

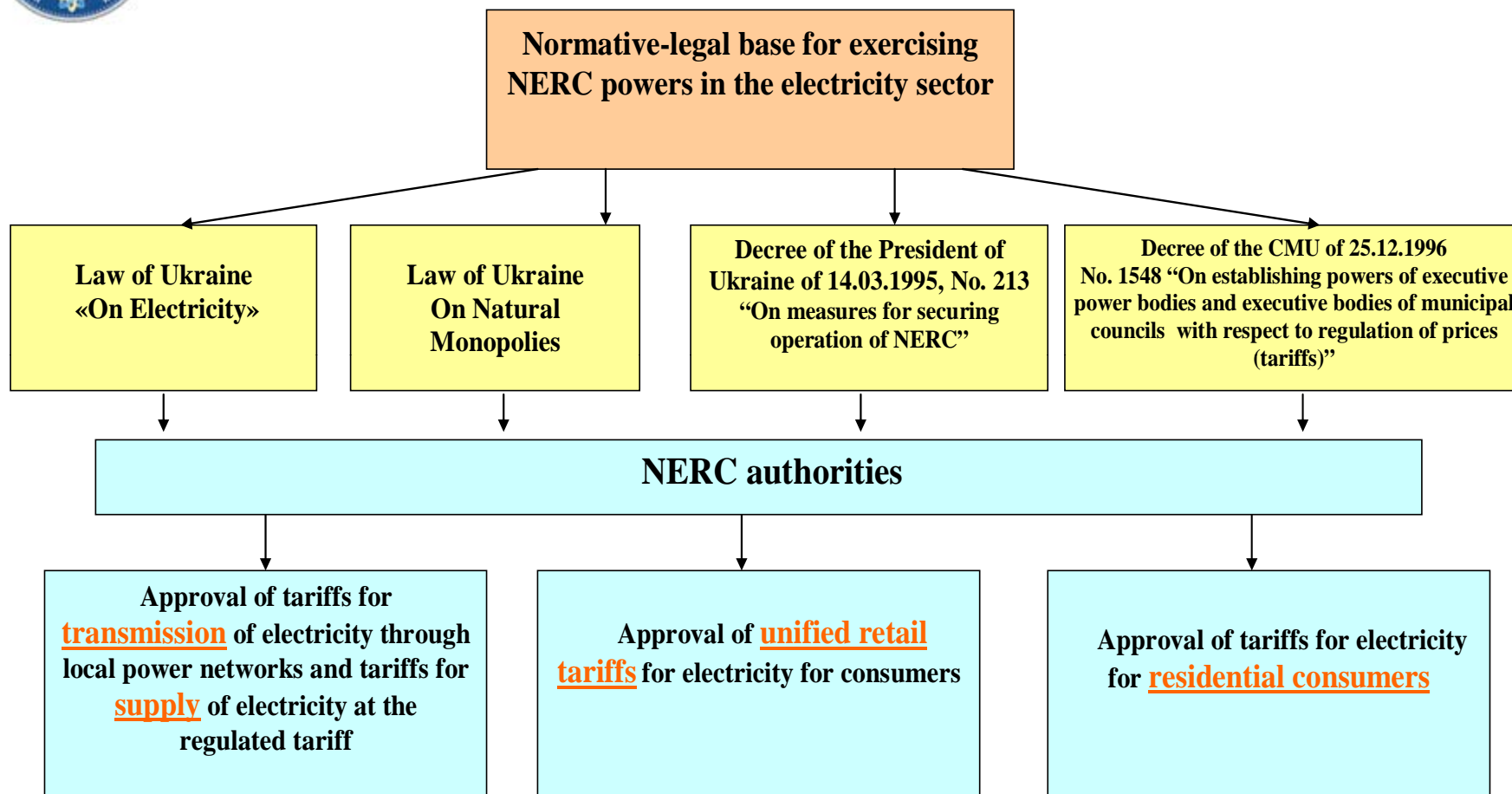


Tariff Regulation: prospects of Ukraine

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Pricing and Tariff Policy Framework

- State regulation of tariffs for monopolies
- Free pricing in competitive sectors
- Recovery of economically justified costs of economic entities related to carrying out licensed types of activities
- Control over justified costs of natural monopolies
- Protection of consumer rights and openness of the procedure for revision and approval of tariffs



According to Article 17 of the Law
on Electricity the following is
envisioned:

- wholesale prices for electricity should be designed in accordance with provisions of the Agreement of members of the Wholesale Electricity Market
- retail tariffs for electricity are designed by energy supply companies in accordance with Conditions and Rules for carrying out entrepreneurial activities on delivery of electricity
- tariffs for transmission and supply of electricity through local power networks are regulated by the National Electricity Regulatory Commission.



Normative-legal basis for regulation of distribution companies

- **Law of Ukraine on Prices and Pricing**
- **Law of Ukraine on Taxation of Profit of Enterprises**
- **Law of Ukraine on the Taxation System**
- **Law of Ukraine on Accounting and Financial Reporting in Ukraine**
- **Conditions and Rules for carrying out entrepreneurial activities on supply of electricity at the regulated tariff**
- **Procedure for setting or revising tariffs for licensees on transmission of electricity through power networks and on supply of electricity at the regulated tariff.**
- **Temporary methodology of calculation of the retail tariff, tariff for transmission and supply of electricity**
- **Procedure for determining retail tariffs for electricity, tariffs for transmission of electricity through local power networks and tariffs for supply of electricity for licensees on supply of electricity at the regulated tariff, which ensure full payment for electricity purchased in the wholesale electricity market of Ukraine**
- **Mechanism of determining labor remuneration fund for licensees on transmission of electricity through local power networks and on supply of electricity at the regulated tariff**
- **Procedure for acquisition of goods, works and services by licensees, for whose relevant activities NERC sets tariffs**



Procedure for setting or revising tariffs for licensees on transmission of electricity through local power networks and on supply of electricity at the regulated tariff:

- **Sets conditions for accepting company's application for consideration**
- **Contains requirements to preparation of an application with detailed list of all documents (see next slide)**
- **Sets the procedure and terms for examining the application**
- **Envisions a possibility to revise tariffs at the initiative of NERC**



Requirement to preparation of an application with detailed list of all documents

- The company submits to NERC an application and the whole list of documents required by that procedure, documents have to be printed in 4 copies and in the electronic form. Meanwhile, the company is responsible for accuracy of the information.
- The company has to allocate in a justified manner costs between licensed types of activities and other types of entrepreneurial activities and to confirm this allocation with arguments and necessary documents.
- The company has to justify each item of operating costs and profit that are included in calculation of tariffs.
- In order to justify planned costs for reconstruction, upgrading and development, the company submits its investment program to NERC.
- The procedure determines that funding of the investment program is done at the expense of profit, depreciation charges, payment for exchanges of reactive power, and also at the expense of penalties (fines, etc.), external and other sources of funding.



Revision of Tariffs at NERC's Initiative

- Expiry of the period of validity of tariffs, their structure or certain cost elements in the structure
- Establishing the fact of non-targeted or unjustified use of cash
- Use of cash for purposes or in amounts not envisioned in the approved investment programs without coordination with NERC;
- Submission of inaccurate information
- Carrying out other types of activities without permission from NERC;
- Failure to execute the program of measures aimed at improvement of the quality of electricity
- Failure to fulfill obligations on payment for electricity purchased at WEM
- Violation of conditions of carrying out purchase of goods, works and services specified in current legal acts
- Changes in the volumes of transmission or supply of electricity in comparison with those accounted for in current tariffs more than by 5%
- Changes in costs of the company for reasons that are beyond control of the licensee, if it leads to changes in the level of approved tariffs more than by 5%.

Control over carrying out licensed activities

- Is carried out in accordance with the Procedure for control over licensees' compliance with Conditions and Rules for carrying out entrepreneurial activities related to transmission of electricity through local power networks and on supply of electricity at the regulated tariff.
- Is carried out by NERC and its territorial branches
- Inspections can be scheduled and ad hoc



Formation of tariffs for transmission and supply of electricity

Tariffs for transmission are divided into 2 voltage classes depending on the level of voltage:

1 class – 27.5 -154 kV

2 class - 0.4 -10 kV.

Tariffs for supply of electricity are divided into 2 groups:

1 group

- Industrial and similar consumers connected to networks with voltage 750 kV and more
- Industrial and similar consumers connected to networks with voltage less than 750 kV
- Electric railroad transport
- Electric municipal transport
- Non-industrial consumers
- Agricultural consumers-producers

2 group

- Residential consumers (population and localities)



Setting tariffs for transmission and supply of electricity

It has to be noted that in order to avoid cross subsidies each energy supply company has to ensure unbundling of costs by types of licensed activities – transmission and supply

For this purpose each company develops and approves an internal order for such unbundling of costs with the list of all accounts (sub-accounts), and financial economic activity is carried out in strict compliance with this order



Calculation of tariffs for transmission of electricity through local networks

Tariff for transmission of electricity for consumers of the 1 class is calculated by the formula:

$$T_1^M = \frac{B_{U1}}{E_1}$$

T_1^M - tariff for transmission of electricity through networks of the 1 voltage class

B_{U1} - costs of transmission of electricity through networks of the 1 voltage class

E_1 - volume of electricity transmission through networks of the 1 class

Tariff for transmission of electricity for consumers of the 2nd class is calculated by the formula:

$$T_2^M = \frac{T_1^M}{(1 - k_{P2}^M)} \times \left(1 - \frac{E_{r2}}{(E_{T1} + E_{r2})} \right) + \frac{B_{U2}}{E_2}$$

k_{P2}^M – coefficient of standard technological losses in networks of the 2nd voltage class

E_{r2} - volume of electricity that inflows directly into networks of the 2nd voltage class

E_{T1} – volume of electricity that is transformed from networks of the 1st voltage class to networks of the 2nd 2 voltage class

B_{U2} – costs of transmission of electricity through networks of the 2nd voltage class

E_2 – volume of electricity transmitted through networks of the 1st class



Calculation of tariffs for supply of electricity

Tariff for supply for consumers of group I is calculated by the formula:

$$T_1^{\Pi} = \frac{B^{\Pi}}{(E_{C1}^{\Pi} + K \times E_{C2}^{\Pi})}$$

B^{Π} - costs of supply of electricity

$E_{C1}^{\Pi}, E_{C2}^{\Pi}$ - volumes of electricity sold to own consumers of groups I and II

K – Difficulty factor when supplying electricity to consumers of group II

Tariff for supply for consumers of group II is calculated by the formula:

$$T_2^{\Pi} = \frac{K \times B^{\Pi}}{(E_{C1}^{\Pi} + K \times E_{C2}^{\Pi})}$$

Difficulty factor is equal to 5.

Difficulty factor motivates the energy supply company to supply electricity to consumers of group II



Specifics of regulation of distribution companies

- 40 distribution companies
- Out of them 36 energy supply companies
- 5 companies that were privatized in 2001 by strategic investors work according to the methodology approved by Decree 301:
 - OJSC “EC “Zhitomiroblenergo”
 - CJSC “A.E.C. Kievoblenergo»
 - CJSC “Kirovogradoblenergo”
 - CJSC “A-E-S “Rovnoenergo”
 - OJSC “EC “Sevastopolenergo”
- Others work according to the Methodology approved by Decree 564
- “Cost plus” method serves as a basis for calculation of tariffs under Methodology 564, and profit is included according to approved investment plans.



Investment plan

- Approved by NERC
- Coordinated with the Ministry of Fuel and Energy
- Takes into consideration volume, direction and purpose of investments
- Suggests a procedure for changing an investment plan – additional investments for inclusion in the tariff have to be coordinated with NERC
- Envisions liability for non-execution of the investment plan – sanctions in the form of reduction of tariffs



Specifics of the tariff methodology approved by NERC Decree of 02.04.2001 No. 309

- 1. Operating costs

full current costs of the company are determined according to the valid method for inclusion in the tariff justified necessary operating costs

so-called basic levels of costs are set and fixed for 7 years

each year fixed levels of operating costs are adjusted by NERC :

- material costs – for the producer price index (published by the State Statistic Committee of Ukraine)

- foreign currency component of operating costs – taking into account devaluation of hryvna to U.S. dollar (at the official exchange rate of the National bank of Ukraine)

- separate operating costs – in case of changing relevant legal and normative acts of Ukraine

adjustment of levels of operating costs is done if total influence of the listed factors leads to increase of tariffs for transmission and supply by more than 5%.



2. Profit on the cost of purchase of a block of shares

is calculated as a rate of return on the cost of purchase of a block of shares and production investments

rate of return for the first 7 years – from 2001 to 2008 – was set at the level of 17 % for the cost of purchase of a block of shares

for the next 5 years – from 2009 to 2013 – the rate of return is set by NERC, but it cannot be lower than 11 %.

for year 2009 and 2010 the rate of return was set by NERC at the level of 15%.

profit is allocated to transmission and supply pro rata to allocation of operating costs.



3. Profit on production investments

Production investments mean that an investor contributed cash directly in development of production

Only those production investments are taken into account in the tariff, which are made in accordance with investment plants approved by NERC

The basis for determination of profit for production investments during the first 4 years of tariff calculation in accordance with this order is determined by the formula:

$$B_i = I_n + I_H - A_i$$

I_n – is the sum of production investments made at the beginning of the period

I_H – is the sum of production investments, which would be made during the period, for which a base is determined for accrual of profit for production investments

A_i – is the sum of depreciation charges for production investments made as of the beginning of the period

A rate of return for production investments during the first 4 years is set at the level of 17%



3. Profit on production investments

starting with the fifth year accrual of the rate of return on production investments is determined separately for investments made at the expense of own cash and investments made at the expense borrowed funds

rate of return for production investments at the expense of own funds is set on the level of 17%

rate of return on production investments at the expense of borrowed funds is determined by the formula:

$$H_n = B_{\phi} + (17 - B_{\phi})/2$$

B_{ϕ} – actual interest rate for the credit, but not more than 17%

during seven years, actual rate of return on the amount of cost of purchase of a block of shares and production investments should not exceed 25%.



Normative-legal basis for tariff setting in the retail market

- **Procedure of formation of a retail tariff for electricity for consumers, except for the population and localities**
- **Procedure for calculation of unified retail tariffs for electricity sold to each voltage class, except for the population, localities and street lighting in the territory of Ukraine**



Setting of Retail Tariffs

$$T_{ij} = \frac{\varrho_p^{c3}}{\prod_{l=1}^j (1 - k_l)} + T_j^M + T_i^{\Pi}$$

i – consumer group

j – consumer class

l – voltage class of power network through which electricity was transmitted to the final consumer

ϱ_p^{c3} – forecasted average purchase price of electricity for the settlement month

k_l – economic coefficient of technological costs of electricity at the 1st voltage class

T_j^M – tariff for transmission of electricity

T_i^{Π} – tariff for supply of electricity



Forecasted average purchase price is formed as an average of the forecasted wholesale market price and price of purchase of electricity from independent producers of electricity balanced against relevant purchase volumes.

$$\Pi_p^{cz} = \frac{\Pi_p^{OP} \cdot E_p^{OP} + \Pi_p^H \cdot E_p^H + \Delta C_{p-2}}{E_p^{OP} + E_p^H}$$

where:

Π_p^{OP} – is forecasted wholesale market price for the settlement month (approved by NERC)

Π_p^H – price, at which a licensee under a contract buys electricity directly from an independent producer

E_p^{OP} – forecasted volume of purchase of electricity in the Wholesale Electricity Market (WEM)

E_p^H – is forecasted volume of purchase of electricity by a licensee directly from an independent producer

ΔC_{p-2} – is deviation of the size of payment for purchased electricity (deviation of actual from the forecast based on the results for the month preceding the settlement month).



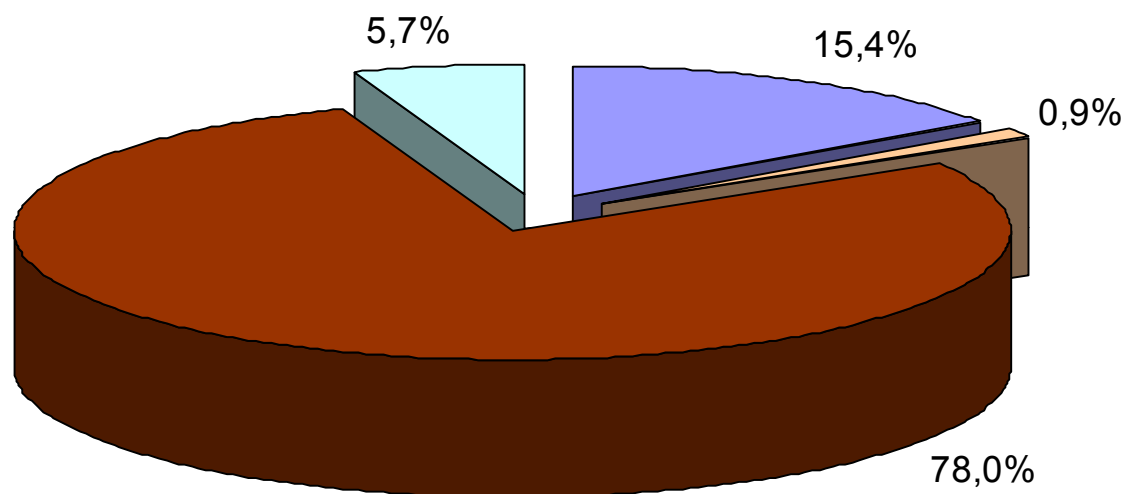
Unified retail tariffs

Were introduced starting with September 1, 2005, in accordance with Decree of the Cabinet of Ministers of Ukraine of 15.08.2005, No. 745

They are calculated by NERC as a weighted average value of estimated retail tariffs by voltage levels among all energy supply companies



Structure of the average retail tariff in 2009



Level of the average retail tariff is 426.80 hrv/MWh

■ transmission tariff - 65.74 hrv/MWh

■ Supply tariff - 4.03 hrv/MWh

■ wholesale market price - 332.90 hrv/MWh

■ standard losses of electricity in networks -17.40 hrv./MWh



THANK YOU FOR ATTENTION!