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The Role and Features of Resource-Saving Processes in Modern Conditions of Managing the National Economy and the Implementation of State Strategic Initiatives

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Abstract

Purpose of the study: The purpose of the preparation of this article is to determine the substantive essence of resource-saving activities at the level of state regulatory management, identify problem points, specific features and key trends in the aspect of medium and long-term planning. Methodology: The leading approach to the study of this problem was the content analysis of scientific-theoretical and practical materials, expert assessments of domestic and foreign scientists in the field of resource conservation, strategic planning and tactical development of the state regulatory mechanism. Results: The results of the study are that the authors described the features of resource-saving processes, as well as their principles, methods, directions and approaches, which formed the basis for the formation of a range of key tasks aimed at implementing resource-saving policies at the government level. Applications of this study: The theoretical significance of the article's materials consists in deepening and expanding the scientific and methodological approaches to the interpretation of the category "resource saving", in the course of which the substantive essence of this definition was established. The materials of the article are of practical importance and can be used in the development of strategic programs for resource conservation and resource efficiency at the regional and national levels, as well as in training personnel for this field of activity. Novelty/Originality of this study: The novelty of the research results lies in the fact that the state instruments for activating and regulating the process of resource saving were clarified, and conceptual provisions were developed to provide for the process of transition of the national economy of the Russian Federation to the path of resource-saving development. The originality of the research consists in the systematization of foreign experience, which determined the fundamental basis of the tasks in the implementation of resource-saving policy at the governmental level.

Keywords Resource Efficiency, National Economy, Public Administration, Competitiveness, Strategy, Resource Saving

1 Introduction

In recent years, priorities in the global economic space have been dominated by increasing food, economic and national security (6,28). The escalation of political instability, high competitive struggle for markets and resources, tensions in the social and environmental spheres prove the need to form a sustainable and balanced vector of socio-economic, industrial, technological and scientific and technological development (4,7,8,23). The real sector of the economy, the basis of which consists of leading industrial complexes and associations, today needs to be stepped up, including through the widespread use of resource-oriented methods and approaches. This tool, against the background of a shortage

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of resources and their high cost, has significant hidden potential to provide a breakthrough type of development of the latter. In this context, in many countries of the world, this kind of initiative projects have acquired the status of state policy with long-term prospects. This kind of state regulatory mechanism should have a number of specific properties, and, in particular: complexity, consistency, science, objectivity and be program-targeted in nature. Note that this mechanism should involve the use of various tools of a flexible and adaptive type and affect all spheres of economic activity of the national economy. The success of many large-scale projects that are nationwide, such as sectoral modernization of production and technological systems, raising the informational capacity of society, digitalization of the economy is largely determined by the scope of energy and resource consumption, as well as resource efficiency.

In the list of strategic initiatives of state management of the process of improving the level of resource efficiency the following initiatives will be highlighted: the complementarity of the objectives of the processes of resource-saving and environmental activities based on the use of low- and non-waste technologies; the maximum concentration of scientific, technical and economic potential in the direction of the development and implementation of energy-efficient technical systems with low resource consumption; stabilization and balance of import dependence on the supply of all kinds of resources, equipment and technologies; giving resource-saving policy the properties of clear structuring.

These areas are the most important tools to ensure sustainable growth, balanced development and competitive functioning of the real sector of the national economy in the modern world space.

Thus, the issues of raising the level of resource saving and resource efficiency is a nationwide level and modern states set priority tasks corresponding to the designated trend and development vector, which proves a particular degree of relevance and perspective significance of the scientific study of this spectrum of issues based on the application of advanced knowledge and experience of progressive economic thought.

2 Methodological Basis

The methodological basis of the research was the work of domestic and foreign scientists in the field of strategic planning and tactical development of the state regulatory mechanism aimed at increasing the level of resource saving and the efficiency of production-technological and socio-economic systems. During the development of conceptual theoretical foundations, information and analytical data, as well as in the process of achieving goals and objectives, we used a whole block of scientific methods and approaches. In particular, the following most common scientific approaches were applied: systemic, situational, logical, dialectical and processual. Among the methods of empirical, theoretical and general scientific groups it is worth noting: description, comparison, expert assessment, analysis, synthesis, deduction, reflection, generalization, concretization, abstraction, as well as abstract logical and graphical methods. The methods of the axiomatic and hypothetical group of knowledge were also applied. The use of these scientific methods and approaches in the complex allowed determining the substantive essence of resource-saving activities at the level of state regulatory management, identifying problem points, specific features and key trends in the aspect of medium and long-term strategy.

3 Literature Review

Consider the basic scientific approaches to the definition of the essence and meaningful sense of the category "resource saving" (table 1).

Table 1: Basic approaches to the interpretation of the category "resource saving"

Author	Treatment
G.Ya. Vagin et al. (25)	Activities, methods, processes, a set of organizational and technical measures and activities that accompany all stages of the life cycle of objects and aimed at the rational use and economic use of resources
A.N. Azriliyan (3)	One of the forms of realization of reserves of production associated with the maximum savings in the production of material resources
A.A. Kalenyuk (15)	Resource conservation should be aimed at improving the efficiency of resource use.
G.A. Beznosov (5)	Resources are used in an integrated and scientifically sound manner
I.N. Gerchikova (12)	One of the important ways to improve production efficiency. The main areas of resource saving are the introduction of resource-saving equipment and technologies that allow to reduce material consumption of products
I.I. Gizyatov (13)	The effectiveness of the interaction of certain types of resources in the production process, their best combination
E.A. Shokolenko (20)	The process of formation of the resource potential as the basis of economic development

Goals, objectives and problems associated with improving the efficiency of the economy, including through the use of resource-saving methods and approaches, are priorities and relevant in all countries of the world, including for our country. In the domestic literature there are many definitions of resource saving, used in economics. Note that V. Meshalkin et al. understands resource-oriented as a purposeful process (research, project, educational, production, economic, organizational, managerial), implemented with the involvement of the most progressive intellectual and information resources, aimed at reducing the specific indicators of resource consumption and increasing the overall level resource efficiency in compliance with the basic provisions of national and international regulatory support (17).

In particular, I.P. Vorotnikov notes that resource saving is a complex process and a focused type of activity focused on the preservation and rational use of all available resources (resource potential). In general terms, this is a specific list of activities that reduce the resource consumption of production and economic activity (27). This interpretation has specific limitations due to the fact that the author focuses solely on minimizing the use of resources, not taking into account indicators of efficiency and productivity. Important for modern production systems is not the minimization of resource costs, but an increase in the specific resource efficiency (the volume of finished product output per unit of source resource used). Also, relevant issues remain: minimizing losses, optimizing the supply of resources, their harvesting and storage, identifying resource reserves, reducing resource intensity, increasing the depth and complexity of using raw materials, rationalizing the use of secondary raw materials and waste (regeneration, recovery, recycling).

In the economic encyclopedia, the process of resource conservation is considered not only in the industrial sphere, but also in the sphere of consumption (9). In our opinion, this approach is very logical and legitimate, since excellent areas from production also have serious prerequisites for optimizing the process of resource consumption.

According to A.P. Vorontsov, whose position we fully share, resource saving is a complex of universal and specific tools aimed at rationalization and effective use of all factors of production (technical and technological, economic, financial, labor, information, transport and logistics, intellectual, innovative) (26). Thus, the process of raising the level of resource saving and resource efficiency forms the general character, principles of using the resource base (material, labor, scientific, etc.), and also includes a set of methods and approaches aimed at improving the efficiency, multifunctionality and competitiveness of various areas of economic activity based on the use of tools to optimize and rationalize resource use.

4 Results

In order to develop more effective tools and mechanisms of state regulation of the process of raising the level of resource efficiency of the national economy and certain sectoral economic structures, we will conduct an analysis of foreign experience regarding the set subject area of research. In this context, it is quite remarkable and logical to consider the experience of Japan, which, apart from actively participating in international projects in the field of environmental protection and environmental protection, quite successfully implements state initiative solutions aimed at improving energy efficiency, developing alternative energy sources, creating reliable and high-capacity reserves raw materials and supplies. Japan has a goal - by 2025 to increase the share of the use of renewable energy by 2 times and reach the highest rate in the world - 20%. According to the goals and objectives presented in the energy strategy of Japan, by 2030 it should increase the self-sufficiency in energy from 18% to 70%.

To implement these facilities in practice, a whole range of tools will be applied, in particular, financial support (subsidies, preferential loans) to the population, industrial enterprises, and other organizations that actively use alternative energy sources. Various benefits and government incentives are enjoyed by producers and consumers of environmentally friendly transport; production associations and individual business entities using equipment and technologies operating from alternative energy sources. For example, the mechanism of concessional lending applies to enterprises and organizations that replace the use of oil with coal. This form of economic incentives and support is provided by the Japanese Development Bank (the interest rate on these projects is 8-10% lower than the average level). The same measure applies to activities that lead to an increase in energy efficiency by more than 20% (22). Tax breaks and vacations are very active. So, if an enterprise acquired technological equipment with a high energy efficiency index and put it into operation within one year after the acquisition, then this enterprise can use the following options of tax schemes: 1) for enterprises of the “small business” category - a tax credit of 7% of the initial cost of the equipment, which may not exceed 20% of the income tax and / or corporate tax paid; 2) for all other enterprises - the tax deduction cannot exceed 30% of the base value of the equipment at the time of its acquisition (1).

Similarly, to the noted initiatives implemented in Japan, the very active policies of the "green economy" began to be implemented in India and China. Great achievements should be noted in the production of technical systems that collect, accumulate and use wind and solar energy. In particular, the PRC plans to increase the share of renewable energy sources to 15% in the near future by means of production and the widespread introduction of so-called "clean" technologies. In South Korea today, the national program of "green growth" is being implemented with the direct participation and support of the state (21,22).

In Denmark, as early as 1976, the energy plan for reducing the dependence of the national economy on oil imports was approved and began to be implemented. In order to increase energy conservation in Denmark, specific state-level program activities are being implemented to provide organizational, financial, legal and informational and consulting assistance for the introduction of energy-saving technologies in both production and household activities. In such countries as the Netherlands, Japan, Belgium, Germany, France, and the UK, projects for the construction of “eco-cities” have been implemented for a long time, which will make the most of the use of alternative energy sources and have a minimal impact on the environment. Also, in these countries there have long been the so-called "ecoparks", which are multifunctional recreational areas of the new generation.

In France, at the state level, there is a large financial support for energy saving measures in various sectoral areas of management (on average, at least 25-30% of the initial cost). Also, direct state financing of resource-saving projects in the non-industrial sector is being implemented. Special attention is paid to small and medium-sized businesses. Concessional lending of this type of measures is implemented at a reduced rate of 8-10%.

In the USA and the UK, there is a real opportunity to receive interest-free loans, as well as real organizational, informational and legal support for the renovation of buildings, the purchase of equipment for energy efficiency (10).

The implementation of a clear and logically structured state policy in the field of improving the resource efficiency of the economy has allowed many European countries to achieve high indicators of rationality, productivity and thrift. In particular, Germany is an example in the field of organizing a "green economy"; by rationalizing the processing of secondary raw materials and waste, German industry provides about 15% of the total amount of consumed energy and resources. Timely and effective government policy in the promotion of initiative projects in the field of "green industry" has led to the fact that currently more than 30% of the total energy consumption of Germany, Italy, Spain is provided through the use of renewable energy sources (19).

In our country, the implementation of such events and projects is not at the proper level. Today, of course, there are real achievements and results. But they are exclusively point-like project type. One of the main problems is the lack of a clear strategy for innovation and energy saving policy. An important problem is the lack of domestic resource-saving technologies and industrial equipment that meet the requirements of high efficiency of resource consumption. In these circumstances, the process of resource conservation is both a factor and a result of the sustainable development of the national economy. High competitive environment focuses modern economic entities on minimizing the costs (direct and indirect) of production, implementing an active policy to reduce the cost of final products, rationalize the use of the entire available resource potential in order to increase production capitalization, increase profitability, profitability and competitiveness. The main tasks of the state resource-saving policy are presented in fig. 1 (16).

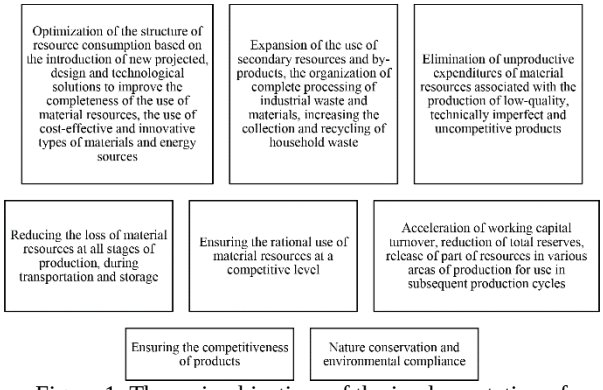

Figure 1: The main objectives of the implementation of resource-saving policy at the level of government control

Economic include: fiscal and price regulation, benefits and subsidies, fines and surcharges. Administrative include: the organization of the functioning of public services and bodies in the field of supervision, control and regulation of economic activities of state and business structures, in the context of compliance with environmental safety and enhancing resource-saving processes. Also, this includes information and consulting support. Regulatory and legislative include: the development of legislative and regulatory documents that reglament processes in the field of environmental management, environmental protection and resource conservation (law, standard, license, certificate, audit) (19) For the solution designated by the state has a whole set of tools (Fig. 2).

Figure 2: State instruments for enhancing and regulating the process of resource saving

In order to solve a number of issues of environmental management and resource conservation in particular, complex techniques are needed to study the transition of the national economy to the path of a resource-saving type of development, environmental management, and environmental safety. This methodology should include the conceptual provisions shown in Fig. 3.

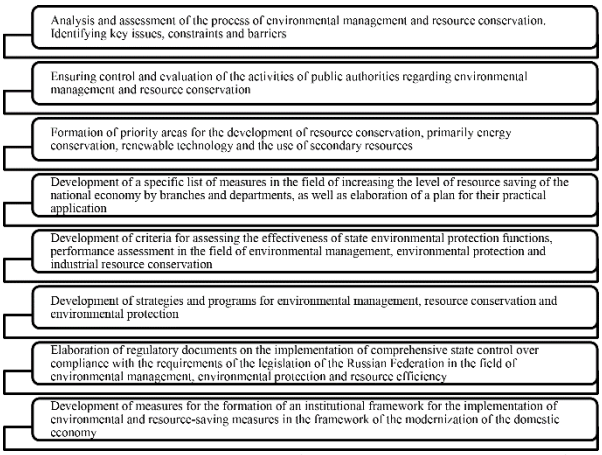

Figure 3: Conceptual provisions of the methodological support of the process of transition of the national economy of Russia to the path of resource-saving development

The development and implementation of such an integrated methodology for strategic management of environmental management and resource saving will allow, with a fairly high degree of probability, to predict the development of the processes under study both in the economy as a whole and in its individual sectors (for certain types of resources: subsoil, forest, water resources, energy consumption, use of secondary waste and raw materials, minimization of losses, increasing the depth of processing of raw materials, optimal schemes for the formation of material and technical and raw materials supply, human resources, etc.), as well as to develop a set of measures to improve the quality of implementation of public functions in the field of environmental protection and rational use of resources (18).

In terms of improving regulatory legislation, the Government of the Russian Federation has currently approved the Industry Development Strategy for the Treatment, Disposal and decontamination of Production and Consumption Wastes for the Period up to 2030 (approved no. 84-p dated January 25, 2008).

The strategy, being a sectoral strategic planning document of the Russian Federation, defines goals and objectives, ways to achieve them effectively (decisions), priorities, and the implementation stages of state policy in the

field of formation and development in the long-term perspective of the industry for processing, recycling and neutralizing industrial and consumer waste, including municipal solid waste. This document is the basis for the formation and implementation of state industrial and scientific-technological policy at the federal, regional, municipal and sectoral levels in the field of waste treatment, disposal and deontamination, resource conservation and waste involvement in economic circulation. This regulatory legal act is aimed at the formation and future development of a new industry for the treatment, recycling and disposal of waste, which unites in its infrastructure: business entities implementing activities to create, produce and release equipment, technologies, installations, equipment for processing, recycling and waste disposal; research and development organizations, institutions engaged in the development of innovative technologies for resource conservation, processing, recycling and disposal of waste; economic entities of one or several sectors of the economy engaged in the processing, recycling and disposal of waste, production of secondary raw materials.

A modern strategic approach to environmental management and resource conservation should also take into account the fundamental trends to strengthen the role of innovative development factors. Therefore, innovation, including in the field of environmental and resource-saving activities, should be the basis of the strategic policy of all economic entities, and individual enterprises, and regional authorities, and the state as a whole (2,11,14).

5 Discussions

The study showed that at the current moment programs and strategies for the development of production and economic systems of a resource-saving type are a priority task of the state regulatory management in tactical and strategic terms. In particular, production with high resource consumption, which have a low utilization rate of secondary raw materials, the depth of processing of initial resources, as well as a large negative environmental impact on the environment deserve special attention. A study of foreign experience in state regulation of raising the level of resource efficiency of various socio-economic and production and technical areas of entrepreneurial activity made it possible to formulate key tasks for implementing resource-saving policies in Russia at the level of government, and also to work out the basic provisions of the methodological process of transition of the Russian national economy to the path of resource development. It was also noted that at present the Government of the Russian Federation has approved the Industry Development Strategy for the Treatment, Disposal and decontamination of Production and Consumption Wastes for the Period up to 2030. This document defines the basic directions, goals and objectives, indicators, as well as mechanisms and tools for implementation and control program activities in the field of formation and development of the industry for the treatment, recycling and disposal of industrial and consumer waste.

Author's research has fundamental differences from a number of existing ones in terms of that developed foreign experience will constitute the fundamental basis of the basis of tasks in the implementation of resource-saving policy at the government level; methodological support of the process of transition of the national economy of the Russian Federation to the path of resource-saving development This fact, which, in turn, is confirmed by state initiative decisions for the long-term perspective (Strategy for the development of industry in the processing, recycling and disposal of industrial and consumer waste for the period up to 2030).

6 Conclusion

In order to be a competitive state in the international arena, as well as to maintain its economic, food and national security, completely different approaches are now required in terms of rationalization, increasing productivity and resource efficiency of various socio-economic systems. In the context of global political instability, the permanent growth of the cost of resources, as well as the pronounced shortage of the latter, resource-oriented methods and approaches acquire extraordinary significance and a high degree of relevance. This direction is the most important factor in enhancing the production and economic potential, increasing capitalization, the level of competitiveness and innovativeness of both individual industry sectors and the entire national economy.

Based on foreign experience in implementing state regulatory management in the field of resource consumption and resource efficiency, the list of key tasks for implementing resource-saving policies at the government level was clarified, state tools were developed to enhance and regulate the resource saving process, and conceptual guidelines were developed to ensure the transition of the Russian national economy to the path of resource development.

The application of these developments in practice will allow a more objective and complete look at the problem of the resource efficiency of the national economy, to move away from fragmented programmatic actions in the area of improving the efficiency of utilization of the resource potential and rational processing of industrial wastes as well as secondary resources towards a logical, high-level structured development strategies of production and economic systems, based on the application of well-established methodological support of the transition process of the Russian economy on the path of development of resource-saving.

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