Federal State Energy Supervision in Electric Power Industry: Evolution and Current State of Regulatory Control

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Abstract

Ensuring the reliable and safe operation of the unified energy system of Russia and technologically isolated territorial power systems, the energy security of the industry, as well as the priority of life and health of employees of organizations of the electric power industry when operating electric power facilities and power receivers are among the basic principles of state regulation and control in the electric power industry. Without state energy supervision and development of the necessary regulatory framework, it is impossible to achieve the goals of reliability and safety regulation in the electric power industry, to fully implement the principles of state regulation and control in the electric power industry, as well as the fundamentals of the state sectoral policy. The article examines the process of evolution of statutory regulation of state energy supervision in the electric power industry, highlights the key changes in state supervision after the adoption of normative legal acts as part of the reform of control and supervisory activities, and considers the priority tasks of the development of legal regulation of state energy supervision.
I. Significance of Federal State Energy Supervision in the Electric Power Industry

Ensuring the reliable and safe operation of the UES of Russia and technologically isolated territorial power systems, the energy security of the industry, as well as the priority of life and health of employees of organizations of the electric power industry when operating electric power industry facilities and power receivers are among the basic principles of state regulation and control in the electric power industry.

According to clause 2 of Article 20 of Federal Law No. 35-FZ on the Electric Power Industry dated March 26, 2003 (hereinafter referred to as the Federal Law On the Electric Power Industry), federal state energy supervision (hereinafter referred to as state energy supervision) is one of the methods of state regulation and control applied in the electric power industry.

Along with the adoption of regulatory legal acts establishing requirements for ensuring the reliability of electric power systems, the reliability and safety of electric power facilities and power receivers and ensuring the quality of electric power, and security clearance in the electric power industry, state energy supervision also refers to measures of state regulation of reliability and safety in the electric power industry aimed at ensuring its sustainable, reliable and safe operation and preventing emergencies related to the operation of electric power facilities and power installations of electric power consumers.

Historically, state energy supervision has occupied a special place in the system of public supervisory authorities responsible for ensuring energy security not only of the fuel and energy sector, but also of the country as a whole. Consistent work on the development of normative legal acts in the electric power industry has resulted in a well-established system of state supervision over the safety of electric power facilities and power receivers.

Nevertheless, the issue of permanent development of regulatory support for state energy supervision has not lost its relevance.

One of the main objectives of the Federal Service for Environmental, Technological and Nuclear Supervision (hereinafter referred to as Rostekhnadzor) for the near future is the improvement of activities for the implementation of state control
(supervision) functions and the improvement of statutory regulation in the established field of activity, which also includes the implementation of state energy supervision [1].

At the present stage of development of the electric power industry, the supervisory authorities are also working to promote good faith compliance with and explanation of mandatory requirements, to create a common understanding of mandatory requirements, to eliminate conditions, causes and factors that can lead to violations of mandatory requirements and (or) harm (damage) to legally protected values [2].

It should be noted that without an effective system of state energy supervision and continuous development of the necessary regulatory framework, it is impossible to achieve the goals of reliability and safety regulation in the electric power industry, to fully implement the principles of state regulation and control in the electric power industry, as well as the fundamentals of the state sectoral policy. The need for a developed system of state energy supervision became particularly acute at the time of reforming UES of Russia RJSC and establishing separate organizations for electric power generation, transmission, and sale [3].

Thus, the relevance of the research topic is determined by the importance of quality regulation of state energy supervision in the electric power industry.

Issues of legal support of state energy supervision are not sufficiently considered in science. The last thesis research on the legal regulation of supervisory activities in ensuring the safety of the electric power industry was conducted 10 years ago [4]. Since then, the problems of statutory regulation of state energy supervision have been dealt with in a fragmentary manner in scientific publications. However, due to the reform of control and supervisory activities, they require reconsideration [5]. At the same time, the development of legal regulation in the energy sector, including state regulation and control, is becoming more and more relevant for energy law, as rightly noted in modern scientific literature [6].

The purpose of this study is to consider the evolution of the process of statutory regulation of state energy supervision in the electric power industry from the post-Soviet period to the introduction and implementation of the risk-based approach, as well as to highlight the main changes in state supervision after the adoption of regulatory legal acts as part of the reform of control and supervisory activities, to review the priority tasks of the development of legal support for the implementation of state energy supervision in the electric power industry.

II. Establishment of Statutory Regulation of State Energy Supervision

In the post-Soviet period, the statutory regulation of state energy supervision in the electric power industry was formalized in a separate Regulation On State Energy Supervision in the Russian Federation approved by Resolution of the Government of the Russian Federation No. 47 of May 12, 1993. The task of state energy supervision is to control the technical condition and safe maintenance of electrical installations of electric power consumers, equipment and main structures of power plants, power grids of power
providers, rational and efficient use of electric power by enterprises, organizations and institutions, regardless of their departmental affiliation and ownership.

In order to fulfill this task, a three-tier system of state energy supervisory authorities has been established: the Main Department of State Energy Supervision of the Ministry of Fuel and Energy of the Russian Federation (Glavgosenergonadzor of Russia); regional departments of state energy supervision; and local energy supervision agencies.

The above-mentioned state energy supervision authorities supervised compliance with:

1. Measures for saving electric power and reducing its consumption per unit of production (works, services);
2. Rules for the design of electrical installations, technical operation of electrical installations, operational safety and rules for electric power use;
3. Organization of metering of electric power production and consumption;
4. Balance tests of operating, commissioned, reconstructed, and upgraded installations and equipment.

In order to perform supervisory functions, the 1993 Regulation on State Energy Supervision granted significant powers to inspectors.

In particular, it granted the right to issue mandatory orders to eliminate violations of the rules of electrical installation construction and operation and electric power use; to demand immediate disconnection of electrical installations in case of detection of violations that may lead to accidents; to control the verification of personnel awareness of these rules; to give instructions to suspend from work persons who have failed the test of awareness of the rules of safety and operation of electrical installations; to participate in investigation of emergencies; to authorize the operation of new and reconstructed electrical installations; to give orders for the installation of metering devices, control and regulation systems of electric power consumption; to freely enter the premises of electrical installations at any time of the day upon presentation of an official ID.

At the same time, supervised entities could appeal against the actions of state energy supervisors. The filing of a complaint did not suspend the appealed decision.

The next stage in the development of state energy supervision is the reorganization of state energy supervision authorities by the Ministry of Fuel and Energy of Russia in accordance with Resolution of the Government of the Russian Federation No. 560 of May 8, 1996 [7] in order to ensure reliable and safe power supply to electric power consumers, improve the efficiency of state energy supervision authorities, and bring their structure in compliance with the Law of the Russian Federation On Competition and Restriction of Monopolistic Activities in Commodity Markets [8].

The new structure required the Ministry of Fuel and Energy of Russia to create a unified system of state energy supervision based on individual supervisory organizations and inspections operating in the fuel and energy sector.
As a result of the reform, state energy supervision was carried out by the Main Department of State Energy Supervision of the Ministry of Fuel and Energy of the Russian Federation, regional departments of state energy supervision, and departments of state energy supervision in the constituent entities of the Russian Federation.

Subsequently, a new version of the Regulation on State Energy Supervision was approved by Resolution of the Government of the Russian Federation No. 938 dated August 12, 1998 [9].

The tasks of state energy supervision did not undergo any significant changes. The system of state energy supervision authorities was formed by a centralized vertical structure created as a result of the reform of the Ministry of Fuel and Energy of Russia. The scope of state energy supervision, the powers of inspectors, and the possibility to appeal against the actions of officials remained unchanged.

Major changes began in 2004. Fundamental decisions determining the status, scope of activities, and powers of Rostekhnadzor, which is currently the only state energy supervision body, were made during the reform of the system and structure of federal executive authorities [10].

However, the transfer of special functions of state energy supervision in the electric power industry to Rostekhnadzor was accompanied by the lack of the necessary system of normative legal acts. Certain aspects of state energy supervision were regulated by the Civil Code of the Russian Federation, the Labor Code of the Russian Federation, the Code of Administrative Offenses of the Russian Federation, the Federal Law On Occupational Safety and Health in the Russian Federation, the Federal Law On the Safety of Hydraulic Structures, the Federal Law On Licensing of Certain Types of Activities, and a number of resolutions of the Government of the Russian Federation.

The task assigned to Rostekhnadzor to supervise the safe operation of electric power facilities and power receivers could not be properly fulfilled due to the lack of independent statutory regulation of such supervisory activities.

A flawed system of receiving information on personnel injuries at supervised facilities, technological violations, and accidents from energy providers and consumers, as well as uncoordinated inspections of supervised facilities, were specific shortcomings in the work of state energy supervisory authorities. The transformation of state energy supervision began during the reform of UES of Russia PJSC [11]. At that time, the analysis of power supply interruptions to consumers showed that they were mainly caused by the dilapidated state of equipment of power generation facilities and power grid facilities, as well as by unqualified actions of process personnel [12].

Rostekhnadzor’s activity plans included the development of the necessary regulatory framework, including the adoption of a new version of the Regulations On State Energy Supervision, the development of criteria and identification of objects of federal supervision, inventory, revision and updating of regulatory documents on federal supervision in the electric power industry [13].

The modern concept of state energy supervision in the electric power industry emerged after the adoption of Federal Law No. 242-FZ On Amending Certain Legislative Acts of the Russian Federation On State Control (Supervision) and
Municipal Control of July 18, 2011, which was developed pursuant to the instruction of the Government of the Russian Federation in order to implement the provisions of Federal Law No. 294-FZ On Protecting the Rights of Legal Entities and Individual Entrepreneurs in the Implementation of State Control (Supervision) and Municipal Control of December 26, 2008.

This Federal Law introduced significant amendments to the sectoral Federal Law On the Electric Power Industry. In particular, it introduced the concept of state energy supervision and defined the procedure for the activities of the federal executive body authorized to carry out this type of supervision, as well as its duties and powers. At the same time, work continued on the draft Resolution of the Government of the Russian Federation On Federal State Energy Supervision [14].

As a result of developing regulatory support for state energy supervision, a new Regulation on State Energy Supervision was approved by Resolution the Government of the Russian Federation No. 610 of July 20, 2013 [15].

In accordance with these Regulations, federal energy supervision is aimed at preventing, detecting and suppressing violations by electric power entities of reliability and safety requirements in the electric power industry (mandatory requirements) by organizing and conducting inspections, taking measures to suppress and/or eliminate the consequences of detected violations, holding violators of such requirements accountable, and the activities of state energy supervision authorities to systematically monitor compliance with the mandatory requirements, analyze and forecast the state of compliance with the mandatory requirements in the course of activities of electric power industry entities.

In contrast to the previous provisions on state energy supervision, the subject of federal supervision has been drastically revised and clarified. It is now compliance of supervised electric power entities with the mandatory requirements, including:

- Availability of permits for operation of electric power facilities.
- Compliance by owners or other legal holders of thermal power plants with fuel reserve standards, as well as the procedure for creating and using fuel reserves.
- Compliance with special conditions for the use of land plots within the boundaries of protection zones of electric power facilities.
- Adherence to the established procedure for shutting down electric power facilities for maintenance purposes.
- Compliance by supervisory control entities in the electric power industry with the mandatory requirements governing relations in the field of supervisory control.

The rights of state energy supervision inspectors have not changed significantly in terms of content, but have been updated to take into account the updated conceptual framework of the Federal Law On the Electric Power Industry. In comparison with the previous provisions on state energy supervision, the updated regulatory document authorized the inspectors to issue orders to stop violations of the mandatory requirements, to take measures to ensure the safety and reliability of electric power facilities, to make reports on administrative offenses related to violations of the
mandatory requirements, to consider these administrative offenses, to file claims in court and commercial court.

The next stage in the evolution of state energy supervision was the adoption of Federal Law No. 196-FZ dated June 23, 2016, which introduced a number of new concepts into the sectoral legislation, clarified the subject of state energy supervision, excluded reliability issues from its scope, but fully included issues of control over compliance with special conditions for the use of land plots within the boundaries of protection zones of facilities, empowered the Government of the Russian Federation or a federal executive body authorized by it to establish requirements for ensuring the reliability of electric power systems, reliability and safety of electric power facilities and power receivers [16]. In order to develop this Federal Law, the Government of the Russian Federation adopted Resolution No. 701 of July 20, 2016, according to which state energy supervision in the electric power industry is extended to certain categories of electric power consumers [17].

Thus, the regulatory support of state energy supervision is constantly improving:

At the stage of formation of the regulatory framework, it became obvious that an effective system of state energy supervision in the electric power industry should operate in a centralized manner. In this regard, not only the reform of the system of state energy supervision authorities was carried out, but also an inventory of the then valid regulatory requirements was made.

A key stage in the development of state energy supervision is the reform of the system and structure of federal executive bodies, which resulted in Rostekhnadzor becoming the only supervisory body responsible for state energy supervision in the electric power industry.

Transition from a disparate system of normative legal acts governing state energy supervision in the electric power industry to a two-stage system: establishment of the basic principles of state energy supervision in the Federal Law On the Electric Power Industry and their specification in the Regulation on State Energy Supervision approved by the Government of the Russian Federation.

III. Transition to Risk-Oriented State Energy Supervision and Current Tasks of Regulatory Support Development

In 2017, on the basis of the priority program “Reform of Control and Supervisory Activities” approved by the Presidium of the Presidential Council for Strategic Development and Priority Projects (Minutes No. 12 dated December 21, 2016), work began on the introduction of a risk-oriented approach to state energy supervision.

It should be noted that the strategic results of the reform of control and supervisory activities suggested the introduction of a comprehensive system for assessing the performance and effectiveness of control and supervisory bodies and their activities, the development of mechanisms for preventing violations of the mandatory
requirements and ensuring compliance with legal requirements, the introduction of remote control methods (video and photo monitoring), as well as other methods of remote technical monitoring. Besides, as part of the ongoing reform, it was supposed to adopt a federal Law On control and supervision activities and normative legal acts to develop the said federal law and sectoral legislative regulation on control and supervision [18].

The first result of the transition of state energy supervision to a risk-oriented approach was the adoption of Resolution of the Government of the Russian Federation No. 1445 on Amendments to the Regulations On Federal State Energy Supervision dated November 30, 2018. The risk-oriented approach to state energy supervision in the electric power industry means that electric power entities and electric power consumers have been assigned to a risk category.

The introduction of this approach in state energy supervision also resulted in changes in the frequency of scheduled inspections of electric power entities and electric power consumers (for the high risk category – once every 3 years, for the substantial risk category – once every 4 years, for the medium risk category – not more often than once every 5 years, for the moderate risk category – not more often than once every 6 years).

Due to the development of the risk-oriented approach in Rostekhnadzor’s activities, the priority in improving control and supervisory activities has shifted to the introduction of remote control methods, improvement of the regulatory legal framework for safety in the electric power industry, proper regulation of the function of certification of employees of supervised facilities and admission of power receivers to operation.

The main results of the ongoing reform of control and supervisory activities, including state energy supervision, were the adoption of the following laws:


In accordance with Federal Law No. 248-FZ, the organization and implementation of state energy supervision is regulated by a federal Law On such type of control and regulations on the type of state control (supervision) and/or normative legal acts of federal executive authorities adopted in accordance therewith.

In order to implement the said procedure for regulating state energy supervision, the Federal Law On the Electric Power Industry has been amended by the Companion Law in order to define the basic principles of the existing procedure for organizing and implementing state energy supervision; to authorize the Government of the Russian
Federation to approve regulations on state energy supervision; and to conduct an assessment of compliance of supervisory control entities with the mandatory requirements as part of state energy supervision.

In 2021, the Government of the Russian Federation adopted Resolution No. 1085 of June 30, 2021, to approve the Regulations on State Energy Supervision, which take into account current trends in the introduction of a risk-oriented approach.

These Regulations on State Energy Supervision are fundamentally new for the industry. The normative document defines the subject of state supervision and the bodies (officials of the bodies) carrying it out, the procedure for applying the risk management system for causing damage to legally protected values, types of control (supervision) measures and control (supervision) actions, the procedure for organizing preventive measures, the pre-trial procedure for considering appeals against decisions, actions (inaction) of officials in carrying out state energy supervision, the procedure for assessing the effectiveness and efficiency of activities in carrying out supervision.

The new Regulations differentiate the subject of state energy supervision in the electric power industry by parties with respect to:

- Electric power entities and/or electric power consumers (except for electric power consumers whose activities are related to the operation of electric power receivers used for household needs, as well as other electric power receivers, the total maximum capacity of which does not exceed 150 kilowatts with a rated voltage of up to 1,000 volts and which are connected to a single power supply source).

- Electric power entities managing electric power generation facilities operating in combined heat and power generation mode.

- Manufacturers, contractors (entities performing the functions of a foreign manufacturer), sellers (with respect to the requirements established by technical regulations or mandatory requirements applicable prior to the date of entry into force of technical regulations in accordance with the Federal Law On Technical Regulation).

The content of mandatory requirements assessed as part of state energy supervision depends on the supervised entity. Thus, with respect to the first group of electric power entities and electric power consumers, compliance with the requirements for ensuring the reliability of electric power systems, the reliability and safety of electric power facilities and electric power receivers; the requirements for safe work at electric power facilities established by occupational health and safety rules; the requirements for saving energy and increasing energy efficiency, and special conditions for the use of land plots within the boundaries of protection zones of electric power facilities are inspected.

In accordance with the said Regulations, state energy supervision is carried out by preventing violations of the mandatory requirements, organizing and conducting control (supervision) activities and taking measures stipulated by the laws of the Russian Federation to suppress violations of the mandatory requirements.

The definition of types of control (supervision) activities (on-site and documentary inspection), as well as the composition of control (supervision) actions
(inspection, interview, obtaining written explanations, requesting documents, instrumental examination, expertise, experiment) in statutory regulation has also become an innovation.

The assignment of the supervised facilities to one of the risk categories (high, substantial, medium, moderate, low) is a characteristic feature of the new approach to this type of supervision in the electric power industry. The risk categorization is based on the criteria specified in the Annex to the Regulations.

The peculiarities of modern state energy supervision are also reflected in the regulations-level procedure for the submission of appeals on the part of electric power entities and electric power consumers regarding the warnings issued to them, as well as appeals against decisions, actions (inaction) of state energy supervision officials.

The key performance indicators of state energy supervision have also been established: reduced number of accidents investigated by the state energy supervision authorities that occurred at operated electric power facilities and electric power receivers, as well as reduced number of fatalities caused by accidents that occurred at these facilities.

Thus, the adoption of the Regulations on State Energy Supervision as part of the ongoing reform of control and supervision activities has created the regulatory framework for a whole new system of such federal supervision in the electric power industry, but the improvement of the legal framework is still in progress.

In the short term, it is necessary to continue development in the following areas:

Updating the forms of checklists used by officials of Rostekhnadzor and its territorial agencies during scheduled on-site inspections as part of state energy supervision.

Application of modern diagnostic methods for making decisions on prolonging the service life of equipment of power generating facilities, power grids of electric power entities and electric power receivers of consumers. Suggestions on the use of data on the rate of accidents at electric power facilities in the course of control and supervision activities to prevent violations.

Clarification of risk indicators in the course of state energy supervision in the electric power industry.

Improvement of the system of testing the ability of process personnel to perform work functions in the electric power industry, as well as advanced training of inspectors of territorial agencies of Rostekhnadzor [19].

In the medium and long term, it is necessary to periodically review and update the list of mandatory requirements, including with regard to the adoption of new rules for technical operation of electric power plants and grids of the Russian Federation and rules for technical operation of electrical installations of electric power consumers, as well as due to the constant updating of the laws of the Russian Federation on the electric power industry.
Conclusions

The statutory regulation of state energy supervision in the electric power industry is constantly improving. In the course of its evolution, state energy supervision has moved from decentralized inspections by individual supervisory organizations and inspectorates to the introduction and improvement of a risk-based approach in the industry. Priority tasks in the development of state energy supervision in the electric power sector include the introduction of remote control methods and the improvement of regulatory support for issues related to the safe operation of electric power facilities and electric power receivers.

The evolution of regulatory support for state energy supervision promotes not only the development of legal regulation of supervision itself, but also the improvement of mandatory requirements in the electric power industry, which are assessed by state energy supervision authorities. For this reason, the statutory regulation of state energy supervision continues to be one of the priority sectoral tasks in the development of control and supervision activities.

References:


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Аннотация

Ensuring the reliable and safe operation of the unified energy system of Russia and technologically isolated territorial power systems, the energy security of the industry, as well as the priority of life and health of employees of organizations of the electric power industry when operating electric power facilities and power receivers are among the basic principles of state regulation and control in the electric power industry. Without state energy supervision and development of the necessary regulatory framework, it is impossible to achieve the goals of reliability and safety regulation in the electric power industry, to fully implement the principles of state regulation and control in the electric power industry, as well as the fundamentals of the state sectoral policy. The article examines the process of evolution of statutory regulation of state energy supervision in the electric power industry, highlights the key changes in state supervision after the adoption of normative legal acts as part of the reform of control and supervisory activities, and considers the priority tasks of the development of legal regulation of state energy supervision.

Ключевые слова: energy law, electric power industry, statutory regulation of federal state energy supervision

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