Pursuant to Article 15, Paragraph 1, Item 3 and in connection with Article 55 of the Energy Law (*Official Gazette of the Republic of Serbia* No. 84/04) and Article 12 of the Statute of the Energy Agency of the Republic of Serbia (*Official Gazette of the Republic of Serbia* No. 52/05),

The Council of the Energy Agency of the Republic of Serbia, at the 35st Council Session held on 2 February 2007, passed the following

D E C I S I O N
ON DETERMINING METHODOLOGY FOR SETTING CRITERIA FOR SETTING COSTS OF CONNECTION TO THE TRANSMISSION AND DISTRIBUTION SYSTEM FOR NATURAL GAS

(This Decision was published in the *Official Gazette of the Republic of Serbia*,

No. 18, dated 14 February 2007)

1. Methodology for setting criteria for setting costs of connection to the transmission and distribution system for natural gas has been determined and is attached to this decision.

2. This decision is to be published in the *Official Gazette of the Republic of Serbia*.

Council of the Energy Agency of the Republic of Serbia

Ref. No. 33-2/2-2007-D-I — President of the Council

Belgrade, 2 February 2007 — Ljubo Macic

METHODOLOGY FOR SETTING CRITERIA FOR SETTING COSTS OF CONNECTION TO THE TRANSPORTATION AND DISTRIBUTION SYSTEM FOR NATURAL GAS

I. SCOPE OF THE METHODOLOGY

This Methodology shall provide a more elaborate definition of criteria and methods of setting the costs of connection of system users' facilities to the natural gas transportation or distribution system (hereinafter: the Methodology).

II. TERMS

The terms used in the Methodology shall have the following meanings:

Energy entity – an entity that performs the energy activity of natural gas transportation or distribution;

Individual connection – any facility connection to the transportation or distribution system which does not meet the conditions for being classified as a standard connection as defined by this Methodology;

System user – an applicant whose facility is being or has been connected to the natural gas transportation or distribution system, or for which a change of previously approved capacity is asked for;

Facility - facility that is connected to natural gas transportation or distribution system, or facility for which a change of previously approved capacity is asked for;

Connection – equipment, devices and material used for the physical connection to the system, in accordance with the approval for connection, from the facility to the nearest point in the system at which connection is technically and legally possible, including the metering device;

System – energy facilities for natural gas transportation or distribution, interconnected in such a manner as to form a unified technical and technological whole, to which the facilities of system users are connected;

Actual costs – all the cost of the energy entity incurred for creating or changing existing terms for natural gas delivery:

Standard distance from the system – accounting unit for setting costs of a standard connection, which shall be equal to 12 meters for any distance from the system not exceeding 20 meters, measured by pipeline route;

Standard connection – every connection with approved capacity on connection point not exceeding 10 m^3/h;

Distance from the system – the distance of the metering device from the nearest point in the existing system at which connection is technically and legally possible, as measured along the pipeline route;

Coincidence factor – the parameter taken into account while setting the total capacity of network in the project documentation in accordance with the professional standards.

III. CRITERIA FOR SETTING CONNECTION COSTS AND THE BREAKDOWN OF CONNECTION COSTS

III. 1. **Criteria for Setting Connection Costs**

Connection costs shall be set according to the following criteria: the approved capacity for connection, the type of equipment, devices and materials installed, operations/tasks that need to be done, costs of preparing and gathering documentation and creating other conditions for connection.

III. 2. **The Breakdown of Connection Costs**

Connection costs shall comprise:

1) Costs of equipment, devices and materials;
2) Costs of carrying out the works;
3) Costs of professional, operational and administrative work required to connect the facility to the system;

4) Part of system costs incurred by connecting the facility to the specific network and which depend on the approved capacity.

That part of system costs incurred as a prerequisite for connection of the facility consists of the costs of construction of the transportation or distribution network and the costs of stations where the measurements are done and the costs of the reduction of pressure of the network to which the facility is connected.

IV. CONNECTION TYPES

Depending on the approved capacity at the point of connection to the natural gas transportation or distribution system, the connections shall be classified into two types:

1. Standard connection, and
2. Individual connection

IV. 1. Standard connection

Depending on the approved capacity on the connection point, i.e. the type of meter, the following connection subtypes are set:

Number	Type of meter	Maximum capacity
1.	G – 2.5	≤ 4 m^3/h
2.	G – 4	≤ 6 m^3/h
3.	G - 6	≤ 10 m^3/h

IV. 2. Individual connection

Individual connection is each connection with allowed capacity exceeding 10 m^3/h.

V. THE METHOD FOR SETTING CONNECTION COSTS

V.1. Standard connection

V.1.1. The costs of a standard connection shall be set, for each type of this connection, on the basis of the standardised average quantity of required equipment, devices and materials whose installation is required, average costs of works and costs of professional, operational and administrative tasks that have to be done in order to connect a facility to the system.

The costs of a standard connection may be:

- fixed, and
- variable.

Fixed costs shall comprise the costs for the standard distance from the system and are calculated with respect to the elements in Paragraph 1 of this Clause.

Variable costs shall comprise the costs which depend on the distance of the facility from the system and are calculated and expressed per meter of length.

In case the costs of standard connection for system user comprise the costs for settling property rights, the costs of standard connection set with respect to the elements from Paragraph 1 to 3 of this Clause, shall be increased for the actual cost of settling property rights and shall be presented separately.

V.1.1.1. The costs of equipment, devices and materials shall comprise the costs of procurement of the standardised quantities of equipment, devices and materials that are installed according to the technical rules and regulations of the operation of the system to which the facility is to be connected.
The costs are calculated by multiplying the determined market value by the standard quantity of equipment, devices and material.
The market value is the price on the market at the most favourable terms at the time of determining this value.
The costs of equipment, devices and materials may be fixed and variable.

V.1.1.2. The costs of carrying out the works shall comprise the costs of labour, the costs of machinery usage and the costs of vehicle usage.

V.1.1.2.1. The costs of labour of persons engaged to perform the necessary works on a particular connection type shall be calculated by multiplication of the determined market price of one person-hour, according to the standardised level of educational attainment and occupational profile of the persons performing the works and the standardised number of person-hours necessary for completion of the works on the connection. The costs of labour per working hour shall not exceed the market price of the standard person-hour for such services, regardless of whether the work is performed by employees of the energy entity or by contractors hired by that energy entity.

V.1.1.2.2. The costs of using machinery with a machine operator, which is used for the purpose of connecting a specific connection type, shall be calculated by multiplication of the standardised number of hours of operation of the particular piece of machinery necessary for the connection and the determined market price of employment of that machine per hour of operation. The costs of using a piece of machinery with a machine operator per hour of operation shall not exceed the market price of employment of that machine per hour of operation, regardless of whether the machine is owned by the energy entity or by the contractor hired by the energy entity.

V.1.1.2.3. The costs of vehicles with drivers, which are used for the purpose of connecting a specific connection type, shall be calculated as the sum of the appertaining standardised costs of the vehicle, according to the category or type of the vehicle required, and the appertaining costs of the fuel for the vehicles, calculated on the basis of the distance of 50 km

The costs in items V.1.1.2.1. and V.1.1.2.2. may be fixed and variable.

The costs in item V.1.1.2.3 are entirely fixed.

V.1.1.3. The costs of professional, operational and administrative tasks necessary for connecting the facility to the system shall comprise the labour costs calculated by multiplying standard labour costs of persons working on the connection, per person-hour, according to the standardised level of educational attainment and the standardised number of person-hours necessary for completion of the works. The costs of labour per working hour shall not exceed the average price of the standard

person-hour according to standardised level of educational attainment and occupational profile of the persons performing the works in an energy entity.

The costs of professional, operational and administrative tasks necessary for connecting the facility to the system are completely fixed.

V.1.2. The part of system costs incurred prior to the connection shall be set as an accounting unit expressed as a unit cost per m^3/h.

The basis for determining the part of system costs incurred prior to the connection of the facility to that system is set as replacement value of costs of transportation or distribution network construction. These costs comprise: costs of pipes, armature/reinforcement, fittings (clutch, reducer, knee, t-parts, finishing caps for electro fusion connection, etc.), assembling, transportation and final works for construction of the network to which the facility is connected, as well as the costs of the station where the metering is done and the reduction of the pressure of the network to which the user is connected, taking into account coincidence factor.

The part of system costs incurred prior to connection comprise the costs of designing, acquiring permits and approvals and preparation work on the network and connection construction, as well as taxes, charges and costs of other professional, operational and administrative works of network and connection construction.

V.1.2.1 Unit cost shall be the quotient of total costs of system construction incurred prior to the connection and maximum capacity of network to which the user is connected, taking into account coincidence factor and shall be expressed in dinars/ m^3/h and set in accordance with this Methodology.
The costs incurred prior to connection shall be set as the result of multiplying the total costs of system construction incurred prior to the connection by the percentage of the residual of the available capacity.
The part of system costs incurred prior to the standard connection that the customer pays shall be the result of multiplying unit cost and allowed capacity at the connection point.

V.2. Individual connection

V.2.1. The construction costs of the individual connection shall be set as the total sum of actual costs of: equipment, devices and materials, works, design preparation, acquiring of required documentation and meeting other requirements for building the connection.

The construction costs of the individual connection shall comprise:

- conducting analysis of optimal connection point;
- connection design preparation;
- obtaining required consents and approvals and other necessary documentation;
- settling property rights pertaining to the connection in question;
- performing preliminary works;
- procurement of equipment, devices and materials;
- necessary assembly works for building a connection, inclusive of the costs of labour, usage of machinery and vehicles;
- metering point equipment;
- geodetic works;

- testing and commissioning;
- performing other necessary specialist, operational and administrative works for connecting the facility to the system, in accordance with the operational and technical rules and regulations of the system to which the facility is to be connected and with the criteria stipulated by this Methodology.

If it is necessary due to technical and other objective conditions of connection to design a transportation or distribution facility of a capacity exceeding the maximum allowed capacity on the connection point or to install equipment or devices of capacity exceeding the allowed capacity, the share of connection costs in facility construction costs is set in proportion to the allowed capacity at the connection point.

V.2.2. The part of the system costs incurred prior to the connection shall be set as an accounting unit expressed as a unit cost per m^3/h.

Costs of construction of the transportation or distribution network shall set the basis for calculating the part of system costs incurred prior to connection of the facility to the system. These costs shall include the costs listed in V.1.2.

V.2.2.1. Unit cost shall be the quotient of total costs of system construction incurred prior to the connection and maximum capacity of network to which the user is connected, taking into account coincidence factor and shall be expressed in dinars/ m^3/h and set in accordance with this Methodology.

The costs incurred prior to the connection shall be set as the result of multiplying the total costs of system construction incurred prior to the connection by the percentage of the residual of the available capacity.

The part of system costs incurred prior to the individual connection that the customer pays shall be the result of multiplying unit cost by allowed capacity at the connection point.

VI. CONNECTION COSTS CALCULATION METHOD

VI.1. Standard connection

VI.1.1. Costs of standard connection are calculated shall be calculated according to the following formula:

$$TP_i = TO_i + TR_i + TD_i + DTS \quad (1)$$

where:

$$TO_i = FO_i + VO_i * SU$$

$$TR_i = FR_i + VR_i * SU$$

that is

$$TP_i = (FO_i + VO_i * SU) + (FR_i + VR_i * SU) + TD_i + DTS \quad (2)$$

where:

i – connection type set in accordance to the criteria stipulated by this Methodology;

TP_i –total connection costs for the i-type connection;

TO_i –total costs of the equipment, devices and materials necessary for establishing the i-type connection;

TR_i – total costs of performed works for the i-type connection;

TD_i – fixed costs of professional, operational and administrative activities required to connect the facility to the system for the i-type connection;

DTS – the part of system costs incurred by the connection;

FO_i – fixed costs of the equipment, devices and materials necessary for establishing the i-type connection;

VO_i –variable costs of the equipment and materials necessary for the i-type connection;

SU – standard distance from the system;

FR_i –fixed costs of the works done for the i-type connection;

VR_i –variable costs of the works for the i-type connection.

After classifying the costs into fixed and variable, the formula (2) is reduced to the following:

$$TP_i = F_i + V_i * S_U + DTS \quad (3)$$

where:

$$F_i = FO_i + FR_i + TD_i$$

$$V_i = VO_i + VR_i$$

where the abbreviations have the following meanings, apart from those listed above:

F_i –the total fixed costs of the i-type connection;

V_i –the total variable connection costs for the i-type connection, expressed in dinars per metre.

If the distance of a facility from the system exceeds 20 metres, the costs of connecting such a facility shall be calculated according to the following formula:

$$STP_i = TP_i + V_i \times PU$$

where:

STP_i –the total connection costs for the i-type connection when the distance of the facility from the system exceeds 20 metres;

PU –the difference between the distance of the metering device from the system, measured by the pipeline route and the length of 20 metres.

VI.1.2. The part of the system costs prior to the connection shall be calculated as the sum of the costs of equipment, devices and materials, works done and design preparation, gathering of required documentation and fulfilling of other conditions for building the connection, in accordance with the criteria stipulated by this Methodology.

Unit costs per connection type shall be determined according to the following formula:

$$JT = (UT/ MKP)*((MKP-IKP)/MKP)$$

where:

$$UT = TO + TR + TA$$

where:

JT –unit cost of the part of the system incurred prior to the connection (in dinars per m^3/h);

UT –total costs of the part of the system incurred prior to the connection;

TO –total costs of the equipment, devices and materials installed in construction of the transportation or distribution network and stations where the

metering is done and the reduction of the network pressure to which the facility is connected;

TR –total costs of works carried out in the course of construction of transportation or distribution network and stations where the metering is done and the reduction of the network pressure to which the facility is connected;

TA – total administrative costs of construction of transportation or distribution network and stations where the metering is done and the reduction of the network pressure to which the facility is connected, in connection with Paragraph 3. Item V.1.2

MKP – maximum network capacity to which the user is connected taking into account coincidence factor;

IKP – employed network capacity to which the user is connected taking into account coincidence factor;

DTS for a specific user is calculated according to the following formula:

DTS = JT * OKP (4)

where:

OKP – allowed capacity at the connection point recorded in the decision by which the connection is allowed (in m^3/h).

DTS for a specific user calculated in accordance with the formula (4) cannot exceed 30% of total value of TO_i, TR_i i TD_i.

VI.2. Individual connection

VI.2.1. The costs of an individual connection shall be set on the basis of the project documentation, standards of the energy entity and market prices.

Costs of individual connection shall be calculated according to the following formula:

TP = TO + TR + TD + DTS,

where:

TP – total connection costs;

TO –total costs of the equipment, devices and materials required for the construction of the connection;

TR – total costs of the works carried out;

TD – total costs of acquiring and preparing the documentation and creating other conditions for the construction of the connection;

DTS – part of system costs incurred prior to the connection.

DTS for a specific user calculated in accordance with the formula (4) cannot exceed 30% of total value of TO_i, TR_i i TD_i.

VI.3. **Adjustment of Connection Costs Calculation**

If the system user, due to more favourable terms and more efficient construction procedure of an individual connection or of facility connection to the system, demands to carry out some works and activities on his own agenda and if these activities do not require any consents and permits from the state or some other authorised organisation and if he can obtain a written permit from the energy entity to which he shall connect, the connection costs shall not encompass costs that imply these works and activities , i.e. these costs are subtracted from the total connection costs. Potential additional costs of the energy entity that performs the control over the construction shall be taken into account.

VII. CONNECTION COSTS IN SPECIAL CASES

The following cases for setting connection costs, with respect to this Methodology, shall be considered as special:

1) the change of maximum allowed capacity on the connection point;
2) reconnection of the facility to the system when the application for connection is submitted after forced disconnection from the system.

Connection costs in the above mentioned special cases shall be set according to the following:

1) in case of a change of maximum allowed capacity at the connection point, connection costs are set according to actual costs of such connection.

2) in case of reconnection of the facility to the system, when the application for connection is submitted after forced disconnection from the system, the connection costs shall be set according to the additional actual costs of such connection, except in cases of forced disconnection after unauthorised connection of the internal gas installations to a transport or distribution system or usage of gas without permission to connect, where the costs are set in accordance with this Methodology for calculation of cost for a facility that is connected for the first time.

VIII. APPLICATION OF THE METHODOLOGY

Energy entities for natural gas transportation and distribution set standards for calculation of connection costs and unit costs for determining the part of system costs incurred by connecting a facility to the system and energy entities for natural gas distribution also set the costs for each of the standard connections on the basis of these standards.

Energy entities shall pass a code setting the standards for determining the connection costs and unit costs for determining the part of system costs, as well as a code setting the costs of standard connections, within 60 days from the day of publishing this Methodology in the *Official Gazette of the Republic of Serbia*. The code setting the costs of standard connections should also include a detailed structure of the set standards and costs, separately for each element determined by this Methodology (with respect to the type of equipment, devices, materials, works, design preparation, gathering of documentation and fulfilling other conditions for constructing a connection).

The connection costs, in accordance with this Methodology and with the codes of energy entities for natural gas transportation and distribution referred to in Paragraph 1 of this Clause, shall be calculated as of 1 June 2007.

Energy entities shall submit to the Energy Agency of the Republic of Serbia one copy of the codes referred to in Paragraph 2 of this Clause, with an explanation of the calculation of the set standards and costs, before they start calculating the connection costs for customers in accordance with this Methodology.

Energy entities shall make available to the applicants for connection, the codes which serve as the basis for setting the connection costs, i.e. the amount of those costs and the method for setting them.

The costs for standard connection are set annually; however, the costs may be adjusted before the expiry of one year in case of retail price increases or decreases exceeding 10%, according to data published by the officially competent statistical body, for the period from the date of passing the code on setting the connection costs to the date of adjustment of those costs.