

the principles of legality of made decisions; timeliness of executive actions and application of enforcement measures.

As a rule, the grounds for challenging by the prosecutors of the bailiffs' omission is a failure to take measures to enforce the court order in the form of imposition of arrest on property of the debtor, perform an inspection of the property status of the debtor, declare the debtor or its property to be searched, and check the debtor's cash register. [9]

Numerous violations in the sphere of ensuring safety of electric power facilities occur predominantly due to inadequate implementation of control and supervision activities by authorized bodies. Therefore, the task of the prosecutors is to assess the completeness and adequacy of the measures taken by these authorities with regard to the violations detected in the course of supervisory activities; attention is drawn to the efficiency

of performed inspections and taking preventive measures.

Upon submission to the supervisory bodies of deeds of response to eliminate violations of the law, the prosecutors raise the issue of the personal responsibility of particular guilty persons, which is an effective method or control of violations in the sphere under consideration.

The results of the performed research allow us to identify the most problematic aspects of legal regulation relating to the legal regime of power grid facilities including ownerless ones, the procedure for tariff formation, the procedure for settlements for electricity, the legal status of participants of the electricity market, and the procurement procedures. This is a rule-making task, which requires elaboration and preparation of the necessary legislative and subordinate normative legal acts regulating relations in the electric power market.

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PROBLEMS OF LEGAL REGULATION FOR DEVELOPMENT OF DISTRIBUTED (SMALL-SCALE) ENERGY IN THE RUSSIAN FEDERATION

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Abstract: In the modern world, the electric power industry faces many challenges and problems, among which the improvement of environmental friendliness and energy efficiency, and the reliability of energy supply are of primary importance. One of the current vectors of energy reform in many countries is its decentralization and development of distributed, small-scale generation, which is also one of the means to solve the global challenges faced by the industry. Distributed (small-scale) energy generation has a number of advantages over centralized one, and its development is one of the directions of the energy policy in many states. Energy generated by small-scale power facilities is usually used by the producers for own needs, and surplus energy is sent to the grid or sold to other consumers located nearby and connected to the distribution network.

At present, there is no special legal regulation of distributed energy and legal measures to support its development. To support the development of small-scale distributed energy (SDE) in Russia, it is necessary to improve a number of normative legal acts, to develop and introduce new legal mechanisms to support and stimulate development of the SDE. According to the author, it is necessary to formalize the special status of the SDE entities as participants in the electricity and capacity market in the Russian energy laws. It is practical to improve the rules for technological connection to the grids as related to simplification of the procedure for technological connection for the SDE entities, and also to develop measures to support the SDE, in the first place, with regard to the sale of the “surplus” of own generation in the market. The creation of a legal mechanism that obliges the guaranteeing suppliers (energy supply organizations) to buy “surplus” electricity from the producers is of paramount importance for stimulating development of small-scale energy, especially the one based on renewable energy resources.

Keywords: energy law, legal regulation in the electric power industry, subjects of small-scale energy, distributed energy, distributed generation, renewable energy.

It was not immediately understood both in Russia and abroad what the distributed generation (DG) and small-scale distributed energy (SDE) are [1]. Distributed generation is production of energy (electricity and/or heat) by small- and medium-sized facilities (in most cases, up to 25 MW) near the places of its consumption, at the level of the distribution network or di-

rectly on the side of the consumer connected to the network. [2]

The world distributed energy is based on the use of cogeneration, renewable energy resources, or the use of local types of fuel (coal, gas, peat, shale, timber, solid waste, etc.).

The main difference between the distributed and the centralized energy is location of

generating equipment near the places of consumption, which represents a number of advantages for both consumers and producers. The advantages of distributed generation may be divided into the following groups:

Due to location of the generating facilities near the consumer, there is no need to transfer energy over long distances, which significantly reduces losses in the grids. Moreover, at the majority of distributed power generation facilities, generation is arranged in the form of cogeneration (joint generation of electric power and heat) or on the basis of use of renewable resources.

Construction and operation of distributed energy facilities and its own microgrid allows the consumers to provide themselves with electricity and/or heat; therefore, to a certain extent, ensuring independence on the supply of electricity (heat) by the energy supply organizations. As a result, the consumers ensure independence on changes in energy prices, power outages and accidents at (heat) power plants. This advantage is especially evident when using distributed generation facilities in remote areas where there is no centralized power supply. Nevertheless, consuming producers often (especially when using renewable energy resources) maintain their connection to the centralized grid (macrogrid) to cover risks (for example, during bad weather).

Economic efficiency of development of distributed energy is manifested both for the consuming producers themselves and for the electric power industry as a whole. For the consuming producers, economic efficiency is primarily associated with a lower cost of generated energy and a higher coefficient of fuel efficiency. This useful effect, however, can be leveled while investments in the construction of the DG facilities are paid back.

At first glance, it may seem that development of small-scale energy can damage economic interests of large energy companies that ensure centralized energy supply (in the broad sense, that is, transmission, distribution, united dispatch control, and sales). In fact, there is a number of advantages for these companies but upon planned and controlled rather than spontaneous development of distributed energy. First of all, the need to create energy infrastructure is

reduced — construction and operation of trunk transmission lines (heat supply). The costs of modernization of energy facilities are also reduced, and consequences of accidents at central power plants and power transmission lines are mitigated. Herewith, the majority of large consumers (primarily, industrial ones) and the overwhelming majority of the population keep purchasing energy from the energy supply companies.

Furthermore, distributed energy, as compared to the centralized one, has great investment attractiveness due to lower financial and time costs of construction, shorter payback periods, and lower risks of non-completion of projects [3].

Thus, under certain conditions, distributed energy has a number of advantages.

In the Russian Federation, there is a number of prerequisites for development of distributed energy, primarily: a large number of remote areas isolated from the UES of Russia, high wear and tear, moral and technical obsolescence of energy infrastructure facilities, and high growth rates of prices for electricity.

Russia's energy strategy for the period until 2030 mentions insufficient development of small-scale energy generation and low involvement of local and regional energy sources in power balances as one of the problems of the regional energy policy, and development of small-scale energy in the zone of decentralized energy supply by increasing the efficiency of use of local energy resources, development of the power grid facilities, and reduction of the volume of consumption of imported light oil products as one of the tasks for achieving the strategic goals of electric power development. The Strategy also mentions widespread development of distributed generation as one of the priorities of the innovative, and scientific and technical policy in the "Electric Power Industry".

In the currently discussed draft of the Energy Strategy of Russia for the Period until 2035, it is noted that small-scale distributed energy including in the heat supply sector has developed at the time of the adoption of the Strategy, and its role in the development of competition is constantly increasing. However, the draft of the Energy Strategy does not set any goals for the further development of the SDE [4].

The spontaneous and unsystematic nature of development of the SDE in Russia is currently one of the serious problems since this development entails a large number of negative consequences for the market, the producers and the consumers of energy. First of all, refusal of large consumers to use centralized energy supplies, the chaotic creation by them of their own capacities and shifting of some of the costs to the consumers remaining in the centralized electric power system (within the framework of the UEC) entail an increase in prices (tariffs) for electricity and heat. On the other hand, distributed energy projects of large consumers require maintaining a capacity reserve and ensuring reliability by maintaining a connection to the UES of Russia, which is also a factor of increase in the electricity prices (tariffs).

By the Resolution of the Governmental Commission on High Technologies and Innovations, on April 1, 2011 a list of technological platforms was approved. The list includes “Small-Scale Distributed Energy” Technological Platform which provides a number of tasks and activities for development of the SDE in Russia. This technological platform specifically identifies sectors where the SDE is especially in demand in the Russian conditions.

Thus, it can be noted that an independent sector of the Russian electric power industry is currently being formed — small-scale distributed energy, development of which can contribute to increase in the level of competition in the electricity and capacity market as well as the level of technological development, especially digitalization and intellectualization of the energy sector.

However, based on the above, the following may be distinguished as one of the problems of development of the distributed energy in Russia:

1) development of distributed energy is not a part of the state energy policy; no attention is paid to it in the acts of “soft law” — strategies, plans, schemes — as a result, its development is characterized by unpredictability and spontaneity;

2) there are currently no special legal regulation of distributed energy and legal measures to support its development.

First of all, the laws lack legal formalization of the concepts of the “small-scale (distributed) energy” (generation) and the “subjects of

small-scale (distributed) energy”, let alone formalization of more specific concepts such as “smart (intelligent) grids”, “virtual power station”, and other concepts that are realities of the energy of the XXIst century. It seems that the definitions of these concepts should be specified in Article 3 of Federal Law No. 35-Φ3 dd. March 26, 2003, “On the Electric Power Industry”.

Nevertheless, the legislative formalization of these concepts is not an end in itself; the main goal is introduction of these concepts into legal circulation and creation of legal conditions for development of the small-scale (distributed) energy, primarily by establishing a special legal status of the SDE subjects. To support development of the SDE in Russia, it is necessary to improve a number of normative legal acts, and to develop and introduce new legal mechanisms to support and stimulate development of the SDE.

The SDE along with the centralized energy is currently regulated by common rules. At the same time, the SDE subjects are often not professional market participants.

Despite a number of economic advantages of autonomous generation, it has a rather significant drawback — in the event of a breakdown of the generating equipment or lack of an energy resource (for example, an accident on a gas pipeline, or because of unfavorable weather conditions in case of use of renewable energy resources), the SDE subject will simply be left without energy. The consequences might be most notable for industrial enterprises and social institutions. Therefore, to prevent these situations, in many cases it is necessary to have a “backup” in the form of connection to the common grid from which, if necessary, it will be possible to receive electricity. Moreover, the generating equipment and power-consuming facilities of the SDE subject may be located at a considerable distance, and the subject may not have its own grid infrastructure for transmission of autonomously generated energy. Therefore, many SDE subjects encounter the problem of technological connection to the grids.

Connection of power-consuming facilities to the UES of Russia and consumption of electricity from the grid are regulated by the Rules

for Technological Connection approved by Resolution of the Government of the Russian Federation No. 861 dd. December 27, 2004. But the SDE subjects may arrange for two-way cross flow and, for example, in case of cross flow of surplus electricity to the grid for further sale, the SDE facility is not actually a power-consuming facility, and, therefore, the SDE subject is not a consumer.

Moreover, it is possible that the SDE subject generates electricity and sells surplus by transmitting it directly through its own grid. In this case, for business entities performing various types of activities (including production (purchase and sale) and transfer) using the power stations and other electric power facilities beneficially or otherwise legally owned by them, and directly connected to each other and/or to power-consuming facilities belonging to these subjects mainly to meet their own production needs, an exception is made from the general rule on the prohibition of combining types of activity within a single price area of the wholesale electricity and capacity market (Article 6 of Federal Law No. № 36-Φ3 dd. March 26, 2003).

Herewith, a compulsory condition is compliance by these business entities with the requirements of Resolution of the Government of the Russian Federation No. 355 dd. June 6, 2006 “On the Specifics of Functioning of Business Entities that Operate in the Power Sector Mainly with the Purpose of Satisfying their own Production Needs”, and sending by them of a notice on use of these power facilities to the antimonopoly authority.

A separate issue relates to payment for technological connection of the SDE facilities to the grids.

The cost of technological connection is a very noticeable item of expenditure for low-power generators. But, at present, support measures have been established only for qualified generating facilities operating on the basis of renewable energy resources or peat, with an installed generating capacity not exceeding 25 MW. The Russian laws provide for a mechanism to grant subsidies from the federal budget to compensate for the cost of technological connection of these facilities to the grids, which positively influences

the investment attractiveness of these projects. Owners of other SDE facilities including generation using renewable energy resources with an installed capacity exceeding 25 MW have to bear the costs of technological connection on a par with other facilities of the “large-scale” energy.

Primarily due to a small volume of “free” capacity, most SDE subjects are interested in selling electricity in the retail electricity and capacity market (hereinafter referred to as the RECM). The basic provisions for functioning of the retail electricity markets (hereinafter referred to as Basic Provisions No. 442) acknowledge proprietors (other legal owners) of the facilities for the production of electricity (capacity) that are part of the UES of Russia, generate electricity (capacity) for the purpose of its selling in the retail market, and for which no groups of supply points are registered in the wholesale electricity and capacity market (hereinafter referred to as the WECM), as the producers of electricity (capacity) in the retail market. Herewith, according to the general rule, the installed generating capacity of the producers at the RECM should not exceed 25 MW (excluding technologically isolated territorial and autonomous electric power systems). An exception is also made for entities that are not covered by the requirement to sell produced electricity (capacity) only in the wholesale market. The criteria for inclusion of subjects into this category are established in paragraph 32 of the Rules of the wholesale electricity and capacity market (WECM).

Herewith, pursuant to paragraphs 8 and 9 of clause 2 of Basic Provisions No. 442, the participants of the retail markets in technologically isolated territorial electric power systems and in territories technologically unconnected to the UES of Russia and technologically isolated territorial electric power systems as well as the participants of the retail markets in the territories united in price and non-price areas of the wholesale market, which beneficially (or on any other legal basis) own the facility for production of electricity (capacity) and power-consuming facilities connected with power grid facilities beneficially or otherwise legally owned by this participant, through which the entire volume or part of the volume of energy consumed by the

said power-consuming facilities of this participant is transmitted, are also deemed the producers of electricity (capacity) in the RECM within the limits of the sales volumes determined by Resolution of the Government No. 442. As for the subjects in the territory of the WECM areas and power-consuming facilities of these subjects, no groups of supply points shall be registered in the WECM, and these entities shall not be subject to the requirement to sell produced electricity (capacity) only at the WECM as provided for by paragraph 5, Article 36 of the Federal Law “On the Electric Power Industry”. That is, this regulation actually refers to the majority of the SDE subjects. However, the SDE subjects can use infrastructure of the third parties — grid organizations — for transmission of electricity (capacity) to power-consuming facilities for their own consumption or for sale.

The electricity producers in the retail market have the right to sell energy to the consumers, the grid organizations and the guaranteeing suppliers (energy supply organizations), which, however, are not generally obliged to buy the “surplus”.

The exception is made for the sale of electric power facilities operating on the basis of renewable energy resources or peat, grid organizations to compensate for their technological losses (paragraph 2, clause 5, Article 41 of the Federal Law “On the Electric Power Industry”).

Moreover, in accordance with clause 65 of Basic Provisions No. 442, the electricity producers at the RECM sell electricity in the volume equal to the amount for the settlement period of the excess of actual hourly electricity production volume over the hourly volume of electricity sold for the same hour under the contracts for sale of electricity to the consumers, the energy supply organizations or the grid organizations in order to compensate for losses (except for generation using renewable energy resources), the guaranteeing supplier, within the zone of activity of which there are the points of supply, where the obligations of this producer for supply of electricity (capacity) are fulfilled.

However, this rule of compulsory acquisition by the guaranteeing supplier of excessively generated electricity applies only to the electricity producers in the retail market, which already have

contractual relations for the purchase and sale of produced electricity. Therefore, it refers only to mandatory purchase of “surplus” electricity by the guaranteeing supplier in excess of the volumes stipulated by the sales contracts concluded by the producer with the consumers, the energy supply organizations or the grid organizations.

Clause 66 of Basic Provisions No. 442 stipulates that in the situation when the producer of electricity (capacity) transfers energy from the facilities for production of electricity (capacity) to its own power-consuming facilities located within the zone of activity of one guaranteeing supplier through the grids of other persons (grid organizations), the owner of these facilities buys (sells) electricity (capacity) in the retail market in a volume corresponding to the difference in hourly volumes of own consumption and production under the contracts concluded by it.

With regard to small-scale (distributed) energy, it is an autonomous generation, that is, the production of electricity for own needs. Therefore, the SDE subjects cannot be regarded as professional market participants on an equal basis with other electricity producers as they produce electricity not for the market, but primarily for themselves. Only “surplus” of electricity produced by the SDE subjects may enter the market. Therefore, the SDE subjects should not be equated with the electricity (capacity) producers in the retail market in terms of the scope of rights and obligations (for example, to provide commercial accounting data for the grid organization and the guaranteeing supplier — clause 164 of Basic Provisions No. 442). This conclusion is also reflected in judicial practice [4]. Nevertheless, paragraphs 8 and 9, clause 2 of Basic Provisions No. 442 equates the majority of the SDE subjects to other electricity (capacity) producers.

Furthermore, “surplus” may appear for the SDE subjects upon generation using equipment with installed capacity exceeding 25 MW, and in this case, according to the general rule, the SDE subject is already obliged to sell all electricity (even in small amounts) in the wholesale market.

This explains the need to formalize a special status of the SDE subjects as participants of the electricity and capacity market as well as the need to develop measures to support the SDE,

primarily, on the sale of the “surplus” own generation in the market in the Russian energy laws.

Not all SDE subjects currently have the opportunity to find buyers of their surplus and conclude relevant agreements with them. Therefore, in a number of cases, the “surplus” from the generating facilities of the SDE simply enter the common grid (in fact, at the disposal of the guaranteeing supplier), but remain unrealized, and the producer incurs losses in the form of the cost of electricity supplied to the grid. Nevertheless, in the court practice, however, there were cases when the courts collected an unjust enrichment in the amount of the cost of unrealized electricity from the guaranteeing supplier in favor of the electricity producer [5].

Creation of a legal mechanism that obliges the guaranteeing suppliers (energy supply organizations) to buy “surplus” electricity from the producers is of paramount importance for stimulating development of the small-scale energy, especially, the one based on the renewable energy resources.

A support mechanism is currently being developed for small-scale generation facilities operating on renewable energy resources.

On July 19, 2017, an Action Plan was approved to stimulate development of generating facilities based on renewable energy resources with an installed capacity up to 15 kW [6], but it refers only to support of small-scale generation with solar panels and mini-windmills. It is planned to oblige the guaranteeing suppliers to buy surpluses of the electricity produced by these facilities. The Ministry of Energy, the Ministry of Economic Development and the Federal Antimonopoly Service shall prepare the relevant draft law by January 2018, and the draft resolutions of the government on simplified technical connection of microgeneration facilities to the grids and work of the guaranteeing suppliers with the population, by April 2018. Herewith, proceeds from sale of the “surplus” are planned to be tax exempt.

However, one of the main issues is the issue of the selling price since the cost of production of 1 kW • h of energy using the renewable energy resources in the greater part of the territory of Russia (excluding isolated electric power systems) is several times higher than the cost

of energy production using traditional resources. The plan of measures assumes establishment of prices depending on the location of the microgeneration facility using the renewable energy resources — 1) in the price areas of the wholesale market, the purchase price will be equal to the weighted average unregulated price for energy calculated “in accordance with the established procedure”; 2) in the non-price areas of the market — the sale will be arranged at a regulated price; 3) in isolated electric power systems, electricity will be sold at the minimum production price established by the authorized executive body.

These conditions can hardly be called attractive for the investors. To reduce the payback period of projects of generation on the basis of renewable energy resources, and, consequently, to increase the investment attractiveness of these projects, it is necessary to introduce a surcharge for “green” energy (“green tariff”). However, in the Russian conditions, this stimulating surcharge will ultimately most likely “fall on the shoulders” of the consumers, which will cause the increase in the cost of electricity in the retail market. Alternatively, it may be possible to further develop a mechanism of government subsidies for such a surcharge for the guaranteeing suppliers or to consider the possibility of introducing a net metering mechanism.

To sum up, I would like to make the following conclusions.

1. The distributed generation of energy shall be understood as the production of electricity and/or heat by sources of small and medium power near the places of its consumption, mainly for the purposes of own consumption. The SDE sector has a great potential for use of modern technologies including creation of Smart Microgrids, use of block-chain technology, and other innovative technologies. Thus, development of the SDE contributes to the increase in the level of technological development, primarily, the digitalization and intellectualization of the energy sector.

2. In Russia, there are a number of prerequisites for development of the SDE, but current development of this sector is spontaneous, which entails a number of negative consequences. Unlike the world experience, primarily, of the