

METHODOLOGY FOR THE DETERMINATION, APPROVAL AND APPLICATION OF TARIFFS FOR THE ELECTRICITY GENERATED FROM RENEWABLE ELECTRIC ENERGY AND FUEL

I. GENERAL PROVISIONS

1.1. This Methodology is developed according to the provisions of the Renewable Energy Act, no 160-XVI of 12.07.2007, the National Accounting Standards (NAS) of the Republic of Moldova and has the aim to establish a single methodology for the determination, approval and application of regulated tariffs for all producers of electric energy generated from renewable sources (hereinafter – renewable energy) and biofuel.

1.2. The Methodology establishes:

- the structure and the method to determine regulated incomes and expenditures;
- the method of determining, approval and application of regulated tariffs;
- procedures and the method to adjust tariffs for the period of the Methodology validity.

1.3. The mechanism applied for determining and regulation of tariffs is based on the following principles:

- protection and enhancement of state energy security;
- reduction of negative impact of the energy sector on the environment;
- covering companies' real costs for adequate exploitation of production units and for normal carrying out of the regulated activity;
- companies shall perform an efficient and profitable activity that would allow them to recover their financial resources invested in development, modernization and reconstruction of production capacities.

1.4. This Methodology is mandatory for energy generation companies in case the capacity of the power plant of the producer is not less than 10 kW and the electricity generated is designed to be commercialized on the electric energy market and for all companies producing biofuel designed to be commercialized on the market of petroleum products.

1.5. This Methodology shall come in force from the date of its publication in Monitorul Oficial (Official Gazette) and shall be valid for a period of 15 years.

II. THE METHOD USED TO CALCULATE TARIFFS FOR RENEWABLE ELECTRIC ENERGY AND BIOFUEL

2.1. The tariffs for the delivery of renewable energy are assessed for each producer independently and are established for 1 kWh of electricity, according to the following formula:

$$TE_t = \frac{RI_t}{W_t} \quad (1)$$

where:

TE_t - tariff for delivery of renewable energy for year “ t ”, MDL/kWh;

RI_t - regulated incomes, necessary to be obtained by the company in year “ t ”, MDL;

W_t - electric energy delivered by the company in year “ t ”, kWh.

2.2. The tariff for delivery of biofuel (biodiesel, bioethanol) is determined for each producer independently and established for 1 ton of biofuel, according to the formula:

$$TFbio_{y,t} = \frac{RI_t}{Vdeliv_t} \quad (2)$$

where:

$TFbio_{y,t}$ - tariff for delivery of biofuel of type y in year “ t ”, MDL/t;

RI_t - regulated incomes, necessary to be obtained by the company in year “ t ”, MDL;

$Vdeliv_t$ - delivered biofuel volume, based on projected production quantity, tonnes;

2.3. The regulated incomes of the company in year “ t ” are determined:

2.3.1. For energy producing companies:

$$RI_t = C_{fuel,t} + CD_t + C_{cap,t} + Desv_{t-1} \quad (3)$$

2.3.2. For biofuel producing companies:

$$RI_t = C_{r.m.,t} + CD_t + C_{cap,t} + Desv_{t-1} \quad (4)$$

where:

$C_{fuel,t}$ - the cost of fuel purchased for production of electric energy, which is determined according to the formula:

$$C_{fuel,t} = Vf_t \times Cf_t \quad (5)$$

where:

Vf_t - the volume of fuel needed for electric energy production, tonnes (m^3). It is determined according to the formula:

$$Vf_t = W_t \times Cs \times \frac{Efe}{Eft} \quad (6)$$

where:

C_s - specific consumption of conventional fuel (kg) needed for the production of 1 kWh of electric energy, which is determined according to the formula:

$$C_s = \frac{122,8 \times 100}{\rho} \quad (7)$$

where:

ρ - return rate of the power plant, %;

E_{fe} - calorific power of conventional fuel, equal to 7000 kCal;

E_{f_t} - calorific power of fuel used for electric energy generation, kCal.

C_{f_t} - average cost of 1 ton (m^3) of fuel used for electric energy generation, which includes the purchasing price, transportation expenses, excises, customs duties, etc. and which according to NAS are included in the cost of purchased fuel, MDL;

$C_{r.m.,t}$ - the cost of raw material for production of biofuel, which includes the price including the purchasing price, transportation expenses, excises, customs duties, etc. and which according to NAS are included in the cost of purchased raw material, MDL;

CD_t - own costs of the company, related to production, service and exploitation of production units, commercialization of renewable electric energy and biofuel. These costs are formed of expenditures related to depreciation of fixed assets, remuneration of work, material consumption and expenditures, consumption and expenditures related to serviced provided by third parties, other operational consumption and expenditures, taxes and duties. Thus:

$$CD_t = Depr_t + LCD_t + CMD_t + C_{third,t} + OthCD_t \quad (8)$$

where:

$Depr_t$ - depreciation of fixed assets, which includes the depreciation of assets, used directly in the production process, of those with commercial, general and administrative designation, evaluated according to the National Accounting Standards (NAS). Depreciation of fixed assets is determined emerging from the initial value of fixed assets of production companies of electric energy and biofuel and the period of their use. This Methodology provides for, that the period of useful functioning taken into account when determining the depreciation of production installations will not exceed 15 years;

LCD_t - costs related to labour remuneration of the enterprises' personnel, including social contributions to insurance and health insurance premiums in year "t";

CMD_t - material consumption and expenditures in year "t";

$C_{third p.,t}$ - consumption and expenditures related to services provided by third parties, in year "t";

$OthCD_t$ - other operational consumptions and expenditures, related to production of renewable electric energy and biofuel, in year "t";

$C_{cap,t}$ - return rate of the companies' assets, given into exploitation as a result of

investments made in production of electric energy and biofuel;

$Desv_{(t-1)}$ - component for redressing the incomes (financial deviations) resulted from the difference between the parameters applied in the process of determining the regulated planned incomes for the previous year and the real ones obtained in the previous year “ $t-1$ ”.

Financial deviations are determined only on the bases of the difference occurred in year of administration from the modification of the following parameters:

- purchasing price of fuel;
- cost of raw material purchased to produce biofuel;
- inflation rate in the Republic of Moldova;
- approval or amendment of legal and normative acts, leading to modification of costs;
- the delivered volume of renewable electric energy or biofuel.

III. THE METHOD USED TO CALCULATE INVESTMENTS’ RETURN RATE

The return rate of assets given into exploitation as a result of made investments is determined according to the following formula:

$$C_{cap,t} = NVA_t \times Rr_t \quad (9)$$

where:

NVA_t - net value of company’ assets on long term, used to produce renewable electric energy and biofuel, which is determined as the difference between the initial value of assets on long term (fixed assets and nonmaterial assets) (IVA) and the accumulated depreciation ($\sum Depr$) of these assets in the period from the year when the production units were given into exploitation till the end of year of administration “ t ”, and is calculated according to the following formula:

$$NVA_t = IVA - \sum_{i=1}^{t-1} Depr_i \quad (10)$$

Rr_t - return rate of new assets, determined according to the method of Weighted Average Cost of Capital (WACC). This methodology envisages that return rate for the companies producing renewable energy and biofuel shall be determined according to the formula:

$$Rr_t = WACCe.t._t \times K_t \quad (11)$$

where:

$WACCe.t._t$ - Weighted Average Cost of Capital determined and approved by ANRE for the electric energy distribution companies in year “ t ”;

K_t - multiplier applied for generation of renewable energy and biofuel in year “ t ”. This multiplier is established as follows:

- for the first five years of activity (years 1-5) will be equal to 1.5;

- for the second five years of activity (years 6-10) will be equal to 1.3;
- for the third five years of activity (years 11-15) will be equal to 1.1.

IV. THE METHOD TO DETERMINE, APPROVE AND ADJUST TARIFFS

4.1. According to this Methodology, the companies shall present to ANRE every year, till the end of November, the calculation of tariffs for the following year, made according to the provisions of this Methodology.

4.2. ANRE shall examine the materials presented by the companies and, in case, there are valid reasons, adjust, approve and publish new tariffs, which shall enter into force, starting from January, next year, and will be valid for the entire calendar year. ANRE shall have the right to decline approval of the proposed tariff, if it considers that costs and incomes required by the company are not reasonable. In doing so, ANRE shall provide the company with an explanation in writing as to its finding with regard to costs and incomes and offer direction to the company as to the revision of presented materials.

4.3. For the first two years of activity, the companies shall present detailed materials necessary to determine their own consumptions and expenditures (*CD*). Consumptions and expenditures accepted by ANRE for year 2 of activity shall be considered as main costs for further adjustment of tariffs for the entire period of validity of this Methodology. For the following years the main consumptions and expenditures shall be adjusted every year, on the basis of consumption price indicators in the Republic of Moldova (*CPIM*) adjusted to efficiency indicator.

Thus, in order to take into consideration the scale economy, consumptions and expenditures shall be adjusted every year as follows:

$$CD_t = CD_{(t-1)} \times \prod_{i=1}^t 0,99 \times \left(1 + \frac{CPIM_t}{100}\right) \quad (12)$$

4.4. Tariffs for delivery of renewable electric energy and biofuel shall be approved as fixed tariffs and thus, avoided the discrimination of consumers in the process of tariff application. Tariffs shall be approved by the Administration Council of the National Agency Energy Regulation (ANRE) and published in the Official Monitor of the Republic of Moldova.

4.5. In approving tariffs, ANRE shall take into account, as the case might be, the prices on the international market, and has the right, based on the calculation made according to this Methodology, to approve average tariffs for production of renewable electric energy and biofuel for a long term period.