

## ENERGETIC SECTOR OF ECONOMY: THE RUSSIAN LAW MODEL

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### ABSTRACT

The authors of the article consider the formation of the economy energetic sector with regard to the system of law provisions, governing the state activity in relation to the formation and development of market mechanism in the fuel and energy complex (FEC), and also the activity of business entities in the energy market and its infrastructure. They analyze the set of law provisions, forming the existing energy legislation in Russia, and some practical matters regarding statutory requirements for applying effective and safe lighting equipment. The article draws the conclusion about the necessity of the energy law stabilization and the provision of legal control in the developing sphere of public relations in the area of energy. Authors point out the need of improving legislation in the area of producing energy effective lighting equipment, with the purpose of stimulating the development of scientific research and legal support for manufacturing new goods, which are necessary for customers.

**Keywords:** energy, energy legislation, lighting, lighting equipment, energy market, energy commodities, stimulation of production, alternative energy sources, energy savings, energy conservation

### 1. INTRODUCTION

Relations in the area of energy involve the complicated complex of such processes as extraction, refining, downstream and utilization of all kinds of energy resources. Energy stability and independence are the guarantee of successful economy de-

velopment, that provide the formation and operation of almost all technological processes. Due to these aspects, the essential importance of energy industry for the economy of any state today is not contested. Regardless of the government role in the energy market, the influence of international prices on energy resources will put pressure on the domestic market. It is worth pointing out that the energy market in Russia has been characterized by imbalance of price indicators, since 1990-s. Prices of oil sector products, which are more integrated with the foreign market, were practically free from the direct state impact and were formed on the netback principle. Market pricing also dominates in the coal industry of Russia. However, gas prices are mainly regulated by the government, and the government policy has been changed three times for the last two decades – from rigid price control (to ensure social stability and the competitiveness of industry) to higher-than-market-growth in 2003–2013, and at last, again to blocking of prices resulting from economic slowdown [1].

The variety of objective and subjective factors, characterized with internal and external nature, influence on the economy development. It stands to mention that in spite of immutability of component elements, the influence of some or other factors proportionally changes in course of time. For example, nowadays the role of such factors as environmental safety, political expediency and legislative control is increasing. In considering matters about energy effectiveness, another important aspect is usually ignored – it is the usage of efficient and safe lighting equipment, and in particular, legislative control of this area.

Hence, in this article the attempt to scrutinize the existing energy sector of the Russian Federation economy and its legislative regulation has been made. For this purpose, authors analyze legislative requirements with regard to the introduction of effective lighting equipment, as well as the matters of electric consumers' protection by means of the possibility to search alternative power-generating sources.

## 2. THE ENERGY MARKET ANALYSIS

Russia has the largest territory (11 %), where up to 15 % of world's developed fuel reserves have been discovered and prepared for use. Russia has the highest capitulation supply with relatively cheap energy resources among developed countries. However only 18 % of the country regions are provided with their own energy resources, the rest ones have to import them from other regions, often being hundreds of kilometres away [1]. The Russian fuel and energy complex was created during Soviet times and it was the largest international energy resources manufacturer and the second energy consumption state of that time. After the demise of the Soviet Union, the fuel and energy complex (FEC) together with the whole economy suffered a blow – 40–50 % decline in production of main energy resources.

Partly for these reasons, but mostly because of excessive raw material structure and poor economy management with great technological inferiority, Russia consume 5.5 % of world's energy resources, but the energy intensity of gross domestic product (GDP) (as regard to purchasing power parity of the rouble) is 1.9 times higher than worldwide average one, two times higher than the energy intensity of the USA and three times higher than the energy intensity of leading Europe countries. When combined with the export orientation of the energy sector (up to the half of produced energy resources are exported), the economy burden is 4.5 times higher than worldwide average one: investments to the energy sector reach 6 % of Russia GDP with 1.3 % in the world as a whole.

Some subjective elements putting pressure on energetic development are destabilizing factors, the influence of which should be minimized with the purpose to secure stable and independent energy market. The specific feature of the world's energy market is the impossibility of changing its participants' status. The majority of countries in the

world cannot provide themselves with resources to produce energy, as the result of which they have to purchase required volumes from other countries. Exporting countries are also interested in the stability of energy market, because it secures the significant part of national income. According to the data of the national survey "The forecast of world's and Russia energetic development up to 2040" [1], Russia is the fourth largest energy resources producer in the world (after the Organization of Petroleum-Exporting Countries (OPEC), China and the USA) and the sixth largest consumer (after China, the USA, the European Union (EU), OPEC and India), providing 10 % world output and 5 % world consumption of energy resources.

The optimal model of the modern energy market includes not only production but also the rational use of energy gain. This situation is attributable to the factor, that ultimate consumers in any country are interested not only in reliable and stable energy supplies at affordable prices, but for its effective use. Importing countries, having a measure of dependency from exporters, have to seek alternative energy sources and develop energy intensive technology for exported energy storage. In a manner of speaking, energy dependence, or rather attempts to weaken it, in an indirect way helped the growth of technology in the energy sector, aimed at finding solutions for the best use and storage of purchased energy. It stands to mention that increasing the share of alternative energy sources, including renewable ones, is not always economically justified – in most cases for the large scale implementation of such sources government support is used. The state policy of government support enables to draw attention to renewable energy even in those cases, when initial economic indicators (without including support mechanisms, taxation and so on) more than 50 % worse when traditional sources are used. It is paradoxical, but in this case, at the stage of renewable energy sources implementation, high energy prices are psychologically advantageous for importing countries, because they provide an opportunity to justify expenses concerning with the transition to alternative energy sources. According to the data of the Analytical Centre under the Government of the RF, the growth of alternative energy sources will reach 93 % in the year 2040 in relation to forecasted 47 % general increase in energy demand [1].

In addition to that, countries that have been traditionally energy suppliers were less concerned

with the problems of diversification of energy and its intensity. Traditional energy sources (such as coal, gas, oil), being the basic ones for the number of countries, were prevalent on the market, and it led to the orientation of exporting countries domestic markets to one type of sources. There was no economic need for diversification, because alternative sources were less effective and more expensive, besides, there was no need in their search. According to the data of the Forecast of world's and Russian energetic development up to 2040, the consumption of primary energy in Russia will increase 0.9 % during 2010–2020, at the same time in the USA the growth will be 0.3 %, and in the European Union countries it will even decline to 0.4 %. The main problem of the Russian energy sector is low efficiency, connected with cold climate, large area, low population density (and its unequal distribution through the territory), and also raw material orientation of the economy and the obsolete technologies for fuel and energy utilization.

### **3. THE ANALYSIS OF A REGULATORY FRAMEWORK FOR THE ENERGY SECTOR**

Securing the legal and regulatory framework of the economy energy sector, the establishment of certain uniform “rules” for the participants of this activity sphere in all its diversity, takes on enormous importance in stabilizing the sector and the formation of its development key directions. The detailed energy laws enable to minimize the influence of external factors and diffuse the impact of negative “non-market” conditions. It should be emphasized that due to the deep penetration of the energetic in all spheres of the economy, legal regulation of this sector is difficult both in theoretical and practical aspects, since developing rules of law it is necessary to take into account possible consequences not only for separate types of energy market, but for the whole economy of the country.

To date the sources of law, governing the relations in the energy sector, include the Constitution of the Russian Federation, federal laws, by-laws, acts of self-regulating organizations, containing rules of law, local normative acts of legal entities, international treaties of the Russian Federation, customs, judicial acts of courts of last resort, doctrine.

National energy legislation cannot develop in a stable way in isolation from the international law that as a result engenders the problem of unification of national and international energy legislation. Hence it may be noted that legislative regulation regards not only to the internal factors of energy sector formation, but it can pretend to be the external factor, which in its turn doesn't always emerge under the influence of objective circumstances. The competition among states in the energy sector poses a number of international problems that is necessary to solve within the established global legal order based on the contemporary international law.

There is a number of international instruments concerning with the energy sphere, in the first place these are the European Energy Charter 1991; the Energy Charter Treaty 1994 and other documents adopted in its development; the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects 1994; Mining Charter of the Commonwealth of Independent States 1997; the Agreement on Cooperation in the study, exploration and use of raw mineral resources 1997; the Agreement on Cross-border Cooperation in the area of study, development and protection of natural resources 2001; the General Agreement on Tariffs and Trade 1947; the Marrakech Agreement about the establishment of the World Trade Organisation (WTO) 1994; The Barcelona Convention and Statute on Freedom of Transit, the Charter of Organization of Petroleum Exporting Countries (OPEC), agreements of CIS (the Commonwealth of Independent States) countries, and also federal laws of the Russian Federation, reflecting stages of energy politics development.

Rules of law regulating social relations (both public and private law relations), arising in connection with prospecting, extraction of energy resources, production, processing, supply, storage, transportation of various types of energy resources, designing and building energy plants, ensuring energy security, industrial security, counter-terrorist security are constantly being improved.

During the implementation of the Energy Strategy of Russia for the period until 2020, approved by the order of the Government of the Russian Federation of August 28, 2003 No. 1234-p, the adequateness of the majority of its provisions to the real process of the country's energy sector development, even in the conditions of sharp changes of inter-

nal and external factors, determining the main parameters of functioning the fuel and energy complex of Russia has been confirmed. Moreover, it was planned to amend this Strategy no less frequently than once every five years.

The adoption of the Order of the Russian Federation Government of 13.11.2009 No. 1715-p “Concerning the Energy Strategy of Russia for the period until 2030” [2] has stipulated the energy law development regulating social relations in the energy sphere and in individual energy industries. The Energy Strategy is the document establishing the goals and objectives of the Russian energy sector long-term growth, priorities and benchmarks, and also the mechanisms of state energy politics at certain stages of its realization in accordance with new objectives and priorities of the country’s development. Indeed, the Energy Strategy of Russia for the period until 2030 takes into account new trends of the economy and energy sector development as much as possible, the emergence of new technologies and expanding the time horizon until 2030 in accordance with the necessities of the times.

Since the adoption of the Energy Strategy of Russia for the period until 2030 the considerable amount of laws and regulations have been passed, which ensure the implementation of the strategic objectives. The principle of environmental protection can be distinguished as one of the energy development directions. Ecologically oriented policies are reflected in laws and regulations, devoted to the energy problems. The above-mentioned Energy Strategy of Russia for the period until 2030 defines that the objective of the state energy politics is the most effective use of energy resources and the potential capacity of the energy sector for the steady growth of the economy, the improvement of the country’s population quality of life and the assistance in strengthening country’s foreign economic positions.

The completeness and sufficiency of the state energy politics regulatory support is manifested in complex framework law in the sphere of energy sector functioning, together with integral systems of relevant by-laws.

At present, the formation of legal regime for energy resources continues, its peculiarities are fixed in the number of legislative acts. For example, the federal law of November 23, 2009 No. 261-FZ “Concerning Energy Saving and Energy Efficiency Improvement and on Amendments to Certain Le-

gislative acts of the Russian Federation” [3] regulates relations regarding energy saving and energy efficiency improvement; establishes the legal, economic and organizational framework for stimulating energy saving and energy efficiency improvement.

The Federal law of 31.03.1999 No. 69-FZ (as amended on 26.07.2017) “Concerning Gas Supply of the Russian Federation” [4] determines legal, economic and organizational framework for relations in the field of gas supply in the Russian Federation and is directed to meet the needs of the state in the strategic kind of energy resources.

The Federal Law of March 26, 2003 No. 35-FZ (as amended on 29.12.2017) “Concerning the Electric Power Industry” [5] establishes legal framework for economic relations in the field of electric power industry, determines the powers of state authorities to regulate these relations, basic rights and obligations of electric power industry entities, when exercising the activity in the field of electric power industry (including production in the mode of combined generation of electricity and heat) and the consumers of the electric power.

The Federal Law of July 27, 2010 No. 190-FZ “Concerning Heat Supply” (as amended and supplemented, and come into force on 10.08.2017) [6] establishes legal framework for economic relations, emerging in connection with production, transmission and consumption of heat energy, heat power, the heat transfer medium with the use of heat supply system, the implementation, functioning and development of such systems, and also determines powers of state authorities, local authorities regarding the regulation and control in the field of heat supply, rights and obligations of heat energy consumers, heating supply companies, heating network organizations.

The development of normative legal base in the field of state regulation energy saving and energy efficiency improvement is exercised including other laws and regulations, and taking into account goals described by the National programme of the Russian Federation “Energy Efficiency and Energy Development” approved by the RF Government Regulation of April 15, 2014 No. 321 (as amended on 30.03.2018) [7], including the development of energy saving and energy efficiency improvement; meeting the demands of the domestic market with reliable, quality and economically justified supply of electric energy and heat; the development of oil-and-gas and coal industries of the fuel and ener-

gy complex for the effective supply with hydrocarbon and coal raw materials the demands of the domestic market and the fulfilment of obligations under foreign contracts; promoting innovative development of the fuel and energy complex.

In addition, according to paragraph 60 of the Russian President Decree of 31.12.2015 No. 683 “Russia’s National Security Strategy” [8], one of the main directions of national security protection in the economic field for the long term is enhancing energy security, which involves sustainable provision of domestic demand with energy carriers of standard quality, the growth of energy efficiency and energy saving, the competitiveness of national energy companies and manufacturers of energy resources, prevention of the fuel and energy resources deficit, the development of strategic oil reserves, reserve capacity, the production of accessory equipment, constant fuel and energy system performance.

The majority of the mentioned legal acts taking into account their significance and integrated nature are the objects of active work with the purpose of improvement, making necessary amendments and/or the establishment of the system of appropriate by-laws.

It is necessary to note, that at the present time the legislative policy in the sphere of the energy market is changing. In particular, together with requirement strengthening to the energy producers, there is the increase of lawmakers’ attention to energy consumers, especially to equipment used by them. The awareness by lawmakers the importance of energy-intensive and energy-saving technologies as regards to the energy security is manifested mainly in adoption of new laws and regulations.

Thus since 1 January 2018 more than 10 provisions of legislative acts come into force, directly affect the interests of Russian producers of light-emitting-diode light engineering. In particular, the RF Government Regulation of April 15, 2017 No. 450 amending the RF Government Regulation of 31.12.2009 No. 1222 [9]; the RF Government Regulation of January 25, 2011 No. 18 “On Approval of Regulations for Restablishing Requirement of Energy Efficiency for Buildings and Structures and Requirements to the Rules of Determining the Class of Energy Efficiency in Blocks of Flats” [10]; The Regulation of November 10, 2017 No. 1356 “On Approval Requirements to Lighting Devices and Electric Bulbs, used for Purposes of Alternating-current and Lighting” [11]. The analysis of

the Russian Federation legislation indicates that the Russian light engineering is on the stage of intensive development and improvement.

The energy sector of the economy in any country is the area of state interest, therefore, as a rule, it is under the strict control of the government. The state share at the domestic energy market in different parts can reach 100 %. This situation is primarily connected with the conservatism of the energy business – in order to make some profit it is necessary to receive substantial investment for long terms.

Undoubtedly, the issuers of legislative regulation of renewable or regenerative energy require particular attention. Along with that despite the adoption of a number of statutory acts, designed to put things right in the area of energy supply with the use of renewable sources of power, it would be premature to say that there is the particular systemized base of sources in this sphere. The majority of current legal acts in this sphere are mostly of a declarative nature proclaiming the main aim: “the development of using renewable energy sources”, and not proposing the necessary mechanism of its realization, that lead to difficulties in application of these acts. At the present time, the technologies operating on the base of the use of renewable sources of power are not sufficiently developed to be compete in the market, they do not provide for the development of alternative energy suppliers, major suppliers do not seek to diversify deliveries, preferring traditional single sources, that highlights the need for state support of their promotion. In addition, internal and external problems the Russia faces, taking into account economic parameters and the potential capacity of the Russian energy sector, result in the changes in the development model. According to experts’ estimates, the rapid increase in the use of renewable sources of power set additional tasks for the whole energy sector, connected with the necessity of reserving power and its accumulation for providing the flexibility of the State energy system activity.

#### 4. CONCLUSION

To conclude, it is necessary to mention, that monopolization of the energy sector by the state at present is disputable in terms of benefits for final consumers. Without contesting the right of state control over production and selling of traditional kinds of energy, it is offered to consumers with the

opportunity to seek alternative sources themselves in order to meet their own needs with energy. Besides, legislators should review their position regarding the opportunity for sellers to enter the market of the energy, while the analysis of laws and regulations, governing the energy sector of Russia, shows that at the present time there is no such opportunity for the participants of the market. The peculiarities of the development of the Russian energy sector have resulted to its governmentalisation that at the moment it diverges with the interests of final consumers. To stabilize the relations of alternative sources of energy at the market, it is required to fundamentally review the legislation taking into account the interests of private suppliers. Deciding on the introduction of a new alternative source of energy it is necessary to be sure in its future demand, stability, and legitimacy. It is worth noting that considering the legislative provision of the domestic energy market it is important to deal with the issues of energy efficiency and energy saving. In particular, it is pointed out that lighting equipment allows to reduce energy consumption, and overall energy saving in this case can reach 30 % [12]. The share of lighting in overall energy consumption is high enough, that is why the application of effective sources of light and the development of appropriate technologies is one of the primary ways for solving this problem. For some entities the way out will be not only the diversification of energy supply through the use of renewable energy sources and the emergence of new independent suppliers in the market, but putting into operation safe and effective lighting equipment. It should be noted the increasing role of legislative regulation in this sphere. The introduction of new energy-saving technologies, including the use of legal restrictions and direct instructions, promote the development of a modern energy legislation model, aimed at effective use of produced energy.

As can be seen from the above review of the legislation, the government pays little attention to the potential of alternative energy resources, establishing general rules for all market participants. Moreover, the absence of legislative restrictions with regard to the use of obsolete lighting equipment also leads to the lag of the Russian domestic energy market and contributes to increasing losses of energy for consumers. In keeping with this trend, the most wide use of practice for stimulating energy savings and the development of new technological processes

is the policy of rising traditional sources energy prices that is contrary to the interests of final consumers and can increase prices on for a significant number of goods in the domestic market. The introduction of state programs with regards to energy saving and energy efficiency stimulates the application of appropriate technologies and as a consequence conducting scientific research and development in these respects.

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Editorial staff of Light & Engineering Journal apologizes for the next missing paragraph in V. 26, #1, p. 16, paper “Technological Lighting for Agro-Industrial Installations in Russia” by Leonid B. Prikupets:

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