## ENERGY SECURITY IN THE MEMBER STATES OF THE EURASIAN ECONOMIC UNION IN THE ELECTRIC POWER SECTOR: LEGAL AND ECONOMIC ASPECTS

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Abstract: In connection with the current situation of geopolitical tensions and application of sanctions, the issues of energy security that make it possible to provide reliable and uninterrupted energy supply to national economies as well as consumers of all categories and levels at an affordable price become particularly relevant for the member states of the Eurasian Economic Union (hereinafter referred to as the member states and the Union respectively). One of the key areas of integration defined by the Treaty on the Eurasian Economic Union (hereinafter referred to as the Treaty), which was signed by the Presidents of countries on May 29, 2014, is energy, which, to a large extent, determines the dynamics and the rates of development of national economies, their competitiveness in the world markets, and the standard of living of the population. In accordance with Article 79 of the Treaty, the member states agreed to pursue a coordinated energy policy and develop mutually beneficial cooperation with due account for provision of energy security. Pursuant to Article 81 of the Treaty, the member states formation of the common electricity market of the Union (hereinafter referred to as the CEM). The principles of its formation specified in the Concept for the Formation of the CEM of the Union also contain provisions on ensuring energy security of the member states with due account for preservation of peculiarities of the domestic energy markets of each of the states. Therefore, it seems relevant to study the problems of legal regulation of energy security in the electric power industry in the member states of the Eurosian Economic Commission and ensuring energy security of the member states with due account for preservation of peculiarities of the domestic energy markets of each of the states. Therefore, it seems relevant to study the problems of legal regulation of energy security in the electric power industry in the member states of the EAEU.

**Keywords:** energy law, energy security, member states of the Eurasian Economic Union, formation of the common electricity market of the Eurasian Economic Union, electric power system.

t the national level, each member state faces the tasks of legal regulation of energy security specified in their long-term and short-term development strategies. In a systematized form, these tasks of supranational and national levels aimed at ensuring energy security and specified in strategic planning documents are outlined in the scheme in Figure 1.

The main strategic directions of development in the energy sector of the member states of the EAEU are as follows:

for the Republic of Belarus, energy independence, diversification of suppliers and types of energy resources, reliability of supplies, reservation, processing and distribution of fuel and energy resources, energy efficiency of ultimate consumption, improvement of the management system for the fuel and energy complex and its organizational structure [1];

for the Republic of Armenia and the Republic of Kazakhstan, development of renewable energy

sources as well as energy efficiency and energy saving ones [2];

for the Kyrgyz Republic, development of non-carbon energy, financial recovery of the energy sector, capital investment in the construction and reconstruction of the sector's assets, and development of information technology, which will ensure successful implementation of projects and introduction of smart meters [3];

for the Russian Federation, reduction of the energy consumptions of the economy, digitalization of the energy complex, increased availability of resources, emergence of new routes, and, accordingly, integration of regional markets [4].

The purposes of development of the electric power industry of the member states of the EAEU and the comparative characteristics of their electricity markets are given in Tables 1 and 2. Analysis of the data of these tables makes it possible to conclude that energy security issues are

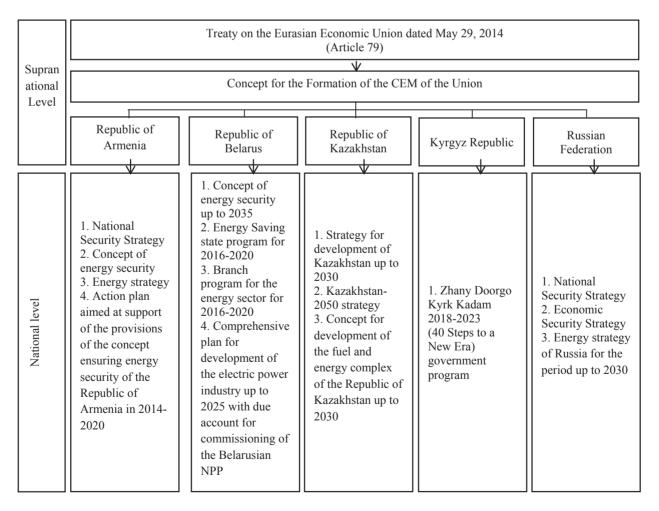


Fig. 1 – Tasks of Legal Regulation of Energy Security in the Member States of the Union

Table 1

## Purposes of Development of the Electric Power Industry of the Member States of the Union

Republic of Armenia	Republic of Be- larus	Republic of Kazakhstan	Kyrgyz Republic	<b>Russian Federation</b>
ensuring energy se-	improvement	improvement of ef-	ensuring sustainable eco-	transition of the country's energy
curity;	of efficiency	ficient use of en-	nomic growth through	sector through structural transfor-
ensuring sustainable	and reliabili-	ergy resources	strengthening of energy	mation to a higher, qualitatively
development of the	ty of function-	for promotion of	and economic security,	new level, maximally contributing
energy sector based on	ing of the Be-	growth of econ-	achievement of financial	to the dynamic social and eco-
improvement of the	larusian energy	omy and quality	and economic recovery	nomic development of the Rus-
energy efficiency of	system and up-	of life of the pop-	as well as the competitive	sian Federation;
the economy, develop-	grade of ener-	ulation as well as	advantage of the Kyrgyz	promotion of grid infrastructure
ment of nuclear pow-	gy security on	strengthening of	Republic in the region-	and generating capacity as well as
er industry and effi-	its basis	foreign economic	al export market of elec-	ensuring satisfaction of long-term
cient use of renewable		relations	tric power	and medium-term demand for
resources				electricity and capacity

Table 2

<b>Comparative Characteristics o</b>	f Electricity Markets of the	Member States of the Union
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Criteria for comparison	Republic of Armenia	Republic of Belarus	Republic of Kazakhstan	Kyrgyz Republic	<b>Russian Federation</b>
Regulators	Ministry of Ener- gy and Natural Re- sources Commission for Regulation of Pub- lic Services (CRPS)	Ministry of Energy Ministry of Econ- omy	Ministry of Energy Ministry of National Economy	Ministry of Economy State Agency for Fuel and Ener- gy Complex Reg- ulation	Ministry of Energy Federal Antimonopo- ly Service
Basic regu- lations	Law No. 3P-148 of the Repub- lic of Armenia dd. March 21, 2001 <i>On</i> <i>the Energy Industry</i>	Law No. 293-3 of the Republic of Be- larus dd. January 8, 2015 On Energy Saving	1. Law No. 588-II of the Republic of Kazakhstan dd. July 9, 2004 On the Electric Power Industry; 2. Law of the Republic of Kazakhstan On Introduc- tion of Amendments and Supplements to Some Leg- islative Acts of the Republic of Kazakhstan on the Ac- tivities of Independent In- dustry Regulators; 3. Resolution No. 392 of the Government of the Republic of Kazakhstan dd. March 25, 2009 On Approval of Ceiling Rates	1. Law No. 56 of the Kyrgyz Re- public On the En- ergy Industry dd. October 30, 1996; 2. Law No. 8 of the Kyrgyz Re- public On the Electric Power In- dustry dd. Janu- ary 28, 1997; 3. Law No. 149 of the Kyrgyz Re- public On the Natural Monopo- lies in the Kyrgyz Republic dd. Au- gust 8, 2011	<ol> <li>Federal Law</li> <li>No. 35-Φ3 dd.</li> <li>March 26, 2003</li> <li>On the Electric Power Industry;</li> <li>Federal Law</li> <li>No. 256 dd. July 21, 2011 On Safety of the Fuel and Energy Sec- tor Facilities;</li> <li>Resolution of the Government of the Russian Federation</li> <li>No. 1178 dd. Decem- ber 29, 2011 On Pric- ing in the Field of Reg- ulated Prices (Tariffs) in the Electric Power Industry</li> </ol>
Market model	Single buyer-seller model Forced pool of in- dependent produc- ers and importers of electricity with regulated tariffs at all functional lev- els, except for for- eign trade transac- tions. Goods: electric power No trading floor	State Production As- sociation Belenergo, a vertically integrat- ed company, per- forms fully regulated by the state activi- ties for the produc- tion, transmission, distribution, and sale of electricity as well as its export and im- port. Goods: electric pow- er No trading floor	Decentralized mod- el based on bilateral con- tracts. Wholesale market consists of the following segments: 1) decentralized sale and purchase market; 2) market of centralized trade; 3) balancing market (imi- tation mode); 4) capacity market (to be launched on January 1, 2019). Goods: electric power Trading floor: KOREM, JSC	Model based on bilateral contracts with one domi- nating producer (Electric stations, OJSC) Goods: electric power No trading floor	Centralized model in- cluding possible two- way trade. Wholesale market consists of the follow- ing segments: 1) market of free bi- lateral contracts; 2) day-ahead market; 3) balancing market; 4) capacity market. Two goods: electric power and capacity Trading floor: ATS, JSC

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considered in each country on the basis of the current conditions of the energy complex, social and economic interests, and priorities of development of the state. The electric power system of each country has unique features inherent only in them, which significantly affects the relations forming within the EAEU in the energy sector.

However, energy security in the electric power industry of any state includes the following system elements:

- safety of the generating sector;

 safety of electric power transmission networks;

- reliability of the energy infrastructure;

- occupational safety at electric power facilities;

reliability and continuity of electricity supplies;

continuous operation of the electricity markets.

Thus, complex energy security in the electric power industry of the Union depends on the state of protection of each system element in each member state against threats to reliable energy supply to the consumers of all categories and levels at any time at an affordable price.

At the same time, there is currently a common set of problems that have a negative impact on energy security and, therefore, on economic security of the state. They include:

1. Insufficient level of investment in the electric power industry;

2. High level of depreciation of the main production energy assets;

3. Insufficient level of financial resources to ensure timely and quality repair of equipment;

4. Insufficient feasibility studies upon creation and development of electric power industry facilities;

5. Presence of zones where electricity is scarce and redundant, and different prices for electricity;

6. Insufficient level of supply of highly qualified personnel.

At the same time, the electric power systems of the member states of the EAEU have specific features and the peculiar hazards [5]. The Republic of Armenia is characterized by the existence of monopolistic structures with indicia of vertical integration such as Electric Networks of Armenia, CJSC and High Voltage Electric Networks, CJSC, absence of the balancing and the day-ahead markets, and trade under bilateral contracts as a primary type of trade. The absence of geographical borders with the Union entails joining the CEM of the Union by transit through Georgia. Moreover, the electric power system of the Republic of Armenia operates in parallel with the energy system of Iran, and there is a risk of failure of the electric power systems of Armenia and Iran, which will lead to the isolation of the Armenian energy system.

In the Republic of Belarus, there is no special law *On the Electric Power Industry*, there is no wholesale electricity market, and cross-subsidization is used. Fuel supply to the state entirely depends on imported raw materials, that is, gas that needs to be purchased from the Russian Federation.

The electric power system of the Republic of Kazakhstan lacks maneuvering capacities. At the same time, coal plants that produce cheap electric power at a cost are concentrated in the north of the country; therefore, in the south, there is a deficit of competitive electric power, and the consumers have to use economically unprofitable electricity.

In the Kyrgyz Republic, there is no competitive wholesale electricity market, there is a need to develop internal competition by type of generation and heat generation. As power generation at hydraulic power stations accounts for 90% of generation in the republic, there is a hazard of insufficient energy supplies to the population of the country in dry years. At the same time, these stations are located in the north, while 65% of consumers are in the south, and they are connected by one 500 kV transmission line. It is worth noting the presence of commercial traders, which, based on the best practices, is one of the prerequisites for creation of a liquid competitive organized market.

In the Russian Federation, the model for setting prices for electricity is not transparent, and the price is determined by the most expensive (closing) electric power plant of the price zone. Interstate trade operations are performed only by the export/import operator (Inter RAO UES, OJSC); only residents of the Russian Federation can participate in the wholesale market. Negative factors include great share of foreign spare parts and their price in the cost of equipment repairing as well as dependence of the generation and grid facilities on the foreign manufacture of power generating equipment that does not have homeproduced analogues.

Therefore, existing hazards, both general and specific for each member state, can be leveled by implementing an agreed energy policy and developing long-term mutually beneficial cooperation within the framework of formation of the Union's CEM. Efficient use of the fuel and energy potential of each of the member states of the Union will make it possible to ensure sustainable social and economic development of all states and increase the welfare of the population. Therefore, it is relevant and well-timed to perform scientific research on the legal problems of formation of common markets of energy resources of the Eurasian Economic Union with a view to the proper legal regulation of energy security for the member states of the Eurasian Economic Union [6].

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