

## 1 (b)(iii) 2 Cost of capital and its calculation methodology

(Source: Methodology for the determination of the tariff items for gas transmission ("Official Gazette" nos. 48/18 and 58/18), Article 14.

(1) WACC amount for the regulatory period is calculated according to the following formula:

$$WACC = \frac{r_e}{1-P} \times \frac{E}{E+D} + r_d \times \frac{D}{E+D}$$

where:

WACC – WACC amount for the regulatory period (%),

$r_e$  - rate of return on equity (%),

$E/(E+D)$  - share of equity in total capital structure (%),

$r_d$  - rate of return on debt (%),

$D/(E+D)$  - share of debt in total capital structure (%),

$P$  - income tax rate (%).

(2) As a target share in the capital structure for the calculation of WACC for the regulatory period referred to in paragraph 1 of this Article, the share of equity in the amount of 50% and the share of debt in the amount of 50% are prescribed.

(3) The rate of return on equity is established by applying the model relying on the capital asset pricing model (CAPM model) according to the following formula:

$$r_e = r_f + \beta \times (r_m - r_f)$$

where:

$r_e$  - rate of return on equity (%),

$r_f$  - risk-free rate of return (%),

$r_m$  - rate of return on diversified market portfolio (%),

$r_m - r_f$  - market risk premium (%),

$\beta$  - variability coefficient of yield on operator's shares in relation to average variability of yield on market portfolio.

(4) The risk-free rate of return ( $r_f$ ) is determined on the basis of the average nominal interest rate of the last three emissions of bonds with maturity of ten years or more issued by the Republic of Croatia.

(5) The variability coefficient of yield on operator's shares in relation to average variability of yield on market portfolio ( $\beta$ ) reflects the investment risk level in the energy activity of gas transmission in relation to the investment risk on the market, and can be established on the basis of the comparative analysis of the variability coefficients of

yield on gas system operator's shares applied in the regulatory mechanisms of European countries.

(6) The market risk premium ( $r_m - r_f$ ) reflects an additional yield of investor above the risk-free rate of return for taking over the investment risk on the capital market, and it is determined by a comparative analysis of market risk premium, based on publicly available data from the relevant international studies and databases.

(7) The rate of return on debt ( $r_d$ ) equals to the weighted average interest rate on investment loans used by the operator to finance regulated assets, whereby the interest rate on investment loans is taken into account up to the level of rationally and prudentially borrowed funds, that is, up to the amount of the reference interest rate.

Table 7 Elements for determining WACC for the regulatory period

WACC ELEMENTS	
Rate of return on equity - $r_e$ (%)	5,34%
Risk-free rate of return - $r_f$ (%)	2,75%
Variability coefficient of yield on operator's shares in relation to	0,54
Market risk premium - $r_m - r_f$ (%)	4,80%
Rate of return on diversified market portfolio - $r_m$ (%)	7,55%
Share of equity in total capital structure (%) - $E/(E+D)$ (%)	50,00%
Share of debt in total capital structure	3,92%
Share of debt in total capital structure (%) - $D/(E+D)$ (%)	50,00%
Income tax rate - $P$ (%)	18,00%
Planned amount of WACC for the regulatory period - WACCP (%)	5,22%

Source: Decision by HERA dtd 17 March 2017; Table 7.