 o'clock of the following day, taking into account the quantities measured in the current day.
4. In order to perform the analyses referred to in paragraph 3 of this Article, the Operator's dispatching center is obliged to use the software packages referring to distance measurement, control, simulation, optimization and modeling the System balance in real time, when the suitable conditions are provided therefore.
5. Balanced operation of the System may be affected in a situation when:
 - consumption points of the System require more/less quantity than estimated,
 - disturbances, damages and defects in the operation of the System occur,
 - disturbances, damages and defects occur in the operation of the distribution systems.
6. The dispatching center of the Operator shall make daily physical balancing of the System by means of appropriate tools applied in the following order:
 - proposal for re-nomination,
 - use the line pack of the System,
 - reduction of the delivery in accordance with Article 28,
 - restriction of delivery in accordance with Article 53.
7. Restrictions are applied by the Operator only if the other tools from paragraph 6 of this Article do not ensure restoring balance anymore.
8. The Operator decides at its discretion about the application of the tools available for maintaining balanced operation of the System.
9. In the course of restoring the balance of the System referred to in paragraphs 4 and 5 of this Article, the Operator must take into account:
 - relevant legal regulations related to reduction and restriction of the transport and delivery of natural gas,
 - all technical and hydraulic conditions in the System,
 - obligation for non-discriminative relation towards the users,
 - to balance the System when shall cause the least damage to the users, if possible.
10. After completion the balancing process, referring to each user separately, the Operator shall prepare a report specifying the reasons for the measures taken as pursuant to paragraph 6 of this Article and the consequences which would incur in the absence of those measures, specifies the quantities of natural gas which are used for the balancing, as well as the change of the line pack of the gas pipeline network. The Operator is supposed to submit one sample of the report to the Energy Regulatory Commission.

4.3 Commercial balancing

Article 18

1. The commercial balancing is an exact calculation and allocation of the transported natural gas among the users, as well as a system of calculation of the fees paid by the users for any excess referring to the allowed deviations. These measures, which are applied by the Operator, incentive the user to balance the quantities of natural gas at entry and exit points of the System.
2. Each user of the System must maintain the balance between the delivered and taken quantities of natural gas on a daily basis, which means that the daily quantity of natural gas at entry and exit points of the System must be equal.
3. The Operator is obliged to determine, at the end of each day, the quantity of natural gas at entry and exit point of the System for each user. In the case of a discrepancy between the nominated quantity at entry and the consumption at exit point of the System, the Operator shall determine a quantity of natural gas, which is necessary for balance of incurred discrepancy based on measurement results at entry and exit point of the System for each respective user.
4. The actual daily quantity of natural gas at entry and the real daily quantity at exit of the System (the consumption) can differ to a certain extent without balancing fee by the user; this difference represents the tolerance range.
5. The Operator shall perform operational balance maintenance as a basic service for all users and shall provide natural gas for balance at cost price without charging the balancing fee within the tolerance range.
6. Outside the tolerance range, the user is obliged to pay natural gas transport fee and to pay the balancing gas used according to the provisions of Articles 21, 22, 23, 24 and 25 of this Network Code.
7. The Operator carries out the commercial balancing based on the nominations and on the actual flows of natural gas for the entire System and for each of the users separately.
8. The commercial balancing of the System is performed by the Operator on a monthly basis.

4.4 Tolerance limits

Article 19

1. The Operator is obliged to carry out the service of transport of natural gas through the System despite the difference that is, deviation between the delivered and off taken quantities of natural gas.
2. The tolerance limits referring to bigger or smaller transported quantities according to the Tariff System for Transport of Natural Gas on annual level are defined as follows:
 - the upper tolerance limit for transport of natural gas quantities bigger than the contracted during a calendar year shall amount 30% of the agreed annual quantity,
 - the lower tolerance limit for transport of natural gas quantities smaller than the contracted during a calendar year shall amount 30% of the agreed annual quantity,
3. The permissible variation between the daily nomination of the quantities and the delivered quantities at the entry of the System, as well as the daily nomination of the quantities and the off taken quantities at the exit of the System amounts $\pm 10\%$. For greater variations, the user is supposed to pay fee to the Operator according to Article 22 and Article 23 of this Network Code.
4. The permissible variation referring to the difference between the delivered quantities at the entry of the System and the quantities taken at the exit is $\pm 5\%$ of the confirmed daily nomination according to Article 15, paragraph 3. For greater variations, the user is supposed to pay fee to the Operator according to Article 24 of this Network Code.
5. The permissible variation of the absolute value of the monthly sum of the differences between the daily quantities delivered at the entry point and the quantities off taken at the exit point of the System is 10%. For greater variations, the user is supposed to pay fee to the Operator according to Article 25 of this Network Code.
6. The fee for the natural gas which is used for settling of the daily quantity at the entry and the exit of the System and which is within the framework of the permissible tolerance range is carried out as per the sale price of the natural gas in the respective month.

4.5 Fee for exceeding of annual capacity

Article 20

1. If the total transported quantity of natural gas in the given year along with the variation is higher than 30% of the agreed annual quantity, the price of the transport service for each nm^3 transported quantity over the allowed 30% variation shall be increased by 1%.
2. If the total transported quantity of natural gas in the given year along with the variation is lower than 70% of the agreed annual quantity, user shall pay a fee equal to the amount that would be paid for transport of 70% of the agreed annual quantity.
3. The calculations of the settlement of the accounts related to less or more transported quantity of natural gas within the given year as well as the calculations of the variations referring to lower or higher quantities of transported natural gas than those contracted according to Article 19, paragraph 2, are carried out by the Operator as in compliance with the Act on Energy, that is, with the Tariff System for Transport of Natural Gas.

4.6 Fee for variation of daily capacity

Article 21

1. If the daily quantities at the entry and at the exit point are lower than or equal to 110% of the contracted maximal daily quantities, the user shall not bear any expenses on the deviation from the capacity.
2. If the daily quantities at the entry or at the exit point are higher than 110% of the contracted maximal daily quantities, the user shall, starting from that day and until the end of the current month, be supposed to pay fee for the daily capacity based on the highest measured daily quantity. The payment of this fee on the variation from the daily capacity does not entitle the user to increase the capacity in the current month.

4.7 Fee for difference between daily nomination and actual quantity at the entry of the System

Article 22

If the absolute value of the difference between the quantity that is delivered by the user at the entry point of the System during the respective day, and the confirmed daily nomination is higher than 10% of the measured daily quantity at that particular entry point, the user shall pay, in favor of the Operator, fee in the amount of 120% of the price of the transport of natural gas for each nm^3 of transported natural gas.

4.8 Fee for difference between daily nomination and actual quantity at the exit of the System

Article 23

If the absolute value of the difference between the quantity that is off taken by the user at the exit point of the System during the respective day, and the confirmed daily nomination is higher than 10% of the measured daily

quantity at that particular exit point, the user shall pay, in favor of the Operator, fee in the amount of 120% of the price of the transport of natural gas for each nm³ of transported natural gas.

4.9 Fee for balancing the difference between daily quantities at the entry and at the exit points of the System

Article 24

1. If the absolute value of the difference between the quantities that the user, in the course of the day, has delivered at the entry point and off taken at the exit point of the System is lower than 5% of the confirmed daily nominations or equal to that percentage, the user shall not bear any expenses pertaining to the said difference. The said difference with its real indicator is recorded at that day, it enters into the monthly calculation of the differences between the delivered and the off taken quantities, and it is settled between the Operator and the user as per the sale price of the natural gas.

2. If the absolute value of the difference between the quantities that the user, in the course of the day, has delivered at the entry point and off taken at the exit point of the System is higher than 5% of the confirmed daily nominations, the user assumes the obligation of paying, in favor of the Operator, a fee referring to the quantities for which the difference is higher than 5%, in the amount of 120% of the sale price of the natural gas for each nm³ of transported natural gas.

3. If, in the course of the day, the user has delivered, at the entry point, a quantity higher than those received at the exit point of the System, the difference, lower than 5% or equal to the confirmed daily nomination of the quantities enters into the monthly calculations of the natural gas and is settled between the Operator and the user as per the sale price of the natural gas. The Operator shall purchase the quantities of natural gas, which represent a difference higher than 5%, from the user at the price amounting 90% of the sale price of the natural gas.

4. If, in the course of the day, the user has delivered, at the entry point, a quantity lower than those received at the exit point of the System, the difference, lower than 5% or equal to the confirmed daily nomination of the quantities enters into the monthly calculations of the natural gas and is settled between the Operator and the user as per the sale price of the natural gas. The user shall purchase the quantities of natural gas, which represent a difference higher than 5%, from the Operator at the price amounting 110% of the sale price of the natural gas.

4.10 Fee for balancing the difference between daily quantities at the entry and at the exit of the System on a monthly level

Article 25

1. Each month the Operator sums up the daily differences between the daily quantities delivered at the entry and off taken at the exit of the System, which are lower or equal to 10% of the confirmed daily nominations with the correct algebraic sign of the daily differences.

2. If the absolute value of the monthly sum of the differences between the daily quantities delivered at the entry and off taken at the exit of the System is lower or equal to 10% of the agreed maximal daily quantities, the user will not pay any fee.

3. If the absolute value of the monthly sum of the differences between the daily quantities delivered at the entry and off taken at the exit of the System is higher than 10% of the agreed maximal daily quantities, the user will be supposed to pay fee in favor of the Operator in the amount of 110% of the sale price of the natural gas for each nm³ of transported natural gas for the quantities higher than 10%.

4. VAT is calculated to the amount of the fees defined in the Articles 20, 21, 22, 23, 24 and 25 of this Network Code, and the amount of the fees is corrected once per year in accordance with the increase of the retail prices in the Republic of Macedonia in the course of the previous year.

4.11 Final Balance

Article 26

1. At the beginning of each month, the Operator prepares a Final Balance of the System referring to the transported quantities of natural gas in the course of the previous month.

2. The Final Balance of the System, referred to in paragraph 1 of this Article expresses the measured quantities of natural gas at the entry points of the System, the measured quantities delivered at the exit points balanced with the changes of the pressure in the System (line pack), as well as the differences resulting from the allowed discrepancies in the measurements. The calculation of the discrepancies is carried out as per the methodology brought by the Operator after the previous approval of the Energy Regulatory Commission.

3. The participation of the direct customers and the distributors of natural gas within the established deviations resulting from the Final Balance, are allocated by the Operator proportionally depending on the off taken quantities of natural gas by the direct customers and the distributors of natural gas.

4. Pursuant to the calculation referred to in paragraph 3 of this Article, the direct customers and the distributors of natural gas are responsible to settle their financial obligations towards the supplier, which result from the Final Balance on a monthly level.

5. The Operator is obliged, at least to the tenth day during the current month, to submit the monthly Final Balance referring to the previous month to the Energy Regulatory Commission of the Republic of Macedonia, together with the accumulated review of the monthly Final Balances on the previous period of the year.

5. RESTRICTION AND INTERRUPTION IN THE TRANSPORT OF NATURAL GAS

5.1 Planned restriction or interruption in the transport of natural gas

Article 27

1. The Operator can temporarily reduce or interrupt the transport of natural gas from the System when the Transporter carries out the planned examinations, tests and control measurements, reconstructions and expansions of the structures, appliances and the installations of the gas pipeline system.

2. The planned interruption Operator can carry out at times when the damages to the users are the lowest, as in compliance with the program for maintenance of the structures, the appliances and plants and with the annual energy balance.

3. The Operator assumes the obligation of timely informing the users and the Ministry in charge of the energy matters about the date and the hour of the expected duration of the planned interruption at least one month prior to the said interruption.

4. Neither the Operator nor the Transporter are responsible for the damages incurred with the users as a result of the planned temporary interruptions in the natural gas transport system, about which the users were informed according to paragraph 3 of this Article.

5.2 Restriction or interruption of the transport of natural gas

Article 28

1. The Operator can decrease the quantities of natural gas, which should be transported for the needs of certain user, if the user, after prior information and within the period determined in the information fails to eliminate the following non-allowed situations or actions:

- impedes the Operator's staff to access the connection, to a measurement and regulating station or to the measurement devices,
- impedes the correct recording of the off taken quantities of natural gas or if it off takes the gas without measurement,
- fails to carry out its obligations according to the Contract on access and transport of natural gas.

2. The Operator can interrupt the transport of natural gas to a certain user, if the user, after prior information and within the period determined in the information fails to eliminate the following non-allowed situations or actions:

- if it exceeds the contracted and reported daily flow, if it deviates without permission from the reported transport capacity and despite the remark of the Operator does not reduce the capacity to the contracted value,
- if it connects a customer without the consent of the Operator, or enables for the connection of a third party without the necessary permissions,
- in case of shortage of natural gas announced by the Operator, fails to observe the measures envisaged in this Network Code and in the other regulations in case of such deficiency.

3. The Operator can, without any prior information to the user, reduce or interrupt the transport and the delivery of natural gas to the user which has not observed the Contract and has failed to provide any quantities of natural gas or if, upon the use of the natural gas, there were events which can have serious impact on the life and the safety of System operation.

4. The Operator is obliged to inform the supplier about the measures taken according to the paragraph 1, 2 and 3 of this Article.

6. INVOICING AND PAYMENT

Article 29

1. The user is obliged to pay every month the fee for the service of transport of natural gas including VAT according to the monthly invoice submitted by the Operator.

2. The Operator is obliged to submit the invoice to the user for the previous month at the latest by the 5th day of the current month.

3. The invoice referred to in paragraph 2 of this Article shall be paid by the user at the latest by 20th day of the month for the previous month.

4. The invoice submitted by the Operator to the user contains a document stating the following data:
- quantity of natural gas delivered to the System through the entry points in the accounting month,

- the quantity of natural gas off taken by the users through the exit points for the accounting month,
 - monthly deviation and its allocation to all users of the System.
5. In case of expected delay in payment of liabilities pursuant to the contracts concluded between Operator and user, relevant contracting party shall be obliged to notify the other contractual party about such default at least two working days before the due data of the respective liabilities.
6. In case of default in making payment of liabilities pursuant to the contracts concluded between Operator and user, relevant contracting party shall be obliged to pay to the other contractual party the interest on arrears provided by law for each day of delay.

7. TRANSPORT OF NATURAL GAS, HANDLING AND MANAGING THE SYSTEM

7.1 Description of the gas pipeline network

Article 30

1. The gas transport pipeline begins from the entry in the Republic of Macedonia and the border station located at Židilovo on the Macedonian-Bulgarian border, through the distribution gas pipelines and the city gates stations and the city gas pipelines to the exit measurement and regulating stations of the direct consumers, including also the measurement and regulating stations.
2. A pig launching and pig receipt station are built at the high pressure gas pipeline, eight valve block stations on the main and eight valve block stations on the distribution gas pipelines, as well as a valve block station for interconnection with the gas pipelines of the neighboring countries.
3. The high pressure gas pipeline is designed for a physical capacity of 800 million nm³ annually at an operating pressure of 40 bar. The maximal pressure at the entry in the border station is 54 bar. The operating pressure in the city gas pipelines ranges from 8 bar to 12 bar, while the exit pressure of the measurement and regulating stations, as a rule, is equal or higher than 3 bar.

7.2 Entry and exit points

Article 31

1. The entry and the exit point of the System are the points where the qualitative and quantitative delivery of the natural gas is carried out by the Transporter to the user.
2. The entry point of the System is the border station at Židilovo.
3. The exit points of the System are the city gate stations at the point of delivery and receipt and the measurement and regulating stations of the direct consumers.
4. The basic technical parameters of the gas pipeline system and the sites at the entry point, as well as the most important exit points are given in Attachment 2, which is an integral part of this Network Code.
5. In order to determine the responsibility for possible damages during assignment of the ownership of the transported gas, delivery and receipt points of the System where the natural gas is delivered to the direct consumers are defined as exit points.
6. Ownership of the gas transported based on the contract for access and transport of the gas shall in no instant during the term of the contract be transferred to Operator, unless otherwise stipulated in the contract.

7.3 Secure and reliable operation of the System

Article 32

1. The Operator and the Transporter are obliged to provide for secure and reliable operation of the System by proper planning, erection and maintenance of the gas pipeline, of the measurement and regulating stations and of all the other equipment by careful managing and supervision of the transport network, as well as by controlling all the interventions within the protection area of the gas pipeline.
2. In order to carry out the obligations referred to in the previous paragraph, the user assumes the obligation to provide for the Operator and Transporter access to the gas pipeline, to the measurement and regulating stations and to the measurement devices if those are located on its property.

Article 33

1. In order to ensure the secure and reliable operation of the System, the Transporter assumes the obligation to plan the current and investment-related maintenance. These works especially include the following:
- protection of the gas pipeline against mechanical, electric or chemical influences,
 - preventive inspections,
 - corrections, adaptations and reconstructions of the System,
 - maintenance of the gas transport system,
 - supervision over the routes and on the activities of third entities in the protective area of the gas pipeline,
 - servicing and replacement of the equipment.

2. The works referred to in the previous paragraph due to which a temporary limitation or interruption occurred shall be performed by the Transporter according to Article 27.
3. In its internal rulebooks, the Transporter must envisage measures intended for secure operation, technological and other instructions, schedule plans for the inspection on the gas pipeline and other acts, which are necessary for the performance of the tasks pertaining to the maintenance, secure operation and supervision on the System.
4. The annual plans of current maintenance of the System made on a monthly basis are published at the Transporter's web site. Whenever needed, such plans will be revised, supplemented and renewed.
5. The Transporter is obliged to secure the buildings and the facilities of the System.

Article 34

1. The Operator is obliged to organize dispatching service for continuous (24 hours) supervision on the System operation and management.
2. The supervision, referred to in paragraph 1 of this Article is carried out by means of process, measurement, registration, telemetric and program equipment intended to enable for the operation and management of the System, and especially:
 - continuous, high-quality and secure transport of natural gas,
 - recording of the entry and of the exit quantities, the pressures and the temperatures of the natural gas within the System,
 - establishment of the quantities of natural gas within the System,
 - nomination of the flows and of the pressures and simulation of the operation conditions within the System,
 - monitoring and detection of any leakages of natural gas from the System,
 - determination and reporting the crisis situations and unbalanced working conditions,
 - supervision over the operation of the measurement and of the measurement and regulating stations, compressor stations and of other facilities on which depends the unhindered functioning of the System,
 - supervision over the receipt and delivery of natural gas by the large-scale users.

Article 35

1. The dispatching center of the Operator must be adequately connected to the dispatching centers of the other gas pipeline systems the System is bordered by.
2. The Operator is obliged to bring internal instructions for operation procedures of the dispatching center.

7.4 Supervision and protection of the System

Article 36

1. The extension of the gas pipeline must be marked over ground by boards and by signs referring to the air supervision of the route of the gas pipeline, as well as by warning boards, as pursuant to the valid technical regulations.
2. On the gas pipelines with the operational pressure of over 12 bar, the change of the direction and the gas pipeline axis are marked by boards, which must bear the signs of the picket, the diameter of the gas pipeline and the turning angle of the route. These markings shall be fixed at the distance of 2 meters to the right-hand side from the axis of the gas pipe seen towards the direction of the natural gas flow.
3. On the gas pipelines with the operational pressure of 8 bar to 12 bar, marking signs are fixed on each 100 meters of the flat part of the gas pipeline, as well as on all changing of the direction of the System axis. Upon its erection, the gas pipe is marked by a marking tape over the gas pipeline, at the depth of 0.5 meter bearing the inscription DANGEROUS: GAS PIPELINE.
4. Upon the crossing of the pipeline with roads, watercourses, railways etc., independently from the operational pressure, markings or warning boards are fixed on both sides of the facility with which the gas pipeline is crossing.
5. In view of the System protection, as well as of the protection of the life and the health of the people on the property within the gas transport area, the Transporter shall issue an approval to third entities pertaining to the carrying out of activities within the protection area of the gas pipeline and controls these activities according to this Network Code, the building regulations and the Connection Decision.

8. MEASUREMENT AND QUALITY OF THE NATURAL GAS

8.1 Measurement equipment

Article 37

1. The measurement of the natural gas is a procedure by which the flow and the quantity of natural gas at the entry and at the exit points of the System is determined, and this procedure is performed at the measurement and at the measurement and regulating stations.

2. The quantity of the gas which flows at the entry and at the exit points of the System is measured in normal cubic meters (nm³) at the temperature of 20°C (293.15 K) and at absolute pressure of 1.01325 bar.
3. The natural gas measurement station at the entry point of the System includes at least the following equipment:
 - filter for separation of the impurities, dust and condensate from the natural gas,
 - flow meter,
 - process flow computer for calculation and correction of the flow under normal conditions,
 - computer system for operation, control, storage and transport of data,
 - pressure transmitter and a registering/writing device,
 - temperature transmitter a registering/writing device,
 - measurement equipment for direct comparison of the metered flow,
 - equipment for determination of the natural gas density,
 - equipment for determination of composition of the natural gas (gas chromatograph).
4. The natural gas measurement station at the exit point of the System consists of at least the following equipment:
 - filter for separation of the impurities, dust and condensate from the natural gas,
 - flow meter,
 - electronic corrector of the natural gas volume,
 - device for reading, storage and transport of data,
 - pressure transmitter,
 - temperature transmitter.
5. The measurement and the measurement and regulating stations at entry and exit of the System are selected, constructed and maintained by the Transporter in the way and according to a procedure determined by Law.

Article 38

1. The flow of the natural gas at entry points is measured, as a rule, by means of an orifice plate and/or by ultrasonic flow meter and a process flow computer for the calculation and correction of the flow under normal conditions, and, at exit points by a turbine flow meter and a corrector, an ultrasonic flow meter and a process flow computer for the calculation and correction of the flow under normal conditions, a rotary flow meter and corrector as well by a mass flow meter.
2. The measurement of the flow quantities of natural gas is carried out continuously by measurement devices of which the characteristics can comply with the international standards, regulations, recommendations, directives and rulebooks on metrological conditions, which are applied in the Republic of Macedonia.
3. The measurement equipment must be inspected, calibrated and approved by an authority, as in compliance with the metrology regulations applicable in the Republic of Macedonia.
4. The inspection of the meters and of the correctors is carried out in laboratory conditions. The measurement orifice plate systems are inspected on-site at operating conditions.
5. The measurement devices are operated only if they have been properly stamped and if they possess a certificate on verification of the measurement device, that is, verification certificate (a certificate on the operability of the meter).
6. The Operator and the user can, due to excusable reasons, request an additional test of the measurement equipment at a certain measurement site. The measurement and the re-calibration are carried out by an authorized laboratory, and the expenses on the additional test shall be borne by the party, which has requested the respective test.
7. If it is confirmed, by the additional test that the meter is not operating properly, the Operator assumes the obligation of compensating the expense on the additional test and the re-calibration.

8.2 Standards and regulations

Article 39

1. The measurement and the correction of the flow quantities of natural gas at the points with the orifice plate are carried out according to the following standards:
 - ISO 5167, with the earliest date of acquisition being the year of 1991,
 - AGA Bulletin no. 8, with the earliest date of acquisition being the year of 1992,
 - AGA Bulletin NX-19.
2. The international standards, which define the way and the conditions of the measurement of the natural gas flow by ultrasonic flow meters, are as follows:
 - ISO/TR 12765 dated 1998,
 - ISO/CD 17089 dated 2004,
 - AGA Bulletin No. 9 of 2007.

3. The turbine flow meters and the rotary flow meters, as well as the mass flow meters, which are used as primary measurement devices at the exit points from the System, must meet the provisions of the following standards and recommendations:

- ISO 9951 dated 1993,
- OIML R6 and OIML R32 of 1989,
- AGA Bulletin No. 11 of 2003.

4. The primary measurement devices referred to in paragraph 1, 2 and 3 of this Article must cover the entire scope of flow measurement, to meet the following limits of the relative measurement errors:

- for values from Q_{min} to $0.2Q_{max}$, the relative error falls within the limit of $\pm 2\%$,
- for values from $0.2Q_{max}$ to Q_{max} , the relative error falls within the limits of $\pm 1\%$.

5. The total relative error in the measurement of the natural gas flow on the entire gas transport network of the Republic of Macedonia is calculated according to ISO Guide to the Expression of Uncertainty in measurement, dated 1995.

8.3 Reading of the quantities

Article 40

1. The quantities of natural gas, off taken at the entry point of the System are determined as a difference between the meter condition at the measurement station at the entry point of the System at the eighth hour AM and the condition of the meter at the eighth hour AM of the previous day. This condition is registered in a daily protocol referring to the delivery and receipt of natural gas.

2. The reading of the delivered quantities of natural gas at the exit point of the System is carried out by means of a measurement device at an exit point of the System in the presence of the Operator, the user and the direct consumer, as a rule, on the first working day in the current month for the previous month. The read condition is recorded into a protocol on the delivery of natural gas signed the Operator, the user and the direct consumer.

3. The reading of the off taken and the delivered quantities of natural gas is also carried out on a compulsory basis, upon the change of the price of the natural gas, upon any change of the Law and of the regulations brought as in conformity with the Law and upon any possible change in the transport conditions.

4. If it is concluded that the measurement device at a certain period of time has wrongly detected or has failed to detect the off taken that is, the delivered quantity of natural gas, the non-registered portion of the off taken that is, of the delivered quantity of natural gas is determined according to the provisions of the Technical Agreement on the delivery of natural gas from the Russian Federation into the Republic of Macedonia, that is, the contract for access and transport of natural gas.

8.4 Allocation of the quantities

Article 41

1. If the off taken, that is, the delivered quantities of natural gas are measured on special measurement devices, or lines, such measurement is used for the determination of the quantities of natural gas which have been off taken at the entry points of the System, that is, delivered at the System exit points.

2. If the off taken, that is, the delivered quantities of natural gas are measured together for several users, that is, direct consumers of the same measurement device, or line, than the off taken, that is, the delivered quantity of natural gas for each user, that is, direct consumer is established according to the nomination referred to in Article 14 of this Network Code, under the condition that the total off taken that is, delivered quantities of natural gas are equal to the total sum of the daily nominations of all users, that is, direct consumers.

3. If a difference is determined between the measures off taken, that is, delivered quantities of natural gas and the total sum of the nominations of all users, that is, all direct consumers, the Operator shall allocate the measured quantities to the users, that is, the direct consumers as per the principle of allocation (proportional, as pursuant to the nominations etc.) which has been agreed between the Operator and all users, that is, all direct consumers.

4. If the users, that is, the direct consumers, do not reach an agreement about the application of the principle of allocation, than the Operator shall allocate the quantities to the users, that is, to the direct consumers according to the proportionate principle.

8.5 The quality of the natural gas

Article 42

1. The natural gas which is delivered into the System and which represents a mixture of carbohydrates in which the most present ingredient is the methane (CH_4), must correspond to the values and to the characteristics given in Attachment 1, as an integral part of this Network Code.

2. The Operator shall not off take any quantities of natural gas into the System, if the quality of such natural gas does not correspond with the values and the characteristics given in the Attachment 1 of this Network Code.

3. The establishment of the quality of the natural gas at the entry points of the System is carried out on a daily basis and is confirmed by a quality certificate.
4. The System user and the Operator can require that an independent authorized and accredited legal or physical entity analyze the quality of the natural gas and to determine the conformity of the quality as prescribed in the Attachment 1.
5. The expenses pertaining to the additional analysis of the quality and to the determination of the conformity of the natural gas with the quality prescribed in the Attachment 1 shall be borne by the party, which required the analysis and the determination of the adequacy of the natural gas.
6. If the additional analysis reveals, that the quality of the natural gas does not comply with the values prescribed in the Attachment 1, than the Operator assumes the obligation to compensate the analysis expenses.
7. If the Operator has required an additional analysis of the quality of the natural gas, and if it is revealed by the analysis that the quality of the natural gas does not correspond to the values prescribed in the Attachment 1, than the user which delivers the natural gas into the System assumes the obligation to compensate the analysis expenses.
8. The natural gas in the System is not odoured.

9. DEVELOPMENT OF THE SYSTEM FOR TRANSPORT OF NATURAL GAS

9.1 Development of the System

Article 43

1. The Operator in cooperation with the Transporter elaborates the System development plans based on the following:
 - the capacities of the System referring to extension, connection and access thereto,
 - national strategy and program for energy development,
 - analysis of the natural gas transport and of the management of the System,
 - analysis of the flows and of the pressures within the System,
 - actual and envisaged activation of the System,
 - reliable and secure transport,
 - issued approvals on the access to the System,
 - issued decisions on the connection to the System,
 - surveying of potential users, and
 - other sources.
2. In order that the Transporter be able to plan the forthcoming development of the gas transport network, the actual and the future users of natural gas assume the obligation, upon the request to the Operator, to submit all the requested data indispensable for the planning of any further development of the System.
3. On the basis of the data obtained as in compliance with the paragraph 2 of the previous Article, the Transporter determines the suggestions pertaining to the development of the System, than carries out, in cooperation with the Operator, economic analysis of the profitability of the suggestions and accepts plans referring to extension of the gas transport network which are economically rentable, and for which it shall receive the approval of the Ministry in charge of the energy-related business activity.

9.2 Designing and erection of the System

Article 44

1. Upon the designing, erection and commissioning of the facilities, the plants and the devices of the System, the Operator and the Transporter assume the obligation to apply the regulations and the rules pertaining to the erection, operation and maintenance thereof.
2. Upon the carrying out of the works referred to in paragraph 1 of this Article, the Operator and the Transporter can follow their own internal rulebooks and regulations relating to the ways and the procedures of designing, erection, operation and maintenance of the System, which must be coordinated with the actual valid regulations and rules of erection, operation and maintenance of the gas pipeline systems.

10. CONNECTION TO THE NATURAL GAS TRANSPORT SYSTEM

10.1 Connection procedure

Article 45

1. The Transporter shall connect each user, that is, each direct consumer to the System in accordance with the provisions of the Act on Energy and this Network Code if the same is allowed by the gas pipeline capacity, under the conditions and manners specified in the connection contract.
2. The procedure of connection, the technical conditions pertaining to connection, as well as the conditions for use of the System shall be published on the web page of the Transporter.

10.2 Connection at the entry point to the System

Article 46

1. The connection at the entry into the System is permitted to energy-related subject dealing with storage of natural gas and to other energy subjects dealing with the transport of natural gas.
2. In order to connect to the System, the energy subject must address a request to the Transporter pertaining to the issuance of an approval for the connection at the entry point of the gas pipeline network. The following parameters of the request must be in conformity with this Network Code:
 - the minimum pressure of the natural gas at the entry point should be of 40 bar and the maximum one shall amount 54 bar,
 - the composition of the natural must be is in conformity with the Article 42 of this Network Code,
 - the measurement equipment must comply with Article 37, 38 and 39 of this Network Code,
 - data referring to the delivery of natural gas according to Article 47, paragraph 2 of this Network Code.
3. Within the period of thirty days from the date of the submission of the request referring to the connection at an entry point of the System, the Transporter in agreement with the Operator shall inform the applicant thereof in writing by issuing an adequate solution.
4. The expenditures pertaining to the connection shall be borne by the energy subject, which is being connected, to the System.
5. The first delivery of natural gas at the point of entry into the gas transport network is carried out if the connection to the System is in conformity with the approval on connection at the entry point and if the applicant has previously signed a contract with the Operator on its access to the System referring to that particular point of entry.

10.3 Connection at an exit point of the System

Article 47

1. The connection at an exit point on the System is carried out according to a decision, which is in conformity with the Law is issued by the Transporter, by previously obtaining approval of the Operator.
2. The potential user is supposed to provide a request on the connection. This request should include the following:
 - the applicant (name, address of the main office, contact person, telephone number, e-mail),
 - the premises of the consumer seeking approval for connection (address, location, type and purpose),
 - operational pressure of the natural gas necessary for the premises,
 - minimal, maximal and average hourly, maximal and average consumption and the total annual consumption with the expected monthly dynamism,
 - the technical characteristics of the plant and the purpose use of the natural gas,
 - possibility of replacement of the natural gas with another source of energy and the time necessary for transferring to an alternative fuel and vice versa,
 - plant approval, that is, approval to use the premises,
 - the date of the foreseen commencement of the connection.
3. The Transporter, by the consent of the Operator, assumes the responsibility to decide on the request within the period of thirty days from the date of the receipt of the written request of the applicant.
4. The decision approving the connection of the structure to the System, besides the parts determined by law, also includes data on the purpose of the structure, the approved capacity and the operational pressure of the connection point, the minimal and the maximal hourly flow, the way of measurement, the place, the way and the technical condition for connection and the validity period of the decision.
5. A complaint can be lodged to the Energy Regulatory Commission against the negative decision of the Transporter within the period of 15 days of the submission thereof. The decision of the Energy Regulatory Commission as referring to the complaint is final and subject to initiation of a procedure in contentious against it.
6. The decision is issued as with the validity period corresponding to the period necessary for the applicant's plant erection, but not more than two years after the date when it is brought. The valid decision is the condition for signing a connection contract.
7. The validity period of the decision can be extended upon the request of the applicant.
8. The decision should be lodged to the applicant, the Operator, the trader and/or the supplier.

10.4 Contracts for connection and delivery of natural gas

Article 48

1. The Transporter and the applicant for connection, pursuant to the valid solution, sign a contract for connection before the commencement of the designing of a connection gas pipeline, a measurement and regulating station and other structures necessary for connection to the System. The contract regulates the mutual rights and obligations between the Transporter and the applicant for connection, and especially:
 - the scope of works pending to be carried out in view of connection to the System,

- compensation of the connection expenses borne by the applicant,
 - ownership over the connection,
 - erection period,
 - provide for a location,
 - way and technical conditions for connection,
 - minimal and maximal hourly flow and expected consumption trend,
 - operational pressure at the point of connection with the allowed deviations,
 - measurement principle,
 - amount and payment of disproportion in the amounts of the connection expenses,
 - a bank guarantee which should be provided by the applicant,
 - contractual obligations in cases of breach of the contractual provisions.
2. The documents, which the applicant is obliged to provide to the Operator before the physical connection of its gas pipeline to the System should, as a minimum, include the following:
- declaration confirming that all the works indispensable for connection to the System have been carried out, and the conditions prescribed by the decision have been met,
 - minutes on the performed technical inspection without any remarks and with all attachments proving the successfully performed hydraulic test of the connection gas pipeline,
 - plan and connection procedure, welding procedure and a list of the other works necessary thereto,
 - confirmation on the technical eligibility and the competency of the Contractor.
3. After the termination of the obligations pertaining to the contract for connection referred to in paragraph 1 of this Article, and before the filling with natural gas, the Operator shall inform the trader and the supplier that the contract for delivery of natural gas can be signed with the applicant. Besides the supply of the adequate delivery of natural gas, the applicant must acquire a permission to use all the plants that are being connected to the System, including the corresponding civil engineering buildings, and to provide them to the Transporter.

10.5 Criteria for determination of the connection expenses

Article 49

1. The Transporter shall prepare a methodology for calculation of the connection costs, which shall define the norms for determination of the connection costs and the individual costs for determination of the part of the costs related to the System.
2. The criteria applied in the methodology under paragraph 1, of this Article referring to the determination of the expenses for connection to the System are the following: approved/agreed capacity, point of connection, type of equipment, devices and materials indispensable to be installed, type and scope of assembly or other works necessary to be carried out upon the connection and creation of other connection conditions.
3. The connection expenses shall include the following:
- elaboration of investment and technical documentation and the prescribed consents and approvals,
 - decision on the property-right relations referring to the connection,
 - purchasing of equipment, appliances and materials,
 - civil engineering, assembly and other works referring to the connection, together with the labor power expenses, the use of special tools, machines, vehicles etc.,
 - inspection and commissioning,
 - expert, operational and administrative works indispensable to carry out the connection,
 - part of the expenses of the System as a pre-condition to perform the connection.
4. A part of the costs causing disproportion, which are in accordance with Article 48, paragraph 1 of this Network Code, shall be borne by the applicant.
5. Methodology mentioned above in paragraph 1 of this Article approves the Energy Regulatory Commission of the Republic of Macedonia.

10.6 Filling with natural gas

Article 50

1. The consumer assumes the responsibility to submit to the Transporter a request in writing for filling the installations with natural gas, within the period of three days from the day when the contract referring to the sale of natural gas has been signed.
2. The Transporter shall fill the installations with natural gas to the direct consumer in the following cases:
- if the connection to the System, the connection pipeline and the measurement and regulating station have been constructed according to the law, to the technical provisions and standards, as well to the conditions cited in the Decision thereon,
 - if the structures of the direct consumer have been built as in conformity with the law, with the technical regulations and standards, that is, if they possess a work permission,

- if the direct consumer has signed a contract on purchasing of natural gas.
- 3. The filling of the gas pipeline network of the direct consumer with natural gas is the final stage of the connection. The filling shall take place after all the conditions cited within this Network Code have been met.
- 4. Before the filling with natural gas, the direct consumer shall submit to the Transporter proof referring to the reliability and to the functionality of the facilities belonging to its pipeline as well as to the degree of expertise of the personnel for their operation.
- 5. The Transporter assumes the obligation to fill the gas pipeline network until the first interception valve on the gas pipeline belonging to direct consumer. The further filling of the gas pipeline network of the direct consumer is performed by its expert personnel.

Article 51

1. If, after the first commissioning at the exit point, it is established that the real flow, expressed in nm³/h exceeds the scope of the installed measurement equipment, installed as pertaining to the request of the direct consumer, the Operator shall carry out the indispensable replacement thereof and, if necessary, shall also reconstruct the measurement line if this is possible, in order that the real flow be within the scope of the installed measurement equipment.
2. The expenses pertaining to the reconstruction of the measurement line and the replacement of the measurement equipment referred to in paragraph 1 of this Article, shall be borne by the direct consumer, which has submitted inadequate data on the scope of the flow.

11. OPERATION OF THE SYSTEM IN CASES OF DANGER AND IN STATE OF CRISIS

11.1 Measures in case of the System endangerment

Article 52

1. The Operator is obliged to bring instructions referring to the competences and procedures for information and taking measures in case of the System endangerment.
2. The transporter is obliged, without delay, to remove all the System defects and to inform the Operator immediately.
3. The Dispatching Center must immediately transport information to the Fast Intervention Service about the operational obstacles, damages or the System defects as well as about any unexpected circumstances, which have influence to a part or to the whole of the gas pipeline.
4. The Dispatching Center, together with the on-duty service teams, immediately takes all necessary measures to the System in order to prevent damages and human injures.
5. The transporter must prepare, at any time, professional operational services, which are able to remove the damages and the System obstacles and to perform the necessary repairs ensuring the stable operating of the System as soon as possible.
6. If the Operator and the Transporter react in accordance with the above mentioned principles in this Article, they have no responsibility about any possible limitation or interruption of the natural gas transport.

11.2 State of Crisis

Article 53

1. The System crisis condition is every circumstance or event, which can cause any obstacle to the balanced operation of a part or of the whole System, as well as interruption of the natural gas delivery. The Operator and the Transporter have the right and duty, in any case of crisis condition, to undertake all technical measures intended for prevention of the unbalanced operation of a part or of the whole System and free transmission of the natural gas.
2. Upon the performance of the possible technical interventions in view of the establishment of unhindered and balanced operation of the System, the Operator can limit the transport of agreed quantities or completely interrupt the natural gas transport as per the following order of the consumers of the natural gas:
 - the consumers, which use the natural gas as an energy source for production of hot water, intended for the heating systems and which possess other type of fuel as a compensation of the natural gas.
 - the consumers which produce technological steam using the natural gas as a safer and ecologically pure energy source,
 - the consumers which use the natural gas in the technological procedures ensuring higher coefficient of efficiency and quality of production,
 - the consumers which use the natural gas as a raw material in the technological procedures where the natural gas interruption causes interruption of the production,
 - the consumers where, due to technological reasons, the use of other fuel is impossible and the natural gas interruption will make great damage to its equipment and devices,
 - the consumers which use the natural gas as an energy source for production of steam or hot heating water and consumers which do not have technological possibility for using other type of fuel,

- the consumers, which use the natural gas for their own needs in the households.
- 3. The Operator assumes the obligation of immediately informing the affected users of the System about the occurrence of any state of crisis.

11.3 Force Major

Article 54

1. The term of Force Major shall refer to each circumstance or event beyond the Operator or Transporter supervision and which is impossible to be anticipated, avoided or removed, such as floods, soil erosion, earthquakes, state authorities' influence, telephone line damages, connected transmission systems damages, electric power system defects on the area of the natural gas usage, freezing or formation of hydrates on the gas pipeline.

2. When the Operator and Transporter do not meet, partially or totally, the agreed obligations due to Force Major influence, they have no any responsibility to the users during the period of Force Major.

Article 55

1. The Operator and the Transporter must complete all the necessary tasks as soon as possible in case of the System defect occurred due to the force major, in order to ensure for the unhindered and reliable operation of the gas pipeline.

2. The Operator shall not cover the user expenses and shall not be responsible for any damage as a result of the natural gas limitation or interruption during the carrying out of extraordinary or unexpected tasks and repairs intended for the removal of the obstacles or defects mentioned in the paragraph 1 of this Article with the purpose of ensuring unlimited and safe System operation.

3. The third entities which create obstacles or defects to the gas transport pipeline, are obliged to cover the expenses occurred as a result of extraordinary and unexpected repairs mentioned in this Article, and are responsible for any damages incurred as a result thereof.

12. CONFIDENTIALITY

Article 56

1. The Operator shall be obliged to maintain confidentiality concerning information about the contracts on access and transport of natural gas concluded with the users, to keep them as a business secret, especially the commercial and the business information related to the conclusion and fulfillment of these contracts, as well as the information related to the services provided by Operator, until such confidential information shall become publicly available without breach of Operator's.

2. The Operator shall in particular undertake not to disclose confidential information to the public, unless the contractual party shall be authorized to do so based on prior written consent of the other contractual party.

3. The obligation of confidentiality pursuant to the provisions of the previous paragraphs of this Article shall not apply to those Operator's obligations imposed by generally binding regulations.

13. COMMUNICATION AND INFORMATION

13.1. Communication with users and other operators

Article 57

1. The user and the Operator must exchange information on all duties and circumstances connected with the natural gas transport.

2. The information, mentioned above in paragraph 1, which refers to the transport contract, will be submitted by e-mail or by any means of communication previously agreed in written form between the both parties, which is applicable for such information.

3. The dispatching center of the Operator shall be in constant touch with the operators of the neighboring transport pipelines. While managing and running the System, the Operator shall observe the provisions of the contracts applicable to the transport networks, the foreign suppliers, the transporters and the operators of the systems through which they carry out transit of natural gas.

13.2 Notices

Article 58

1. The Operator and the Transporter shall, through their web site, constantly inform the users with the necessary data about the System. The following information shall be constantly published and updated:

- description of the System,
- technical characteristics of the System.

2. The Operator shall permanently issue, on its web site, information referring to the following:

- the types of services performed by it,
- the types of contracts and types of facilities available to the users,

- procedures which are applied upon the use of the System and definitions of the most important terms,
 - the principles of capacity allocation during normal operating conditions of the System and in the case of a congestion of the System,
 - rules referring to the access to the System and connection thereto,
 - suggested and actual changes of the conditions of rendering of the services.
3. The Operator and the Transporter shall at least twice a year, and through their web sites, publish the information on the condition of the System and the availability of the transport capacity of the System. As for the entry and the exit points of the System, the Operator assumes the responsibility to publish whether the available transport capacity exists or not.
4. The Operator and the Transporter shall at least once a year publish on its web site the schedule for regular maintenance and the schedule of planned inspections, tests, reconstructions or expansions of the System, which may affect the contract on transport of natural gas.
5. The Operator is obliged to publish all changes related to the transport of natural gas, about the limitation in the capacities and the transport risks, as well as the possible changes of the planned periods for maintenance, including the information about the unexpected restrictions and interruptions timely and in a non-discriminating way as soon as they become available to the Operator.
6. In addition to the publication on its web site, the Operator and/or the Transporter may exchange this information also by telephone, followed by written notes.

14. CHANGES AND AMENDMENTS OF THE NETWORK CODE

Article 59

1. The changes and the amendments to the Network Code can be suggested by the Operator, the Transporter and the user of the System.
2. When the proposal for change or amendment of the Network Code is submitted by the Transporter, or the user, the proposal should:
- be submitted to the Operator in writing,
 - include information about the entity, which has submitted the suggestion (name, address of the main office, contact person, telephone, e-mail),
 - detail the provision or provisions of the Network Code which are to be changed or amended,
 - contain a detailed explanation of the proposal and purpose of the change and amendment.
3. Within the period of 10 working days from the receipt of the proposal, the Operator shall determine whether the proposal complies with the requirements of paragraph 2 of this Article and, if it is concluded that the proposal complies with the paragraph 2 of this Article, it shall publish it on its web site for a period of ten days with the purpose to enable the interested entities to give their comments, in the way as determined in the publication.
4. If the Operator determines that the proposal does not comply with requirements referred to in paragraph 2 of this Article, the Operator shall inform the entity in writing about the deficiencies of the suggestion, the way of its overcoming and the period within which the proper proposal is supposed to be provided.
5. The Operator shall require the opinion of the Transporter if the proposal has been submitted by a System user.
6. The elements, which are analyzed by the Operator upon the estimation of the proposals for change and amendment of the Network Code, are as follows:
- compliance of the proposal with the adequate legal provisions,
 - contribution in the improvement of the changes and amendments of the Network Code,
 - influence of the requested change upon the operability of the System, as well as the time and means necessary for the application of the said change,
 - opinions and suggestions submitted by the interested entities and the Transporter as pursuant to the paragraph 3 and the paragraph 5 of this Article.
7. If the Operator determines that the suggestion does not comply with the respective legal regulations, it shall bring a conclusion on the refusal of the said suggestions.
8. If the Operator determines that the proposal is in compliance with a law and that it contributes to the betterment of the Network Code or the security, safety and the continuous operation in the supply of the System, the Operator shall bring a conclusion on the acceptance of the proposal and shall, within the period of ten days, after the expiry of the announcement referred to in the paragraph 3 of this Article, organize a public debate on which it shall obligatorily invite the Transporter, the System users, the Ministry in charge of the matters in the field of energy and the Energy Regulatory Commission. The subject of the said public debate shall be the suggested attitude of the Operator as per the submitted proposal.
9. The Operator assumes the obligation, within the period of ten days after the public debate, to bring the decision referring to the said proposal.

10. The Operator is entitled to amend and to change the Network Code always when such changes reflect the practical experience in the operation and the maintenance of the System, the commercial praxis common in the gas industry and the change in the technology, which is used in the transport of natural gas.

11. The decision on the changes and the amendments of the Network Code brought according to the paragraph 10 of this Article shall be submitted to the Energy Regulatory Commission for approval according to Article 86 of the Act on Energy.

15. TRANSITIONAL AND CONCLUDING PROVISIONS

Article 60

1. The Operator is obliged to prepare and to submit for approval to the Energy Regulatory Commission the Methodology referred to in Article 26, paragraph 2 in the period of 60 days from the date of the coming into force of this Network Code.

2. The Transporter is obliged to prepare and to submit for approval to the Energy Regulatory Commission the Methodology referred to in Article 49 in the period of 60 days from the date of the coming into force of this Network Code.

Article 61

1. The Articles 21, 22, 23, 24 and 25 of this Network Code shall be applied as starting from January 1 2011.

2. The Articles 4, 5, 6, 7, 8 of the Decision on the Establishment of the General Condition of Delivery of Natural Gas (Official Gazette of the Republic of Macedonia 47/97), are not valid after coming into effect of this Network Code.

Article 62

This Network Code comes into effect on the eighth day after its publishing in the Official Gazette of the Republic of Macedonia.

ATTACHMENT 1**CHEMICAL AND PHYSICAL PARAMETERS OF NATURAL GAS**

a. Component composition in mol%

Methane	CH ₄	min 92%
Ethane	C ₂ H ₆	max 4%
Propane, Butane, and Heavier carbohydrates	C ₃ H ₈ C ₄ H ₁₀	max 2%
Nitrogen	N ₂	max 2%
Carbon dioxide	CO ₂	max 1%
Oxygen	O ₂	max 0,1%

b. Sulfur content

Sulfur hydrate	H ₂ S	max 5 mg/m ³
Mercaptane sulfur	S	max 10 mg/m ³
Sulfur	S	max 20 mg/m ³

c. Lower heating value (at 20°C)

- Minimal	33,00 MJ/m ³
- Maximal	34,00 MJ/m ³

d. Water dew-point (at 40 bar)

- Summer period	-3°C
- Winter period	-5°C

e. Gas temperature

- Minimal	+2°C
- Maximal	+20°C

f. The natural gas must not contain any mechanical impurities, resin or resin-forming composites

ATTACHMENT 2
BASIC TECHNICAL PARAMETERS OF THE GAS PIPELINE TRANSPORT SYSTEM
a. Entry and exit points of the System

a.1 Entry point	Location	Flow (nm³/h)	Pressure entry (bar)	Pressure exit (bar)
1. BS Židilovo	Židilovo, Kriva Palanka	240 000	54-40	min. 40

a.2 Exit point	Location	Flow (nm³/h)	Pressure entry (bar)	Pressure exit (bar)
1	Kriva Palanka	4 500	54-25	12-8
2	Kratovo	4 500	54-25	12-8
3	Kumanovo	20 000	54-25	12-8
4	Skopje	70 000	54-25	12-8
5	Skopje	70 000	54-25	12-8
6	Skopje	20 000	54-25	6-4

b. Users directly connected to the System

Customer	Location	Flow (nm³/h)	Pressure Entry (bar)	Pressure Exit (bar)
1. Idnina	Kratovo	1.500	12-8	3
1 FZC 11 Oktomvri	Kumanovo	10.000	12-8	3
2 Tutunski Kombinat	Kumanovo	1 500	12-8	3
3 KIK	Kumanovo	1 500	12-8	3
4 Koka Pulp Molding	Kumanovo	500	12-8	3
1 TO Istok	Skopje	40 000	12-8	3
2 OHIS AD	Skopje	22 500	12-8	3
3 ELEM, Energetika plant	Skopje	22 500	12-8	3
4 TO Skopje Sever	Skopje	14 000	12-8	3
5 Makstil Topla Valavnica	Skopje	14 000	12-8	0,5
6 Mittalstil Ladna Valavnica	Skopje	8 000	12-8	0,8
7 Pivara AD	Skopje	6 000	12-8	3
8 TO 11 Oktomvri	Skopje	6 000	12-8	3
9 Makstil Čelcarnica	Skopje	2 500	12-8	3
10 Žito Luks AD 8 Mart	Skopje	2 500	12-8	3
11 Ministry of Defense of the RM	Skopje	2 500	12-8	3
12 USJE AD	Skopje	2 500	12-8	3
13 IPM Tipó	Skopje	2 500	12-8	3
14 JSP Skopje	Skopje	1 500	12-8	3
15 Komuna	Skopje	1 500	12-8	3
16 Evropa AD	Skopje	1 500	12-8	3
17 Mel-Pek	Skopje	500	12-8	3
18 Porsche Macedonia	Skopje	500	12-8	3
19 Mel-Pek	Skopje	100	12-8	3
20 MakAutoStar	Skopje	100	12-8	3
21 Polnilnica CNG	Skopje	1000	12-8	12