

Pursuant to Article 15, Paragraph 1, Item 3 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 session held on January 29, 2009, passed the

## DECISION

### ON THE AMENDMENT TO THE DECISION ON DETERMINING THE ELECTRICITY TRANSMISSION AND DISTRIBUTION CONNECTION CHARGING METHODOLOGY

1. The Decision on Determining Electricity Transmission and Distribution Connection Charging Methodology (Official Gazette of the Republic of Serbia, No. 60/06, 79/06 114/06 и 14/07), the Electricity Transmission and Distribution Connection Charging Methodology, Section IV. CONNECTION TYPES shall be amended by the addition of the following Paragraph 2.:

“Where a distance of facility from system is exceeding 25 metres, the connection is deemed to be a standard connection:

- if, for a standard power line cross-section and required connection power, the voltage drop remains within set limits regardless of the (underground, overhead) power line based connection type
- for overhead power lines, if pillars are used for the construction of a connection, or if no tension pole installation is required for the construction of a connection.”

2. Section V. THE METHOD OF CONNECTION CHARGING, subsection **V.1. Standard Connection**, clause V.1.1., paragraph 4. is amended by replacing the wording “calculated and expressed in metres of length” with “calculated using elements from paragraph 1. hereof per metre of length”.

After paragraph 4. the next two paragraphs follow:

“Where the distance of facility from system is up to 25 metres, variable costs are calculated for a standard distance of 15 metres from the system.

Where the distance of facility from system exceeds 25 metres, connection variable costs, calculated for a standard distance from the system, are increased for every metre over the 25 metre distance, whereby these costs, for power line based connection types referred to in tables 1. and 2, are determined in the following manner:

- for setting up a connection type using overhead power lines, the variable costs per metre are determined by dividing the cost of construction of one overhead low-voltage line range of 40 metres in length by 40, whereby only one pillar and its associated equipment are included in the calculation of the range construction value, and the cost of individual elements, or construction items, is set in accordance with the costs of equipment, materials and works of the relevant connection type at the standard distance from system;

- for setting up a connection type using underground power lines, the variable cost per metre is equal to the value of variable costs per metre determined for the standard distance from system.”

Sub-clause V.1.1.1., paragraph 2. and sub-clause V.1.1.2.1., paragraph 2. is amended after the wording “number of metering devices” by addition of the following wording “of the adequate connection type referred to in table 2.”

Sub-clause V.1.1.3. is amended to read as follows:

“V.1.1.3. Costs of design preparation, gathering required documentation and other construction arrangements for connection consist of costs of connection design preparation, costs of gathering required documentation and costs of carrying out other necessary specialist and operational works, dependent on the relevant connection type.

These costs consist of costs of labour calculated by multiplying standardised labour costs of persons engaged in works referred to in paragraph 1. hereof, per person-hour in accordance with the standardised level of educational attainment and occupational profile, by the standardised number of person-hours required to complete these works, and shall not exceed the market price of a standard person-hour for such services, regardless of whether works are performed by energy entity’s employees, or by service providers hired by the relevant energy entity.

Costs of design preparation, gathering required documentation and making other construction arrangements for connection are calculated to the maximum of 2 energy entity’s engineer-hours per metering device, whereas these costs for all standard group connection types are calculated based on the installation of the half of the maximum number of metering devices of the adequate connection type referred to in table 2.

These costs are entirely fixed“.

Clause V.1.2, paragraph 3., last bullet is amended by replacing the wording “specialist, operational and administrative works“ with the wording ”specialist and operational works.”

Wording under paragraph 4 “the number of 0.4kV power lines emerging from one precast concrete TS shall be 4; the number of 0.4kV power lines emerging from one pole-mounted TS shall be 2” is replaced by the following wording ”there shall be four 0.4kV power lines emerging from one precast concrete TS, which shall be cable lines PP 00-A 4x150; there shall be two 0.4kV power lines emerging from one pole-mounted TS, which shall be overhead lines CKC 3x70+71,5 mm“.

Subsection **V.2 Custom Connection**, clause V.2.1., paragraph 2., last bullet is amended by replacing the wording “specialist, operational and administrative works” with the wording “specialist and operational works”.

The paragraph 3. is amended to read as follows:

“Where a connection, on account of technical conditions, also involves construction of an electricity facility exclusively for user’s needs, the construction costs of connection are determined

to the amount needed to construct such a facility according to the power required by the user, or for the next greater standardised rated power of the transformer and the next larger standardised cross-section of the power line.”

Clause V.2.2., sub-clause V.2.2.1., paragraph 1 is amended by deleting the word “energy”.

The wording in paragraph 3., item 6 “the number of 0.4kV power lines emerging from one precast concrete TS shall be 4; the number of 0.4kV power lines emerging from one pole-mounted TS shall be 2” is replaced by the following wording: “there shall be four 0.4kV power lines emerging from one precast concrete TS, which shall be cable lines PP 00-A 4x150; there shall be two 0.4kV power lines emerging from one pole-mounted TS, which shall be overhead lines CKC 3x70+71,5 mm”.

The wording in parentheses in paragraph 5. “(aerial cable)” is replaced by the following wording:“(aerial or cable)”.

3. In section VI. CONNECTION CHARGING METHOD, in subsection **VI.1. Standard Connection**, clause VI.1.1., paragraph 1-3 is amended to read as follows:

“VI.1.1. Construction costs of a standard connection facility to be connected to the system for the first time are calculated according to the formula for a distance of facility from system of up to 25 metre, as follows:

$$T_{Pi} = T_{Oi} + T_{Ri} + T_{Di} + D_{TS} \quad (1)$$

where:

$$T_{Oi} = F_{Oi} + V_{Oi} * SU$$

$$T_{Ri} = F_{Ri} + V_{Ri} * SU$$

that is,

$$T_{Pi} = (F_{Oi} + V_{Oi} * SU) + (F_{Ri} + V_{Ri} * SU) + T_{Di} + D_{TS} \quad (2)$$

where:

i = connection type, single (M1,...,T3) or group (G11,...,G33);

$T_{Pi}$  = total connection charges of an i-type connection for a distance of facility from system not exceeding 25 metres;

$T_{Oi}$  = total costs of equipment, devices and materials necessary for constructing an i-type connection;

$T_{Ri}$  = total costs of works performed on an i-type connection;

$T_{Di}$  = total costs of design preparation, gathering documentation and other arrangements for constructing an i-type connection, which are by their nature always fixed;

$D_{TS}$  = semi-deep costs incurred by the connection;

$F_{Oi}$  = fixed costs of equipment, devices and materials necessary for constructing an i-type connection;

$V_{Oi}$  = variable costs of equipment and materials required for an i-type connection, per metre, for a distance of facility from system not exceeding 25 metres;

$SU$  = standard distance from system;

$F_{Ri}$  = fixed costs of works performed on an i-type connection;

$V_{Ri}$  = variable costs of works performed on an i-type connection, per metre, for a distance of facility from system not exceeding 25 metre.

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

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

where:

$$F_i = FO_i + FR_i + TD_i, \text{ and}$$

$$V_i = VO_i + VR_i$$

Where, in addition to the previously stated, the abbreviations have the following meaning:

$F_i$  = total fixed costs of an i-type connection;

$V_i$  = total variable connection costs for an i-type connection, expressed in dinars per metre, for a distance of facility from system not exceeding 25 metres;

Where the distance of facility from system exceeds 25 metres, connection charges for such a facility are calculated according to the following formula:

$$STP_i = TP_i + VP_i * PU \quad (4)$$

where:

$STP_i$  = total connection charges of an i-type connection when the distance of facility from system exceeds 25 metres;

$TP_i$  = total costs of an i-type connection for a distance of facility from system not exceeding 25 metres;

$VP_i$  = variable costs of an i-type connection, for the part of connection in excess of the 25 metre range, expressed in dinars per metre;

$PU$  = difference between the distance of facility from system and the length of 25 metres, expressed in metres.

After paragraph 4, a new paragraph is added to read as follows:

“If installation of a meter with an integrated rate control device is granted to the customers, the connection charge is calculated by subtracting the costs of the two-rate meter and rate-switching device from the costs as calculated according to the said formula, and adding the costs of the meter with an integrated rate control device.

Paragraphs 5. and 6. become now paragraphs 6. and 7.

The formula under clause VI.1.2.: “ $UT_j = TO_j + TR_j + TA_j$ ” is replaced by the following formula: “ $UT_j = TO_j + TR_j$ ”; the formula explanation “ $F_j$  - demand load coincidence factor on the considered voltage level” is replaced with the following wording: “ $F_j$  - demand load coincidence factor on the observed voltage level, referred to in table 3.”; and the explanation: “ $TA_j$  – total administrative costs of a j-group connection” is deleted.

After clause VI.1.2., a new clause VI.1.3. shall follow and read as follows:

“VI.1.3. In case the standard connection charge for a particular customer consist of also costs associated with regulating ownership relations, the standard connection charge is increased by the actual amount of costs of resolving ownership relations.

Where, on account of ensuring technical conditions for setting up a connection, the customer bears construction costs or participates, commensurate with the required power, in the construction of energy facilities with the next higher voltage level in relation to the network voltage level to which the facility is to be connected, the total amount of system costs incurred by the connection, calculated in accordance with clause VI.1.2., are deducted from the connection charge.”

4. Subsection **VI.2. Custom Connection**, after clause VI.2.2, a new clause VI.2.3. shall follow and read as follows:

“VI.2.3. When connecting to the transmission system, as well as to the distribution network of voltage level above 1kV, any costs of works, materials, equipment and services, born by user and associated with the construction of a connection, are deducted from the connection charge calculated in accordance with this Methodology, and such cost portion is to be indicated separately in the calculation of connection charges by items.

Where, on account of ensuring technical conditions for connection, the customer bears construction costs or participates, commensurate with the required power, in the construction of energy facilities with the next higher voltage level in relation to the network voltage level to which the facility is to be connected, the total amount of system costs, incurred by the connection and calculated in accordance with the clause VI.2.2., is deducted from the connection charge”.

5. Subsection **VI.3. Adjustment of Connection Costs Calculation** shall be deleted.

6. Subsection VII. CONNECTION COSTS IN SPECIAL CASES, paragraph 1, after item 3. a new item shall follow and read as follows:

“3.a. connection of mobile temporary facilities (movable booths, mobile circuses, roller coasters and other amusement facilities, television reporter vehicle etc.) when connection is granted for a period of 30 days;”

Paragraph 2., after item 3. a new item shall follow and read as follows:

“3.a. Charges of connecting a mobile facility for a period of up to 30 days are determined in accordance with the complexity of a connection associated with the type of equipment, devices, material and works required for construction and the location of connection within the power distribution system.

The connection charge is determined from the costs of mounting and dismantling the connection plus the number of days of using the connection multiplied by the daily connection charge calculated in accordance with this clause of the Methodology.

The daily connection charge is calculated by dividing the construction cost of connection by the estimated number of service days during the equipment's service life period; whereas the estimated number of service days shall not be less than 500 days. The construction cost of connection consist of costs of procuring equipment, devices and material and costs of works required to set up a connection.

Costs of mounting and dismantling a connection include standardised costs of labour, costs of machinery usage and costs of vehicle usage. These costs are included in the customer's cost calculation to their total amount.

Semi-deep connection costs incurred by connecting these facilities are not included in the calculation.”

7. Electricity transmission and distribution entities shall harmonize their acts on connection charging with this Decision, within 15 days following the date of its publication in the “Official Gazette of the Republic of Serbia”, and submit them to the Energy Agency of the Republic of Serbia with standards for connection charging and unit costs for setting semi-deep connection costs incurred by connecting the facility to the system, within 10 days following the date of their

adoption, whereby electricity distribution entities shall, in addition, submit charge levels for each standard connection calculated on the basis of these standards.

The act setting charge levels of standard connections shall include a detailed breakdown of the set standards and charge levels, separately for each component of the connection charge breakdown specified by this Methodology, in accordance with the excel sheet entries published on the website of the Energy Agency of the Republic of Serbia ([www.aers.rs](http://www.aers.rs)).

Electricity transmission and distribution entities shall calculate connection charges set in the manner referred to in paragraph 1. of this clause as of 1 March 2009.

8. This Decision shall be published in the "Official Gazette of the Republic of Serbia".

No: 33/2009-D-I/21

Belgrade, 29 January 2009

Council of the Energy Agency of the Republic of Serbia

Council President,  
Ljubo Macic