RISK-BASED APPROACH IN THE REGION'S INDUSTRY

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Annotation. The need to minimize risks in the functioning of the industrial sector of the region is realized through the use of means and tools of state supervision and control in the production areas of the region; the intensity of the control measures implemented in certain cases depends on whether the activity of the enterprise (IE) or industrial facilities used by the owners of the enterprise to ensure their activities belongs to one or another category of risks. The application of a risk-based approach is primarily aimed at reducing the number of industrial accidents, as well as reducing the level of occupational injuries and accidents at work. This applies to all areas of use of this approach, and the intensity of control (both the frequency of inspections and their coverage) is inversely proportional to the level of safety of a particular production site. Thus, the relevant resources are allocated rationally, and measures are taken exactly where it is necessary.

Keywords: regional economy, risk-oriented approach, risk management, industrial sector of the region

In relation to the electric power industry, the key principles of the risk-based approach are set out in the provisions of the government Decree "On Amendments to the Regulations on the Implementation of Federal State Energy Supervision" developed with the participation of leading Rostechnadzor employees. According to the specified act, a dynamic model should be used for risk management, which is based on the analysis of the statistics of violations that were detected at the facilities subject to supervision. At the same time, the risk category, in accordance with the severity of such violations, can be changed; supervisory structures, based on this, get the opportunity, to prevent negative consequences, to direct their control resources, first of all, to objects belonging to the highest categories [1]. The most significant indicator of the probability of risks is the power indicator. The activities of industry entities, heating grid and heat supply enterprises (and individual industrial facilities), as well as end consumers of electricity, within the framework of using a risk-oriented approach in state supervision activities, should thus, according to the current rules and criteria, be assigned to a certain risk category.

Russian legislation highlights a number of aspects of the risk-based approach, with the main focus on control and supervisory activities carried out by state supervisory and regulatory authorities. Thus, the Federal Law "On the Protection of the Rights of Legal Entities in the Exercise of State Control" defines that in order to increase the efficiency of the use of all types of resources involved in the implementation of the procedure of state supervision and control, optimizing the costs of legal entities and individual entrepreneurs and ensuring high efficiency of the work performed, state control bodies should be guided by a risk-oriented approach when conducting the procedure of state control and supervision. At the same time, the risk-oriented approach is a way of preparing and executing the procedure of state supervision and control, in which the intensity, duration of control measures, as well as the form in which they are carried out, directly depend on which risk category (or hazard class) the activity of an enterprise or individual entrepreneur belongs to. When the so-called risk-oriented management system is introduced at a manufacturing enterprise, a number of goals are achieved [2]:

1) making thoughtful and adequate decisions, taking into account the level of risk;

2) ensuring the possibility of free circulation of information about risks and their characteristics (with vertical movement of information flows, and in both directions - from management to staff and from staff to management); the ability to take timely measures to manage risks, including their prevention;

3) conducting an audit of those areas of activity that are associated with maximum risks (including in "real time" mode).

The basis of the entire management system of an economic entity should be based on thoughtful management decisions and correct goal setting; it is necessary to make such decisions solely based on the results of a comprehensive analysis of negative factors that can affect the activities of the entity. To do this, the risk management system should be an integral part of the enterprise management system. The definition of a particular risk category for a particular supervised entity is carried out according to the severity of the possible consequences of non-compliance with legislative requirements in the field of safety of the electric power industry, as well as the likelihood of their violation.

It should be noted that when operating production facilities of various power levels or with different network capacity by supervised energy enterprises, the risk category is assigned to this subject according to the value of these indicators that corresponds to the maximum hazard class. In addition, the risk category increases if the object subject to supervision is the only source of heat or electricity that provides the activities of the enterprise operating this object (Table 1) [3].

Table 1 - Criteria for assigning electric power industry entities, heat supply organizations, heating grid organizations and consumers of electric energy to a certain risk category

Features of attribution of organizations of owners of energy facilities, energy receiving devices to risk categories	Категория риска				
	I	II	III	IV	V
	High risk category	Significant risk category	Medium risk category	Moderate risk category	Low risk category
Electric power plants	Installed capacity from 500 MW and abov	Installed capacity from 150 to 500 MW	Installed capacity from 50 to 150 MW	Installed capacity from 1 to 50 MW	Installed capacity less than 1 MW
Electric grid facilities	Capacity of the electric network from 500 MW	Capacity of the electric network from 100 to 500 MW	Capacity of the electric network from 5 to 100 MW	Capacity of the electric network from 0.15 to 100 MW	Capacity of the electric network less than 0.15 MW
Electrical installations of consumers	Maximum power from 500 MW and above	Maximum power from 100 to 500 MW	Maximum power from 5 to 100 MW	Maximum power from 0.15 to 5 MW	Maximum power less than 0.15 MW (consumers of the 1st and 2nd categories of power supply)
Thermal installations and networks			Installed capacity from 10 MW and above	Installed capacity from 0.15 to 10 MW	Installed capacity less than 0.15 MW
Subjects of operational dispatch management in the electric power industry	Medium risk category				

Dynamic model

When taking into account the evaluation of the specified model [4,5]:

1) entities operating in the electric power industry are classified according to risk categories as follows: high risk, significant, medium and moderate; it is necessary to revise the procedure for assigning to all categories except the first, and introduce certain rules for assigning these categories:

- for at least 5 years immediately before the assignment of the category, there must be no judicial acts (which have entered into force) issued for violation of safety requirements, as a result of which an accident and /or a fatal accident occurred at work, in relation to the enterprise (IE), as well as individual officials and / or other employees of this enterprise;

- for at least 3 years immediately before the assignment of the category, there should be no resolutions (which have entered into force) on bringing the subject to administrative responsibility due to the commission of offenses provided for by certain provisions of the Administrative Code (articles 9.7 to 9.9, as well as 9.11 and 9.18);

2) entities operating in the areas of heating networks and heat supply, as well as electricity consumers, are classified according to risk categories as follows: high risk, significant, medium and moderate; it is necessary to revise the procedure for assigning to all categories except the first, and introduce certain rules for assigning these categories:

- for at least 5 years immediately before the assignment of the category, there must be no judicial acts (which have entered into force) issued for violation of safety requirements, as a result of which an accident and /or a fatal accident occurred at work, in relation to the enterprise (IE), as well as individual officials and / or other employees of this enterprise;

- according to the results of the latest inspection, there should be no resolutions (which have entered into force) on bringing the subject to administrative responsibility due to the commission of offenses provided for by certain provisions of the Administrative Code (articles 9.9 to 9.11);

3) a supervised entity may be assigned a category of significant, medium, moderate or low risk in the following cases:

- over the past 5 years, immediately before the assignment of the category, there has been at least one judicial act (which has entered into legal force) issued for violation of safety requirements, as a result of which an accident and /or a fatal accident occurred at work, in relation to the enterprise (IE), as well as individual officials and /or other employees of this enterprise;

- over the past 3 years, immediately before the assignment of the category, there has been at least one resolution (which entered into force) on bringing the subject to administrative responsibility due to the commission of offences provided for by certain provisions of the Administrative Code (1st part of Article 19.5);

Attribution authority (Fig 1) [6]

In relation to the level of risk, the activities of supervised entities belong to one or another category:

- when determining a high, significant, medium risk – in accordance with the decision of the head (or deputy). head) of the state supervisory authority;

- when determining moderate, low risk – in accordance with the decision of the management of the relevant territorial subdivision of state supervisory authorities.

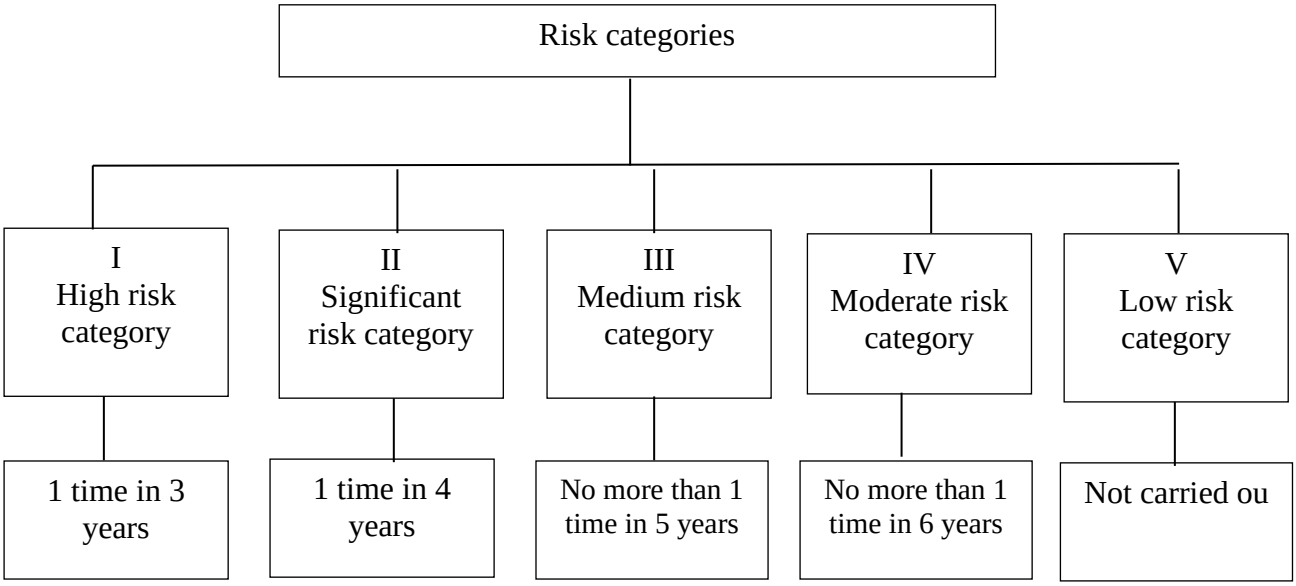

Figure 1 - Frequency of scheduled inspections depending on the assigned risk category

The decision to assign a particular risk category to a supervised entity in the case of the presence of several such entities in the relevant territory is made by the management (deputy head) of the supervisory authorities. In turn, the decision concerning the promotion of this category is made by an official with the appropriate authority.; if such a decision concerns the reduction of a category, it should be made by the same official who was charged with making a decision on assigning a certain risk category (or hazard class), and at the same time, both the decision on the reduction of the category in writing and its documentary grounds should be sent to the authorized body. If there is no corresponding decision at all, the activity of the supervised entity automatically belongs to the low-risk group.

Scheduled inspections

The following figure shows the regulatory frequency of planned supervisory inspections of electric power industry enterprises in accordance with risk categories (hazard classes); it should be borne in mind that subjects classified as low risk are not subject to planned control (Fig 2) [4, 7].

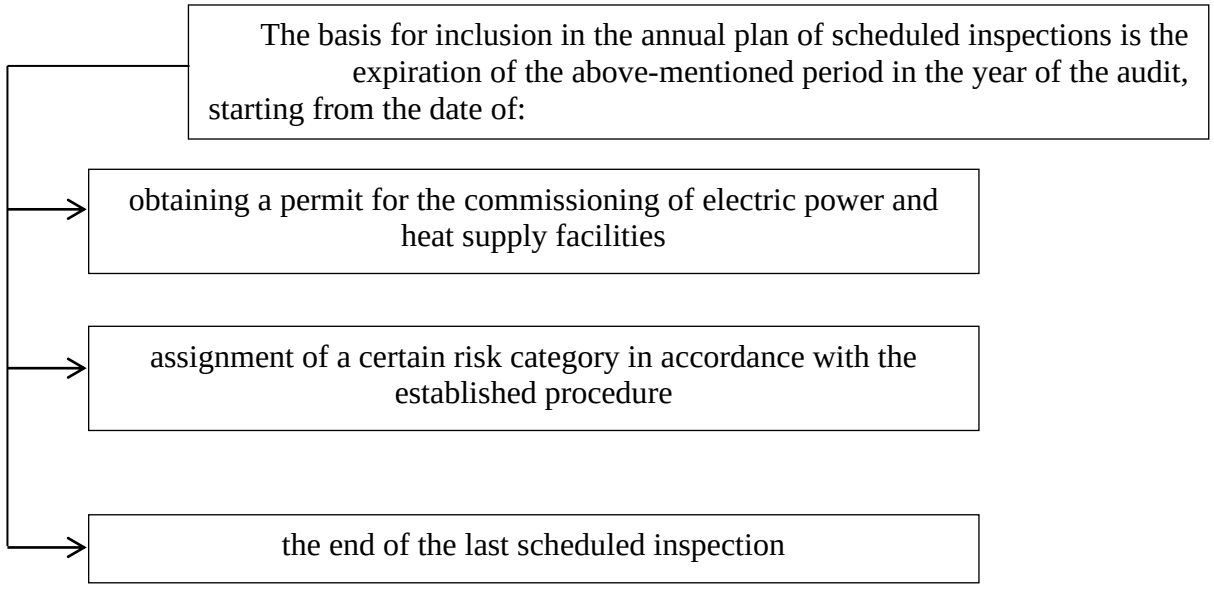

Figure 2 - The basis for inclusion in the annual plan of scheduled inspections

A planned audit of an enterprise (IE) is included in the corresponding annual plan on the general basis that in the period for which the plan is drawn up, the validity period of the previous audit expires; at the same time, the countdown begins from the date:

- obtaining (in accordance with the procedure provided for by the provisions of the legislation on urban development) a permit to put electric power and heat supply facilities belonging to heating grid enterprises into operation;
- assignment of a certain risk category to a supervised entity (also in accordance with the procedure established by law);
- completion of the last scheduled inspection.

Lists of subjects of supervision

Supervised entities belonging to certain risk categories are included in special lists compiled by state supervisory structures; the following data are entered into such lists [8]:

- the name (full) of the relevant enterprise or the passport data of the sole proprietor;
- OGRN and INN;
- the legal address of the company (or the residential address of the sole proprietor);
- the actual address at which the company conducts its main activities;
- the risk category (hazard class), the details of the document according to which it was assigned, the documentary grounds for assigning the specified category.

Information about supervised entities classified, in accordance with the nature of their activities, into high and significant risk categories should be posted on the official Internet pages of the relevant state supervisory structures, as well as, if necessary, updated; such information includes:

- the name (full) of the relevant enterprise or the passport data of the sole proprietor;
- OGRN and INN;
- the legal address of the company (or the residential address of the sole proprietor);
- the actual address at which the company conducts its main activities;
- the risk category assigned to the subject, as well as the date of the relevant decision by the authorized body.

When posting this information on the international Internet, the current provisions of the legislation concerning the preservation of state secrets of the Russian Federation must be observed. Supervisory authorities that, according to the Rules on Assigning Risk Categories to Enterprises, Sole Proprietors and Their Industrial Facilities, have decided to assign a supervised entity to a

particular risk category, in accordance with the request of this entity, must provide data on the assignment of the entity's activities to a particular category, as well as the grounds for the decision. In accordance with the procedure provided for by the above-mentioned Rules, the supervised entity has the right to submit an application to the state supervisory authorities for a change in the risk category to which its activities were assigned by the decision of the authorized bodies.

Problem areas of regions in the Russian Federation

The so-called problem zones are territories of various sizes, within which certain anomalies operate. In particular, this refers to territories that have been negatively affected by the consequences of various kinds of accidents and catastrophes (both man-made and natural origin), military conflicts, socio-political upheavals, etc., which ultimately led to the displacement of significant masses of the local population (forced migration), as well as a decrease in the economic potential of the region as a result of a sharp drop in production and, as a consequence, the quality of life of citizens. In Russia at the moment, such territories, for the regulation of which special techniques should be used, can be classified, based on typological features formulated according to the results of research, as follows: underdeveloped or lagging regions; depressed regions; regions in a state of crisis [9]. The first of these categories can be attributed to federal subjects whose economy is in a state of stagnation and whose economic potential is many times inferior to the national average due to the influence of various factors – both historical and socio-economic; social infrastructure is insufficiently developed in the territories of such regions, and local industry is poorly diversified (Altai, the North Caucasus, most joint-stock companies, except those in which the oil and gas industry prevails, etc.). The development of such regions should be stimulated through state support measures, as well as the use of existing advantages; it should be noted that this requires significant costs, including temporary ones. The depressed regions of Russia, characterized by a steady and deep decline in economic activity and a sharp decline in the standard of living of the population, include local zones of old-industrial, agricultural -industrial and some mining regions of the European Center, the Urals, southern Siberia and the Far East. The group of problem regions also includes a significant part of the northern territories, where typical negative factors (unfavorable climate and high cost of living, increased production and transport costs, environmental vulnerability, etc.) are currently not compensated by strong competitive advantages in the form of the richest resources (oil and gas, diamonds, precious and non-ferrous metals, etc.). The plight of a number of regions of the Far North (the curtailment of basic and service industries, significant unemployment, low incomes, difficulties with the import of fuel and food) require special measures of state assistance. The situation of a number of depressed regions may improve if Russia's position in the global arms markets, aerospace equipment, nuclear industry and other high-tech industries is restored and strengthened. For most depressed regions, the path to sustainable

economic growth can be achieved on their own by diversifying, converting, modernizing production, stimulating the development of small businesses, improving the local investment climate, searching for new markets, etc. However, a number of regions with a particularly deep degree of depression should become objects of targeted state support. According to the results of the period "January-August" 2021, the volume of industrial production amounted to 37.2% compared to the same period of the previous year, which amounted to 55,019,000 million rubles. What do the indicators of industrial production demonstrate (Fig 3) [10]

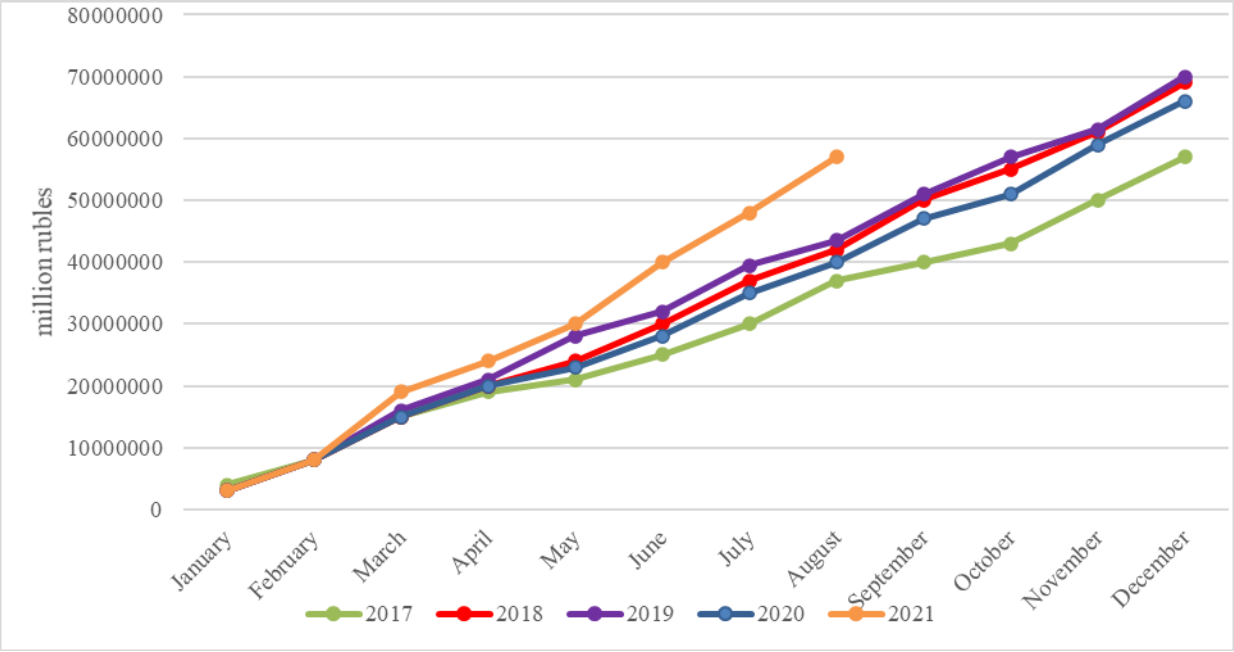

Fig 3 - industrial production indicators 2017-2021 (aug)

Moscow (7,619,691 million rubles), the Tyumen Region (6,877,904 million rubles), as well as the Khanty-Mansi Autonomous Okrug (3,481,258 million rubles) were among the leaders in terms of shipped goods of their own production, works and services performed in the country, while the highest industrial production indices were in the Republic of North Ossetia (133%), Primorsky Krai (133.4%) and the Republic of Sakha (Yakutia) (125.7%). Among the lagging regions are the Republic of Altai (5,542 million rubles), the Republic of Kalmykia (2,841 million rubles), and the Republic of Ingushetia (2,394 million rubles), the lowest industrial production indices were recorded in the Republic of Ingushetia (93.3%), Sakhalin Oblast (87.8%). Thus, the use of a risk-based approach for industrial enterprises is associated not only with control and audit activities, but also with the main activities of enterprises, including:

- production,
- financial,
- investment activities.

The risk-oriented approach is part of the enterprise management process, includes a specific strategy, tactics and operational implementation. The risk management system includes not only analysis and impact procedures, but also mechanisms for periodic review and ranking of risk management measures and tools. The full application of a risk-based approach in the management of an industrial enterprise means the introduction of a risk management system, including the integration of components of this system into the main business processes and activities.

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