Draft methodology

for determining and calculation of tariffs for the natural gas transmission services for entry and exit points based on long-term incentive based regulation

I. General provisions

1. This Methodology has been developed in accordance with the Law of Ukraine "On Natural Monopolies", "On Natural Gas Market", "On Prices and Pricing", "On Pipeline Transport", Decree of the President of Ukraine No.715 of 10 September 2014 "On Approval of the Resolution on the National Commission for the State Regulation of Energy and Utilities".

2. This Methodology shall apply to subjects of economic activity (hereinafter – a gas transmission enterprise, licensee, operator) carrying out transmission of natural gas via gas transmission system (hereinafter – natural gas transmission).

3. This Methodology shall establish the mechanism for setting tariffs for natural gas transmission from entry point (points) to exit point (points) a regulation which are of long-term duration for purposes of incentive-based regulation and ensuring:

receipt of the allowed revenue and return on the regulatory asset base;

observance of the regulatory asset base and the regulated income rate.

4. Terms used in this Methodology shall have the following meanings:

'depreciation' means systematic allocation of the value of the regulatory base of assets during their lifetime term for purposes of carrying out the activity of natural gas transmission;

'base year' means a year which precedes the first year of the regulatory period;

'industrial and technological uses and normative losses of natural gas' mean uses and losses of natural gas associated with the technological process of transmission of natural gas which is determined on the basis of the internal standards of the licensee;

'tariff setting' means approval (revision, update, adjustment) for licensee of tariffs, calculated according to this Methodology, according to a decision, taken at a session of the National Commission for State Regulation of Energy and Public Utilities (hereinafter –NCSREU);

'long-term regulatory parameters' mean parameters of regulation of the allowed revenue of the licensee which are of long-term duration and shall remain unchanged during the regulatory period;

'overall performance indicator' means a targeted industry task to reduce annual controlled operating costs taken as a percentage;

'the ten year network development plan' – investment plan, which defines, in accordance with Article 30 of Law of Ukraine "On the natural gas market", main objects of gas transmission system, the construction or reconstruction of which is justified in the next 10 years, confirmed investments as well as a list of new investments to be executed in the next 3 years.

'allowed revenue adjustment' means taking into account the outstanding difference between the actual revenue and the revised allowed revenue for the previous two regulatory periods for the calculation of allowed revenue for each year of the next regulatory period;

'allowed revenue' means the revenue calculated based on regulatory parameters which are of long-term duration in accordance with this Methodology and established to ensure natural gas transmission in every year of the regulatory period;

'operating costs' mean costs associated with the licensee's operational activity (natural gas transmission);

'controlled operating costs' mean operating costs the volume of which depends on decisions of the licensee's management;

'uncontrolled operating costs' mean operating costs on which the licensee has no direct influence (taxes, charges, mandatory payments the amount of which is established in accordance with the Ukrainian laws);

'tariffs revision' means tariff setting based on the calculated allowed revenue for the following regulatory period, taking into account long-term regulatory parameters;

'forecasted value (level)' means the value (of costs, volumes etc.) which are taken into account in calculating tariffs for the next year before its beginning;

'regulatory period' means the time period between two consequent tariff revisions and changes in regulatory parameters which are of long-term duration, which shall equal 5 years, except for the first regulatory period which will be determined by a separate decision of the NCSREU;

tariff for natural gas transmission for entry and exit points (hereinafter – entry tariff, exit tariff) means the monetarized fee paid to the user in planned period for volume of booked capacity expressed in 1000 m3 (energy units)/ per unit of time at points of entry into the gas transmission system and exit from the gas transmission system;

'exit point of the gas transmission system (exit point)' means a predetermined point of the gas transmission system, where the Operator of the gas transmission system delivers gas from the gas transmission system to another gas transmission or gas distribution network, gas storage, LNG terminals or consumer, connected to the gas transmission system or to an entity of natural gas production;

entry point of the gas transmission system (entry point)' means a predetermined point of the gas transmission system, where gas enters the gas transmission system from entities of natural gas production, gas storage, LNG terminals and from other gas transmission and gas distributing networks ;

'tariff update' – tariff setting for every year of the regulatory period, except for the first one, based on the calculated allowed revenue taking into account updated index of consumer prices, price index of producers of industrial products, index of increase of nominal average monthly salary, and the ten year network development plan;

'homogeneous group of points' – means a group of one of the following types of entry/exit points: virtual and/or physical entry interconnection points; virtual and/or physical exit interconnection points; domestic entry points (virtual and/or physical entry points from adjacent gas producers, virtual entry points from distribution networks); domestic exit points (virtual and/or physical exit points to distribution networks, physical exit points to direct consumers); virtual and/or physical entry points from underground gas storages or group of storages; virtual and/or physical exit points to underground gas storages or group of storages ; physical entry points from LNG facilities;

'cluster points' means a homogeneous group of points or group of entry points or of exit points located within the vicinity of each other and which are considered as, respectively, one entry point or one exit point for the purpose of tariff determination;

The other terms are used in the meaning assigned thereto by the Laws of Ukraine "On Natural Gas Market", "On Natural Monopolies".

5. The first regulatory period shall start on the date of introduction of incentive-based regulation by the NCSREU.

6. The calculation of the forecasted allowed revenue from natural gas transmission activities shall be carried out in the base year for each year of the regulatory period, taking into account the following:

1) regulatory parameters which are of long-term duration and shall remain unchanged during the regulatory period as set by the NCSREU:

    regulated income rate for the regulatory asset base determined on the date of the transition to the incentive-based regulation;

    regulated income rate for the part of the regulatory asset base created after the transition to the incentive-based regulation;

    overall performance indicator in respect of controlled operating costs;
    overall performance indicator in respect of industrial and technological uses and normative losses of natural gas

2) the adjustment parameter of allowed revenue for previous regulatory periods;

3) forecasted values of parameters for calculation of the allowed revenue according to the forecast of Ukraine's socio-economic development, the key macroindicators of economic and social development of Ukraine, and key directions of the budget policy:

index of consumer prices;

price index of producers of industrial products;

index of increase of nominal average monthly salary.

If the specified forecasted values are not available on the date of the tariff setting, calculations shall be made using the actual values for the last 12 months;

4) the ten year network development plan.

7. During the regulatory period the licensee has an obligation to apply to the NCSREU for tariff update in accordance with clauses 1 and 2 Part X of this Methodology. If there exists any ground set forth by this Methodology, the licensee applies to the NCSREU to adjust the allowed revenue from transportation activities in accordance with clauses 1 and 2 Part X of this Methodology. The grounds for such application to adjust the allowed revenue are as follows:

- changes in the forecasted volumes of booked capacities;

- changes in the ten-year network development plan;

- other factors that may cause a deviation of the allowed revenue by more than 5%.

II. Determination of the allowed revenue from natural gas transmission activities

1. The forecasted allowed revenue from activities of natural gas transmission is comprised of revenue from capacity charges and recovery of costs as listed in this Section II, and revenue from commodity charges, paid in monetary terms or in kind, levied for the purpose of covering the expenses of technological uses and normative losses of gas in relation to natural gas transmission as set out in Section VI.9 of this Methodology.

2. The forecasted allowed revenue from activities of natural gas transmission for the year t from capacity charges shall be calculated using the following formula:

$$НД_t^n = ОКВ_t^n + ОНВ_t^n + А_t^n + П_t^n + ПП_t^n + ВНД_t^n + ПДВ_t^n \quad \text{(thousand UAH) (1)}$$

where:

OKB_t^n means forecasted controlled operating costs associated with natural gas transmission for year t, the approximate list of which is specified in Annex 1 to this Methodology, thousand UAH;

OHB_t^n means forecasted uncontrolled operating costs associated with natural gas transmission in year t, the approximate list of which is specified in Annex 2 to this Methodology, thousand UAH;

A_t^n means forecasted depreciation in year t, thousand UAH;

Π_t^n means forecasted return on the regulatory asset base after paying taxes in year t, thousand UAH;

$\Pi\Pi_t^n$ means forecasted income tax in year t, thousand UAH;

ВНД$_t^n$ – allowed revenue adjustment parameter for previous regulatory periods, which takes into account difference between the actual revenue and revised allowed revenue for previous regulatory periods and is calculated in accordance with section III of this Methodology, thousand UAH;

ПДВ$_t^n$ means forecasted value added tax in year t, thousand UAH

3. Forecasted controlled operating costs associated with natural gas transmission shall be calculated before the start of the regulatory period for each year of the regulatory period (except for the first one) using the following formula:

$$OKB_t^n = ((OKB_{t-1}^n - \Phi O\Pi_{t-1}^n) \times \frac{I\!L\!B_t^n}{100} + \Phi O\Pi_t^n) \times (1 - \frac{\Pi E_{_3}}{100}) \text{ (thousand UAH), (2)}$$

where: OKB_{t-1}^n means forecasted controlled operating costs in year t-1, thousand UAH;

$\Phi O\Pi_{t-1}^n$ means the forecasted payroll fund in year t-1 determined in accordance with paragraph 3 of this section, thousand UAH;

$\Phi O\Pi_t^n$ means the forecasted payroll fund in year t determined in accordance with paragraph 3 of this section, thousand UAH;

$I\!L\!B_t^n$ means forecasted price index of industrial producers in year t, %;

$\Pi E_{_3}$ means the general performance indicator for controlled operating costs set by the NCSREU, %.

The base forecasted level of controlled operating costs for the first year of regulatory period (OKB'_1) shall be set at the level of the relevant expected costs in that year, which are defined taking into account expected costs in the base year and expected change in costs in the first year of regulatory period compared to costs in the base year.

Saving of controlled operating costs during the regulatory period shall be at the disposal of the licensee.

The level of controlled operating costs for the first year of second and subsequent regulatory periods shall be set taking into account the base forecasted level of controlled operating costs (OKB'_1) and a portion of savings of controlled operating costs in the previous regulatory period using the formula:

$$OKB_1 = OKB'_1 - \frac{\max(EOKB; 0)}{2} \text{ (thousand UAH) (3)}$$

where:

$EOKB$ – means savings of controlled operating costs in the previous regulatory period (except for the last year) calculated using the following formula

$$EOKB = \frac{1}{k-1} \times \sum_{t=1}^{k-1} (OKB_t^n - OKB_t^\phi) \text{ (thousand UAH) (4)}$$

where:

OKB_t^n means forecasted controlled operating costs in year t, thousand UAH;

OKB_t^ϕ means actual controlled operating costs in year t, thousand UAH;

k – means the number of years in the previous regulatory period.

4. Determination of the forecasted ФОП for year t shall be made using the following formula

$$ФОП_t^n = ФОП_{t-1}^n \times \frac{IЗП_t^n}{100} \text{ thousand UAH) (5)}$$

where: $ФОП_t^n$ means the forecasted payroll fund for year t, thousand UAH;

$ФОП_{t-1}^n$ means the forecasted payroll fund for year $t-1$, thousand UAH;

$IЗП_t^n$ means the forecasted index of increase in the average nominal monthly salary in Ukraine for year t, %.

5. Forecasted uncontrolled operating costs shall include only those uncontrolled operating costs which are directly associated with the licensed activity of natural gas transmission.

1) forecasted uncontrolled operating costs of natural gas transmission in year t (OHB_t^n) except for the first year of regulatory period shall be determined using the following formula:

$$OHB_t^n = \left(OHB_{t-1}^n - ФОП_{t-1}^n \times H^{ФОП}\right) \times \frac{IСЦ_t^n}{100} + ФОП_t^n \times H^{ФОП} \text{ (thousand UAH) (6)}$$

where $H^{\Phi O\Pi}$ means the actual level of the single social security contribution in the last reporting year preceding year t, relative units;

$I C Ц_t^n$ means the forecasted index of consumer prices in year t, %.

2) forecasted uncontrolled operating costs of natural gas transmission in the first year of each regulatory period (OHB_l) shall be determined based on expected costs in that year, taking into account factual costs in the last year if previous regulatory period and expected change in costs in the first year of regulatory period compared to costs in the base year .

3) $H^{\Phi O\Pi}$ shall be revised in the event of the legislative change in the single social security contribution in accordance with the procedure, determined by section IX of this methodology.

Upon the increase (decrease) in uncontrolled operating costs, the base level of uncontrolled operating costs shall be revised in accordance with the procedure, determined by section IX of this methodology.

The base level of uncontrolled operating costs shall be revised following changes in current legislation of Ukraine in tax rates, charges, obligatory payments.

6. Depreciation in year t of the regulatory period shall be determined in accordance with sections IV and V of this Methodology, separately for assets created on the date of transition to incentive-based regulation, assets created after the transition to incentive-based regulation, assets received

by licensees on a free-of-charge basis, and assets created at the expense of the fee for connection of gas consumption (gas supply) objects of users to gas networks of a gas transmission enterprise, using by the following formula

$$A_t^n = A_t^{cm} + A_t^{\text{нов}} + A_t^{\text{бо}} + A_t^{\text{пр}} \quad \text{(thousand UAH) (8)}$$

where

A_t^{cm} means annual depreciation of assets established on the date of transition to incentive-based regulation, thousand UAH;

$A_t^{\text{нов}}$ means annual depreciation in year t of assets created after the transition to incentive-based regulation pursuant to the ten year network development plan, thousand UAH;

$A_t^{\text{бо}}$ means annual depreciation of assets received by the licensee on a free-of-charge basis after transition to incentive-based regulation, except for assets (administrative buildings, vehicles, furniture, equipment, software and other assets) in accordance with section IV of the present Methodology, thousand UAH;

A_t^{np} means annual depreciation of assets created at the expense of the fee for connection of gas consumption (gas supply) objects of users to gas networks of a gas transmission enterprise, thousand UAH.

1) while determining the amount of depreciation ($A_t^{\textit{нов}}$) in year t, the relevant components shall take into account the forecasted amount of depreciation of assets created in year t as part of the ten year network development plan, including at the expense of the fee for connection of gas consumption (gas supply) objects of users to gas networks of a gas transmission enterprise, or received by the licensees on a free-of-charge basis.

2) forecasted annual depreciation of assets received by the license on a free-of-charge basis after the transition to incentive-based regulation or assets created at the expense of the fee for connection of gas consumption ($A_t^{\text{бо}}$ and $A_t^{\text{пр}}$) in year t shall be calculated as 4/3 of the actual depreciation for three quarters of year $t-1$.

The forecasted depreciation of these assets in the first year of the first regulatory period shall be equal to 0.

The indicated depreciation shall be accrued as of the quarter following the one in which the relevant asset is commissioned.

7. Return on the regulatory asset base ($\textit{П}_t$) shall be calculated as follows:

For the first regulatory period the return in year t shall be calculated using the following formula:

$$\textit{П}_t = \frac{(\textit{РБА}_{nt}^{ст} + \textit{РБА}_{кt}^{ст})}{2} \times \textit{РНД}^0 + \frac{(\textit{РБА}_{nt}^{\textit{нов}} + \textit{РБА}_{кt}^{\textit{нов}})}{2} \times \textit{РНД}^{\textit{нов}} \quad \text{(thousand UAH) (9)}$$

where

$\textit{РБА}_{n\text{t}}^{ст}$ means the regulatory asset base established before the transition to incentive-based regulation as of the beginning of year t, thousand UAH;

$\textit{РБА}_{kt}^{ст}$ means the regulatory asset base established before the transition to incentive-based regulation as of the end of year t, thousand UAH.

$\textit{РНД}^0$ means the regulated income rate on the regulatory asset base established on the date of transition to incentive-based regulation as set by the NCSREU, relative units;

$\textit{РБА}_{nt}^{\textit{нов}}$ means the regulatory asset base established after the transition to incentive-base regulation as of the beginning of year t, thousand UAH;

$РБА_{кт}^{нов}$ means the regulatory asset base established after the transition to incentive-based regulation as of the end of year t, thousand UAH;

$РНД^{нов}$ means the regulated income rate on the regulatory asset base established after transition to incentive-based regulation as set by the NCSREU, relative units;

8. At the beginning of the first regulatory period, the regulatory asset base created before transition to incentive-based regulation shall equal the regulatory asset base established on the date of transition to incentive-based regulation $(РБА_{nt}^{cm} = РБА^0)$.

9. The regulatory asset base created on the date of transition to incentive-based regulation ($РБА^0$), as well as the regulatory asset base created after the transition to incentive-based regulation shall be determined in accordance with section V of the present Methodology.

10. The regulatory asset base created on the date of transition to incentive-based regulation may be subject to a one-off revision while adjusting the allowed revenue by the value of assets which were created on the date of transition to incentive-based regulation pursuant to the ten year network development plan in the year preceding the year of introduction of the incentive-based regulation and at the data of transition to incentive-based regulation information was not available as to their actual value.

As of the beginning of the first year of the first regulatory period, the regulatory asset base created following transition to incentive-based regulation ($РБА_{nt}^{нов}$), shall equal 0.

11. The regulatory asset base created after transition to incentive-based regulation as of the beginning of each subsequent year of the regulatory period shall be set at the level of the regulatory asset base established after transition to incentive-based regulation as of the end of the previous year

$(РБА_{nt}^{нов} = РБА_{кт-1}^{нов})$.

12. $РБА_{кт}^{нов}$ and $РБА_{кт}^{cm}$ shall be determined using the following formula:

$$РБА_{кт}^{нов} = РБА_{nt}^{нов} - BA_t^{нов} - A_t^{нов} + I_t^{нов} \text{ (thousand UAH) (10)}$$

where: $I_t^{нов}$ means the initial value of assets created in the year t under the ten year network development plan, thousand UAH;

$BA_t^{нов}$ means the value of assets which have been written-off during the year t and created after the transition to incentive-based regulation pursuant to the ten year network development plan, thousand UAH;

$$РБА_{кt}^{cm} = РБА_{nt}^{cm} - A_t^{cm} \text{ (thousand UAH). (11)}$$

13. Income tax in year t shall be calculated using the following formula

$$ПП_t = П_t \times \frac{НПП_t}{1 - НПП_t} \text{ (thousand UAH) (12)}$$

where: $НПП_t$ means the income tax rate in year t, set according to the Tax Code of Ukraine, relative units.

14. Value added tax in year t shall be calculated using the following formula

$$ПДВ_t^n = (ОКВ_t^n + ОНВ_t^n + А_t^n + П_t^n + ПП_t^n + ВНД_t^n) \times (1 + СПДВ_t^n) \text{ (thousand UAH),}$$

where: $СПДВ_t^n$ means the value added tax rate in year t, set according to the Tax Code of Ukraine, relative units.

15. Forecasted depreciation, return on the regulatory asset base, and income tax shall be calculated in accordance with paragraphs 7 - 14 of the present section taking into account forecasted values of depreciation, the amount of investments, the index of consumer prices etc.

At the same time:

forecasted depreciation of assets of the regulatory base of assets acquired by licensees on a free-of-charge basis after transition to incentive-based regulation in year t shall be calculated as regards assets acquired before year $t-1$ inclusive;

forecasted depreciation of assets of the regulatory base of assets created at the expense of the fee for connection of gas consumption (gas supply) objects of users to gas networks of a gas transmission enterprise in year t shall be calculated as regards assets created prior to year $t-1$ inclusive.

III. Parameter of adjustment of allowed revenue from natural gas transmission based on capacity charges

1. Parameter of adjustment of the allowed revenue from natural gas transmission (ВНД) based on capacity charges shall be calculated in the base year and take into account difference between the actual revenue and the revised allowed revenue for previous regulatory periods. Due to the fact that while calculation of the adjustment parameter the last year of the previous regulatory period (base year) is still ongoing, expected deviation from the forecasted allowed revenue is assessed and included to the adjustment parameter. Correction of this expected deviation can be made during the next calculation of adjustment parameter in the last year of next regulatory period.

2. Allowed revenue adjustment parameter for year t of regulatory period ($ВНД_t^n$) shall be calculated by the formula

$$\text{ВНД}_t^n = \Delta\text{ЧПВ}^{n-2} \times (1 + \text{ОС}^{n-2})^{r^{n-2}} + \Delta\text{ЧПВ}^{n-1} \times (1 + \text{ОС}^{n-1})^{r^{n-1}}, \ r^{n-2} = K+t, \ r^{n-1} = t,$$
(thousand UAH)

(17) where:

n – regulatory period, for which the allowed revenue is calculated

K – number of years in the regulatory period n-1;

$\Delta\text{ЧПВ}^{n-2}$ – part of the difference between net present value of the revised allowed revenue and net present value of the actual revenue for the regulatory period n-2, thousand UAH;

$\Delta\text{ЧПВ}^{n-1}$ – part of the difference between net present value of the revised allowed revenue and net present value of the actual revenue for the regulatory period n-1, thousand UAH;

ОС^{n-2} means the average daily reference rate published by the National Bank of Ukraine, which was effective in the regulatory period n-2, in percentage points (%);

ОС^{n-1} means the average daily reference rate published by the National Bank of Ukraine, which was effective in the regulatory period n-1, in percentage points (%);

3. The part of the difference between net present value of the revised allowed revenue and net present value of the actual revenue ($\Delta\text{ЧПВ}^{n-2}$) for the regulatory period n-2 shall be calculated by the formula

$$\Delta\text{ЧПВ}^{n-2} = \frac{\text{ЧПВ}^{n-2}_{\text{НД}^y} - \text{ЧПВ}^{n-2}_{\text{НД}^\phi}}{K+L} \quad \text{(thousand UAH) (18)}$$

$\text{ЧПВ}^{n-2}_{\text{НД}^y}$ – the net present value of the revised allowed revenue for the regulatory period n-2, thousand UAH;

$\text{ЧПВ}^{n-2}_{\text{НД}^\phi}$ – the net present value of the actual revenue for the regulatory period n-2, thousand UAH;

K – number of years in the regulatory period n-1;

L – number of years in the regulatory period n.

4. The net present value of the revised allowed revenue ($\text{ЧПВ}^{n-2}_{\text{НД}^y}$) for the regulatory period n-2 shall be calculated by the formula

$$\text{ЧПВ}^{n-2}_{\text{НД}^y} = \sum_{t=1}^{k} \frac{\text{НД}_t^{y,n-2}}{(1+\text{ОС}^{n-2})^{t-k}} \ \text{(thousand UAH), (19)}$$

where:

$НД_t^{y,n-2}$ - the revised allowed revenue from natural gas transportation for year t of the regulatory period $n-2$, thousand UAH;

k – number of years in the regulatory period $n-2$;

5. The net present value of the actual revenue ($ЧПВ_{НД^ф}^{n-2}$) for the regulatory period $n-2$ determined under formula (19) with the actual revenue for the regulatory period n-2 in the numerator, thousand UAH.

6. The part of the difference between net present value of the revised allowed revenue and net present value of the actual revenue ($\Delta ЧПВ^{n-1}$) for the regulatory period $n-1$ is determined by analogy with formula (18), thousand UAH

7. The net present value of the revised allowed revenue ($ЧПВ_{НД^y}^{n-1}$) for the regulatory period $n-1$ shall be calculated by the formula

$$ЧПВ_{НД^y}^{n-1} = \sum_{t=1}^{K} \frac{НД_t^{y,n-1}}{(1+ОС^{n-1})^{t-K}} \text{ (thousand UAH), (20)}$$

where:

$НД_t^{y,n-1}$ - the revised allowed revenue from natural gas transportation for year t of the regulatory period $n-1$, thousand UAH;

K – number of years in the regulatory period $n-1$;

8. The net present value of the actual revenue ($ЧПВ_{НД^ф}^{n-1}$) for the regulatory period $n-1$ is determined by analogy with formula (20) with the actual revenue for the regulatory period n-1 in the numerator, thousand UAH.

9. When calculating allowed revenue adjustment parameter for the second regulatory period there is no component ($\Delta ЧПВ^{n-2}$).

10. The revised allowed revenue from natural gas transmission in year t of any of the two previous regulatory periods ($n-2$ and $n-1$) shall be determined using the following formula:

$$НД_t^y = ОКВ_t^y + ОНВ_t^y + А_t^ф + П_t^y + ПП_t^y + ВНД_t^ф + ПДВ_t^y + КО_t + КПР_t + КП_t \text{ (thousand UAH)}, (21)$$

where:

$ОКВ_t^y$ means adjusted controlled operating costs of natural gas transmission for year t determined using the following formula

$$ОКВ_t^y = ((ОКВ_{t-1}^y - ФОП_{t-1}^y) \times \frac{ІЦФ_t^ф}{100} + ФОП_t^y) \times (1 - \frac{ПЕ_з}{100}) \text{ (thousand UAH) (23)}$$

where ОКВ_{t-1}^{y} means forecasted controlled operating costs adjusted for years of the second and subsequent regulatory periods taking into account the base level of controlled operating costs (for the first regulatory period $\text{ОКВ}_{t-1}^{y} = \text{ОКВ}_0$) calculated using formula (3) with specification of savings $EOKB^{y}$ to be determined using the following formula

$$EOKB^{y} = \frac{1}{k} \times \sum_{t=1}^{k} (OKB_{t}^{n} - OKB_{t}^{\phi}) \text{ (thousand UAH) (24)}$$

where: ФОП_t^y means the adjusted payroll fund in year t o, determined using the following formula

$$\varPhi O\varPi_{t}^{y} = \varPhi O\varPi_{t-1}^{y} \times \frac{I3\varPi_{t}^{\varPhi}}{100} \text{ (thousand UAH) (25)}$$

where $I3\varPi_{t}^{\varPhi}$ means the actual index of increase in nominal average monthly salary in Ukraine in year t, %;

$\varPhi O\varPi_{t-1}^{y}$ means the adjusted payroll fund in year t-1 of the , determined under formula (25), thousand UAH;

ІЦВ_t^{ϕ} means the actual price index of industrial producers in year t-1, %;

ОНВ_t^{y} means adjusted uncontrolled operating costs of natural gas transmission in year t, determined using the following formula

$$\text{ОНВ}_t^{y} = \text{ОНВ}_t^{\phi} - \text{ФОП}_t^{\phi} \times \text{Н}_t^{\text{ФОП}_\phi} + \text{ФОП}_t^{y} \times \text{Н}_t^{\text{ФОП}_\phi} \text{ (thousand UAH) (26)}$$

where ОНВ_t^{ϕ} means the actual level of uncontrolled operating costs in year t, thousand UAH;

ФОП_t^{ϕ} means the actual payroll fund in year t , thousand UAH;

$\text{Н}_t^{\text{ФОП}_\phi}$ means the actual level of the single social security contribution in year t , relative units;

А_t^{ϕ} means actual depreciation in year t , calculated in accordance with para 7 of section II of the present Methodology taking into account the actual data on assets created prior to and after the transition to incentive-based regulation, assets acquired by licensees on a free-of-charge basis as well as assets created at the expense of the fee for connection of gas consumption (gas supply) objects of users to gas networks of a gas transmission enterprise, thousand UAH;

П_t^{y} means adjusted profits in year t calculated in accordance with para 8 of section II of this Methodology taking into account actual data on assets created prior to and after the transition to incentive-based regulation, value of assets upon their elimination from the regulatory asset base established after

transition to incentive-based regulation, amounts of investments in year t in accordance with the ten year network development plan, thousand UAH;

ПП_t^y means the adjusted income tax in year t, calculated in accordance with paragraph 13 of section II of the present Methodology, thousand UAH;

ВНД_t^{ϕ} – actual allowed revenue adjustment parameter in year t, calculated in accordance with paragraph 2 of section III of the present Methodology, thousand UAH;

ПДВ_t^y means the adjusted value added tax in year t, calculated in accordance with paragraph 14 of section II of the present Methodology, thousand UAH

КО_t means the adjustment of the allowed revenue in connection with the change in the booked capacities in year of regulation t, thousand UAH, determined using the following formula

$$\text{КО}_t = (\text{НПП}_t - 1) \times \sum_{i=1}^{m} \sum_p (T_{p,t(i)}^n \times D_{p,i} \times \Delta N_{p,t(i)}^{\phi n}) \text{ (thousand UAH) (27)}$$

Where p covers all types of booked capacities (annual, quarterly, monthly and daily)

m means the number of tariff changes by types of booked capacities p during year of regulation t ;

i means a period in year t during which tariffs remained unchanged;

Dp,i is the duration of ensuring capacity by types of booked capacities p for period i

$T_{p,t(i)}^n$ means the tariff by types of booked capacities p which was effective throughout period i in year t , UAH per 1000m3;

$\Delta N_{p,t(i)}^{\phi n}$ means the difference between actual and forecasted, forecasted during the tariff calculation, volume of booked capacities for natural gas transmission by types of booked capacities p in period i in year t , 1000 m3/month determined using the following formula

$$\Delta N_{p,t(i)}^{\phi n} = N_{p,t(i)}^{\phi n} - N_{p,t(i)}^{nn} \text{(1000 m3/day) (28)}$$

where

$N_{p,t(i)}^{\phi n}$ means the actual volume of booked capacities by types of booked capacities p in period i in year t , 1000 m3/day;

$N_{p,t(i)}^{nn}$ means the forecasted volume of booked capacities forecasted during the tariff calculation by types of booked capacities p in period i in year t , 1000 m3/month determined using the following formula

$$N_{t.(i)}^{nn} = N_{p,t}^{nn} \times \frac{N_{p,t(i)}^{\phi n}}{N_{p,t}^{\phi n}} \text{(1000 m3/day) (29)}$$

where

$N_{p,t}^{nn}$ means the annual forecasted booked capacities by types of product capacities p in period i expected during the tariff calculation in year t, 1000 m3/month;

$N_{p,t}^{\phi n}$ means the actual volume of booked capacities by types of booked capacities p in period I in year t, 1000 m3/month;

$НПП_t$ means the income tax rate in year t, in relative units;

$КПР_t$ means the adjustment of the allowed revenue in accordance with obligations related to costs associated with connection in year t determined using the following formula

$$КПР_t = (ІПР_t - ППР_t) \times (1 + РНД^{нов}) \text{ (thousand UAH) (30)}$$

Where $ІПР_t$ means the amount of actual investments in year t associated with connection of gas consumption (supply) objects to gas networks of a gas transmission enterprise under the ten year network development plan, thousand UAH without VAT;

$ППР_t$ means the amount of fee for connection of gas consumption (supply) objects to gas networks of a gas transmission enterprise collected in year t, thousand UAH without VAT;

$КП_t$ means the adjustment of the allowed revenue in connection with identification and confirmation in the course of audits of violations as regards instances of infringements during the formation of the list of assets to be submitted for an independent valuation and determination of the regulatory asset base, the failure to execute the ten year network development plan, identification in the course of scheduled or unscheduled audit of other violations of licensing conditions for natural gas transmission as well as errors in calculations of the allowed revenue etc.

11. The calculation of the parameter of adjustment of the allowed revenue from natural gas transmission activities based on capacity charges in the period up to and including 2019 should take into account the actual revenues from services of transit of natural gas through the territory of Ukraine by transboundary pipelines, received under the gas transit contract with Gazprom by the vertically-integrated group of companies, which includes the licensee as a member of the group.

IV. Determination of the regulatory asset base established on the date of transition to incentive-based regulation

1. The licensee's regulatory asset base established on the date of transition to incentive-based regulation ($РБА$) shall be determined based on the opinion on the value of assets forming an integral part of the asset valuation report conducted in accordance with the Methodology of valuation of assets of natural monopolies, of subjects of economic activity on adjacent markets in combined power and heat generation as approved by the order of the State Property Fund of Ukraine No.293 of 12 March 2013 and registered with the Ministry of Justice of Ukraine under No.522/23054 on 29 March 2013 (hereinafter – the

Valuation Methodology) subject to receipt of a positive opinion of a reviewer who shall be employed with the state authority in charge of regulation of the valuation activity as regards compliance of the asset valuation report with the requirements of the Asset Valuation Methodology and national valuation standards determined using the following formula:

$$РБА = РБА_{iв} \times К_{дол} \text{ (thousand UAH) (31)}$$

where РБА means the regulatory asset base determined on the basis of revaluated assets according to the results of independent valuation made in compliance with the Valuation Methodology, taking into account clause 3 hereof determined using the following formula:

$РБА_{iв}$ means the depreciated asset replacement value based on results of the cost approach as determined per the results of an independent valuation as of 30 June 2014, thousand UAH;

$К_{дол}$ means the exchange rate index which shall reflect the ratio between the official UAH-USD exchange rate set by the National Bank of Ukraine as of the date of tariffs setting and official UAH-USD exchange rate set by the National Bank of Ukraine as of 30 June 2014 determined using the following formula:

$$К_{дол} = \frac{К_{дол}^{n}}{К_{дол}^{2014}} \text{ (32)}$$

Where n means the date of the tariff setting;

$K_{дол}^{n}$ means the official UAH-USD exchange rate set by the National Bank of Ukraine as of the date of the tariff setting (n);

$K_{дол}^{2014}$ means the official UAH-USD exchange rate set by the National Bank of Ukraine as of 30 June 2014;

2. If the transition to incentive-based regulation has taken place later than one quarter after the date of valuation of the licensee's assets, the regulatory asset base established on the date of transition to incentive-based regulation ($РБА^0$) shall be determined taking into account the value of assets created under the ten year network development plan and accepted to the balance sheet, asset write-off and depreciation using the following formula:

$$РБА^0 = РБА + I - BA - \left(A_0^{ст} + A^{нов} \right) \text{ (thousand UAH) (33)}$$

where: I means the initial value of assets created during the period from the date of asset valuation to the date of transition to incentive-based regulation under the ten year network development plan, thousand UAH;

BA - the assets value, calculated according to the Asset Valuation Methodology regarding assets, which were written-off during the period since the asset valuation date to date of transition to incentive-based regulation, thousand UAH;

A_0^{cm} means annual depreciation of assets established on the date of transition to incentive-based regulation during the period from the date of asset valuation to the date of transition to incentive-based regulation calculated in accordance with para 7 of this section, thousand UAH;

$A^{нов}$ means depreciation of assets created during the period from the date of asset valuation to the date of transition to incentive-based regulation calculated in accordance with para 4 and 5 of section V of this Methodology, thousand UAH.

3. The regulatory asset base established on the date of transition to incentive-based regulation shall include assets that are directly used for carrying out the licensed activity of natural gas transmission.

Assets used also in activities other than natural gas transmission (administrative buildings, software, vehicles, telecommunication systems, office equipment, IT hardware etc.) shall be deemed as general operating assets. General operating assets shall be allocated proportionately to

the number of staff engaged in the relevant activity. The principle of allocation of general operating assets used in natural gas transmission shall be the staff engaged in natural gas transmission.

4. The regulatory asset base established on the date of transition to incentive-based regulation shall not include:

· objects of social and cultural significance;

· objects of other fixed tangible assets not used for gas transmission services;

· objects of unfinished capital investments;

· long-term financial investments;

· long-term biological assets;

· long-term receivables;

· deferred tax assets;

· other fixed assets;

· expenses of future periods.

5. The regulatory asset base shall not include:

Assets, which exceed existing limitations – administrative buildings with an area per employee greater than 15 m2.

Assets on which limitations have been placed – cars, except specialized, whose initial value exceeds UAH 200 thousands per unit and cars, except specialized, whose quantity exceeds 3 for 100 employees.

6. Objects of unfinished capital investments the fee for execution of which has been paid under the ten year network development plan in the year preceding the one of introduction of incentive-based regulation but which fee has not been included in the regulatory asset base established on the date of transition to incentive-based regulation may be included therein in the year following the one of their commissioning.

Objects of unfinished capital investments the fee for execution of which has been paid under the ten year network development plan in years preceding the one of introduction of incentive-based regulation may be included in the regulatory asset base established on the date of transition to incentive-based regulation in the year following the one of their commissioning, taking into account the opinion on the value of assets forming an integral part of the asset valuation report prepared in accordance with the Valuation Methodology.

7. Annual depreciation of assets included in the regulatory asset base established on the date of transition to incentive-based regulation ($A^{ст}$) shall be determined using the following formula

$$A^{cm} = \frac{РБА}{C} \ \text{(thousand UAH) (34)}$$

where: C means the economic lifetime term of assets included in the regulatory asset base established on the date of transition to incentive-based regulation, years.

The operator of the Gas Transmission System of Ukraine, taking into account the results of an independent valuation and based on long-term plans for booked capacities shall annually provide the NCSREU with the calculations of depreciation of assets included in the regulatory asset base

established on the date of transition to incentive-based regulation. In case the adjustment of terms of useful life of such assets is needed such adjustment and calculation of depreciation must be approved by the Operator along with the owner of such assets and by the central executive body that ensures the formation and implementation of state policy in the oil and gas sector.

8 Depreciation of assets, included in the regulatory asset base at the time of transition to incentive-based regulation, is calculated every quarter using the linear method.

9. After the transition to incentive-based regulation, if assets included in the regulatory asset base established on the date of transition to incentive-based regulation are alienated, the regulated income rate on such a regulatory base and depreciation in the amount of the value of such assets as of the date of their alienation shall not be accrued.

V. Determination of the regulatory asset base established after transition to incentive-based regulation

1. The regulatory asset base established after transition to incentive-based regulation shall include assets created (purchased) under the ten year network development plan.

2. Objects of unfinished capital investments the fee for execution of which has been paid under the ten year network development plan in years following the years after introduction of incentive-based regulation may be included in the regulatory asset base established after the date of transition to incentive-based regulation in the year following the one of their commissioning.

3. The regulatory asset base established after the transition to incentive-based regulation shall not include assets created at the expense of the fee for connection of objects of users to gas networks as well as assets to which limitations under para 4 of Section IV of this Methodology.

4. Depreciation of assets included in the regulatory asset base established after the transition to incentive-based regulation shall be accrued on a quarterly basis using the straight-line method taking into account their lifetime terms in accordance with the Annex 3 to this Methodology.

5. Accrual of depreciation of assets included in the regulatory asset base established after the transition to incentive-based regulation shall be suspended for the duration of their decommissioning that exceeds three months (for purposes of their reconstruction, modernization, enhancement, retrofit, conservation, etc.) based on documents certifying the decommissioning of such fixed assets. Accrual of depreciation shall be resumed as of the month following the one where the assets were commissioned.

VI. Formation of the tariff for transportation of natural gas for entry and exit points to/from gas transportation system

1. The tariffs for transportation of natural gas for entry points to gas transportation system are determined on a capacity basis.

The tariffs for transportation of natural gas for exit points from gas transportation system are composed of two parts: the first is determined on a capacity basis; the second is a commodity charge determined taking into account the actual volume of transported gas and covering natural gas volumes expenses for technological use of gas and normative losses of the gas transportation entity (determined as a percentage of the volume of transported gas at exit points), which may be paid by the network user in monetary form, or in kind by transferring natural gas volumes to the gas transmission enterprise.

2. The tariff for transportation of natural gas at entry point g (or at each entry point within a cluster i of entry points) and the tariff at exit point g (or at each exit point within a cluster i of exit points) on a capacity-based charge, without consideration for gas for technological uses and normative losses for exit point, are calculated according to the following formulas

$$T_{\text{вх}_{gi}} = \frac{k^{\text{OB}} \times W_{\text{вх}_{gi}} \times \sum_{t=1}^{m}(\text{НД}_t^n) \times 1000}{\sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^n} \qquad \text{(UAH per 1000 m}^3 \text{ per day), (35)}$$

$$T_{\text{вих}_{gi}} = \frac{(1\text{-}k^{\text{OB}}) \times W_{\text{вих}_{gi}} \times \sum_{t=1}^{m}(\text{НД}_t^n) \times 1000}{\sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^n} \quad \text{(UAH per 1000 m}^3 \text{ per day), (36)}$$

Where:

n – regulatory period, for which the allowed revenue is calculated;

m – number of years in the regulatory period n;

t – year in regulatory period;

$T_{\text{вх}_{gi}}$ is the tariff at entry point g (or at each entry point within a cluster i of entry points), UAH per 1000 m^3 per day;

$T_{\text{вих}_{gi}}$ is the tariff at exit point g (or at each exit point within a cluster i of exit points), UAH per 1000 m^3 per day;

$\sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^n$ is the sum of forecasted contracted capacity at an entry point g or at a cluster i of entry points in regulatory period n, 1000 m³;

$\sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^n$ is the sum of forecasted contracted capacity at an exit point g or at a cluster i of exit points in regulatory period n, 1000 m³;

$\sum_{t=1}^{m} \text{НД}_t^n$ is the sum of forecasted allowed revenue from transmission of natural gas on the capacity-based charge in regulatory period n, (thousand UAH;);

$W_{\text{вх}_{gi}}$ is the weight of entry point g (or a cluster i of entry points), relative units;

$W_{\text{вих}_{gi}}$ is the weight of exit point g (or a cluster i of exit points), relative units;

k^{OB} means the index of allocation of forecasted allowed revenue of the transmission enterprise for purposes of determining the tariff for transportation of natural gas at entry point to the gas transmission system of Ukraine, relative units;
For the purposes of determining the tariff for natural gas transmission for points of entry of the gas transmission system in the first regulatory period k$^{\text{OB}}$ shall amount to 0.3. In all following regulatory periods k$^{\text{OB}}$ shall amount to 0.5.

3. The weight of entry point g (or a cluster i of entry points)($W_{\text{вх}_{gi}}$) and the weight of exit point g (or a cluster i of exit points) ($W_{\text{вих}_{gi}}$) are calculated according to the following formulas

$$W_{\text{вх}_{gi}} = \frac{\text{СД}_{\text{вх}_{gi}} \times \sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^{n}}{\sum(\text{СД}_{\text{вх}_{gi}} \times \sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^{n})} \text{ (relative units), (37)}$$

$$W_{\text{вих}_{gi}} = \frac{\text{СД}_{\text{вих}_{gi}} \times \sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n}}{\sum(\text{СД}_{\text{вих}_{gi}} \times \sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n})} \text{ (relative units), (38)}$$

where:

$\text{СД}_{\text{вх}_{gi}}$ is the weighted average distance for an entry point g or a cluster i of entry points, km, which is calculated according to the following formula

$$\text{СД}_{\text{вх}_{gi}} = \frac{\sum(\text{Д}_{gi} \times \sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n})}{\sum \sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n}} \text{ (km), (39)}$$

where:

Д_{gi} is the distance between a given entry point or a cluster of entry points and a given exit point or a cluster of exit points, km

$\text{СД}_{\text{вих}_{gi}}$ is the weighted average distance for an exit point g or a cluster i of exit points, km, which is calculated according to the following formula

$$\text{СД}_{\text{вих}_{gi}} = \frac{\sum(\text{Д}_{gi} \times \sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^{n})}{\sum \sum_{t=1}^{m} N_{t,\text{вх}_{gi}}^{n}} \text{ (km), (40)}$$

Д_{gi} is the distance between a given entry point or a cluster of entry points and a given exit point or a cluster of exit points, km.

4. The tariff for transportation of natural gas at cross-border entry points, which are situated in the Eastern region of Ukraine (Sumy, Kharkiv, Luhansk, and Donetsk regions) ($T_{\text{вх}}^{\text{сх}}$) on a capacity-based charge shall be set in equal amount and determined using the following formula

$$T_{\text{вх}}^{\text{сх}} = \frac{\sum(T_{\text{вх}_{gi}}^{\text{сх}} \times \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{сх}})}{\sum \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{сх}}} \text{ (UAH per 1000 m}^3 \text{ per day), (41)}$$

Where:

$T_{\text{вх}_{gi}}^{\text{сх}}$ is the tariff at cross-border entry point g (or at each cross-border entry point within a cluster i of entry points), which are situated at the Eastern region of Ukraine (Sumy, Kharkiv, Luhansk, and Donetsk regions), UAH per 1000 m³ per day;

$\sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{сх}}$ is the sum of forecasted contracted capacity at cross-border entry point g (or at a cluster i of cross-border entry points), which are situated in the Eastern region of Ukraine (Sumy, Kharkiv, Luhansk, and Donetsk regions), in regulatory period n, 1000 m³;

5. The tariff for transportation of natural gas at cross-border entry points, except those specified in paragraph 4 of this section, ($T_{\text{вх}}^{\text{зах}}$) on a capacity-based charge shall be set in equal amount and determined using the following formula

$$T_{\text{вх}}^{\text{зах}} = \frac{\sum(T_{\text{вх}_{gi}}^{\text{зах}} \times \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{зах}})}{\sum \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{зах}}} \quad \text{(UAH per 1000 m}^3 \text{ per day), (42)}$$

Where:

$T_{\text{вх}_{gi}}^{\text{зах}}$ is the tariff at cross-border entry point g (or at each entry point within a cluster i of cross-border entry points), except those entry points which are specified in paragraph 4 of this section, UAH per 1000 m³ per day;

$\sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{зах}}$ is the sum of forecasted contracted capacity at cross-border entry point g (or at a cluster i of cross-border entry points), except those entry points which are specified in paragraph 4 of this section, in regulatory period n, 1000 m³.

6. The tariff for transportation of natural gas at all entry points on Ukrainian territory ($T_{\text{вх}}^{\text{укр}}$) on a capacity-based charge shall be set in equal amount and determined using the following formula

$$T_{\text{вх}}^{\text{укр}} = \frac{\sum(T_{\text{вх}_{gi}}^{\text{укр}} \times \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{укр}})}{\sum \sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{укр}}} \quad \text{(UAH per 1000 m}^3 \text{ per day), (43)}$$

Where:

$T_{\text{вх}_{gi}}^{\text{укр}}$ is the tariff at entry point g (or at each entry point within a cluster i of entry points) on Ukrainian territory, UAH per 1000 m³ per day;

$\sum_{t=1}^{m} N_{\text{вх}_{gi}}^{\text{укр}}$ is sum of forecasted contracted capacity at entry point g (or at a cluster i of entry points), on Ukrainian territory in regulatory period n, 1000 m³.

7. The tariff for transportation of natural gas at all exit points on Ukrainian territory ($T_{\text{вих}}^{\text{укр}}$) on a capacity-based charge shall be set in equal amount and determined using the following formula

$$T_{\text{вих}}^{\text{Укр}} = \frac{\sum(T_{\text{вих}_{gi}}^{\text{Укр}} \times \sum_{t=1}^{m} N_{\text{вих}_{gi}}^{\text{Укр}})}{\sum \sum_{t=1}^{m} N_{\text{вих}_{gi}}^{\text{Укр}}} \quad \text{(UAH per 1000 m}^3 \text{ per day), (43)}$$

Where:

$T_{\text{вих}_{gi}}^{\text{Укр}}$ is the tariff at exit point g (or at each exit point within a cluster *i* of exit points) on Ukrainian territory, UAH per 1000 m³ per day;

$\sum_{t=1}^{m} N_{\text{вих}_{gi}}^{\text{Укр}}$ is the sum of forecasted contracted capacity at exit point *g* (or at a cluster *i* of exit points), on Ukrainian territory in regulatory period *n*, 1000 m³.

8. The tariff for transportation of natural gas at cross-border exit points based on a capacity charge shall be set separately for each cross-border exit point *g* or for a cluster *i* of cross-border exit points in accordance with formula (36).

---

9. Technological uses and normative losses in percentage points to the actual volume of transported gas at exit points (P_{mp_g}) are calculated according to the following formula

$$P_{mp}^{n} = \frac{\sum_{t=1}^{m} V_{\text{ВТВ}_t}^{n} \times \left(1 - \frac{\text{ПЕ}_3^{\text{ВТВ}}}{100}\right) + f \times (P_{mp}^{n-1} \times \sum_{t=1}^{K} N_{t,\text{вих}_{gi}}^{\phi,n-1} - \sum_{t=1}^{K} V_{\text{ВТВ}_t}^{\phi,n-1})}{\sum \sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n}} \times 100 \text{ (\%), (44)}$$

Where:

m – number of years in the regulatory period *n*;

K – number of years in the regulatory period *n-1*;

t – year in regulatory period;

$\sum_{t=1}^{m} V_{\text{ВТВ}_t}^{n}$ is the forecasted volume of natural gas for technological uses and normative losses of natural gas which is calculated taking into account the total forecasted transportation volumes in year t of regulatory period *n* and transportation regimes, but cannot exceed 3% from the total forecasted transportation volumes.

$\text{ПЕ}_3^{\text{ВТВ}}$ is the general effectiveness indicator for the volumes of natural gas for technological uses and normative losses determined by NCSREU, %. For the first regulatory period, the effectiveness indicator for the volumes of natural gas for technological uses and normative losses is equal to 0.

f – percentage of savings of the volumes of natural gas for technological uses and normative losses in regulatory period *n-1*, that should be in disposal of the licensee, %.

P_{mp}^{n-1} - the percentage of expenses for technological uses and normative losses to actual volume of transported gas at exit points in regulatory period *n-1*, in percentage points;

$\sum_{t=1}^{K} N_{t,\text{вих}_{gi}}^{\phi,n-1}$ - the actual volume of transported gas at exit point g or at a cluster i of exit points in regulatory period $n-1$, 1000 м³;

$\sum_{t=1}^{K} V_{\text{BTB}_t}^{\phi,n-1}$ - the actual volume of natural gas for technological uses and normative losses of natural gas in regulatory period $n-1$, 1000 м³;

$\sum_{t=1}^{m} N_{t,\text{вих}_{gi}}^{n}$ - the forecasted volume of transported gas at exit points g or at a cluster i of exit points in regulatory period n, 1000 м³

If the network user pays for expenses for technological uses and normative losses in percentage of the actual volume of transported gas in monetary form, the price of natural gas is defined on a daily basis and calculated according to the following formula

$$\text{Ц}_\text{p} = \left(P_{njd} + CT_{n(j-1)} + EC_n \right) \times K_{njd}^{USD} \quad \text{(UAH for 1000 m³) (45)}$$

where:

n – is the corresponding year of gas transportation;

j - is the corresponding month of gas transportation in year n;

d - is the corresponding day in month j of gas transportation in year n

P_{njd} - is the is the parameter numerically equal to day-ahead price assessment for NCG, published in the ICIS Heren European Spot Gas Markets Report that apply to gas transported in day d of month j and year n, in the table "NCG Price Assessment", average of the bid and offer quotations, as quoted for each Day in EUR/MWh after each price has been (a) converted to US dollars by being multiplied by daily \$/€ exchange rates published by the European Central Bank as "ECB reference exchange rate US Dollars/Euro 2.15 pm (C.E.T) " with Series Key EXR.D.USD.EUR.SP00.A" for that day, on days when the ECB does not publish the exchange rate, the closest preceding day and (b) converted from MWh to 1000 m3 by being multiplied by 10.6;

$CT_{n(j-1)}$- is the cost of transporting gas from NCG to Slovakia, expressed in \$/'000 m3. It shall be calculated as the average spread between NCG and Slovak month-ahead prices for year n, calculated as the simple average of the relevant prices published in the ICIS Heren European Spot Gas Markets Report that apply to gas delivered in each day of month (j-1) and year n, in the tables "NCG Price Assessment" and "Slovakia Price Assessment", average of the bid and offer quotations, as quoted for each Day after each price has been (a) converted to US dollars by being multiplied by the arithmetic average of the daily \$/€ exchange rates published by the European Central Bank as "ECB reference exchange rate US Dollars/Euro 2.15 pm (C.E.T) " with Series Key EXR.D.USD.EUR.SP00.A" for that day.on days when the ECB does not publish the exchange rate, the closest preceding day and (b) converted from MWh to 1000 m3 by being multiplied by 10.6.

Ec_n - is the sum of the exit charge from Slovakia and the entry charge to Ukraine at Ukraine-Slovakia border for year n expressed in $/'000 m3.

K_{njd}^{USD} - is the official UAH/USD exchange rate published by the National Bank of Ukraine in day d of month j and year n, on days when the National Bank of Ukraine does not publish the exchange rate, the closest preceding day.

10. Tariffs for natural gas transmission at entry and exit points, located on the Ukrainian border are set in USD or in other foreign currency at the rate of the National Bank of Ukraine on the date of their setting by the NCSREU.

11. The tariffs for quarterly, monthly and daily capacity at entry and exit points to/from the gas transmission system shall be calculated under the formula:

$$T^s = M^s \times T \quad \text{(UAH per 1000 m3 per day) (46)}$$

where: T^s - is the tariff for natural gas transmission services for the respective term of capacity allocation (quarter, month or day);

T- is the tariff for natural gas transmission services at entry or exit point, calculated according to clauses 4-7 of this section.

M^s – is a multiplier which takes into account the term of capacity booking and may take any value between 1 and 1.5 for monthly and quarterly capacity and between 1 and 3 for daily capacity.

In duly justified cases, the level of the respective multipliers may be less than 1, but higher than 0, or higher than 3.

By 1 April 2023, the maximum level of multiplier M^s for daily capacity shall be no more than 1,5, if by 1 April 2021 the NCSREU makes a decision that the maximum level of multiplier M^s for daily capacity should be reduced to this level. This decision of the NCSREU shall take into account the following aspects related to the use of multipliers before and after May 31, 2019:

(а) changes in the booking behavior of network users; (б) impact on the transmission services revenue and its recovery; (в) differences between the level of transmission tariffs applicable for two consecutive tariff periods; (г) cross-subsidisation between network users having contracted yearly and non-yearly standard capacity products; (е) impact on cross-border flows.

12. The Operator shall independently define multipliers which take account of terms of capacity booking for each quarter, month or day and shall provide the NCSREU with the justification for alteration of the multipliers for each period (quarter, month or day) during a year.

13. The NCSREU shall approve the proposed multipliers or modify them so that the Operator complies with the planned necessary revenue for the period of regulation.

14. If the term for the booked capacity exceeds one regulatory period, tariff for such booking for the next regulatory period shall be reconsidered according to this Methodology on general basis.

VII. Determination and establishment of the tariffs for transportation of natural gas for entry and exit points to/from gas transportation system on an interruptible basis

1. To determine the tariff the Operator shall provide to the NCSREU calculations of interruptible capacity tariffs for natural gas transmission every year.

2. The calculations of tariffs shall be based on application of reducing coefficients (discounts) to the tariffs defined in Section VI hereof. The reducing coefficients shall be determined on the basis of the assumption that the interruptible booked capacity will be interrupted.

3. In determining reducing coefficients D, the Operator shall take into account as far as technically possible the extent to which the proposed interruptible capacity may be unavailable.

They shall be calculated under the following formula:

$$D = \frac{N \times D_{int}}{s} \times \frac{ICAP_{int}}{ICAP} \ (47)$$

where: N is the expected number of interruptions during the relevant period

Dint is the expected duration of each interruption

s - is the duration of the capacity booking (quarter, month or day)

ICAPint is the expected amount of interrupted capacity

ICAP is the interruptible capacity that is made available.

4. The NCSREU approves the proposed coefficients or modifies them so as best to ensure that the planned necessary revenue target for the regulatory period is met by the Operator.

VIII Determination and setting of tariffs for natural gas transmission at entry/exit points to/from gas transmission system with restrictions

1. When the use of capacity at entry/exit points is made subject to conditions and restrictions in accordance with the Gas Transmission Code of Ukraine in order to ensure natural gas market liquidity and competition, promote efficient cross-border natural gas trading and the integration of the natural gas market, and the efficient use of the existing gas transmission infrastructure, the NCSREU shall determine and establish separate tariffs for entry/exit points which may be used to realise the right to use capacity with restrictions, providing for natural gas transportation between designated cross-border entry/exit points, and/ or natural gas transportation between designated cross-border entry/exit points and entry/exit points to/from a gas storage facility or group of gas storage facilities for the purpose of natural gas storage in the underground gas storage facilities of Ukraine.

2 Tariffs for designated entry/exit points that can be used to realise the right to use capacity with restrictions shall be based on the use of discount factors to the tariffs specified in chapter VI of this Methodology and shall be set on the Operator's request taking into account the justification for the determination of the level of discount factors prepared by the Operator and provided to the NCSREU.

3. The justification for determining the level of the discount factors shall be based on the following approaches:

- a comparison with the cost of transportation between entry/exit points where the right to use capacity with restrictions may be provided, using alternative routes, bypassing the gas transportation system of Ukraine; and / or

- the use of the weighted average cost of gas transportation by the Operator and the length of the route of transportation between entry/exit points where the right to use capacity with restrictions may be provided; and / or

- a comparison with the estimated tariffs for a simulated notional alternative gas pipeline between entry/exit points where the right to use capacity with restrictions may be provided.

IX. Particular provisions on tariff calculation

1. Tariffs for entry from and exit points to UGS may be set with a coefficient from 0 to 0,5, which is applied to the tariffs, established according to section VI of this Methodology. In the case of applying such discount for entry and exit points from UGS, the forecasted allowed revenue, pre-allocated to such points, should be distributed to all other entry and exit points to / from the gas transportation system.

2. Temporary tariffs for the natural gas transmission services for entry and exit points, outlined in Paragraph 5, Part 7 of the Article 4 of the Law of Ukraine "On the Natural Gas Market", is set according to this Methodology if the transmission system operator has not provided tariff calculation in time for their adoption.

X. Procedure for establishing and revision of tariffs for natural gas transportation services for the entry points and exit points

1. **Requirements of execution of application and documents attached thereto**

1. In order to revise tariff, the licensee files an application to NCSREU as per the established form (Annex 4) and the following documents in hard and soft format, in one copy each:

1) Applicant's background information and evolution of its main engineering and production figures over the last 5 years (Annex 5);

2) Calculation of the licensee's forecasted allowed revenue for the licensed activity in natural gas transportation to be carried out for every year of the regulatory period (Annex 6), including calculation of operating controllable costs for natural gas transmission for each year of the

regulatory period (Annex 7), calculation of payroll fund of licensee engaged in natural gas transmission activity for each year of the regulatory period (Annex 8), calculation of operating uncontrollable costs for natural gas transmission activity for each year of the regulatory period (Annex 9), calculation of expenses related to engineering and manufacturing expenses and normative losses of natural gas of licensee engaged in natural gas transmission activity for each year of the regulatory period (Annex 10), calculation of return on regulatory base of assets used for natural gas transmission activity (Annex 11) and forecasted depreciation (Annexes 12 - 15) and calculation of the allowed revenue adjustment parameter from natural gas transportation;

3) Funding sources for ten year network development plan per year of regulatory period according to the licensee's ten year network development plan approved by NCSREU (Annex 16);

4) Calculation of volumes of booked capacity of natural gas transmission according to the contracts by types of consumers (Annex 17);

5) Calculation of tariff for natural gas transportation services for the entry points and exit points for the forecasted period (Annex 18);

6) information regarding the list of entry and exit points during natural gas transmission via transboundary pipelines and for the consumers of Ukraine with indicated booked capacity by each point, length of natural gas transmission via transboundary pipelines and transmitted volumes at every transmission route (Annex 19)

7) Details regarding evolution of actual and marginal volumes of engineering-and-manufacturing expenses and standard losses of natural gas over the last 5 years (Annex 20);

In addition, the licensee shall on request of NCSREU provide any forms of NCSREU (NCSRE) statistical reporting, financial statements forms, corporate income tax declaration (Annexes included), labour report (Form 1-ПВ) by activity types and labour grades, copy of contract for

supply of natural gas for engineering-and-manufacturing needs as entered into by the licensee and the gas owner.

2. In order to set the tariff when changing over to incentive based regulation, the licensee files to NCSREU the application, documents as defined by clause 1 of this Section, attached with copies of the following documents, one copy each:

1) Independent asset evaluation report carried out under the Asset Evaluation Methodology;

2) Review of the independent asset evaluation report by reviewers employed in a government authority exercising national regulation of evaluation activities;

3) Procedure of asset, expenses and income distribution between the business activity types and an order on approval thereof and/or order on the accounting policy

and the following in hard and soft format, one copy each:

1) Calculation of regulatory base of assets as formed as of the date of change-over to incentive based regulation, taking into account clauses 2 and 3 of section IV of this Methodology;

2) Calculation of base levels of operating controllable costs and operating uncontrollable costs;

3) Evolution of volumes of capacities booked and calculation of forecasted volume of capacities booked by types of capacities booked per each year of the regulatory period;

4) Action plan to improve reliability of data to monitor service quality.

3. In order to update the tariff, licensee files to NCSREU the application and the documents as defined by para 1 of this Section, in both hard and soft format, one copy each, with an update of forecasted data for year of regulatory period for which the tariffs are established.

4. In order to adjust the tariffs, licensee files to NCSREU an application as per the set form (Annex 4)

and the following documents in hard and soft format, one copy each:

1) Calculation of updated required income for the activity in natural gas transportation to be carried out for the previous year, including the calculation of actual depreciation in accordance with the para 2 of section III of this Methodology;

2) Calculation of adjustment of required income from natural gas transmission due to change in volume of capacities booked by types of capacities booked, as provided for in the relevant tariff calculation (Annex 21).

5. NCSREU can request the licensee to provide written substantiation for the materials given and / or any other additional information and documents needed to consider the application and the documents attached thereto.

The licensee is to provide all necessary materials within 7 calendar days from the date of receipt of the written request from NCSREU.

6. The licensee shall be obliged to reasonably distribute the costs between the licensed and other business activities.

7. All the documents provided by the licensee to NCSREU in compliance with this Methodology are to be signed by the chief executive officer, and the copies are to be authenticated according to the procedure prescribed by law.

8. All figures in the calculations are to be given rounded to second decimal.

9. The responsibility for reliability of data given in the documents lies with the licensee.

10.   NCSREU may establish the transportation tariff for new entry and / or exit point during the regulatory period without amending current tariffs, in case of absence of forecasted volumes of booked capacity for transportation of natural gas in such new point and/or if it is expected that establishing the tariff for new entry and/or exit point will not impact allowed revenue for each year of regulatory period for more than 5%.

In this case the tariff for new entry and / or exit point may be set at the level of current tariff(s) for entry/exit point(s), which is(are) part of the same cluster of points as the new entry/exit point(s).

Setting the tariff for new entry and/or exit point during the regulatory period shall be made upon request of the licensee, where it specifies the location of the new entry and/or exit point; forecasted volume of booked capacity of natural gas transportation in such new point (if available); cluster of points, which includes the new entry and/or exit point; set-up tariff(s) for entry/exit point(s), on which level or on the weighted average level of which the licensee proposes to set up the tariff for new entry and/or exit point.

11. Long-term regulatory parameters shall be set by the NCSREUbefore 1 June, in the year preceding the first year of the following regulatory period for which licensee submits the application for tariff revision.

2. Procedure and due dates for application processing

1. The application for tariffs revision and documents attached thereto in compliance to clauses 1 and 2 of Chapter I of this Section shall be submitted to the NCSREU before August 1, in the year preceding the first year of the following regulatory period for which the tariff will be set except for the regulatory period from 2019 to 2023. The application for tariffs revision for the regulatory period from 2019 to 2023 shall be submitted to the NCSREU before October 1, 2018.

2. The application for tariff update and documents attached thereto in compliance to clause 3 of Chapter I of this Section shall be submitted to NCSREU before August 1, in the year preceding the year when tariff will be set.

3. The application for tariffs adjustment and documents attached thereto in compliance to clause 4 of Chapter I of this Section shall be submitted to NCSREU before August 1, in the year when tariff adjustment will be effected.

4. In the cases if the application or documents attached thereto contain mistakes, the licensee shall be entitled to eradicate them within 7 calendar days from the moment when written notification from NCSREU was received.

In cases if after mistakes correction the application and documents attached thereto do not comply with the requirements of clauses -1- 9 of chapter 1 of this section or if the licensee does not correct mistakes in the timely manner, NCSREU may submit a written notification on refusal to consider licensee's application.

5. In case if the application and documents attached thereto were not submitted before the due dates specified by clauses 1-3 of this chapter, NCSREU may independently make calculations necessary for tariff setting (except for tariff setting when changing over to incentive based regulation).

6. After the licensee's application and documents attached thereto were considered and which were drawn up in compliance with the requirements set out in clauses -1- 9 of chapter 1 of this section and after the licensee has submitted all additional materials, NSCREU shall define the date for the issue consideration and notify the licensee in written form.

7.NCSREU shall take decision as to tariff setting (revision, update and adjustment) before November 30, in the year preceding the year when tariff is set.

8. Issues regarding tariff setting are considered during the NSCREU meeting that is held in a public hearing format (hereinafter referred to as hearing)

9. During the hearing the information that is confidential to the licensee under current legislation shall not be disclosed.

10. The copy of the decision for tariff setting shall be sent to the licensee by registered mail within three business days from the date of relevant decision preparation.

3. Grounds for tariffs setting based on NCSREU initiative

1. NCSREU may set tariffs in cases stipulated by clause 7 of chapter 2 of this section. According to NCSREU's decision the allowed revenue of the licensee may be reduced by 2% from the revenue estimated under this Methodology.

2. NCSREU on its own initiative including licensee's reference may adjust tariffs in the following events:

1) NCSREU's decision taking as to License Terms violation with regard to non-compliance with the requirements during assets registry formation to carry out independent assessment and identify regulatory asset base, failure to perform ten year network development plan, submission of invalid data by the licensee, errors when estimating allowed revenue for performing relevant license activity;

2) during increase/reduction of booked natural gas transmission capacity by more than 5%

3) in the events stipulated in the Law of Ukraine "On Natural Gas Market".

Annex 1

to the Methodology for determining and calculation of tariffs for

the natural gas transmission services for entry and exit points

based on long-term incentive-based regulation

(paragraph 1 Section II)

Approximate list of controlled operating expenses

Expense item

1 Material expenses, including:

1.1 Materials

1.2 Combustive and lubricating materials

1.3 Electric energy

1.4 Expenses for repair (without salary)

1.5 Other material expenses

1.6 Natural gas for own needs

2 Labour payment expenses

3 Other operational controlled expenses, including:

3.1 Equipment rental (with the aim of carrying out licensed activity)

3.2 Rent of premises (with the aim of carrying out licensed activity)

3.3 Banks' services

3.4 Services on inspection of metering device

3.5 Insurance

3.6 Expenses for communications

3.7 Expenses for business trip

3.8 Expenses for maintenance of automobile transportation

3.9 Taking meters readings

3.10 Printing, publishing services

3.11 Installation and maintenance of software

3.12 Information and consulting services

3.13 Legal and notary services

3.14 Audit services

3.15 Clerk expenses

3.16 Services of outside organizations

3.17 Education

3.18 Securing of fire protection, watchman service, paramilitary security services

3.19 Healthcare services

3.20 Services of registrar

3.21 Other expenses

3.22 expenses for natural gas transportation by the pipelines of third parties, inter alia by pipelines of gas producers, pipelines of adjacent TSOs.

Annex 2

to the Methodology for determining and calculation of tariffs for

the natural gas transmission services for entry and exit points

based on long-term incentive-based regulation

(paragraph 1 Section II)

Approximate list of operative uncontrollable expenses

Expense item

1 Ecological tax

2 Fee for use of radio frequency resource of Ukraine

3 Fee for the first registration of transport

4 Fee for special use of water

5 Fee for special use of forest resources

6 Social security fee

7 Obtaining licenses and special permissions

8 Mandatory insurance

9 Labour protection, occupational safety and environmental protection

10 Payment for land

11 Other taxes, fees and mandatory payments, included in the prime cost of services (excluding rent payments for transit pipeline

transportation of natural gas through Ukrainian territory)

12 The costs associated with the use of natural gas in UGS and UGS operator services to operator, to manage gas transmission system

13. Regulatory fee for activities regulated by the NCSREUaccording to Law of Ukraine «On National Commission for State Regulation of Energy and Public Utilities»