

ANNEX 21
to the Treaty on the
Eurasian Economic Union

PROTOCOL

on Ensuring the Access to Services of Subjects of Natural Monopolies in Electric Power
Industry, Including the Basics of Pricing and Tariff Policy

1. According to Articles 81 and 82 of the Eurasian Economic Union Treaty (hereinafter - Treaty) this Protocol defines the uniform principles and rules for ensuring the access to services of subjects of natural monopolies in electric power industry.

2. The terms used in this Protocol, shall have the following meanings:

«domestic electric energy (power) demand» - are the volumes of electric energy (power) necessary for consumption in the territories of relevant member States;

«access to services of subjects of natural monopolies in electric power industry area» - is the possibility of the subject of domestic market of one member State to take an advantage of the services of subjects of natural monopolies in electric power industry in territory of other member State;

«replacement of electric energy (power)» - is interconnected and simultaneous delivery of equal capacities of electric energy (power) to the electric power system and then through the different points of delivery located on the border (borders) of member State;

«interstate transmission of electric energy (power)» - provision of services for electric energy (power) transmission and (or) replacement by the authorized organizations of member States. Depending on the legislation of member State, relevant relations are registered by the Contract for the provision of transferring (transit) or other civil-law Contracts, including the Contract for purchase and sale of electric energy (power);

«common electric power market of member States» - is a system of relations between subjects of domestic markets of electric energy of member States connected with

purchase and sale of electric energy (capacity) and accompanying services, operating on the basis of the general rules and relevant Contracts;

«electric energy (power) transmission» - is the maintenance of the electric energy (power) flows generated in territory of one member State through networks of other member State between the points of delivery located on its border (borders);

«subjects of domestic market of electric energy» - are the persons, who are subjects of the market of electric energy (power) of member State according to the legislation of this member State, carrying out their activity in electric power industry, including generation of electric energy (power), acquisition and sale of electric energy (power), distribution of electric energy, power supply of consumers, provision of services for electric energy (power) transmission, operating and dispatching management in electric power industry, sale of electric energy (power), purchase and sale of electric energy;

«services of the subjects of natural monopolies in electric power industry» - are services for electric energy transmission through electric network, operative and dispatching management in electric power industry and other services referred to the area of natural monopolies according to the legislation of member States.

3. The interaction of the member States in electric power industry shall be based on the following principles:

the use of technical and economic advantages of parallel operation of the electric power systems of the member States;

avoidance of economic damage during parallel work;

use of the mechanisms based on market relations and fair competition as one of the basic tools for formation of steady system to meet the demand for electric energy (power);

gradual formation of the general electric power market of member States on the basis of in parallel operating electric power systems of member States, taking into account the features of available models of the electric energy (power) markets of member States;

gradual harmonization of the legislation of member States in electric power industry;

harmonization of technical regulations and rules.

The activity of subjects of natural monopolies in electric power industry shall be regulated on the basis of single principles, rules and methods defined in section XIX of the EAEU Treaty.

4. The member States shall facilitate coordination of programs for electric power development of their states for long-term maintenance of successful cooperation in electric power industry area.

5. Formation of common electric power market of the EAEU shall be carried out on the basis of the following principles:

cooperation based on equality, mutual benefit and prevention of economic damage to any of member States;

balancing economic interests of producers and consumers of electric energy as well as the other subjects of common electric power market of member States;

gradual harmonization of the legislation of member States in the sphere of electric power industry, including in terms of disclosure of the information by subjects of common electric power market of member States;

priority use of mechanisms based on market relations and fair competition for formation of stable system to meet the demand for electric energy (capacity) in competitive activities;

easy access to services of subjects of natural monopolies in the sphere of electric power industry within available technical capability under condition of priority use of specified services for internal needs of member States during interstate transmission of electric energy (power);

gradual transformation of the structure of national vertically integrated companies in the sphere of electric power industry to detach competitive and monopolistic activities;

development of interstate relations in sphere of electric power industry of member States in accordance with agreed model of common electric power market of member States;

gradual formation of common electric power market of member States based on operating in parallel electric power systems of member States taking into account the features of current models of the electric power markets of member States;

use of the technical and economic advantages of the parallel operation of electric power systems of member States in accordance with mutually agreed conditions of parallel operation;

ensuring the access of electric energy producers and consumers to the electric energy markets of member States taking into account interests of national economies at relevant stage of integration of the markets;

electric energy trade between subjects of member States taking into account power safety of the member States.

6. Within the available technical capability, the member States shall provide easy access to the services of subjects of natural monopolies in the sphere of electric power industry under condition of priority use of specified services for compliance with the internal electric energy (power) requirements of member States on the basis of the following principles:

equality of the requirements in relation to the subjects of domestic market of electric energy (power) established by the legislation of member State on the territory, where such services are rendered;

provision of an access to the services of natural monopolies in electric power industry under condition of priority use of such services for meeting domestic demands of member States taking into account the legislation of member States;

maintenance of appropriate technical condition of the electric power objects influencing the modes of parallel operation of electric power systems of member States when rendering of the services by subjects of natural monopolies in the sphere of electric power industry;

Contractual relations arising between the subjects of domestic markets of electric energy of member States;

provision of services by subjects of natural monopolies of member States in electric power industry on non-gratuitous basis.

7. The interstate transmission of electric energy (power) shall be provided on the basis of the following principles:

1) interstate transmission of electric energy (capacity) through an electric power system of adjacent member State shall be provided by member States within available technical capability under condition of priority compliance with electric energy (power) internal needs of member States;

2) technical capability of interstate electric energy (power) transmission shall be based on the following priority:

meeting domestic demand for electric energy (power) of member State, through electric power system of which, is planned to implement the interstate transmission;

ensuring of the interstate electric energy (power) transfer from one part of the electric power system of member State to its other part through electric power system of adjacent member State;

ensuring of the interstate transmission of electric energy (power) through the electric power system of the member State from electric power system of one member State to the electric power system of other member State;

ensuring of the interstate transmission of electric energy (power) through the electric power system of the member State with a view of performance of the obligations concerning the subjects of electric power industry of the third states;

3) in interstate transmission of electric energy (power) the authorized organizations of member States are guided by principle of compensation of cost of the interstate transmission of electric energy (power) proceeding from the legislation of member State;

4) interstate transmission of electric energy (power) with a view of performance of the obligations with reference to the subjects of electric power industry of the third states, is regulated on a bilateral basis taking into account the legislation of the relevant member State.

8. In order to ensure the unhindered interstate transmission of electric energy (power) through electric power systems, the member States shall carry out a complex of the agreed preparatory measures, namely:

Prior to the beginning of the calendar year of electric energy (power) supply, the authorized member States shall declare the planned volumes of electric energy (power), which are assumed to be transmitted between the states, to account them in the national

forecasting balance sheets of electric energy (power) production and consumption, including to account such deliveries in calculation of the tariffs of the services, rendered by subjects of natural monopolies;

On the basis of the calculations of the planned cost of interstate transmission of electric energy (power) the organizations authorized by member States shall conclude the Agreements in the execution of the reached agreements.

In order to maintain the unhindered interstate transmission of electric energy (power) through electric power systems of the member States, authorized bodies of the member States shall use the single interstate electric energy (power) transmission methodology between member States, including the procedure of definition of the technical conditions and volumes of interstate transmission of electric energy (power), and also agreed pricing approaches for the services connected with interstate transmission of electric energy (power) described in Appendix of this Protocol.

The organizations defined according to the legislation of member States shall provide the interstate transmission of electric energy (power) through territory of the state according to the above Stated Methodology.

9. The interstate transmission of electric energy (power) and operation of the facilities of the electric network economy, which are necessary for interstate transmission of electric energy (power) shall be ensured according to the standard legal as well as to normative and technical documents of the member State, rendering the services connected with ensuring of the interstate transmission of the electric energy (power).

10. In case if the interstate transmission of the electric energy (power) is refused, the organizations authorized by member States shall ensure the submission of the evidencing materials about reasons for the refusal.

11. The prices (tariffs) on services of subjects of natural monopolies in electric power industry shall be formed according to the legislation of member States.

The tariffs on services of subjects of natural monopolies in electric power industry at common electric power market of member States shall not exceed the similar internal tariffs for subjects of the electric energy in the domestic market.

12. The relations on interstate transmission of electric energy (power) shall be built taking into account other applicable international Agreements.

Appendix to the Protocol on Ensuring the
Access to Services of Subjects of Natural Monopolies
in Electric Power Industry,
Including the Basics of Pricing and Tariff Policy

Methodology
for Interstate Transmission of Electric Energy (Power) between Member States

1. The general provisions of the procedure for submission of the applications and formation of the annual forecasted volumes of interstate transmission of the electric energy (power) to be included into forecasted balances sheets of electric energy (power) production and consumption, including those ones, which are taken into account in calculating the tariffs for the services of subjects of natural monopolies.

1.1. On the territory of the Republic of Belarus.

1.1.1. The annual forecasted volumes of interstate transmission of electric energy (power) (hereinafter - IST) with regard to national electric network of the Republic of Belarus shall be defined by the organization authorized to such transmission on the basis of the submitted application.

1.1.2. The application for forthcoming calendar year shall be submitted not later than 4th of April, previous year. The annual volume of IST and maximum capacity with breakdown by months shall be indicated in the application.

1.1.3. During consideration of the application, authorized organization of the Republic of Belarus shall be guided by value of available technical capability determined according to this Methodology.

If the declared value of IST is more than the value of available technical capability as a whole for a year or in any month of the year authorized organization of the Republic of Belarus shall direct a motivated refusal to the organization, which has submitted an application.

1.1.4. The announced volumes of IST agreed upon by the authorized organization of the Republic of Belarus shall be attached to the Agreement on transfer of the electric power and taken in account when calculating the tariffs for electric power transmission services.

1.1.5. The volumes of electric energy, which are assumed for IST, can be corrected as agreed by authorized organization of the member States till 1st of November, a year proceeding to the year of the planned IST.

1.2. In the Republic of Kazakhstan.

1.2.1. The annual forecasted volumes of IST through national electric network of the Republic of Kazakhstan shall be defined on the basis of the application for IST, submitted to the system operator of the Republic of Kazakhstan by authorized organization.

1.2.2. The application for forthcoming calendar year shall be submitted not later than 1st of April, previous year. The annual volume of IST with breakdown by months and indication of points of reception and points of delivery of the electric power on the border of the Republic of Kazakhstan shall be indicated in the application.

1.2.3. During consideration of the application, the system operator of the Republic of Kazakhstan shall be guided by value of the available technical capability defined according to this Methodology. When the declared value of IST is more than a value of available technical capability as a whole for a year or in any month of the year, the system operator of the Republic of Kazakhstan shall direct a motivated refusal to the organization, which has submitted an application.

1.2.4. The declared volumes of IST coordinated by the system operator of the Republic of Kazakhstan, shall be executed as Appendix to the Agreement on the transmission of the electric power and considered in calculation of the tariffs for services on electric power transmission.

1.2.5. After formation of the forecasted balance sheet of the electric power and power through the Single Power System of the Republic of Kazakhstan (hereinafter - SPS of Kazakhstan) till 15th of October, the year preceding to the planned one, the delivery volumes of electric energy shall be defined and coordinated with subjects of the wholesale market under bilateral interstate Agreements.

1.2.6. The volumes of electric energy assumed for IST, can be corrected under the offer of the subjects authorized for organization and implementation of IST till 1st of November, a year proceeding to the year of planned delivery.

1.3. On the territory of the Russian Federation.

1.3.1. According to the Procedure for formation of summary forecasted balance within the limits of EAEU of Russia for subjects of the Russian Federation, the authorized organization (organization on management of the single national (Russian) electric network (hereinafter - SNEN) of the Russian Federation) till 1st of April, the year preceding to the year of planned delivery, directs the offers coordinated with the authorized organizations of member States, which are engaged in administration of national electric network, to the Federal Service on Tariffs of the Russian Federation (FST of Russia) and to the system operator of SEN of Russia.

1.3.2. The agreed offers shall be considered by FST of Russia and considered in formation of the summary forecasted balance sheet of electric energy (power) production and consumption among subjects of the Russian Federation for the next calendar year within the time provided by the legislation of the Russian Federation.

1.3.3. The volumes of electric energy and power assumed for IST, confirmed as a part of indicators of summary forecasted balance sheet of electric energy (power) production and consumption among subjects of the Russian Federation for year of delivery, shall be considered in calculation of the prices (tariffs) for services of natural monopolies in electric power industry.

1.3.4. The volumes of electric energy and power assumed for IST, can be corrected under the proposal of organization on management of SNEN provided the approval of the authorized bodies (organization s) of member States has been obtained till 1st of November, the year preceding to the year of planned delivery, with relevant updating of the established prices (tariffs) for services of the natural monopolies in electric power industry.

2. Procedure for determination of technical capability and planned volumes of IST on the basis of planning of annual, month, day and intraday operating modes of electric

power systems, including the provisions, defining the functions and powers of the planning coordinator.

2.1. Terminology.

For section 2 of this Methodology, the following concepts shall be used:

Controllable section - set of electric transmission lines (ETL) and other elements of electric network defined by dispatching centers of system operators of electric power systems of the member States, through which the power cross flows are supervised with a view of maintenance of stable work, reliability and survivability of electric power systems.

Maximum admissible power flow is greatest flow in the section of the network, meeting all requirements of normal modes.

Interstate section-a point or group of points of the delivery, located at interstate ETL (s), connecting electric power systems (separate energy regions) of the adjoining states, technologically caused by tasks of planning and management of electric power modes of parallel work, defined by system operators of electric power systems of member States.

Other used concepts have the meaning, defined by the Protocol on providing an access to services of subjects of natural monopolies in electric power industry, including bases of pricing and tariff policy (Annex 21 to the EAEU Treaty).

2.2. General Provisions.

2.2.1. Issues to be addressed at planning stages:

Annual planning: check of technical capability for performance of the declared volumes of deliveries of the electric energy (power) between member States and IST between member States, considered in forecasted balance sheets of electric energy (power) production and consumption taking into account the annual planned maintenance schedules of the electric network equipment, which are limiting the export and import sections, and their updating if necessary;

monthly planning: check of technical capability for performance of the declared volumes of deliveries and IST between member States, considered in annual forecasted balances of electric energy (power) generation and consumption taking into account the

monthly planned maintenance schedules of the electric network equipment limiting its export-import sections, and their updating if necessary;

daily planning and intraday updating of the modes: check of technical capability for performance of declared hourly volumes of deliveries and IST between member States, declared a day prior to such delivery, taking into account a real scheme and regime situation, planned, unplanned and emergency switching-off of the electric network equipment, limiting the export and import sections, volumes of deliveries and IST between member States.

2.2.2. Planning (calculation of execution ability of the planned volumes of IST between member States is carried out between SEN of Russia and SEN of Kazakhstan and between SEN of Russia and United Energy System of Belarus (UES of Belarus) with use of calculation model of in parallel operating electric energy systems (hereinafter - calculation model).

2.2.3. The calculation model is a mathematical model of technologically interconnected parts of SEN of Russia, SEN of Kazakhstan and UES of Belarus in the volume necessary for planning, and including the description of:

- columns and parameters of equivalent electric network circuit;
- active and reactive central loadings;
- active and reactive generation in units;
- minimum and maximum active and reactive generation capacities;
- network restrictions.

2.2.4. The calculation model is formed on the basis of the electric power systems, which shall be agreed upon by system operators of member States, equivalent circuit, as a rule, for the basic modes conforming to the agreed hours of winter maximum and minimum of loads, and summer maximum and minimum of loads (basic calculation schemes). For characteristic scheme and regime situations, maximum allowable overflows in controllable interstate sections shall be indicated, and also in internal controllable sections if they essentially affect the interstate deliveries (exchanges).

2.2.5. The planning coordinator is the system operator of SEN of Russia.

2.2.6. The structure of calculation models and made actual information for each of planning stages, including lists of energy facilities and electric power systems (equivalents of electric power systems), included into calculation model, order and time regulation of their formation and actualization, formats and way of data exchange for planning of annual, month, day and intraday operating modes of electric power systems are established by the documents confirmed by system operator of SEN of Russia and organization on management of SNEN with organization, executing the functions of system operator of UES of Belarus, and system operator of SEN of Kazakhstan.

2.3. Powers and authorities of planning coordinator and other electrical system operators from member States.

2.3.1. Planning coordinator performs:

Development of basic design models;

Information exchange with organizations that stand as system operators for UES of Belarus and Kazakhstan for planning purposes;

Calculations of electrical and energy modes based on the data received from the organization carrying out the functions of the system operator for UES of Belarus and Kazakhstan for the purposes of planning;

Adjustment of the interstate flow between electrical systems (parts of electrical systems) of member States in case if calculation revealed the unreliability of electrical modes or the excess of maximum allowed power flow in controlled sections of design model during determined scope of interstate transmission, together with priority principles outlined in subparagraph of paragraph 4 of the Protocol on allowing the access to services of natural monopoly entities in the area of electrical energy industry including basic principles of pricing and tariff policy (Annex 21 to the EAEU Treaty):

Provision of member State internal necessities with planning the interstate transmission through electric energy system;

Providing the interstate transmission of electric energy (power) from one part of the system to another part of neighboring member State;

Providing the interstate transmission of electric energy (power) from one part of the system to another part of another member State;

Providing the interstate transmission of electric energy (power) through the power system of a member State in order to fulfill the obligations in respect of electric power industry of Third Countries outside the EAEU;

Starting the organization of the results of the above calculation of functional UES of Belarus and Kazakhstan.

2.3.2. If the calculation revealed the unrealisation of electric modes or exceeding of maximum allowable flows in the controlled sections of the design model, the planning coordinator shall direct the quantities of necessary adjustments of net power flows (balances) of electric power system to the organization, functioning as the system operator of UEC of Kazakhstan and Belarus and management organization of Federal Grid Company.

The organization that performs the functions of the system operator of UEC of Kazakhstan and Belarus and organization management of Federal Grid Company performs the adjusted shipments of electricity (power) for all Agreements, including interstate transmission on the basis of the above-mentioned priority, or takes other measures to prevent violations of allowable flows in the controlled sections identified on the basis of calculations of planning coordinator.

The information about the adjusted contractual volumes of electricity (power) supplies for all Agreements, including interstate transmissions among member States, shall be provided by the organization that acts as the system operator of UEC of Kazakhstan and Belarus and management organization of Unified National Power Grid to subjects of internal electricity markets and members under the Agreements.

2.3.3. Planning Coordinator has the right in the case of non-receipt from the organization performing the functions of the system operator of UEC of Belarus and Kazakhstan of the actual data for planning or receiving data containing technical errors or deliberately false data use of substitute information, content and application procedure which establishes documents approved by organization that acts as the system operator of UEC of Belarus, Kazakhstan and Russia.

2.4. Annual planning.

2.4.1. Annual planning shall be performed in time and in manner determined by the organization that acts as the system operator of UEC of Belarus, Kazakhstan and Russia.

2.4.2. The organization that performs the functions of the system operator of UEC of Belarus, Kazakhstan and Russia forms the draft schedules for repair of electrical equipment for the planned calendar year and submits them to the planning coordinator. Planning Coordinator shall coordinate the schedule for the repair of electrical equipment for the planned calendar year, and send it to the organization performing the functions of the system operator of UEC of Belarus and Kazakhstan and management organization of UNPG of Russia. List of power supply facilities and repairs shall be agreed in the annual (and monthly) schedule repairs, and temporal regulation of its formation is established by the organization that acts as the system operator of UEC of Belarus, Kazakhstan and Russia.

2.4.3. Organization that performs the functions of the system operator of UEC of Belarus and Kazakhstan transmits scheduling information to coordinator for the annual planning for the respective national electricity system (consumption, generation, trade balance, repairs of network equipment), and they formed in the basis of the forecast balance of electricity, power for an hour maximum typical workday.

2.4.4. Scheduling result shall be refined predictive value trade balance UEC of Russia – UEC of Kazakhstan and UEC of Russia – UEC of Belarus.

2.4.5. Planning Coordinator shall calculate modes and sends them to the organization performing the functions of the system operator of UEC of Belarus and Kazakhstan.

2.5. Monthly planning.

2.5.1. Monthly planning shall be performed in time and manner determined by the organization that acts as the system operator of UEC of Belarus, Kazakhstan and Russia in the same way as annual planning, the exchange of data and results on a monthly basis.

2.6. Daily and intra-day planning.

2.6.1. Daily and intra-day planning shall be performed in the time and manner determined by the organization that acts as the system operator for UEC of Belarus, Kazakhstan and Russia.

2.6.2. Daily the organization, performing the functions of the system operator for UEC of Belarus and Kazakhstan shall provide data for planning coordinator with the updates of the calculation model for the planned night (hereinafter – days X) as the sets of 24 hour actual data (from 00:00 to 24:00), which include:

Planned repairs of electric equipment elements from 220 kV power systems and above;

Hourly schedules for consumption and generation of electricity by a total system (including separate power districts established by the organization that acts as the system operator for UEC of Belarus, Kazakhstan and Russia in the formation of the design model);

Hourly schedules of trade balance (surplus flows for power system is its deficit).

UNGP organization management shall provide summarized values that shall be agreed with the organization, performing the functions of the system operator for UEC of Belarus and Kazakhstan for hourly schedules of delivery volumes of electric power between Russia, Kazakhstan and Belarus for all types of the Agreements, including interstate transmission among the member States.

2.6.3. If the data for actualization of the calculation model is not transferred by the organization that acts as the system operator for UEC of Belarus and Kazakhstan to planning coordinator, he shall use the substitute information that was set by organization that acts as the system operator for UEC of Belarus, Kazakhstan and Russia by Agreement on the formation of the computational model.

2.6.4. Planning coordinator shall perform updating of the estimated model and the execution of calculations of electric modes.

2.6.5. Planning Coordinator shall calculate mode and transmit the calculation results to the organization that acts as the system operator for UEC of Belarus and Kazakhstan in a consistent format.

2.6.6. If the requested values of supplies and interstate transmissions between member States are not implemented, the organization that performs the functions of the system operator for UEC of Belarus and Kazakhstan and UNGP organization management

shall take measures to adjust the volume of deliveries and interstate transmission, with the priority, as defined in paragraph 2.3.1 of this Methodology.

2.6.7. If as a result of unpredictable changes in energy consumption and/or circuit regime conditions and/or changes in the conditions of supply the Agreements adjustments are required, the planned delivery volumes and interstate transmission between the member States, within the operational day, the organization, that performs the functions of the system operator for UEC of ECO of Belarus and Kazakhstan, shall provide the planning coordinator with the following information:

data for the actualization of calculation model for the current day in the form of our data set for the remaining hours of the day in the amount of days X corresponding to the information transmitted for the purposes of planning the day ahead;

request notes for changes to the proposed capacity planning of deliveries and interstate transmission between member States.

2.6.8. For each time step within twenty four hour period they establish a critical time for data transmission (“gate closing time”) and communicating the results of calculations. Data transfer after the “gate closing time” shall not be allowed. Planning coordinator performs the actualization of the estimated model and the execution modes of electrical calculations for the remaining hours of the day X.

2.6.9. The result is a refined planning of hourly schedule of deliveries and interstate transmission among the member States for the remaining hours of the day X. In case of inability to perform routine in hourly charts revised due to changes in circuit-regime conditions after intradaily time adjustments, the changes in the supply and interstate transmission between member States on the conditions permitted providing emergency assistance or forced supply of electricity under the relevant special Agreements for the supply of electricity between authorized economic subjects of the member States.

3. A list of the subjects of the member States authorized for the organization and implementation of interstate transmission indicating the functions of each organization in the framework of the transmission.

3.1. On the territory of the Republic of Belarus.

3.1.1. On the territory of the Republic of Belarus the organization and implementation of interstate transmission shall remain with the control function of UEC of Belarus and organization that acts as the system operator for UEC of Belarus while performing the following functions:

provision of services for the transmission of electrical energy by transmitting electrical network (organizations subordinate to the organization performing the control functions of UEC of Belarus, with the overall coordination of the organization performing the control functions of UEC of Belarus);

provision of services for technical control of interstate transmission (the organization that performs the functions of the system operator of UEC of Belarus);

interaction with power systems of neighboring countries to manage the parallel operation and sustainability (the organization that performs the functions of the system operator of UEC of Belarus).

3.2. On the territory of the Republic of Kazakhstan.

3.2.1. On the territory of the Republic of Kazakhstan organization and implementation of interstate transmission lies with the system operator that performs the following functions:

provision of services for power transmission through the National Power Grid;

provision of services for technical control supply to the grid and electric energy consumption;

services on balancing of the production - consumption of electric energy;

interaction with power systems of neighboring countries for the management and sustainability of parallel operation.

3.3. On the territory of Russian Federation.

3.3.1. Provision of interstate transmission between member States through the UEC of Russia in accordance with the legislation of the Russian Federation shall assume the implementation of a set of actions related to:

3.3.1.1. Provision of services for operational dispatch management in the power sector, including the management of parallel operation of UEC of Russia and electric

power systems of other member States, to ensure the replacement of electric energy (power) and coordinated planning;

3.3.1.2. Transmission services (movement) of electric energy on the unified national (All-Russia) electric grid, including the interstate transmission between member States;

3.3.1.3. Features turnover of electricity and power on the wholesale electricity market of the Russian Federation, including, if necessary, assurance of a coherent and simultaneous delivery of equal volumes of electric energy (power) in the UES of Russia and from there through different delivery point located at the border (borders) Russian Federation with the member States.

3.3.2. Interstate transmission among member States provided the following authorized organizations:

3.3.2.1. System Operator of Russia - in terms of organization and management of parallel operation with UEC of Russia, Kazakhstan and Belarus;

3.3.2.2. Organization for UNPG management - in terms of provision of services related to the movement (using the principle of substitution) of electric energy by interstate transmission between member States through the UEC of Russia and the organization of parallel work with UEC of Russia, Kazakhstan and Belarus, including interaction with foreign authorized organizations planning interstate transmission (annual, monthly, hourly), the diversity of actual hourly volumes of electricity moved through the state border of the Russian Federation and the member States from the adjusted planned volumes of commercial Agreements; determining the hourly deviations of actual volumes moved across the border between the Russian Federation and the member States; implementation of commercial metering to delivery points located at the common borders of the member States;

3.3.2.3. Commercial operator - the organization conducting the functions of wholesale trade of electric energy, capacity and other admitted to trading on the wholesale market in goods and services;

3.3.2.4. Organization responsible for providing services for the calculation of the requirements and obligations of participants in the wholesale market;

3.3.2.5. Commercial agent - participant in the wholesale electricity market and power engaged in export-import operations, regarding the organization of access to participation amount of electric energy (power), declared for interstate transmission between member States in relation to the wholesale electricity market and the normalization of relations, and associated with deviations of the actual balance of the planned flow.

4. List of components that shall be included in the tariffs of natural monopolies in the implementation of interstate transmission

4.1. On the territory of the Republic of Belarus.

4.1.1. Costs C_{cet} for interstate transmission services for network transmission of the Republic of Belarus (hereinafter - NT), included in the tariffs of natural monopolies in the implementation of interstate transmission between member States, shall be calculated using the following formula:

$C_{cet} = C (1+IF) (1+I) (1+T)$, where:

C – overall maintenance and operation cost of the NT attributable to interstate transmission between member States, determined in the prescribed manner by the authorized state body;

IF – share of contributions to the Innovation Fund;

I – share of income deductions in accordance with legislation of the Republic of Belarus;

T – share of taxes deductions;

Total 3 costs include: operation and maintenance cost; wages; amortization; other costs (supporting materials, side energy, social security contributions, etc.); compensation costs for electric energy losses.

4.1.2. Tariff for interstate transmission networks for UEC of Belarus shall be calculated by the formula:

$T = C_{cet} / V_t$, where:

T – tariff for interstate transmission networks of UEC of Belarus;

V_t – total volume of UEC between member States on networks of UEC of Belarus.

4.2. On the territory of the Republic of Kazakhstan.

4.2.1. In accordance with the legislation of the Republic of Kazakhstan tariff for electricity transmission, including interstate transmission among member States, used for consumers, to exercise the power transmission, including interstate transmission to the national power grid networks (hereinafter - NPG) shall be calculated using the following formula:

$T = (C + P) / W$ (KZT/kWh), where:

T – tariff for electricity transmission, including interstate transmission between member States applied for consumers which transfer electrical energy, including interstate transmission networks of NPG (KZT/kWh);

C – total costs of NPG of the Republic of Kazakhstan for the transmission of electrical energy, including interstate transmission determined in accordance with the legislation (million tenge);

P – profit level necessary for the efficient functioning of the NPG in the provision of services for the transmission of electrical energy, including interstate transmission, as defined in the legislation of the Republic of Kazakhstan (million tenge);

W_{sum} – total volume of electric energy transmission declared under treaties and contracts (million kWh).

4.2.2. In accordance with the legislation of the Republic of Kazakhstan when calculating the tariff for the transmission of electric energy in the NPG tariff revenue shall include the total cost for the transmission of electric energy on the NPG and the level of profit necessary for effective functioning in the provision of services for the transmission of electric energy (determined on the basis of involvement of assets).

Costs included in the tariff for electricity transmission shall be determined in accordance with the laws of the Republic of Kazakhstan.

4.3. On the territory of the Russian Federation.

4.3.1. General provisions.

In accordance with the legislation of the Russian Federation tariff for the provision of electricity transmission on UNPG installed as 2 rates: rates on electric grid maintenance and rates to compensate the losses of electric energy in the UNPG.

Similarly, costs included in the tariff for the provision of interstate transmission between the member States through the UEC of Russia shall be divided into component costs for tariff for interstate transmission between member States on the maintenance of UNPG and component costs for tariff for interstate transmission among member States for compensation for electric energy and power in the UNPG losses.

4.3.2. The definition of expenses included in the tariffs of natural monopolies in the implementation of interstate transmission between member States.

4.3.2.1. List of components costs for tariffs of interstate transmission between member States on the maintenance of the UNPG.

Power claimed to interstate transmission between member States shall be paid by the rate on the maintenance of UNPG. The power shall be defined in the "exit point" flow of electricity from the electric power system of the state through the electric grid which is the interstate transmission between member States.

When calculating the rates on the facilities of UNPG the following shall be established by national regulatory authority for the relevant settlement period economically reasonable expenses:

- Operating expenses;
- uncontrollable costs;
- return on invested capital (depreciation) on investments;
- return on invested capital.

4.3.2.2. List of components costs tariff for interstate transmission among member States to compensate for losses of electricity and power in the UNPG.

Costs to compensate for losses of electricity and power in the UNPG are determined based on the standard losses of electric energy in the UNPG, reduced by the amount of electric energy losses accounted for in equilibrium prices for electricity and purchase prices of electricity and power in the wholesale market at the end of each settlement period for DPC, an appropriate "exit point" flow of electricity from the electric power system of the state, through the electric grid which is the interstate transmission between member States with regard to the cost of infrastructure services of organizations relevant to national market.

5. List of components associated with the implementation of interstate transmission that shall not be included in tariffs of natural monopolies.

5.1. On the territory of the Republic of Belarus.

In Belarus, the system costs C_s shall include the cost approved by the authorized state body of maintaining the reserve generating capacity to ensure the interstate transmission between member States, defined by the proportion of the total interstate transmission amount of power transmitted through networks of UEC of Belarus, as well as services for technical dispatching of interstate transmission between member States.

5.2. On the territory of the Republic of Kazakhstan.

When developing the tariff for interstate transmission between member States, the costs shall not be taken into account in accordance with the law of the Republic of Kazakhstan.

5.3. On the territory of the Russian Federation.

In order to ensure the replacement of electric energy (power) the amount of electricity to be transmitted between the member States should be considered in the wholesale market price when submitting bids in competitive selection of price bids on the day-ahead market prices and determining the proportion of system costs associated with a coherent and simultaneous delivery of equal volumes of electric energy (power) at different points of delivery at the frontier (borders) of UEC of Russia. System costs shall include the following components:

5.3.1. Component associated with the compensation of the cost of electric power load loss and system constraints in the implementation of interstate transmission between the member States through the UEC of Russia (nodal prices difference):

$$S_m^l = \sum_{hcm} (\max[\lambda_h^{\text{ext}} - \lambda_h^{\text{entr}}; 0] \times V_h^{\text{IST}}), \text{ where}$$

λ_h^{ext} – price resulting of a competitive selection of price bids in the day-ahead at h hour h in m months on the section of exports and imports, complying with the "exit point" electricity flow of UEC of Russia in the framework of the interstate transmission;

λ_h^{entr} – price resulting of a competitive selection of price bids in the day-ahead hour h in m months on the section of exports and imports, the corresponding "entry point" of electricity flow in UEC of Russia in the framework of the interstate transmission;

V_h^{IST} – volume of interstate transmission through UEC of Russia at h hour in the m month.

5.3.2. Component related to the availability of reserve generation capacity to implement modes of UEC of Russia, providing the volume of interstate transmission through UEC of Russia in the hour h of the month m :

$$S_m^2 = \text{Peak}_m \times (K_{\text{plan.FPTZ}}^{\text{res}} - 1) \times C_{\text{FPTZ}}^{\text{prelim.}}, \text{ where:}$$

Peak_m – peak power corresponding to the maximum claimed amount hour of interstate transmission in the month m ;

$K_{\text{plan.FPTZ}}^{\text{res}}$ – planning reserve ratio in FPTZ, accounted by the system operator in competitive procedure for the relevant year;

$C_{\text{FPTZ}}^{\text{prelim.}}$ – preliminary price of competitive selection for consumers in FPTZ of the corresponding year (determined by the system operator in accordance with the rules of the wholesale market of electric energy and power);

FPTZ – free power transfer zone, to which assigned delivery point is corresponding to the "exit point" of electricity from UEC of Russia in the implementation of interstate transmission.

In determining the value of the interstate transmission it is also considered that the difference between the planned prices for buyers, as determined is in the competitive capacity of the free power transfer zones (groups of free power transfer zones) corresponding to the points of "entry" and "exit" of interstate transmission.

6. Requirements for Registration of Interstate Transmission Agreement in Accordance with the Laws of the Member States.

6.1. On the territory of the Republic of Belarus.

Interstate transmission between member States through the power system of the Republic of Belarus is subject to agree on the amount of electricity and power, alleged interstate transmission in accordance with section 1 of paragraphs 2.4, 2.5 and 2.6 of

section 2 of this methodology and instruments for interstate transmission authorized by the organization of the Republic of Belarus.

Cost of services on the interstate transmission for each Agreement shall be calculated using the following formula:

$$C_{IT} = Z_{cet} + Z_{syst}$$

6.2. On the territory of the Republic of Kazakhstan.

On the territory of the Republic of Kazakhstan, interstate transmission between member States on the basis of the Agreements for the provision of electric power transmission shall be concluded on a standard form approved by the Government of the Republic of Kazakhstan. In this case, the implementation of interstate transmission treaties may be considered a particular transmission.

6.3. On the territory of the Russian Federation

Interstate transmission between member States through the UEC of Russia shall be carried out in the presence of the following Agreements:

6.3.1. The Agreements with a commercial agent of the authorized organization of the Republic of Belarus or the Republic of Kazakhstan in order to ensure access to services of natural monopolies and interrelated and simultaneous delivery of equal volumes of electric energy (power) declared for the implementation of interstate transmission in different delivery points at the border (borders) of UEC of Russia.

Cost of interstate transmission between member States through UEC of Russia in m month shall be calculated in such Agreements using the following formula:

$$Q_{IT}^m = Q_{FGC-IST}^m + Q_{SO-IST}^m + Q_{UEC-IST}^m, \text{ where:}$$

$Q_{FGC-IST}^m$ – cost of service of organization for Federal Grid Company management paid in accordance with the legislation of the Russian Federation;

Q_{SO-IST}^m – the cost of services of the system operator paid in accordance with the legislation of the Russian Federation;

$Q_{UEC-IST}^m$ – cost of services associated with activities in the wholesale market of electric energy (power) that accompany the interstate transmission through United Energy System of Russia in m month.

$$Q_{UEC-IST}^m = S_m^1 + S_m^2 + Q_{ATS-IST}^m + Q_{CFP-IST}^m + Q_{agent-IST}^m, \text{ where:}$$

$Q^{\text{ATS_IST}}_m$ – cost of services for the commercial operator of wholesale trade in electricity, power and other admitted to trading on the wholesale market in goods and services in m month;

$Q^{\text{CFP_IST}}_m$ – Comprehensive cost calculation of the services, requirements and obligations defined by the Agreement of accession to the trading system of the wholesale market in m month;

$Q^{\text{agent_IST}}_m$ – cost of a commercial agent defined bilaterally in Agreements concluded by a commercial agent.

6.3.2. The Agreements (technical agreements) on the parallel operation of electric power systems between organizations of the member States exercising the functions of dispatching management in power generation and transmission (movement) of electric energy to the national power grid;

6.3.3. The Agreements for sale of electricity in order to compensate the deviation of actual flows on the cross sections of the interstate transmission plan are arising from the movement of electricity across borders of member States, between the economic entities authorized by member States.

7. Procedure of Organization the Commercial Account of the Hourly Actual Volumes of Interstate Power Flows between Entities of Member States.

7.1. This Procedure shall define the main directions of bilateral cooperation in terms of getting hourly data of commercial accounting; operational procedure for determining the hourly flow of electricity on interstate transmission lines (hereinafter - ITL) between the Republic of Kazakhstan and the Russian Federation based on the use of hourly data of commercial accounting and agreed basis of additional calculation methods of specified data to commercial accounting values at the points of delivery; procedure for defining data exchange procedures of commercial accounting and reconciliation of commercial accounting given to the values at the points of delivery.

Conditions and procedure for the formation and exchange of hourly data on commercial energy accounting ITL shall be determined in accordance with a bilateral Agreement on the exchange of data values for hourly electricity flows through the points accounting ITL:

7.2. Rapid exchange of information.

Daily (or as agreed by member States in a different period of time) the relevant entities of the member States form the values of hourly electricity flows on ITL, share data, perform the appropriate calculations, evaluate relevant data.

For rapid exchange of information containing values of hourly electricity flows transmitted over ITL used a consistent data of transfer formats.

7.3. Calculation of hourly values to the point of delivery.

Calculation of hourly values to the point of delivery is made in accordance with agreed procedures in bilateral agreements that calculate the actual amount of transmitted electricity.

8. The procedure for determining the actual flow balance of interstate electricity lines is in power of the member States.

This procedure, which determines the actual volumes moved through interstate electricity section of the calendar month, shall be intended for the use by authorized organizations of the member States.

Actual balance flow of electricity moved through interstate section of members shall be defined as the algebraic sum of the received (WR1_grain) and/or given (WG1_grain) amount of electrical energy for each calendar month in each delivery point (WBalance_grain).

The values of electrical energy given to the Customs border (to the point of delivery) per calendar month for all work included in ITL modes "Reception", "Return" and the balance shall be calculated using the following formula:

$$WR1_grain = \sum W(factR1)_i,$$

$$WG2_grain = \sum W(factR1)_i,$$

$$WBalance_grain = WR1_grain + WG1_grain, \text{ where:}$$

$W(factR1)_i$ – the actual amount of the highest electricity supply at each point on the i-point of ITL per calendar month. For substitution in the formula for calculating the balance-flow, value shall be calculated taking into account the sign (direction of flow);

$W(factG1)_i$ – the actual number of supplying electrical energy in each point of delivery to the i-point of ITL per calendar month. For substitution in the formula for

calculating the balance-flow, value shall be calculated taking into account the sign (direction of flow);

R – ITL number on the interstate section included into the work for the calendar month.

9. Procedure for Calculating the Volume and Value of Deviations Actual Flows on Interstate Sections from the Planned when Implementing Interstate Transmission within the EAEU.

Actual delivery on interstate sections include the following components: interstate transmission volumes, volumes of commercial Agreements concluded by economic entities of member States, the volumes and volumes of emergency assistance due to the deviation of the actual values of net power flow from the planned.

Calculation of hourly deviations of actual net power flow from the planned and quantification of deviations depending on their initiative is implemented by management UNPG of system operator of UEC of Russia, an organization that acts as the system operator of UEC of Belarus and Kazakhstan based on the following principles:

implementation of interstate transmission through UEC of Russia in hourly values are assumed equal volumes of interstate transmission and relevant planned values recorded in the daily dispatch schedule;

actual hourly volumes of electricity supply to commercial Agreements in each hour settlement period are taken as equal to planned values recorded in the daily dispatch schedule with the agreed adjustments in the prescribed manner;

volumes of hourly deviations are to be settled within the framework of relations with the power systems of Third Countries (external balancing) are recorded in volumes deviations within the EAEU. Procedure for determining the volume of external balancing coordinated system operators (with the participation of management UNPG) neighboring electric power systems of the member States;

volumes of providing emergency aid are determined by the Agreement of purchase/sale of electricity in the provision of emergency assistance concluded between subjects of internal national markets.

Volumes of hourly departures are subject to financial settlement between business entities authorized by member States in accordance with the agreements of interstate transmission for each of the member States provided for by section 6 of this Methodology.

Based on the need to comply with the terms of Agreements (technical agreements) on the parallel operation of electric power systems, including the regulation of frequency in power systems of the member States and maintain a consistent net power flow on interstate sections, cost variances should compensate the subjects of internal national electricity markets (capacity) reasonable costs that they incur as a result of participation in the relationship of balancing system on the national market of electric energy (power).

Calculating the cost of deviations should be based on the accounting for special volume purchase/sale of electricity (capacity) for grid parallel operation of electric power systems in quantities not exceeding the values specified in the Agreements (technical agreements) on the parallel operation of electric power systems or other agreements governing relationships in the electricity between member States.

Used in calculating the quantity and price parameters of electricity and power purchased and sold in order to compensate for variation confirmed the report document organizations commercial infrastructure of the Russian Federation.

When calculating the cost of deliveries under the Agreements re-metering of electricity (capacity) shall not be permitted.
