

COMPLIANCE NOTE

by the Energy Community Secretariat

on Assessment of NEURC's approach to regulatory assets based and incentive based regulation of distribution network tariffs in Ukraine

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Compliance Note 1/2021

Assessment of NEURC's approach to regulatory assets based and incentive based regulation of distribution network tariffs in Ukraine

In this Compliance Note, the Energy Community Secretariat has reviewed the relevant legislation adopted by the National Energy and Utilities Regulatory Commission of Ukraine (NEURC):

- a. The Order for establishment (formation) of tariffs for services on distribution of electric energy No 1175 issued by NEURC on 5 October 2018, amended by Resolution No 356 issued by NEURC on 7 February 2020, amended by Resolution No 1610 issued by NEURC on 26 August 2020 and amended by Resolution No 1936 issued by NEURC on 21 October 2020 (hereinafter referred to as: Tariff Methodology);
- b. The Procedure for determining the regulatory assets base of subjects of natural monopolies in the power sector No 899 issued by NEURC on 11 July 2013, amended by Resolution No 2562 issued by NEURC on 8 October 2015, amended by Resolution No 1607 issued by NEURC on 26 August 2020 and amended by Resolution No 1833 issued by NEURC on 7 October 2020 (hereinafter referred to as: RAB Procedure);
- c. The Decree on setting regulatory parameters with a long-term period of validity for the purpose of incentive regulation" No 1009 issued by NEURC on 23 July 2013, amended by Resolution No 1405 issued by NEURC on 5 November 2013, amended by Resolution No 2561 issued by NEURC on 8 October 2015, amended by Resolution No 972 issued by NEURC on 27 July 2017 and amended by Resolution No 1608 issued by NEURC on 26 August 2020 (hereinafter referred to as: Decree on Parameters);
- d. The Resolution on application of incentive regulation in the conduct of economic activities for the distribution of electricity No 1029 issued by NEURC on 26 July 2013, amended by Resolution No 2020 issued by NEURC on 24 November 2016 and amended by Resolution No 1609 issued by NEURC on 26 August 2020;
- e. The Resolution On approval of the Methodology (procedure) for forming fees for connection to the transmission system and distribution system No 1965 issued by NEURC on 18 December 2018 and amended by Resolution No 2161 issued by NEURC on 25 November 2020;
- f. The Procedure for development and submission for approval of distribution system development plans and investment programs of distribution system operators No 955 issued by NEURC on 4 September 2018, amended by Resolution No 1030 issued by NEURC on 11 June 2019 (hereinafter referred to as: Procedure on investment programs);
- g. Regulations on the procedure for submission, determination and approval of economic coefficients of regulatory and projected technological costs of electricity, approved by Resolution No 981 issued by NEURC on 27 July 2017, amended by Resolution No 1424 issued by NEURC on 27 December 2017 and amended by Resolution No 2099 issued by NEURC on 18 November 2020; regulatory asset

- h. The Procedure for determining labour costs, which are taken into account in the tariffs for electricity distribution services, electricity transmission, dispatching (operational and technological) management, services of the universal service provider, heat production and electricity production No 2645 issued by NEURC on 26 October 2015, amended by Resolution No 2556 on 29 November 2019.

The regulations listed above define the distribution tariff methodology¹, and throughout this document are referred to as “tariff setting rules”. They are based on and refer to primary and secondary legal acts regulating the electricity market, pricing policies and natural monopolies.

The relevant primary legislation, referred to in this document, includes:

- The Law of Ukraine ‘On electricity market’²;
- The Law of Ukraine “On the National Energy and Utilities Regulatory Commission”³;
- Law on Natural Monopolies⁴;
- Law on management of state-owned property⁵;
- Law on Prices and Pricing⁶;
- the Law on evaluation of property, property rights and professional appraisal activity in Ukraine⁷.

In addition, the Secretariat took note of the rules and decisions relevant for determination of the charges for access and use of the network, promulgated by other public authorities:

- a. Methodology for valuation of assets of subjects of natural monopolies, subject to management of adjacent markets in the field of combined production of electric and thermal energy⁸ No 293 of 12 March 2013 and amended by Decree No 1929 on 25 October 2016 issued by the State Property Fund of Ukraine (SPF Methodology on RAB Valuation);
- b. Resolution of Cabinet of Ministers on Property valuation methodology⁹;
- c. Procedure on approval of accounting standard No 318¹⁰ approved by the Ministry of Finance of Ukraine on 31 December 1999 and amended in 2013;
- d. Procedure on formation and implementation of the dividend policy of the State¹¹ No 702 approved by the Cabinet of Ministers of Ukraine on 12 May 2007, amended 2013;

¹ The term “tariff setting rules” throughout this document denotes the set of rules and regulations of NEURC used in the tariff setting, whereas “Tariff Methodology” refers only to the consolidated text of the Order for establishment (formation) of tariffs for services on distribution of electric energy

² Law No 2019-VIII of 13.04.2017 entering into force on 11.06.2017, <https://zakon.rada.gov.ua/laws/show/2019-19#Text>

³ Law No. 1540-VIII of 22.09.2016 entering into force on 26.11.2016, <https://zakon.rada.gov.ua/laws/show/1540-19#Text>

⁴ Law No 1682-III of 20.04.2020, as amended on 17 June 2020, <https://zakon.rada.gov.ua/laws/show/1682-14#Text>

⁵ Law No 185-V of 21.09.2006, as amended on 17 June 2020, <https://zakon.rada.gov.ua/laws/show/185-v#Text>

⁶ Law No. 5007-VI of 21.06.2012, <https://zakon.rada.gov.ua/laws/show/5007-vi#Text>

⁷ Law No. 2658-III of 12.07.2001, as amended on 17 June 2020 2020, <https://zakon.rada.gov.ua/laws/show/2658-14#Text>

⁸ <https://zakon.rada.gov.ua/laws/show/z0522-13#Text>

⁹ CMU Resolution No 1891 of 10.12.2003, amended on 20 February 2019, <https://zakon.rada.gov.ua/laws/show/1891-2003-%D0%BF#n15>

¹⁰ <https://zakon.rada.gov.ua/laws/show/z0027-00#Text>

¹¹ <https://zakon.rada.gov.ua/laws/show/702-2007-%D0%BF#Text>

- e. Methodology for calculating the fee for the flow of reactive electricity¹² approved by the Resolution of the Ministry of Energy and Coal Industry¹³ No 87 on 6 February 2018.

1.1 Approach

The present Compliance Note investigates to which extent and how the distribution tariff methodology adopted by the National Energy and Utilities Regulatory Commission of Ukraine (NEURC) in August 2020 is compliant with the key principles of sound tariff regulation of network operators. The Compliance Note further analyses the impact of this distribution tariff methodology and other legislative documents relevant for tariff setting, and examines how they can contribute to creating a fair, predictable and stable regulatory framework. The draft assessment was presented to NEURC for review. NEURC's comments and explanations¹⁴ are taken into account in the final text.

The approach of the Energy Community Secretariat (the Secretariat) in conducting its assessment was based on the obligations and principles established in the Energy Community acquis, specifically checked against the recommendations outlined in the [Policy Guidelines 02/2018-ECS by the Energy Community Secretariat on the distribution network tariffs](#)¹⁵ (ECS Policy Guidelines).

This assessment is a follow up of the assessments and recommendations presented in the [Compliance Note No 01/2018](#) of the Energy Community Secretariat¹⁶, where NEURC's approach to assets valuation and recognition of associated costs with respect to network tariff setting was analysed in detail.

1.2. Background

In August 2020, NEURC amended the five regulations¹⁷ that taken together make up a methodology to determine charges for use of the distribution network. The amendments are intended to improve applicability and feasibility of the rules introduced in 2013, which aimed to set prices and tariffs for regulated energy activities following an incentive based pricing mechanism. The incentive based methodology was, however, never applied. In practice, a cost-plus tariff, based on the costs of operation and future estimated revenues, was used. This created an inverse incentive for regulated operators to increase the cost of operation at the expense of investment in fixed assets.

¹² <https://zakon.rada.gov.ua/laws/show/z0392-18#Text>

¹³ now Ministry of Energy of Ukraine

¹⁴ Comments e-mailed on 3 November 2020

¹⁵ Published on the Secretariat web page: https://www.energy-community.org/dam/jcr:a6882c6d-923f-4d6a-83d3-395773804984/PG_02_2018_ECS_tariffs_DS.pdf

¹⁶ Published on the Secretariat web page: https://www.energy-community.org/dam/jcr:49de09fa-632a-4e1d-9feb-f93d951610d/ECS_UE_tariffs_052018.pdf

¹⁷ See page 1, indent a. to e.

The key obstacles to implementation of the 2013 methodology were related to the fact that it introduced (in letter only) the recognition of a regulatory assets base as a core concept for recognition of return of assets and return on assets. Moreover, it also introduced a system of incentives for the improvement of efficiency and quality of distribution services in a situation where the carrying value of assets of all operators was undervalued and, due to underinvestment, the assets in the majority of cases were not in an orderly condition. This meant that distribution operators were unable to meet the quality standards, and thus applying the 2013 methodology would have led to serious financial consequences for the operators. Moreover, the revaluation of the assets constituting the regulatory assets base was determined according to the Law on State Property Management and the SPF Methodology on RAB Valuation.

Thirty-two distribution network operators are active in Ukraine today. They vary in size, both in terms of their geographical coverage and the number of connected customers.

Four DSOs have more than 1.000.000 connected customers, and 50% of all customers are connected to the network of eight DSOs, with the dispersion shown in the following figure:

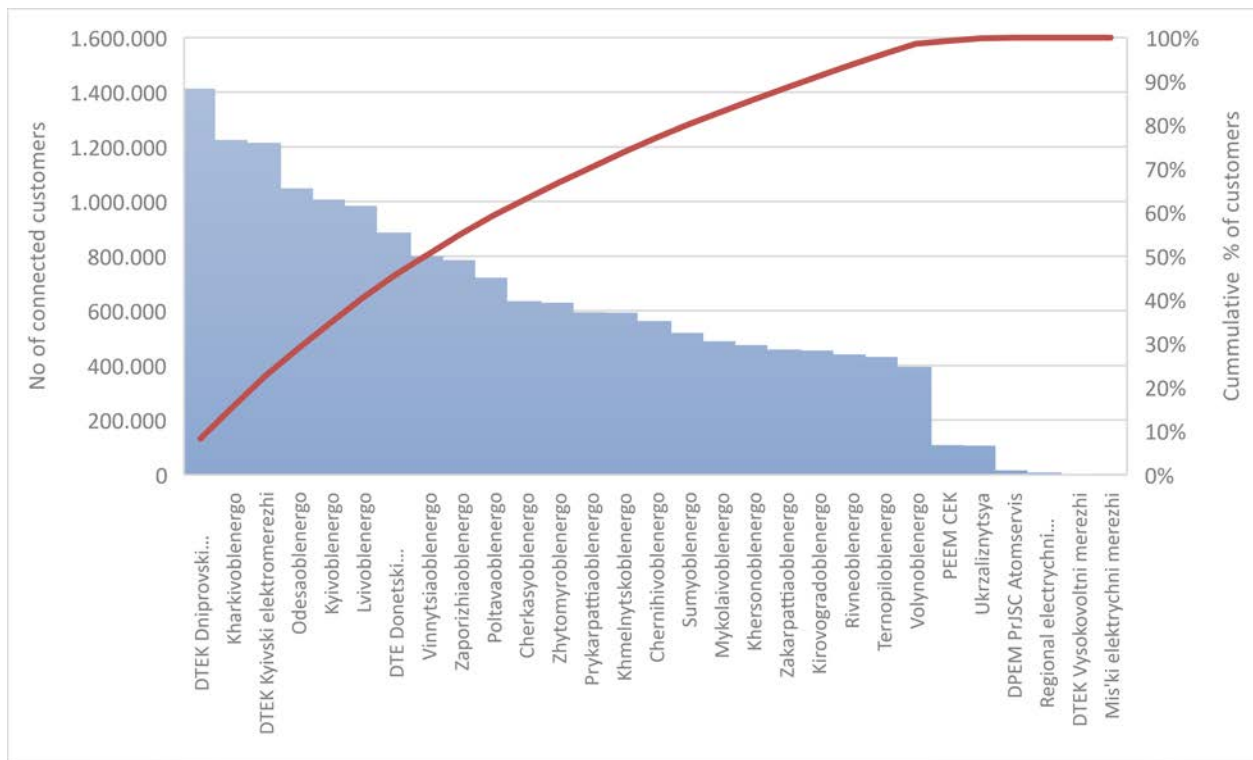


Figure 1 Distribution system operators by size, in number of connected customers as of II q 2020

The currently applicable tariff design is a basic one, with only two customer classes, differentiated on the basis of the voltage level of their connection, with only a volume based tariff for the use of the network. Other applicable charges are not defined in the current Tariff Methodology.

The differences in the level of tariffs per distribution area are strikingly different as shown in the following figures:

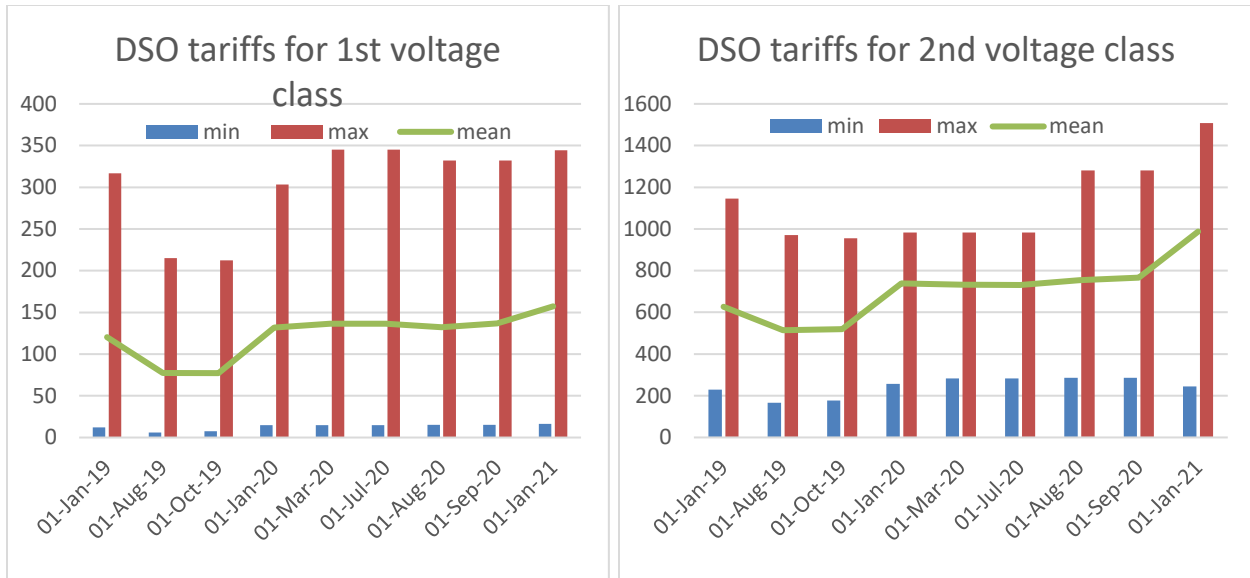


Figure 2. Minimum and maximum DSO tariffs 2019-2020, range and trend

The range of differences in the tariff level for the first voltage class in the period 2019-2021 have been exceeding the proportion of 20:1, whereas for the second voltage class the range is mainly around 5:1. Without prejudice towards the actually incurred costs of each DSO and the conditions in which they operate, the scale of the differences gives rise to concerns related to the tariff setting and applied tariff methodologies.

The correlation between the size of the DSO in terms of the number of connected customers¹⁸ and their respective tariff level for the first voltage class customers is negligible, whereas an increasing correlation is observed from nearly zero in January 2019 to -0,04 in January 2021 for the second voltage class.

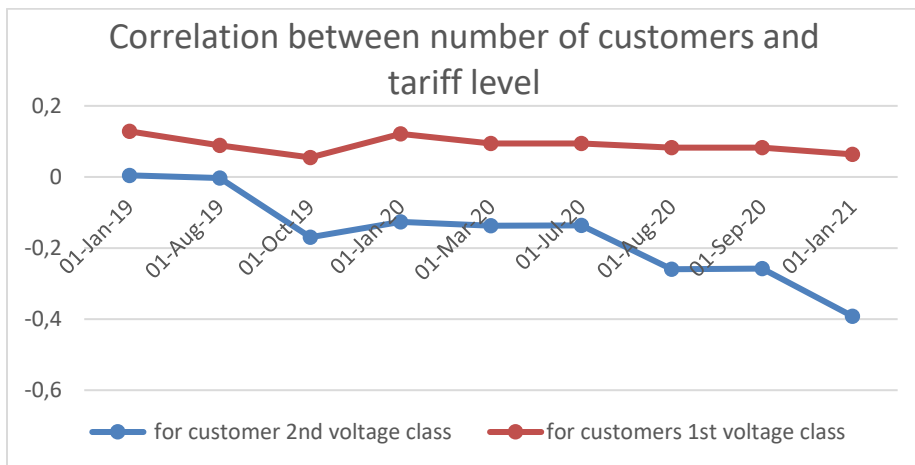


Figure 3 Correlation between the number of customers and the tariff level of DSOs

¹⁸ Correlation between the tariff level and the density of distribution area (number of customers per square km or the number of customers relative to the length of respective network) should be higher. The Secretariat does not possess sufficient data to present these correlations.

The Law of Ukraine “On electricity market” strengthened the powers of NEURC with respect to distribution tariff setting. NEURC now has the legal backing needed to perform its tasks in accordance with the Energy Community acquis.

The Law of Ukraine “On the National Energy and Utilities Regulatory Commission” defines the status, functioning, objectives, principles, competences and tasks entrusted to NEURC.

These competences are stipulated in Article 17.3 of this Law and, among other things, extend to developing and approving:

- the procedure of calculating and setting rates of regulated charges;
- quality criteria for the services provided by natural monopolies in the energy and utilities sectors and entities operating in the adjacent markets;
- procedures (rules) of organizing accounting and reporting with the breakdown by licensed activities;
- procedures (methods) of formation, calculation and setting of state-regulated prices and tariffs for natural monopolies in the energy and utilities sectors, as well as for other economic entities operating in the markets in the energy and utilities sectors provided that respective powers have been granted to NEURC by the Law.

According to the same Law, NEURC has to perform its competences in line with the principles of predictability and timeliness of decision-making, targeted regulation and prevention of discrimination.

2. Review and preliminary findings

Under the Energy Community Treaty, Contracting Parties - therefore also Ukraine – have the obligation to ensure the development and viability of the network. In the long run, an adequate pricing policy should contribute to improving operational efficiency and quality of services, while ensuring the viability of network operation.

The Tariff Methodology (as amended by Resolution No 1610 of 26 August 2020) improved the clarity of provisions related to the recognition of costs and returns on regulated assets and the determination of required revenues from the regulated activity for operators under the incentive regulation scheme.

The new set of tariff setting rules partly improves predictability in terms of fair compensation for expected quality of service for the network operators. With its strengthened powers, NEURC established the principles and methods for the recognition of costs to be recovered through regulated tariffs, such as labour costs and costs of losses. In addition, the Tariff Methodology defines the status of assets acquired from customer’ connection fees under the incentive regulation regime.

However, the same benefits are not achieved for the network user.

The Tariff Methodology keeps the notion of a transition period of an undefined duration and dependent on the network operator’s compliance with the procedure defined therein. On the other

hand, it addresses the adjustments according to the implementation of quality targets during the transition period, whereas the transition period is defined only as a period of non-application of incentive regulation.

The Tariff Methodology introduced an incentive and penalty scheme for quality indicators, but the implementation of the quality target is set for 13 years in case of incentive based regulation, and 18 years if incentive based regulation is not applied. The proposed solutions of the Tariff Methodology on application of incentive regulation could indicate improved predictability in some aspects, potentially reducing the risks of tariff volatility, but it does not prescribe how it will be ensured in practical terms.

While distribution tariffs are defined and set in accordance with the Tariff Methodology adopted by NEURC, network users are also obliged to pay charges for reactive energy in accordance with a methodology adopted by the Ministry of Energy and Coal Industry. The level of the fees charged to customers and revenues accrued from reactive power are not reflected in the determination of the required revenues.

Introduction of the concept of regulatory assets base for recognition of return of capital and return on capital is a decisive step that should be supported by all means. However, there are still serious concerns related to transparency and prudence in recognition of the initial value of the regulatory assets base.

In this assessment, the Secretariat reaffirms its recommendations from Compliance Note 01/2018 related to the recognition of fair value of fixed assets included in the regulatory assets base and associated costs and returns, both in terms of the procedure and the scope.

The Secretariat expresses its main concerns:

- Tariff setting rules issued by NEURC do not clearly communicate some of the key assumptions, such as the beginning and duration of the transition period, recognition of the profit rate during the transition period, criteria for recognition of assets included in the RAB, determination of rate of return on assets (WACC) and similar, elaborated later in this document.
- In the process of setting tariffs, NEURC takes over the significant components for calculation of the required revenues determined by other institutions, notably recognition of the rate of return and value of assets included in the regulatory assets base, without considering their conformity with the objectives of regulation set by NEURC.
- In order to rely on the regulatory assets base for tariff setting, the carrying value of the assets in question must be confirmed as credible. The main concern in this regard is the valuation of assets acquired until the date of implementing incentive regulation and recognition of this value by NEURC, whereas the audit of the determined values and the entire re-valuation is performed by the State Property Fund of Ukraine (SPF). The Tariff Methodology and RAB Procedure do not require compliance with international financial and reporting standards as a precondition for recognition of the fair value of assets.
- Not only that the deadlines for achieving quality standards are very long, but two different deadlines to achieve the quality target are defined, 13 years for DSOs applying incentive regulation and 18 years for those not applying incentive regulation.

- Prescribed sources for financing investments in distribution assets (from depreciation, customer connection fees and revenues from reactive power), without a safeguard that profit is earned only on invested capital and that funds provided from customer contribution or additional charges are fairly recognized for calculation of revenues, may create a possibility for windfall profits.
- The distribution tariffs are defined and set in accordance with the Tariff Methodology adopted by NEURC, but network users are also obliged to pay charges for reactive energy in accordance with the Methodology adopted by the Ministry of Energy and Coal Industry. The level of charges for customers and revenues accrued from reactive power are not reflected in the determination of required revenues at all.
- Definition of tariff structure, with reference to the transition period, has not changed and thus continues to adversely affect the predictability of the tariff system. In particular, whereas the Tariff Methodology explicitly defines the tariff structure and its calculation, the charges for reactive power, although applied by DSOs, are not taken into account in the calculation.

The amended Tariff Methodology, in conjunction with the complementary rules, remains short of achieving its main objective, namely creating incentives for better performing, cost effective operators while customers are fairly charged based on the costs of the services they have received.

3. Assessment

3.1. Transition period and conversion to incentive regulation

As already explained, the new Tariff Methodology is similar to the methodology adopted by NEURC in 2013 (which was never applied in practice) in its basic approach. The amendments simply clarify certain provisions and components relevant for tariff setting. They also amend the methodology in order to reflect changes in other relevant rules and regulations that the methodology refers to.

Following the 2020 amendments, its implementation is expected to happen at a fast pace throughout Ukraine, however, the two tariff regimes may exist in parallel.

Transition period

The transition period is defined in Article 1.2 and Article 2.2 of the Tariff Methodology where the conditions for application of incentive regulation are described. The transition period lasts until an operator has conducted a valuation of its assets and that valuation is reviewed by a public authority, and approved by NEURC; whereas an independent auditor's opinion is not required.

In all relevant (and analysed) rules, the delineation is made at the point of introduction of incentive regulation. In that sense, the RAB Procedure (introduced by NEURC Resolution No 899 and amended by Resolution 1607) sets different criteria for recognition which will be applied for later tariff revisions. Specifically, the list of assets excluded from RAB is specified for RAB created before and until the date of conversion (introduction) of incentive regulation.

The peculiarity is that, while the Tariff Methodology clearly includes the incentive scheme, the quality target will be implemented over 13 years after the beginning of the conversion to incentive regulation. Operators who do not apply or do not comply with incentive regulation requirements will have to achieve the quality target in 18 years. The penalty scheme will be applied in case of non-achievement of interim targets during the three regulatory periods until the deadline, at the level of 0,2 of the value of undelivered electricity above the target for the observed year. However, the maximum deduction for non-observing the target is 0,01 for DSOs in the transitional scheme, and 0,5 for DSOs subject to the new incentive based regulation. There is again leniency toward operators applying the transitional scheme.

The recognition of costs of network losses is also different for those operators that switch to incentive based regulation. For recognition of costs, a reduction of the level of losses is prescribed at 1% for customers in the first voltage class and 3,5% for customers in the second voltage class. For operators that do not switch, the reduction of the level of losses is set at 0,5% and 1% respectively.

The requirements and criteria applied for regulation during the transition period, and more importantly, the length of the transition period, are not explicitly stipulated. This leaves space for arbitrary decisions.

The present tariff setting rules do not define how long the methodology prescribed for the “transition period” will be applied to set tariffs for operators which do not qualify for incentive regulation.

The possibility to apply different calculations methodologies to set tariffs for the operators conducting the same activity is quite unusual. Its main shortcoming is that it puts customers in Ukraine in different positions purely based on who their network operator is.

3.1.2. Conversion date

The date of conversion to incentive regulation is not explicitly defined in the Tariff Methodology. As mentioned above, this date may vary for different DSOs, since the transition period is defined as the “period of non-application of incentive regulation, due to non-compliance with conditions for transition to incentive regulation and/or failure to submit application for setting tariffs subject to incentive regulation”.

According to the amended Resolution on application of incentive regulation in the conduct of economic activities for the distribution of electricity¹⁹, the conditions for application of incentive

¹⁹ Resolution No 1029 issued by NEURC on 26 July 2013, amended by Resolution No 2020 issued by NEURC on 24 November 2016 and amended by Resolution No 1609 issued on 26 August 2020

regulation are stipulated²⁰, but without explicit obligation of any operator to fulfil these conditions by a certain deadline.

Unlike the incentive based methodology, for which all parameters are defined in the Decree on Parameters²¹, it is not clear how the approved profit will be determined and how the quality standards will be achieved by DSOs not applying incentive regulation.

The deadline to achieve quality standards is set at 13 years from the date of conversion to incentive regulation, while the DSOs whose tariffs are set in accordance with the “methodology for transitional period” have a deadline of 18 years starting from 2021.

The method and criteria for recognition of the profit rate and the amount of profit in the required revenues during the transition period is not defined, except that estimated profit is determined taking into account planned capital investments. NEURC additionally clarified that the rate of return was defined by the Ministry of Economics, without referring to the rule and methodology. Such a regime is not transparent and is extremely arbitrary, especially recalling that it does not define if and how the adjustment will take place.

This uncertainty increases risks and reduces predictability of the tariff both for operators and network users. Different calculation methodologies for tariff setting, different quality requirements and different rates of return established in a non-transparent procedure may also lead to discrimination between network users solely based on the fact if their operator has chosen to apply for incentive tariffs or not.

3.2. Regulatory assets base, revaluation and return

3.2.1 Value of assets

The key components of the required revenue, depreciation and profit are associated with the carrying value of the regulatory assets base.

According to the Tariff Methodology, the value of assets is recognized at restated value on the basis of a revaluation performed in accordance with the SPF Methodology on RAB Valuation for assets acquired before application of incentive regulation, and at costs of acquisition for assets acquired after that. The Tariff Methodology and RAB Procedure do not specify any criteria for recognition of asset value, assessment of reasonableness of the acquisition and usefulness and usability of the assets. They simply rely on the SPF Methodology on RAB Valuation for existing asset revaluation²².

In accordance with Article 31 of Directive 2009/72/EC on internal electricity market, undertakings are obliged to keep their accounts, to have them published and audited in accordance with the

²⁰ This is further clarified implicitly in Article 2.2 of the Tariff Methodology where the content and the supporting documentation of an application during the transition to incentive regulation are prescribed.

²¹ Decree on setting regulatory parameters with a long-term period of validity for the purpose of incentive regulation

²² NEURC in its submission of 03.11.2020 clarified that, according to the SPF Methodology on RAB valuation “only the assets that are used for provision of electricity distribution activity are the subject of the valuation. Other types of assets as well as land plots, unusable assets and some other categories are not included to the RAB”

rules of national law concerning the annual accounts of limited liability companies. Whereas the Tariff Methodology refers to accounting standards²³ in Ukraine, the Tariff Methodology and RAB Procedure recognize the value determined in accordance with the SPF Methodology on RAB Valuation, which does not ensure conformity with accounting standards.

When NEURC relies on other effective regulation, it has to exercise its competences and assess conformity of these rules with the principles of regulation imposed on NEURC and long-term objectives of price regulation. By not ensuring it, NEURC has failed to uphold its responsibility for the formation, calculation and setting of state-regulated prices and tariffs for natural monopolies in the energy and utilities sectors in line with the principles of regulation imposed on NEURC and the long-term objectives of price regulation. As already elaborated in the Secretariat's Compliance Note No 01/2018, this should be rectified by amending the Law on Natural Monopolies further "to bring it in line with the laws regulating the energy sector (e.g. Electricity Market Law) in order to allow the regulatory authority to adequately assess the relevance and to estimate and recognize as justified the elements for calculation of the required revenues and tariff setting."

The RAB value is determined in accordance with the RAB Procedure. The Annex to this Procedure refers only to the assets procured after the application of incentive regulation which will be recognized in the RAB, and their respective expected useful lives. The assets acquired before conversion to incentive regulation are subject to revaluation in accordance with the RAB Procedure and the SPF Methodology on RAB Valuation, namely at replacement cost with deduction for wear and tear and adjusted for an "optimization coefficient"²⁴.

Regulatory accounting should be in line with international accounting standards and requirements as well as the procedures stipulated in Article 31 of Directive 2009/72/EC. The statutory accounts and financial statements of regulated companies must be prepared, audited and published in accordance with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) and therefore the property, plant and equipment must be measured at their fair value²⁵. Recalling that NEURC refers to the accounting standards of Ukraine, the assets should be disclosed at the fair value both in the statutory and in the regulatory accounts.

It has to be noted that international accounting standards have to apply also to valuation and, therefore, an independent audit of a company's accounts has to confirm that the valuation was conducted and recorded in accordance with IAS and IFRS. NEURC's approach on the obligatory annual audit of licensee financial statements, stated in licencing conditions, is in line with Article 31 of Directive 2009/72/EC obliging regulated companies to have their accounts prepared, audited and published in accordance with international standards.

The objective of the revaluation, applying the replacement cost methodology, pursuant to the Law

²³ [Regulation \(standard\) of accounting 16 "Costs"](#), approved by the order of the Ministry of Finance of Ukraine dated December 31, 1999 № 318

²⁴ The coefficient of optimisation is used to evaluate the rate of usage of overcapacities in the networks (defining the percentage of the need of certain assets at peak times).

²⁵ IAS 16 (Property, plant and equipment) and IFRS 13 (Fair value measurement).

on natural monopolies and also in line with [ECS Policy Guidelines](#), is to determine the cost of acquiring the same new asset, and then to decrease that value by taking into account the lapsed time of usage and the quality of the maintenance, wear and tear, obsolescence, impairment, stranding and any other element affecting the usability of the assets for its intended purpose.

In order to ensure a fair and consistent approach to asset valuation/revaluation, the Secretariat strongly recommends to integrate the results into the company's books of accounts, even if the company maintains a separate set of accounts for regulatory purposes, in accordance with international best practice, respecting national accounting standards, IAS and IFRS.

In that sense, the audit of financial statements should include the audit of all records used as a basis for recognition of any component of required revenues and specifically if the assets used for conducting the distribution activity are properly recorded at fair value both in the regulatory and statutory accounting.

To ensure that regulatory accounts present the position of a company fairly and that transactions are recorded in accordance with instructions of NEURC and the State Property Fund, an independent audit of all accounts, including regulatory accounts, must be conducted and the auditor's report made publicly available. A review of the State Property Fund cannot replace the proper audit of financial accounts.

Further, it is recommendable that NEURC at least approves the Terms of Reference for the audit of accounts relevant for tariff setting (regulatory accounts).

3.2.2 Cost of capital and rate of return

In addition to the overall legislative and business environment, regulatory scrutiny, transparency and enforcement of the core regulatory principles are important for investor confidence and credibility of the regulatory scheme. This includes clarity of the recognition principles, primarily criteria and procedure for recognition of the RAB and recognition of the costs of capital required to finance the RAB.

Both for the incentive based regulation and the transitional regulation, NEURC does not provide the methodology for setting the rate of return or the profit rate. The weighted average cost of capital (WACC), in case of incentive based regulation, is set in the Decree on Parameters, but neither the Tariff Methodology nor any other NEURC rule defines how the WACC will be determined or adjusted over time.

The Tariff Methodology explicitly introduces a differentiated, two-tier WACC: 3% for assets acquired before conversion to incentive regulation and recognized at restated value in accordance with the SPF Methodology and 16,74% for assets acquired and commissioned after that date.

For DSOs subject to cost-plus regulation under the transitional scheme, the method and criteria to define the profit rate are not stipulated, except a general indication of "projected profit". NEURC clarified in its reply to the Secretariat that the rate of return might be set by the Ministry of Economics, developed specifically for the purposes of regulation in the electricity sector.

Here are two issues of concern: first that NEURC may assign its competence to the Ministry and second that the criteria, principles and method of setting these rates are not determined in a transparent manner.

3.2.3 Assets in RAB: intangible assets, land, stocks

The accounting standards referred to in the Tariff Methodology indicate that element “depreciation” includes the amount of accrued depreciation of fixed assets and other non-current tangible assets and amortization of intangible assets.

As regards assets acquired before the conversion to incentive regulation, the RAB Procedure in Article 2.4 stipulates assets that are not included in the RAB, such as land and capital investment items in progress (under construction). This implies that all other assets, including goodwill, are included in the RAB.

In terms of the recognition of goodwill in RAB, in combination with the recognition of the fair value of fixed assets based on depreciated replacement costs, the RAB would include the difference between market value and book value before valuation and the difference between depreciated replacement cost and book value before revaluation. This would be a double recognition of the same item, with significant impact on the approved revenues.

NEURC in its submission to the Secretariat²⁶ clarifies that “Goodwill should not be included in the RAB and it is not required by the valuation methodology”. Nevertheless, as it is not clearly stipulated in the text of the RAB Procedure and its annexes, it may be subject to dispute and interpretation. Tariff setting rules have to be explicit in this matter to avoid any ambiguity.

The RAB Procedure specifies which groups of assets, currently in the possession of DSOs and used for conducting distribution activity, cannot be included in the RAB.

The non-recognition of land as a component of the RAB is not explained, although land plots and easement rights may constitute significant and necessary assets for distribution. On the other hand, it is not clear if the land acquired after conversion to incentive regulation shall be included in the RAB. The Annexes 9-12 of the Tariff Methodologies, which specified the fixed assets acquired after transition to incentive regulation, do not include land as a distribution asset.

The clarification by NEURC²⁷ that “it is assumed that the land is the asset which is not exposed to depreciation; therefore it is not included to the RAB” and that “DSOs in Ukraine do not own any land, but rent it” brings even more confusion. If land cannot be in the possession of an undertaking, there is no need to exclude it from fixed assets. On the other hand, if an undertaking may acquire an ownership right to land for the purpose of distribution activity, then it should be recorded as a fixed asset and a part of RAB.

It is necessary to clearly state the criteria that would be applied for the recognition of land if it would be included in the RAB. Understandably, the exclusion of acquired land owned and used

²⁶ NEURC's Comments of 3 November 2020

²⁷ Ibid

for distribution activity from the RAB requires explanation.

In the Annex to the RAB Procedure, the item “stocks” is listed without explanation of what kind of stocks will be included and how their value will be determined. Whereas the recognition of working capital, which may include certain level of stocks, is common good practice, the methodology is short of any sort of criteria and method to determine the amount to be included in the RAB.

According to NEURC, the item “stocks” is not used in the case of incentive regulation and refers to other operational expenditures needed to keep the actual stocks in a working condition under the cost-plus methodology. In addition to the fact that the methodology does not define how the amount of recognized stocks will be determined, the incorporation of any amount of operational expenditure into the fixed assets is methodologically problematic.

Clarification of the item “stocks”, method of calculation and criteria for recognition are necessary to avoid ambiguity and ensure non-discriminatory implementation.

3.2.4 Useful lives and remaining useful lives

The useful lives of assets included in the RAB are defined only for the assets acquired after introduction of incentive regulation. According to formula 2 in the RAB Procedure, assets acquired before that date shall be depreciated over 30 years, regardless of their age and condition.

The whole concept is lacking a clear position of NEURC on the recognition of the assets based on their usage and usability for the regulated activity. Revaluation alone cannot solve the principle issue of criteria for the recognition of assets and their fair value. This is even more so the case in Ukraine, since the valuation of assets for distribution activity does not have to be performed in accordance with IAS and IFRS.

NEURC’s decision is reportedly²⁸ based on the fact that the extended depreciation period of 30 years will not lead to a significant tariff increase in the first years of RAB regulation.

Although this solution looks simple, its implementation will lead to perverse incentives. Most electrical equipment and software have a shorter life than 30 years. DSOs shall be incentivized to maintain these assets as long as possible, until their full depreciation, and to accrue planned returns, because the net value shall be excluded from the RAB in case of writing off and disposal. Instead, DSOs are incentivized to invest in the repair of existing obsolete assets or artificially maintain all assets in service, regardless of their actual usability.

To avoid risks to efficiency and cost effectiveness of the DSO from the extended use of obsolete or inefficient assets, the remaining useful life of all revalued assets should be determined according to their status, expected usefulness and usability.

In addition, the Tariff Methodology, the RAB Procedure and the SPF Methodology on RAB Valuation do not mention the treatment of fully depreciated assets in operation. By no means

²⁸Ibid

should fully depreciated assets be revalued in order to allow this restated value to be the basis for accruing depreciation and return on it.

3.3. Tariff structure

The tariff structure is defined in the Tariff Methodology as “components of economically justified expenses of the licensee for economic activity on electricity distribution, grouped by economic elements and on the basis of which tariffs for electricity distribution services are calculated and established for the transition period”. It does not state anything about the tariff structure after the transition period.

The allocation of required revenues on customer classes and tariff components is prescribed in Chapter 8 of the Tariff Methodology. It defines two customer classes, based on the voltage level of their connection, and one tariff component, namely distributed active energy, in UAH/kWh.

In reality, in addition to the tariff for use of the network charged on distributed active energy, determined in accordance with the Tariff Methodology, the network users also pay:

- a one-time connection fee, payable at the time of connection or change of the connection parameters, determined in accordance with the Connection fee methodology, adopted by NEURC Resolution No 1965 of 18.12.2018 “On approval of the Methodology (procedure) for forming fees for connection to distribution system”;
- a tariff for reactive power, determined in accordance with the Methodology for calculating the fee for the flow of reactive electricity approved by Resolution No 87 on 6.2. 2018 issued by the Ministry of Energy and Coal Industry.

The payment of a one-time connection fee and the tariff for excessive reactive power is a common practice throughout Europe. The specifics of Ukraine are:

- revenues accrued from the connection fee and from the reactive power are not taken into account for the determination of required revenue;
- the methodology for setting the tariff for reactive power is not determined by the regulatory authority and it is not considered a component of the tariff system.

3.3.1 Connection fee

In accordance with the Tariff Methodology, the required revenues take into account the above described connection fees to the extent that the costs of connection incurred in a reporting period differ from the revenues from the connection fees. According to the Connection fee methodology, the network operator is the owner of the connection facility. As the value of the connection facility and the connection fee usually do not match, the Tariff Methodology of NEURC recognizes these differences in the adjustments of required revenues during the tariff period.

In formula 11 of the Tariff Methodology, the depreciation of the assets created “within the scope

of providing services for connection and at expense of receipt for reactive power flows” is part of the sum of total recognized costs of depreciation. Hence the assets procured with the contribution of customers are owned by the operator, but excluded from the RAB, so that return is not recognized on assets financed from the connection fee. However, the depreciation of these assets is recognized. NEURC justifies this approach with the explanation that accumulated depreciation will be used to finance maintaining and replacing these assets in the future. In reality, if depreciation is recognized, the customers will pay twice, once under the connection fee and again under the depreciation of the connection assets.

Assets acquired from the connection fee must be excluded from the RAB, not only in terms of return on investment (profit), but also return of investments (depreciation). If not, customers will be obliged to pay the estimated value of the fixed assets linked to the connection first before the connection, and then systematically through their depreciation.

3.2.2 Tariff for reactive power

Operators are entitled to collect revenues for the reactive power taken by the network users. The charge for the reactive power is defined according to the Methodology for calculating the fee for the flow of reactive electricity approved by the Resolution of the Ministry of Energy and Coal Industry No 87 on 6 February 2018. The Tariff Methodology does not take into account the revenues accrued from the charges for reactive power, as an additional stream of regulated revenues, nor the associated costs of reactive power flows for the operator. The fact that this amount must be spent for investment to develop the network, in accordance with the approved investment plan, does not change the fact that revenues from reactive power create additional revenues that later translate into equity.

Recalling that revenues accrued from reactive power charges are regular revenues of the DSO, if not deducted from required revenues to calculate tariff rates, the assets financed from charges for reactive power should not be included in the RAB.

Even if NEURC would not have the competence to adopt the methodology for setting the tariff for reactive power, this significant component of the overall tariff system should be adequately reflected in the definition of the tariff structure, determination of required revenues and cost allocation to set tariffs for network users.

3.3.3 Demand based allocation and capacity charge

Capacity charges are not excluded per se in the 2020 Tariff Methodology. However, none of the calculations presented in Chapter 8 of the 2020 Tariff Methodology include such capacity charges. The Tariff Methodology obviously envisages that determined required revenues will be charged only based on the distributed active energy, allocating the total costs of service to two customer classes.

The Secretariat has already suggested to NEURC to consider the possibility of introducing

capacity charges allocating fixed costs, depending on the available measuring data to the actual or allowed peak demand of identified customer groups. Reform of the tariff design should also entail reconsidering the number and introduction of new customer classes.

Moreover, the expected new tasks of DSOs to facilitate integration of distributed generation, the netting schemes, flexibility services, aggregators, etc. will require the frequent reassessment of the tariff system and identification of new customer classes, defined in accordance with their pattern of network use. The tariff design should be able to reflect these needs and developments.

3.4 Investment (depreciation, connection fees, reactive power)

The Procedure on application of incentive regulation in Article 2.2 stipulates that a DSO must invest in new assets in the amount not less than the annual depreciation, minimum 50% of accrued or approved profit and all revenues accrued on the basis of charges for reactive power. Additionally, DSOs must report to NEURC the funding from each of these sources.

Revenues from connection fees and charges for reactive power are reflected in Article 2.3 of the Procedure on investment programmes, explicitly defining the sources of funding for investments. These are: “depreciation deductions; return on production investment, provided by the structure of tariffs; the planned amount of revenues for the flow of reactive electricity. Additional sources of financing for sole proprietors may be loans, connection fees, any financial assistance, funds received from activities related to and not related to the distribution of electricity, and other sources in accordance with current legislation”.

In reality, the investment needs do not depend on the level and amount of funds made available from certain types of revenues of the company. Moreover, it is likely that the more advanced and modernized the grid, the higher the depreciation cost will be. Therefore, the mandatory scale of investments will be higher in the grids of higher value. The revenues from reactive power are elaborated above; they should be either deducted from required revenues or assets financed from it taken out from the RAB.

The economic operators should be free to choose the most cost effective funding structure made of equity and debt. The regulator is free to decide what financing leverage it will recognize as reasonable to determine the weighted average costs of capital, but it should not prescribe how an economic operator will provide the funding. The mandatory appropriation of certain funds for investments amounts to putting the regulator in a position of managing the company’s finances.

In practice, investments in new assets are financed either from equity or loans, or acquired at no cost, as grants and donations. These additional sources of funding, specified in the Procedure on investment programmes, create confusion in terms of accounting treatment and regulatory recognition of the corresponding revenues. Even Directive 2009/72/EC points out that vertically integrated undertakings may decide on the financing of an unbundled DSO and set target levels of its indebtedness and financial leverage.

Whereas accumulated depreciation and return on investment (profit) are commonly used to finance new investments from equity capital, donations and grants, even if given in kind, should be recorded to reflect the nature of this transaction.

DSOs as regulated economic operators are entitled to the return of the investments in assets funded from their own equity capital or loans. They should not be entitled to receive return of

assets or return on assets paid by customers, either from the connection fee or charges for reactive power.

According to the current requirement for mandatory investment, the higher the value of a DSO's assets, the more investment it has to make. Most importantly, investment in the network has to be based on the need and investment plans, not on the funds available from the sources defined in the methodology.

4. Recommendations

4.1 Transition period

The requirements and criteria for tariff setting during the transition period, and more importantly, the duration of transition period, are not explicitly stipulated, leaving space for arbitrary decisions.

The different tariff methodologies, different quality requirements, different rates of return established in a non-transparent procedure may lead to discrimination between network users solely based on the fact if their operator has chosen to apply for incentive tariffs or not.

- **The duration of the transition period should be clearly defined, as well as the conditions and manner of adjustment of the parameters for switching from one methodology to another.**
- Most importantly, the **methodology and the principles to determine the rate of return on invested capital should be adopted as an integral part of the tariff setting rules**, following a transparent procedure.
- **The conditions, procedure and manner to change the parameters during the period of their envisaged implementation should be explicitly stated.**

4.2 Regulatory Assets Base

The Tariff Methodology and the RAB Procedure have to clearly define the criteria for recognition of the fair value of assets in use to be applied equally for all operators regardless of their ownership status.

Regulatory accounting should present accurate information on the transactions of regulated undertakings, with the aim to ensure fair tariffs which reflect justified costs. Recalling that the SPF Methodology meets the requirements of international valuation standards, regulatory accounting should be compatible with statutory accounting and respect the core principles of recording, disclosure and reporting of relevant transactions and the position of the regulated business.

To ensure that regulatory accounts present the fair position of a company and that transactions are recorded in accordance with the instructions of the regulator and the State Property Fund, the accounts must be audited and the auditor's report published. It is recommended that the regulator at least approves the terms of reference for the audit.

- **All DSOs should be obliged to disclose the fair value of assets in accordance with accounting standards.** If the value of assets for regulatory purposes is based on the carrying value determined in accordance with rules other than accounting standards, the audit should extend to the regulatory accounting and records therein.
- The assets included in the RAB must be defined clearly to avoid any ambiguity and to ensure that the operator is entitled to receive the return on the investment in assets used and usable for performing the regulated activity, and to make sure that there will be no double returns.

- Specifically, **the status of items such as land owned and used for distribution activity and the status of goodwill and stocks for determination of the RAB must be clearly defined.**
- **The remaining useful life of assets subject to revaluation must be determined in accordance with their actual condition, usefulness and usability, instead of 30 years for all assets. Revaluation should include setting the remaining useful life for each asset, or when not applicable, for a group of assets.**
- Since revaluation is imposed as an obligation of the operators, **the costs of revaluation of assets should be recognized as justified costs. The normal regulatory scrutiny to check prudence of incurred costs of valuation should be applied.**
- **The mandatory revaluation and recognition of the revalued RAB should be accompanied by a proper recording and disclosure of the revaluation reserve and the realization of the revaluation reserve in the regulatory accounting.** Revaluation for regulatory purposes must not be exempted from the application of general rules on fair presentation and disclosure of results of the revaluation.
- **Fully depreciated assets with carrying value zero should not be revalued and depreciated again at a restated value. Instead, such assets, if still used and usable, should be kept in the fixed assets register at zero value** in order to be included in the calculation of the respective cost of operation and maintenance, even with an additional allowance as an incentive (for more details see [ECS Policy Guidelines](#)).

4.3 Tariff structure

The tariff structure should be flexible to enable fair charging of existing and new network users in accordance with their pattern of network use. The allocation of costs solely on the basis of volume of distributed electricity does not reflect fairly the costs caused to the operator.

- In order to improve cost reflectivity, the **Tariff Methodology should allow the allocation of costs to network users based on the actual or allowed peak demand, regardless of the measuring unit (capacity or energy), which may also entail reconsidering the number of customer classes.**
- All tariffs and charges imposed on the network users should be adequately reflected in the tariff system and recognized within the component of required revenues. **Charges for reactive power are part of the overall tariff system and should be adequately reflected in the Tariff Methodology.**

3.4. Investments and financing

The present rules oblige network operators to invest in the acquisition of fixed assets all revenues accrued from reactive power and connection fees, as well as the accrued depreciation.

- The investment needs do not depend on the level of certain types of costs or revenues of the company, and therefore **investment in the network should not be based on the funds available from the sources defined in the methodology.**

- Network development, including rehabilitation of existing and acquiring new assets, is financed from equity, loans and grants. **Whereas NEURC may have the competence to recognize any share of equity and debt in a company's accounts for setting the WACC, in the Secretariat's understanding, it should not be entitled to decide what the actual share will be.**
- On the other hand, when assets are acquired at no cost to the DSO, as a grant or a donation (as opposed to from equity or loan), the DSO is not entitled to earn return of investment on such items.
- **If revenues from connection fees and reactive power are not a deductible component to determine required revenues, but instead are mandatorily appropriated for investments, then the depreciation of respective assets should not be recognized as costs for determination of required revenue.**

Vienna, 16 February 2021

A handwritten signature in blue ink, appearing to read "Janez Kopač".

Janez Kopač
Director

Annex Distribution tariffs 2019-2021

Distribution network tariffs for first voltage class

in UAH/MWh

No	DSOs	1 January 2019	1 August 2019	1 October 2019	1 January 2020	1 March 2020	1 July 2020	1 August 2020	1 September 2020	1 January 2021
1	Vynnytsiaoblenergo	135,15	85,19	84,39	153,65	153,65	153,65	146,59	146,59	167,14
2	Volynoblenergo	97,77	52,76	52,2	107,52	107,52	107,52	101,17	101,17	118,34
3	DTEK Dniprovski elektromerezhi	62,55	49,76	51,14	83,13	83,13	83,13	81,39	81,39	93,38
4	DTEK Donetsk elektromerezhi	152,18	96,51	94,56	191,93	191,93	191,93	185,14	185,14	206,32
5	Zhytomyroblenergo	153,42	98,78	97,97	179,17	179,17	179,17	172,04	172,04	212,81
6	Zakarpattiaoblenergo	181,46	129,35	129,15	228,37	228,37	228,37	223,71	223,71	272,28
7	Zaporizhiaoblenergo	69,93	42,09	42,81	79,62	79,62	79,62	77,42	77,42	94,44
8	DTEK Kyivski elektromerezhi	63,06	39,55	41,83	69,6	69,6	69,6	68,24	68,24	84,16
9	Kyivoblenergo	157,98	91,25	80,76	164,63	164,63	164,63	157,1	157,1	172,48
10	Kirovogradoblenergo	201,12	123,45	122,59	215,38	215,38	215,38	205,68	205,68	235,57
11	Lvivoblenergo	123,65	70,44	69,8	133,61	133,61	133,61	127,03	127,03	139,33
12	Mykolaivoblenergo	133,32	90,54	91,97	144,05	144,05	144,05	138,56	138,56	188,55
13	Odesaoblenergo	114,54	70,41	69,66	123,26	123,26	123,26	117,86	117,86	134,82
14	Poltavaoblenergo	91,99	51,96	52,51	106,16	106,16	106,16	103,52	103,52	110,69
15	Prykarpattiaoblenergo	109,41	69,53	69,57	133,52	133,52	133,52	129	132,89	165,59
16	Rivneoblenergo	135,18	92,75	92,24	159,93	159,93	159,93	153,82	153,82	150,21
17	Sumyoblenergo	100,46	81,43	90,1	123,23	123,23	119,63	118,06	118,06	165,23
18	Ternopiloblenergo	142,5	79,49	78,28	155,12	155,12	155,12	146,17	146,17	168,34
19	Kharkivoblenergo	142,8	85,84	84,9	161,9	161,9	161,9	154,83	154,83	184,07
20	Khersonoblenergo	221,42	144,81	142,71	303,43	303,43	303,43	294,04	294,04	301,38
21	Khmelnyskoblenergo	142,46	90,68	89,42	167,23	167,23	167,23	159,84	159,84	192,18
22	Cherkasyoblenergo	101,15	52,51	52,06	102,11	102,11	102,11	95,65	95,65	98,15
23	Chernihivoblenergo	166,55	94,25	93,55	188,05	188,05	188,05	177,75	177,75	194,56
24	DPEM PrJSC Atomservis	12,2	6,13	7,68	14,7	14,7	14,7	15,35	15,35	16,27
25	Regional electrychni merezhi	73,17	56,39	59,79	59,79	85,81	85,81	86,55	86,55	111,83
26	DTEK Vysokovoltni merezhi	25,07	17,67	24,32	33,92	33,92	33,92	38,85	38,85	53,25
27	PJSC Ukrzaliznytsya	118,13	61,44	64,47	173,89	173,89	173,89	174,2	174,2	192,82
28	Mis'ki elektrychni merezhi	57,7	50,78	41,16	41,16	41,16	41,16	41,16	41,16	
29	PEEM CEK	86,86	60,2	60,43	97,33	97,33	97,33	93,91	93,91	83,55
30	Chernivtsioblenergo	98,4	52,85	51,76	105,35	105,35	105,35	98,86	98,86	108,71
31	Luhanske energetychno obiednannia	316,88	215,01	212,31	212,31	345,34	345,34	332,13	332,13	344,48
32	DTEK PEM- Energovugillya	26,18	22,93	25,44	68,54	68,54	68,54	70,53	70,53	27,14
33	GARANT ENERGO M (Naftogaz Teplo LLC)	136,01	118,8	117,87					151,62	274,84
34	GARANT ENERGO M (Naftogaz Teplo LLC)	142,69	85,7	85,8					213,98	127,07

Distribution network tariffs for second voltage class

in UAH/MWh

№	DSOs	1 January 2019	1 August 2019	1 October 2019	1 January 2020	1 March 2020	1 July 2020	1 August 2020	1 September 2020	1 January 2021
1	Vinnitsiaoblenergo	766,83	623,49	616,05	909,89	909,89	909,89	898,7	898,7	1150,4
2	Volynoblenergo	666,97	541,69	532,79	763,08	763,08	763,08	754,07	754,07	1020,03
3	DTEK Dniprovski elektromerezhi	430,41	396,27	410,95	535,6	535,6	535,6	550,46	550,46	697,92
4	DTEK Donetsk elektromerezhi	748,59	578,98	564,84	961,75	961,75	961,75	943,21	943,21	1121,27
5	Zhytomyroblenergo	791,36	646,89	640,28	903,8	903,8	903,8	893,42	893,42	1188,01
6	Zakarpattiaoblenergo	838,69	665,89	664,76	982,38	982,38	982,38	971,01	971,01	1266,75
7	Zaporizhiaoblenergo	525,03	412,35	421,52	646,35	646,35	646,35	653,8	653,8	843,9
8	DTEK Kyivski elektromerezhi	229,29	166,63	177,8	283,36	283,36	283,36	285,84	285,84	374,28
9	Kyivoblenergo	557,24	399,94	340,26	610,08	610,08	610,08	599,13	599,13	754,79
10	Kirovogradoblenergo	818,45	683,27	677,1	887,04	887,04	887,04	879,04	879,04	1179,59
11	Lvivoblenergo	634,02	504,57	498,03	726,72	726,72	726,72	717,49	717,49	955,36
12	Mykolaivoblenergo	641,17	515,37	506,62	777,58	777,58	777,58	769,7	769,7	987,35
13	Odesaoblenergo	623,1	483,32	476,88	703,22	703,22	703,22	692,46	692,46	890,28
14	Poltavaoblenergo	642,46	437,04	442,85	825,4	825,4	825,4	829,9	829,9	932,73
15	Prykarpattiaoblenergo	804,45	658,98	659,52	935,98	935,98	935,98	930,25	970,92	1.276,22
16	Rivneoblenergo	647,21	477,26	474,47	708,01	708,01	708,01	694,35	694,35	926,21
17	Sumyoblenergo	798,63	686,49	762,62	944,72	944,72	914,41	910,18	910,18	1.226,67
18	Ternopiloblenergo	806,45	629,54	616,09	914,58	914,58	914,58	894,31	894,31	1.211,75
19	Kharkivoblenergo	519,45	395,31	389,77	618,78	618,78	618,78	609,07	609,07	820,39

20	Khersonoblenergo	671,97	528,6	519,5	794	794	794	781,25	781,25	1.028,86
21	Khmelnyskoblenenergo	778	640,87	629,65	905,5	905,5	905,5	890,57	890,57	1.121,43
22	Cherkasyoblenergo	605,57	474,15	467,26	759,12	759,12	759,12	749,2	749,2	928,33
23	Chernihivoblenergo	794,75	665,76	658,45	952,89	952,89	952,89	941,99	941,99	1.188,69
24	DPEM PrJSC Atomservis	479,33	367,24	531,53	723,04	723,04	723,04	862,03	862,03	1137,63
25	Regional electrychni merezhi	258,86	240,14	256,92	256,92	283,53	283,53	298,48	298,48	371,31
26	DTEK Vysokovoltni merezhi	295,82	298,66	450,39	597,44	597,44	597,44	770,39	770,39	1.508,28
27	PJSC Ukrzaliznytsya	463,44	256,28	270,74	695,69	695,69	695,69	707,92	707,92	907,44
28	Mis'ki elektrychni merezhi	572,43	519,04	414,35	414,35	414,35	414,35	414,35	414,35	
29	PEEM CEK	514,87	433,17	435,14	577,8	577,8	577,8	577,07	577,07	759,88
30	Chernivtsioblenergo	687,01	514,9	499,15	783,49	783,49	783,49	763,99	763,99	991,84
31	Luhanske energetychni obiednannia»	1145,82	970,25	955,64	955,64	1 298.56	1 298.56	1.280,95	1280,95	1495,98
32	DTEK PEM- Energovugillya	397,91	393,61	440,89	577,62	577,62	577,62	603,38	603,38	245,09
33	GARANT ENERGO M (Naftogaz Teplo LLC)	537,2	426,33	423,17					1211,7	775,66
34	GARANT ENERGO M (Naftogaz Teplo LLC)		854,79	856,83					673,02	1300,39

