

ENERGY SAVING IN THE SPHERE OF STATE PUBLIC INTERESTS

Gulnara F. Ruchkina and Elena Yu. Matveeva

Financial University under the Government of the Russian Federation
E-mail: gruchkina@fa.ru

ABSTRACT

The article considers the categories of energy saving and energy efficiency in the aspect of State public interest. The implementation of energy saving policy is an independent public interest, as it allows solving some global, national tasks systematically. The article investigates the ratio of energy saving to the public interest in reducing the energy intensity of the Russian economy. The authors reveal the relationship between energy saving and public interest in ensuring national energy security of Russia. The authors consider energy saving as a factor contributing to the implementation of the actual public interest in the conservation of exhaustible natural resources reveal the relationship between energy saving and public environmental interest. A part of the article is devoted to the study of energy saving as a direction of state policy, allowing contributing to the preservation of the nation health. Energy saving is also considered in the aspect of public interest to increase the efficiency of budget spending to optimize public spending in the field of municipal authorities (for example, lighting).

The authors correlate all the considered state public interests with the category of “national interest” in the context of the provisions of the national security Strategy of the Russian Federation.

Keywords: energy saving, energy efficiency, state public interests, lighting

1. INTRODUCTION

IEA experts expect that global energy demand will reach 15.3 billion tons of oil equivalent in 2030.

Thus, energy consumption will increase by two-thirds compared to the level of the XXI century beginning [1]. The growth of energy consumption will have stable dynamics. Specialists of the Institute of energy research of the Russian Academy of Sciences predict that primary energy consumption in the world in 2010–2040 will increase annually by 1.3 % [2]. The growing demand for energy makes the efficient use of energy resources, energy, and energy carriers a global challenge.

The basic regulatory documents aimed at the implementation of energy saving Russian policies include:

- Federal law No. 261-FZ of 23.11.2009 “On Energy Saving and on Increasing Energy Efficiency and on Amending Certain Legislative Acts of the Russian Federation” (is edited 23.04.2018);
- Energy strategy of Russia for the period till 2030 (approved by order of the Government of the Russian Federation No. 1715-p of 13.11.2009);
- State program of the Russian Federation “Energy Efficiency and Development of Power” (approved by the RF Government resolution No. 321 from 15.04.2014);
- A comprehensive plan of measures to improve the energy efficiency of the economy of the Russian Federation (approved by order of the Government of the Russian Federation No. 703-p of 19.04.2018).

The importance of the problem of energy saving for our country is explained by the fact that the effective use of energy resources greatly contributes to the solution of some pressing social problems and challenges, namely:

- Problems of energy supply and lack of energy capacity and, as a consequence, the problems of energy security of Russia;
- The tasks of reduction of energy intensity of the Russian economy and, as a consequence, assistance to the task of increasing of its competitiveness;
- The tasks of improvement of ecology, reduction of anthropogenic impact on the natural environment;
- The task of preserving natural resources;
- Objectives of the population health protection;
- The problem of reducing budget expenditures.

The research problem of the aspects mentioned above and in General the problem of energy saving are considered and solved in the article through the prism of national public interests.

2. METHODS

General scientific methods of cognition-formal logic, system analysis, generalisation, formal legal and comparative legal methods are used in the article.

Socially significant, nation-wide tasks, the solution of which is important for an unlimited number of persons, are referred to the sphere of public interests. Their correlation with the status of “national interest” in the context of the provisions of the national security Strategy of the Russian Federation [3] is used as an indicator of the relevance and importance of the public interest. We believe that such an approach can be considered justified since this document defines today the officially recognized system of strategic national priorities aimed at ensuring the long-term sustainable development of our state.

3. RESULTS

According to the national security Strategy, national interests are objectively significant needs of the individual, society and the State in ensuring their security and sustainable development.

3.1. Energy Saving and Energy Intensity Reduction of the Russian Economy as a National and State-wide Public Interest

The most critical problem of the Russian economy is the high level of its energy intensity. Energy intensity of the economy is the ratio of consump-

tion of natural fuel resources and gross domestic product of the country.

The energy intensity of the Russian gross domestic product (GDP) is currently 1.5 times higher than the global and American that averaged and twice as high as that of the leading European countries [4]. The high share of energy costs in production costs leads to a decrease in the level of competitiveness of Russian goods, which limits export opportunities in the foreign market and, on the contrary, programs an increase in imports of consumer goods in the domestic market. It disorientates our national economy.

The risks of reducing the competitiveness of the energy-intensive Russian industry and, as a result, the national economy, are unusually high regarding volatility and lower prices for raw materials in the world markets, the development of shale projects, sanctions restrictions.

The national security strategy contains an indication that improving the competitiveness of the national economy is one of the primary national interests of the Russian Federation, and its action is considered in the long term. At the same time, reducing the competitiveness of the national economy is the strategy ranks among the main strategic risks and threats to national security in the economic sphere. Consequently, energy saving is a public interest in the context of reducing energy intensity and increasing the competitiveness of the domestic economy.

3.2. Energy Saving and Public Interest In Ensuring National Energy Security of Russia

The national security Strategy of the Russian Federation contains a direct indication that energy security is one of the main directions of national security of our country in the economic sphere.

The dependence of any society on energy is tremendous, and as a rule, it only increases along with economic development.

When discussing energy security issues, it is usually a question of providing the needs of the economy and society with the energy resources of the required quality and quantity. In the European Union, since the 1990s, energy conservation has traditionally been a factor in improving the energy and environmental security of member States. The preservation of high energy intensity leads to the aggravation of problems related to the energy security

of Russia and its regions due to the inability to provide energy capacity needs of the growing economy. The relevance of this problem is confirmed by the fact that at the turn of the century in the country there was no one area (both among Federal districts and economic regions and among regions of the Russian Federation), which would not have problems with the provision of electricity [5].

The concept of “energy security” is also enshrined in the legislation of the Russian Federation, in the Energy strategy of Russia until 2020, which states that energy policy will be used to prevent geopolitical and macroeconomic threats, as well as to preserve Russian independence. It is necessary to increase the power generation at least another 20 thousand MW [5] to cover the growing electricity demand in Russia in the next 2–4 years.

A unit of primary energy obtained by increasing its production on average requires 2–3 times more capital investments than its production by increasing energy efficiency [5]. Thus, it is obvious that in many cases it is cheaper to implement measures to save energy or avoid its use than to increase capacity and energy production.

In conditions of a highly energy-wasteful economy, the power industry will not be able to meet the growing demand for energy. The theme of energy supply becomes so defining that it is impossible not to agree with the famous writer-futurologist Arthur Clark, who predicted that soon the single world currency will be kilowatt-hour [6].

The transition to energy will be the saving way of development, and the formation of an energy-efficient society is a saving way of development of the entire world civilization, as it provides a much cheaper increase in energy production. In the context of the problem of ensuring Russian energy security, there is a close link between the implementation of this strategic national priority and the implementation of energy saving policy, and this proves that energy saving is a public interest in Russia.

3.3. Energy Saving and Conservation of Natural Resources as an Actual Public Interest

Energy saving is inextricably linked with the task of saving fuel and energy resources. The high level of energy intensity of the Russian economy indicates the inefficient and wasteful use of energy resources. Today, fossil fuels (coal, oil, gas), i.e., ex-

haustible natural resources, the need for which is not adequately replenished over time, account for more than 80 % of the energy resources consumed in the world.

The whole world is interested in the problems of energy saving precisely because the reserves of fuel and energy resources on the planet are not infinite.

The limited reserves of exhaustible fuel and energy resources made us turn to energy saving as to one of the main elements of the modern concept of the world economy. For resource conservation (especially regarding exhaustible minerals), we should recognize the status of public interest also because the resource conservation is the concern of the current society for future generations. The national security Strategy of Russia states that environmental management is one of the strategic national priorities, it is also noted that the depletion of mineral resources because of inefficient and “predatory” nature management and the predominance of the economy of extractive and resource-intensive industries adversely affect the state of environmental safety. Article 9 of the Constitution the Russian Federation defines the status of natural resources as the basis of life and activity of the population [7]. Due to the direct effect of the Constitution, the presence of the constitutional and legal form is the most critical criteria of publicity of the public interest.

Thus, energy saving to achieve the conservation of exhaustible natural resources should be considered as a national public interest.

3.4. Energy Conservation and Public Environmental Interest

The ecology problem is one of the main problems facing humanity today. On the one hand, energy is an essential component of economic prosperity, and on the other hand, its production is a huge component in environmental pollution and environmental degradation.

The problem of energy security and energy saving in recent decades has become closely associated with a whole range of environmental and legal problems. As it is indicated in the UN report on the sustainable development goals in 2017, the task of increasing the share of water, solar and wind energy, i.e., “clean” energy from renewable sources, is facing the entire world community. The fuel and energy complex is one of the main pollutants of the environment. In Russia, most greenhouse

gas emissions (about 80 %) are due to the activities of the energy sector [8]. Increasing fuel and energy efficiency is the cheapest way to protect the environment.

The benefits of improving the energy efficiency of the economy for the environment are apparent: the energy that brings the least harm to the environment is the energy that should not be consumed or is not produced. Emissions of pollutants will be automatically reduced in appropriate proportion whenever energy consumption for purposes will be reduced (by improving the insulation of dwellings, the use of more efficient light sources and lighting devices, increasing the efficiency of engines, etc.). The modern world is on the threshold of an environmental disaster, the harbingers of which are: global warming, reduction of the earth's ozone layer, acid rain, reduction of forest area and biological diversity, land degradation, deformation of the social environment, deterioration of public health in ecologically unfavorable regions, and other negative phenomena (deterioration of water quality, migration of harmful substances, desertification).

Article 42 of the Constitution of the Russian Federation proclaims the right of everyone to a favourable environment, and in this norm, the public environmental interest is clothed in the form of subjective law. At the same time, article 58 of the Russian Constitution establishes the duty of everyone to preserve nature and the environment, to take care of natural resources. The fact that two more obligations of citizens are fixed at the constitutional level (to protect the Fatherland and to pay legally established taxes and fees) speaks of the importance of environmental interests, the provision of which directly depends on the state of national security.

The national security strategy of Russia defines the strategic objectives the environmental safety preservation and quality assurance of the environment, as well as the elimination of environmental consequences of economic activity in the context of increasing economic activity and global climate changes. The government of the Russian Federation in its Energy strategy until 2030 sets the task of consistently limiting the load of the fuel and energy complex on the environment and climate, including by reducing energy consumption [9]. Based on the above-stated, it should be concluded that energy saving refers to the public interests as an instrument of conservation and protection of the environment.

3.5. Energy Saving and Preservation of the Nation Health as a National Public Interest

First, human settlements suffer from the irrational use of energy resources, because the total impact of pollutants from the emissions of the fuel and energy complex, industry and transport is accumulated precisely there.

By the conducted studies on the assessment of risks to public health, it was concluded that the costs for the economy from the deterioration of the health of the population due to the negative impact of the fuel and energy complex are \$18–35 billion annually.

In “real terms” in addition to a significant increase in the incidence of the population in the country, the damage is at least 6–8 thousand additional deaths per year. Identification of the critical points of energy impact on public health has shown that the most significant contribution to air pollution is made by vehicle exhaust gases, which is the cause of 90 % of health risks in cities [10]. The largest pollutants among stationary sources are power units of thermal power plants, which operate on coal. The health of citizens is the object of constitutional protection that is established by article 7, article 41 of the Constitution of the Russian Federation.

In the comments to the Constitution of the Russian Federation edited by V.D. Zorkin, it is noted: health is one of the highest benefits of a person, without which many other benefits, the opportunity to enjoy other rights can lose their importance [11].

According to the national security strategy of Russia, increasing life expectancy, reducing disability and mortality are strategic goals to ensure national security in the field of health and health care of the nation. In the context of this task, energy saving as a factor that can reduce the negative impact on the health of the population is a national public interest.

3.6. Energy Saving and Public Interest in Improving the Budget Spending Efficiency

Energy conservation also needs to be considered as a task of cost savings in the system of Public Finance.

The national security Strategy of the Russian Federation states that in order to counter the threats to the economic security of the bodies of state po-

wer and bodies of local self-government must implement policies to increase the efficiency and quality of state management of the economy, lowering costs and ineffective budget spending. Total spending on electricity in 2016 made 107.315 billion roubles [12]. These are budget expenditures for lighting in the street and road sector, as well as expenditures for the external and internal lighting of organizations of the budget sector. In 2015–2016 the government of Russia implemented a set of regulatory measures aimed at establishing lighting requirements with a focus on the budget sector.

These measures include:

- Approval of energy efficiency requirements for lighting products purchased for state and municipal needs (a prohibition on the purchase of some inefficient lamps and light sources is introduced) [13];

- Dissemination of energy efficiency requirements to purchases of state and municipal unitary enterprises [14];

- Dynamics of the minimum share of LED sources that can be purchased for buildings, highways, main streets of city significance, from 10 % in 2017 to 75 % in 2020 [15];

- The use restriction of inefficient and outdated technologies in the light design of streets and indoor lighting systems [16].

The comprehensive plan of measures to improve the energy efficiency of the economy of the Russian Federation sets targets to reduce the total annual costs of the budget system for electricity regarding to the level of 2016:

- By 2025 to reduce by 7.73 billion roubles;
- By 2030 to reduce by 10.3 billion roubles.

Thus, in the budgetary sphere, the State has vast reserves of management of energy resources effective consumption.

The President's address to the Federal Assembly dated 01.03.2018 states that one of the sources of financing for the development of the country is an increase of the public spending efficiency [17]. Thus, energy saving in the field of lighting is a public interest in the context of saving budgetary resources.

4. CONCLUSION

The Energy Strategy of Russia for the period up to 2030 contains information that the unrealized potential of organizational and technological energy saving is up to 40 % of the total domestic ener-

gy consumption. The energy strategy sets the task of reducing of the specific energy intensity by more than two times and the task of reducing of the specific electrical capacity of the gross domestic product by at least 1.6 times by 2030 (compared to the level of 2005) [9].

We assessed the national public interests that depend on the effectiveness of the state policy in the field of energy saving.

As M.M. Karabekov points out, any common goal corresponds to the time interval between its setting and achievement, during which some specific actions are implemented to implement "local" (intermediate) goals, which give the result of achieving a common goal [18]. Thus, to achieve the final goals in practice, it is necessary to implement some other, more local goals (in other words sub-goals).

Continuing this idea, we can say that the energy saving policy on the background of global public interests is a social goal, through the implementation of which common goals are achieved.

We considered the energy saving in the aspect that it contributes to the implementation of some public interests, such as energy security, improving the competitiveness of the domestic economy, the preservation of exhaustible natural resources, environmental safety, public health, optimization of public spending.

Consequently, the implementation of energy saving policy is also an independent significant public interest.

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Gulnara F. Ruchkina,

Dr. in Law of Science, Professor, an honorary worker of higher professional education of the Russian Federation; member of the Academy of Natural Sciences, Financial University under the Government of the Russian Federation; Head of Department of Legal Regulation of Economic Activity



Elena Yu. Matveeva,

Ph.D. in Law of Science, Financial University under the Government of the Russian Federation, Associate Professor at Department of Legal Regulation of Economic Activity, Financial Director of ILEC "BL GROUP" LLC