

Based on Article 11-g, paragraph 1, line 4 from the Energy Law (“Official Gazette of the Republic of Macedonia”, no. 47/97, 40/99, 98/00, 94/02, 38/03 and 40/05), the Energy Regulatory Commission of the Republic of Macedonia on the meeting held on 1st November 2005, adopted the present:

RULEBOOK

ON THE METHOD AND CONDITIONS FOR PRICE REGULATION OF NATURAL GAS TRANSMISSION, DISTRIBUTION AND SUPPLY

I. GENERAL PROVISIONS

Article 1

The present Rulebook shall stipulate the method of price setting, approval and control (hereinafter: price regulation) for natural gas transmission, distribution and supply.

Provisions from the present Rulebook shall govern companies performing regulated activities in the natural gas sector.

Regulated activities in the sense of paragraph 2 of this article shall be:

- natural gas transmission;
- natural gas transmission system operation;
- natural gas distribution;
- natural gas distribution system operation; and
- natural gas supply for captive consumers.

Article 2

Companies performing regulated activities (hereinafter: companies) shall be obliged to set prices for their services in compliance with the methodology provided in the present Rulebook.

Natural gas price regulation pursuant to the method and procedure stipulated with the present Rulebook shall aim at providing:

- protection from companies’ dominant and monopoly position abuse;
- protection of natural gas consumers and provision of reliable, continuous and safe natural gas supply;
- conditions for permanent and successful operation of companies by setting the level of regulated return of capital;
- future development of companies by regulation based on incentives for improving productiveness and efficient operation;
- improving the quality of services provided by the companies;
- stable and predictable natural gas market relations that secure favorable conditions for attracting investors;
- preconditions for sustainable development; and
- conditions for applying the principles of objectivity, non-discrimination and transparency.

Article 3

When regulating prices for activities referred to in Article 1, paragraph 3 from the present Rulebook, the methodology based on incentive price regulation for particular regulatory period shall be applied, as well as the price cap method.

The price cap method referred to in paragraph 1 of this article shall mean price setting that enables sufficient revenue for covering justifiable costs.

Article 4

The regulatory period referred to in Article 3, paragraph 1 from the present Rulebook shall mean the period for which the method referred to in Article 3 from the present Rulebook on setting price cap for the provision of regulated service shall be applied.

The regulatory period shall be set by the Energy Regulatory Commission of the Republic of Macedonia (hereinafter: Regulatory Commission).

The duration of the first regulatory period shall be three years and shall be applied as of 1st January 2006.

The base year for the first regulatory period shall be 2005.

Article 5

The company performing two or more regulated activities or performing additional activity which in the sense of the present Rulebook is not considered a regulated activity shall be obliged to keep separate accounts as part of its internal accounting for each activity performed, as well as consolidated balance sheets for other activities, and to prepare balance sheets indicating the income, expenditure and performance outcomes for each of the activities separately, in compliance with the law.

Article 6

The company referred to in Article 1 from the present Rulebook shall keep its accounting in compliance with the International Accounting Standards.

The company shall be obliged - together with the price approval application referred to in Article 15, paragraph 1 from the present Rulebook - to submit the Regulatory Commission data pursuant to forms and tables provided in Annex 4, which is integral part of the present Rulebook.

On the request of the Regulatory Commission, the company shall also be obliged to submit other data and information required for the price setting procedure, including provision of insight in investment and technical documents on new facilities.

II. CALCULATION OF PRICE CAPS FOR COMPANIES' SERVICES

1. Natural gas transmission and natural gas transmission system operation

Article 7

The price cap for the service provided by the company performing natural gas transmission and natural gas transmission system operation should cover the costs of transmission and natural gas transmission system operation and provide a level of regulated return of capital, while it shall be set by applying the method and procedure

proscribed in the Methodology and the criteria provided in Annex 1, which is integral part of the present Rulebook.

Article 8

Technical losses in the natural gas transmission system shall be acknowledged up to 0.3% from the total natural gas quantities on the entrance in the natural gas transmission system, excluding the natural gas transit quantities.

Article 9

Ancillary services in the natural gas transmission system shall concern responsibilities stemming from:

- operation, management and provision of access to the natural gas transmission system;
- covering own natural gas demand of the natural gas transmission system;
- reading and processing metered data;
- balancing deviations between the actual and agreed natural gas quantities intended for transmission; and
- registration and calculation of deviations from agreed natural gas quantities received and delivered from the natural gas transmission system.

Article 10

The charge for covering costs for connecting, maintenance and operation of connection assets in the natural gas transmission system shall be the charge paid by consumers connected to the natural gas transmission system, and shall be calculated in compliance with the Methodology provided under item 2 of Annex 1 from the present Rulebook.

The charge for covering natural gas transmission system connection costs shall be paid by consumers connected to the natural gas transmission system as a single charge pursuant to the Pricelist developed by the company performing natural gas transmission, and previously approved by the Energy Regulatory Commission.

The charge for covering costs of connection assets' maintenance and operation shall be calculated annually, as part of the natural gas transmission company's operational costs.

2. Natural gas distribution and natural gas distribution system operation

Article 11

The price cap for the service provided by the company performing natural gas distribution and natural gas distribution system operation should cover the costs for natural gas distribution, distribution system operation and natural gas supply for consumers connected to the natural gas distribution system and shall provide a level of regulated return of capital, while it shall be set in a manner and procedure proscribed in the present Rulebook and by applying the methodology provided in Annex 2, which is integral part of the present Rulebook.

Article 12

Technical losses in the natural gas distribution system shall be acknowledged up to 0.7% from the total natural gas quantities distributed on annual level.

Article 13

The charge for covering costs for connecting, maintenance and operation of connection assets in the natural gas distribution system shall be paid by consumers connected to the natural gas distribution system.

The charge for covering natural gas distribution system connection costs shall be paid by consumers connected to the natural gas distribution system as a single charge pursuant to the Pricelist developed by the natural gas distribution company, and previously approved by the Energy Regulatory Commission.

The connection assets' maintenance and operation shall be performed by the company referred to in Article 11 of the present Rulebook and shall be acknowledged in the operation costs.

3. Natural gas supply for captive consumers directly connected to the natural gas transmission system

Article 14

The price cap for the service provided by the company performing natural gas supply for captive consumers directly connected to the natural gas transmission system shall be set by applying the Methodology provided in Annex 3 from the present Rulebook.

III. MANNER AND PROCEDURE ON SUBMITTING PRICE APPROVAL AND CONTROL APPLICATION

Article 15

Companies referred to in Article 1 from the present Rulebook shall submit the Regulatory Commission price approval applications in compliance with the present Rulebook (hereinafter: application).

The application shall be submitted by the company's manager or director upon previously obtained approval from the management body.

The price approval application for the regulatory period shall be accompanied with:

- applicant's data (company, seat, license's reference number);
- financial reports with all annexes pursuant to the requirements from the International Accounting Standards, together with audit reports prepared by a certified auditor;
- financial-accounting and technical-economic data and information prepared pursuant to Annex 4 of the present Rulebook;
- investment description, purpose and plan (construction of new, reconstruction and revitalization of existing facilities and plants for performing the regulated activity) covering the regulatory period; and
- other data, which the applicant deems relevant for the price approval procedure.

Attached to the application, the company shall be obliged to submit a declaration concerning the reliability of the application and data provided, signed by

the company's responsible person. The content of the declaration is provided in Annex 5, which is integral part of the present Rulebook.

The application and data referred to in paragraph 3 of this article shall be submitted in four copies, where the application and data referred to in paragraph 3, line 3 shall also be submitted in electronic form.

Article 16

45 days before the beginning of the regulatory period the latest, the company shall submit the Regulatory Commission price approval application for the regulatory period.

The price approval procedure referred to in paragraph 1 of this article shall be initiated on the day of application's receipt at the Regulatory Commission's archive.

Within a period of seven days from the application's receipt, the Regulatory Commission shall be obliged to review the application, adopt a conclusion on the application's completeness and inform the company thereof.

Prior to adopting the conclusion referred to in paragraph 3 of this article, the Regulatory Commission can summon the company on a joint meeting for obtaining additional information, data and clarifications related to the application submitted.

If – within the period of seven days - the company does not proceed completely in compliance with the requirements contained in the conclusion referred to in paragraph 3 of this article, the Regulatory Commission shall - within a period of three days - adopt a decision on rejecting the application referred to in paragraph 1 of this article as incomplete.

If the application is complete, the Regulatory Commission shall adopt a conclusion on the application's completeness.

Article 17

By means of the conclusion referred to Article 16, paragraph 6 from the present Rulebook, the Regulatory Commission shall oblige the applicant to prepare an application notification within a period of three days, which should be published and submitted to the Regulatory Commission for its approval.

Within a period of three days from obtaining the approval referred to in paragraph 1 of this article, the applicant shall be obliged to publish the application notification at its own costs in at least two daily newspapers, where at least one of them is issued in Macedonian language and in a newspaper issued on the language spoken by at least 20% of citizens speaking an official language different from the Macedonian language.

The application notification shall also be published on the website of the Regulatory Commission.

The application notification should contain data from the application, reasons for its submission, manner and deadline for submission of opinions by interested natural persons and legal entities, as well as the address of the Regulatory Commission for submitting opinions.

The deadline for submission of opinions by interested natural persons and legal entities shall not be longer than seven days from the day of the notification's publication.

Article 18

Within a period of 3 days from the expiration of the deadline for submitting opinions by interested natural persons and legal entities, the Regulatory Commission shall be obliged to submit the applicant copies of all opinions obtained in relation to

the published notification and to schedule the preliminary session, which should be held within a period of fourteen days from the day of the price approval procedure's initiation.

Authorized representatives from interested companies, institutions and organizations shall be invited to attend and participate in the discussion on the preliminary session.

Article 19

Within a period of five days from the day the preliminary session was held the latest, the Regulatory Commission shall be obliged to hold a regular session for adopting a decision on the price approval application.

The decision adopted on the session referred to in paragraph 1 of this article must be published in the "Official Gazette of the Republic of Macedonia".

Article 20

Provisions from the Book of Operations of the Energy Regulatory Commission of the Republic of Macedonia no. 01-171/1 from 29th December 2003, shall be appropriately applied for the organization and holding of the Regulatory Commission's preliminary and regular sessions.

Article 21

By 10th March in the current year the latest, the company referred to Article 1 from the present Rulebook shall be obliged to submit the Regulatory Commission: financial reports for the previous year with all annexes pursuant to the requirements of the International Accounting Standards, for the purpose of undertaking the annual control of the application of particular prices set for the regulatory period.

Article 22

The company can submit a price alteration application prior to the expiration of the regulatory period for which the regulatory price has been set in cases of circumstances that did not exist at the time of price approval, but have caused increase or decrease of monitored total costs by more than 5% in the time period in which the previously set price was applied.

Attached to the application referred to in paragraph 1 of this article, the applicant shall be obliged to submit financial-accounting and technical-economic data and information prepared pursuant to Annex 4 of the present Rulebook, as well as other data which the applicant deems relevant to the price approval procedure.

In cases when the company has not submitted a price reduction application in compliance with paragraph 1 of this article, the Regulatory Commission shall inform the company concerned on the initiation of the price reduction procedure.

The deadline for adopting a decision concerning the application referred to in paragraph 1 of this article, i.e., concerning the notification referred to in paragraph 3 of this article, cannot be longer than 20 days from the application's submission, i.e., notification's submission.

In cases referred to in paragraph 1 and paragraph 3 of this article, by adopting a conclusion the Regulatory Commission shall determine deadlines for undertaking particular activities in the procedure within the deadline referred to in paragraph 4 of this article.

IV. TRANSITIONAL AND FINAL PROVISIONS

Article 23

In the period up to the approval of price cap for performing natural gas transmission and natural gas transmission system operation activities pursuant to the present Rulebook, the price cap for these activities shall be set at the rate of 2.217 MKD/nm³.

Article 24

In the period up to the approval of the price cap for performing natural gas supply to captive consumers directly connected to the transmission system pursuant to the present Rulebook, the price cap for the natural gas trading and natural gas supply for captive consumers directly connected to the transmission system shall be set at the rate of 0.246 MKD/nm³.

Article 25

On the day of the application of the present Rulebook, the provision from the Price-Setting Methodology for Particular Energy Types ("Official Gazette of the Republic of Macedonia no. 43/98 and 08/2000) shall cease to be applied for natural gas price-setting.

Article 26

The present Rulebook shall enter into force on the eight day of its publication in the "Official Gazette of the Republic of Macedonia".

No. 01-1271/1
Skopje, 1 November 2005

President
Slave Ivanovski

ANNEX 1

Methodology on calculating price cap for the service provided by the company performing natural gas transmission and natural gas transmission system operation

1. Price Cap

The planned revenue based on the price cap for the service provided by the company performing natural gas transmission and natural gas transmission system operation should cover natural gas transmission and natural gas transmission system operation costs, and shall be calculated according to the following formula:

$$R_{Tt} = \sum_{t=1}^n P_{Tt} * q_t^i$$

Where:

- R_{Tt} - planned income; [MKD]
- P_{Tt} - price cap for year t from the regulatory period; [MKD/unit]
- q_t^i - planned natural gas quantities for the year t, for transmission system consumer (i); [unit]

The upper limit of allowed price cap increase for the service provided by the company performing natural gas transmission and natural gas transmission system operation shall be calculated according to the following formula:

$$(1 + CPI_{t-1}) * (1 - X) \geq \frac{\sum_{i=1}^n P_{Tt} * q_{t-1}^i}{\sum_{i=1}^n P_{T(t-1)} * q_{t-1}^i}$$

Where:

- P_{Tt} - price cap for the year t from the regulatory period; [MKD/unit]
- $P_{T(t-1)}$ - price cap for the previous year t-1; [MKD/unit]
- CPI_{t-1} - Consumer Price Index in the year t-1;
- X - efficiency factor; [from 0 to 1]
- q_{t-1}^i - natural gas quantity transmitted in the year t-1 for the transmission system user (i) separately; [unit]

1.1. Base Year Price

Natural gas transmission price in the base year for the first regulatory period shall be calculated by applying the following formula:

$$P_{T_0} = \frac{O + L + D + T + RA}{180.000.000^{(*)}}$$

Where:

P_{T_0} – natural gas transmission price for the base year t_0 ; [MKD/unit]

O – operational costs in the base year; [MKD]

L – actual technical losses in the transmission system; [MKD]

D – depreciation; [MKD]

T – taxes, contributions and other fees; [MKD]

RA –return on regulated assets; [MKD]

()180.000.000 nm³, represents the sum of maximum natural gas quantity consumed by individual consumers in the last five-year period, increased by 35%, as the expected growth of existing consumers' consumption.*

1.1.1. Operational Costs (O)

Operational costs, according to the present methodology, shall be costs for the operation and maintenance of company's regulated activity in compliance with the technical norms and standards applicable in the Republic of Macedonia, and standardized costs for the performance of the regulated activity, which shall be set according to the following guidelines:

1. costs for materials, energy, spare parts and small inventory, on the basis of consumption and average market prices norms in the purchasing period;
2. costs for regular maintenance, overhaul and asset maintenance services up to 20% of the calculated annual depreciation;
3. costs for construction facility and equipment insurance are acknowledged pursuant to the insurance premium level paid by the company;

4. gross salaries per employee up to level of average gross salary per employee achieved in the economy of the Republic of Macedonia in the current year, increased by 30% as a reflection of the employees' qualification structure and the regulated activity complexity;
5. managerial salaries and management rewards, in standardized amounts appropriate to the efficiency increase, and according to company's management bodies decisions;
6. other services, up to the level of their three-year share (%) in the costs for materials, energy, small inventory (from item 1);
7. other and emergency (excessive) costs, up to 10% from the total costs referred to in items 1; 2; 3; 4 and 6.

1.1.2. Actual Technical Losses (L)

Costs for actual technical losses in the course of natural gas reduction and transmission shall be acknowledged in compliance with Article 8 from the present Rulebook, calculated at natural gas purchase price.

1.1.3. Depreciation (D)

Depreciation of regulated assets shall be calculated in compliance with the stipulated minimum annual depreciation rates provided in the relevant applicable regulations.

1.1.4. Taxes, Contributions and Other Fees (T)

Taxes, contributions and other fees shall be acknowledged in compliance with the legal regulations.

1.1.5. Return on Regulated Assets (RA)

Return on regulated assets shall be calculated according to the following formula:

$$RA = RAB * WACC$$

Where:

- | | | |
|-------------|--|-------|
| RA | – return on regulated assets; | [MKD] |
| RAB | – average value of assets used for performing the regulated activity (regulated assets base) ; | [MKD] |
| WACC | – weighted average cost of capital; | |

1.1.5.1. Regulated Assets Base (**RAB**)

Regulated assets base shall be comprised only of assets used for performing the regulated activity (assets and turnover).

The following formula shall be used for determining the average value of regulated assets base:

$$RAB = \frac{RAB_{start} + RAB_{end}}{2} + AVS_{t-1}$$

Where:

| | | |
|----------------------------|--|-------|
| RAB | - average value of assets used for performing the regulated activity (regulated assets base); | [MKD] |
| RAB_{start} | - regulated assets base at the beginning of the year; | [MKD] |
| RAB_{end} | - regulated assets base at the end of the year ; | [MKD] |
| AVS_{t-1} | - average value of natural gas stock in the natural gas transmission system for the previous year t-1; | [MKD] |

The value of regulated assets base at the beginning of the year shall be the sum of individual accounting values of regulated material assets and regulated non-material assets on the first day of the year.

The value of regulated assets base at the end of the year shall be calculated according to the following formula:

$$RAB_{end} = RAB_{start} + NI - Grant - D - RAB_{out}$$

where:

| | | |
|----------------------------|--|-------|
| RAB_{end} | - value of regulated assets base at the end of the year; | [MKD] |
| RAB_{start} | - value of regulated assets base at the beginning of the year; | [MKD] |
| NI | - new investments; | [MKD] |
| Grant | - freely obtained assets; | [MKD] |
| D | - depreciation of regulated assets; | [MKD] |
| RAB_{out} | - written-off assets for the year; | [MKD] |

1.1.5.2 Weighted Average Cost of Capital (**WACC**)

Weighted average cost of capital shall be calculated according to the following formula:

$$\mathbf{WACC} = \frac{\mathbf{E} * \mathbf{K}_e}{\mathbf{E} + \mathbf{Debt}} + \frac{\mathbf{Debt} * \mathbf{K}_d * (1 - \mathbf{T}_p)}{\mathbf{E} + \mathbf{Debt}}$$

Where:

| | | |
|----------------------|-------------------------------------|-------|
| WACC | - weighted average cost of capital; | |
| E | - equity; | [MKD] |
| K_e | - cost of equity; | |
| Debt | - debt; | [MKD] |
| K_d | - cost of debt; | |
| T_p | - profit tax; | |

1.1.5.2.1. Cost of Equity (**K_e**)

Cost of equity shall be determined by applying the Capital Asset Pricing Model (CAPM), based on non-risk investments, average return on risk investments and systematic risks expressed by the coefficient β , according to the following formula:

$$\mathbf{K}_e = \mathbf{R}_f + (\mathbf{R}_m - \mathbf{R}_f) * \beta$$

Where:

| | |
|--|--|
| K_e | - cost of equity; |
| R_f | - revenue from non-risk investments (% of expected revenue from state bonds); |
| R_m | - average revenue from risk investments (% of expected revenue from the market portfolio); |
| (R_m - R_f) | - market risk premium; |
| β | - coefficient of variability of returns on company stocks in proportion to the average variability of returns on all market stock; |
| (R_m - R_f) * β | - equity premium risk. |

In the first regulatory period, the value of the variability coefficient for company stocks revenue in relation to the average variability of returns on all market stocks β shall be equal to 1.

1.1.5.2.2. *Cost of debt (K_d)*

Cost of debt for the regulated company shall be calculated on the basis of average interest rates for utilized investment loans, while the control shall be performed on the basis of crediting terms and interest rates offered by banks to Macedonian regulated companies.

1.2. *Consumer Price Index (CPI)*

Official data published by the State Statistical Office shall be used for determining the Consumer Price Index (CPI) for the year.

1.3. *Efficiency Factor (X)*

The value of the efficiency factor X shall be between 0 and 1 and shall have the following functions:

- improving efficiency stemming from achieved efficiency outcomes (matter of comparative analysis) and the required speed for efficiency adjustment; and
- revenue leveling based on the procedure that would provide such future revenues for every year from the regulatory period, proportional to the business risk.

The efficiency factor X shall be set by the Regulatory Commission, where in the first year of the regulatory period the value of the efficiency factor shall be set as equal to 0.

2. Charge for maintenance and operation of transmission system's connection assets

The charge for covering connection assets' maintenance and operation when connection assets are owned by the natural gas transmission company shall be calculated according to the following formula:

$$CC_t = \left(\frac{GAV_t}{Y} + WACC_t * NAV_t + M_t \right)$$

Where:

| | | |
|--------------------------|--|---------|
| CC_t | - charge for connection assets' maintenance and operation for the year t; | [MKD] |
| GAV | - gross connection asset value in the year t, based on the value of Modern Equivalent Assets (MEA); | [MKD] |
| Y | - life span of connection assets in compliance with the stipulated minimum annual depreciation rate; | [years] |

| | | |
|----------------------------|--|-------|
| $WACC_t$ | - weighted average cost of capital for the year t, for the natural gas transmission company; | |
| NAV_t | - net asset value for the year t, based on the value of Modern Equivalent Assets (MEA); | [MKD] |
| M_t | - costs for connection assets' operation and maintenance for the year t; | [MKD] |

In cases when connection assets are owned by the natural gas transmission system user, only the charge for connection assets' maintenance and operation (M_t) shall be calculated.

ANNEX 2

Methodology on calculating price cap for the service provided by the company performing natural gas distribution and natural gas distribution system operation

1. Price Cap

The price cap for the service provided by the company performing natural gas distribution and natural gas distribution system operation should cover the costs for natural gas distribution, natural gas supply for captive consumers connected to the natural gas distribution system and shall provide a level of regulated return of capital, and shall be calculated pursuant to the price cap method, according to the following formula:

$$R_{dt} = \sum_i \sum_j p_{dt}^{ij} q_t^{ij}$$

Where:

- R_{dt} - planned income; [MKD]
- p_{dt}^{ij} - tariff rate (j) for the appropriate consumer category (i), for the year t; [MKD/unit]
- q_t^{ij} - planned natural gas quantities for the consumer category (i), with appropriate tariff rate (j), for the year t; [unit]

The upper limit of allowed prices increase according to the price cap method shall be calculated as a ratio of planned and achieved revenue for the year t-1, according to the following formula:

$$(1 + CPI_{t-1}) * (1 - X) \geq \frac{\sum_i \sum_j p_{dt}^{ij} q_{t-1}^{ij}}{\sum_i \sum_j p_{d(t-1)}^{ij} q_{t-1}^{ij}}$$

Where:

- CPI_{t-1} - Consumer Price Index for the year t-1 ;
- X - efficiency factor; [0÷1]
- p_{dt}^{ij} - tariff rate (j) for the consumer category (i), for the year t; [MKD/unit]

$P_{d(t-1)}^{ij}$ – tariff rate (j) for the consumer category (i), in the year t-1; [MKD/unit]

q_{t-1}^{ij} – delivered natural gas quantity for the consumer category (i), in the year t-1; [unit]

- **Consumer Price Index (CPI)**

Official data published by the State Statistical Office shall be used for determining the Consumer Price Index (CPI) for the relevant year.

- **Efficiency Factor (X)**

The value of the efficiency factor X shall be from 0 to 1 and shall have the following functions:

- improving efficiency stemming from achieved efficiency outcomes (matter of comparative analysis) and the required speed for efficiency adjustment; and
- revenue leveling based on the procedure that would provide such future revenues for every year from the regulatory period, proportional to the business risk.

The efficiency factor X shall be set by the Regulatory Commission, where in the first year of the regulatory period the value of the efficiency factor shall be set as equal to 0.

1.1 Setting basic (initial) price for the natural gas distribution service

The basic (initial) price for the natural gas distribution service shall be calculated by applying the following formula:

$$P_{Dt} \leq P_{Ke} - P_{imp} - P_{St} - P_{Tt}$$

Where:

P_{Dt} – basic (initial) price for the distribution service; [MKD/unit]

P_{Ke} – natural gas reference price, as a substitute for energy resources present in the broad consumption proportionate to their share; [MKD/unit]

P_{imp} – natural gas average purchase price in the previous year, including custom duty and other fees; [MKD/unit]

- P_{St} – price cap in the previous year for the service supply to captive consumers connected to the transmission grid; [MKD/unit]
- P_{Tt} – price cap in the previous year of the regulatory period for the service natural gas transmission; [MKD/unit]

1.2 Natural Gas Reference Price (P_{Ke})

The natural gas reference distribution price (P_{Ke}), as a substitute for energy resources present in the wider consumption, proportional to their share, shall be calculated according to the following formula:

$$P_{Ke} = 2,625 * P_{ee} + 0,003 * P_w + 0,103 * P_{elo}^1$$

Where:

- P_{ke} – natural gas reference distribution price; [MKD/unit]
- P_{ee} – average electricity distribution price in the previous year; [MKD/kWh]
- P_w – average sales price of heating wood in the previous year; [MKD/m³];
- P_{elo} – average sales price for extra-light household oil in the previous year; [MKD/ lit]

¹ The formula coefficients have been determined on the basis of following parameters: share of energy resources that are being substituted – electricity 45%, heating wood 40% and household oil 15%; the energy efficiency coefficient - electricity 95%, heating wood 60%, household oil 80%, natural gas 85%; low heating power – electricity 3600 kJ/kWh, heating wood 3900000 kJ/m³, household oil 36000 kJ/lit and natural gas 33500 kJ/nm³. The coefficients have been reduced by 30% for the purpose of enabling investment in installation and devices for natural gas use by distribution consumers.

ANNEX 3

Methodology on calculating the price cap for performing the activity supply for captive consumers directly connected to the natural gas transmission system

1. Price Cap

The price cap for natural gas supply for captive consumers directly connected to the natural gas transmission system should cover the company's costs related to:

- signing natural gas purchase contracts;
- signing natural gas access and transmission contracts;
- signing natural gas supply contracts with captive consumers directly connected to the transmission system; and
- reading, recording and invoicing natural gas quantities delivered,

while it shall be calculated according to the following formula:

$$R_{st} = \sum p_{st} * q_t^i$$

Where:

| | | |
|----------|--|------------|
| R_{st} | - planned revenue; | [MKD] |
| p_{st} | - supply price for the year t; | [MKD/unit] |
| q_t^i | - planned natural gas quantity for each captive consumer (i) separately, for the year t; | [unit] |

The upper limit of allowed prices increase according to the price cap method shall be calculated as a ratio of planned and achieved revenue for the year t-1, according to the following formula:

$$(1 + CPI_{t-1}) * (1 - X) \geq \frac{\sum p_{st} * q_{t-1}^i}{\sum p_{s(t-1)} * q_{t-1}^i}$$

Where:

| | | |
|--------------|---|-------------|
| CPI_{t-1} | - Consumer Price Index for the year t-1; | |
| X | - efficiency factor; | [0÷1] |
| p_{st} | - supply service price for the year t; | [MKD/unit] |
| $p_{s(t-1)}$ | - supply service price for the year t-1; | [MKD/unit] |
| q_{t-1}^i | - supply service price in the year t-1 achieved for natural gas quantity for each captive consumer (i) separately in the year t-1 | [unit/year] |

- **Consumer Price Index (CPI)**

Official data published by the State Statistical Office shall be used for determining the Consumer Price Index (CPI) for the relevant year.

- **Efficiency Factor (X)**

The value of the efficiency factor X shall be from 0 to 1 and shall have the following functions:

- improving efficiency stemming from achieved efficiency outcomes (matter of comparative analysis) and the required speed for efficiency adjustment; and
- revenue leveling based on the procedure that would provide such future revenues for every year from the regulatory period, proportional to the business risk.

The efficiency factor X shall be set by the Regulatory Commission, where in the first year of the regulatory period the value of the efficiency factor shall be set as equal to 0.

1.1 Base Year Price

The price of natural gas supply for captive consumers in the base year shall cover the following costs:

- operational costs (**O**);
- regulated assets depreciation (**D**);
- taxes, contributions and other fees (**T**)

and shall provide for return on regulated assets in the base year (RA).

1.1.1 Operational Costs (O)

Operational costs, according to the present methodology, shall be costs for the operation and maintenance of company's regulated activity in compliance with the technical norms and standards applicable in the Republic of Macedonia, and standardized costs for the performance of the regulated activity, which shall be set according to the following guidelines:

1. costs for materials, energy, spare parts and small inventory, on the basis of consumption and average market prices norms in the purchasing period;

2. costs for regular maintenance, overhaul and asset maintenance services up to 20% of the calculated annual depreciation;
3. costs for construction facility and equipment insurance are acknowledged pursuant to the insurance premium level paid by the company;
4. gross salaries per employee up to level of average gross salary per employee achieved in the economy of the Republic of Macedonia in the current year, increased by 30% as a reflection of the employees' qualification structure and the regulated activity complexity;
5. managerial salaries and management rewards, in standardized amounts appropriate to the efficiency increase, and according to company's management bodies decisions;
6. other services, up to the level of their three-year share (%) in the costs for materials, energy, small inventory (from item 1);
7. other and emergency (excessive) costs, up to 10% from the total costs referred to in items 1; 2; 3; 4 and 6.

1.1.2 Depreciation (D)

Calculation of regulated assets depreciation shall be performed in compliance with the stipulated minimum annual depreciation rates provided in the applicable regulations.

1.1.3 Taxes, Contributions and Other Fees (T)

Taxes, contributions and other fees shall be acknowledged in compliance with legal regulations.

1.1.4 Return on Regulated Assets (RA)

Return on regulated assets shall be calculated according to the formula:

$$\mathbf{RA = RAB * WACC}$$

Where:

| | | |
|-------------|---|-------|
| RA | - return on regulated assets; | [MKD] |
| RAB | - average value of assets used for performing the regulated activity (regulated assets base); | [MKD] |
| WACC | - weighted average cost of capital; | |

1.1.4.1. Average Value of Regulated Assets Base (RAB)

Regulated assets shall be comprised only of those assets used for performing the regulated activity (assets and turnover).

The following formula shall be used for determining the value of regulated assets base:

$$RAB = \frac{RAB_{start} + RAB_{end}}{2}$$

Where:

RAB – average value of regulated assets base; [MKD]

RAB_{start} – value of regulated assets base at the beginning of the year; [MKD]

RAB_{end} – value of regulated assets base at the end of the year [MKD]

The value of regulated assets base at the beginning of the year shall be the sum of individual accounting values of regulated material assets and regulated non-material assets on the first day of the year.

The value of regulated assets base at the end of the year shall be calculated according to the following formula:

$$RAB_{end} = RAB_{start} + NI - Grant - D - RAB_{out}$$

Where:

RAB_{end} – value of regulated assets base at the end of the year; [MKD]

RAB_{start} – value of regulated assets base at the beginning of the year; [MKD]

NI – new investments; [MKD]

Grant – freely obtained assets; [MKD]

D – depreciation of regulated assets; [MKD]

RAB_{out} – written-off assets for the year; [MKD]

1.1.4.2 Weighted Average Cost of Capital (WACC)

Weighted average cost of capital shall be calculated according to the following formula:

$$WACC = \frac{E * K_e}{E + Debt} + \frac{Debt * K_d * (1 - T_p)}{E + Debt}$$

Where:

- WACC** – weighted average cost of capital;
- E** – equity; [MKD]
- K_e** – cost of equity;
- Debt** – debt; [MKD]
- K_d** – cost of debt;
- T_p** – profit tax.

1.1.4.2.1. Cost of Equity (K_e)

Cost of equity shall be determined by applying the Capital Asset Pricing Model (CAPM), based on non-risk investments, average return on risk investments and systematic risks expressed by the coefficient β , according to the following formula:

$$K_e = R_f + (R_m - R_f) * \beta$$

Where:

- K_e** – cost of equity;
- R_f** – revenue from non-risk investments (% of expected revenue from state bonds);
- R_m** – average revenue from risk investments (% of expected revenue from the market portfolio);
- (R_m – R_f)** – market risk premium;
- β** – coefficient of variability of returns on company stocks in proportion to the average variability of returns on all market stock;
- (R_m – R_f) * β** – equity risk premium;

In the first regulatory period, the value of the variability coefficient for returns on company stocks in comparison to the average variability of returns on all market stock β shall be equal to 1.

1.1.4.2.2. Cost of Debt (K_d)

Cost of debt for the regulated company shall be calculated on the basis of average interest rates for utilized investment loans, while the control shall be performed on the basis of crediting terms and interest rates which banks offer for Macedonian regulated companies

ANNEX 4.

Spreadsheets on data required for price regulation of natural gas transmission, distribution and supply

ANNEX 5.

Declaration of company data reliability

D E C L A R A T I O N

Provided by the responsible person from the company submitting
the price and revenue approval application

Under criminal, financial and moral responsibility, I hereby declare that the material and financial data enclosed in the Annex to the price and revenue approval application, submitted to the Energy Regulatory Commission of Macedonia, and concerning the company are completely accurate and trustworthy and they reflect the applicant's actual situation.

Date: _____

Responsible person
(company's director)

Place: _____

Approved by:

Financial manager

Commercial manager

Technical manager
