CHALLENGING ASPECTS OF THE LEGAL REGULATION OF THE USE OF RENEWABLE ENERGY SOURCES IN THE RUSSIAN FEDERATION

DOI 10.18572/2410-4396-2021-1-84-89

Akimov Leonid Yu.
PhD (Law)
Associate Professor of the Department of Energy Law
of the Kutafin Moscow State Law University (MSAL)
info@fsk-ees.ru

The article reviews challenging aspects of the legal regulation of the use of renewable energy sources taking into account the results of the law enforcement practice and the focus on digitization of the electric grid complex. The author justifies the expediency of the introduction of comprehensive legal grounds for the use of MicroGrid systems with RES generation elements by grid operators. It is suggested to give a legal definition of MicroGrid considering the possibility to include RES generation and electric energy accumulators in such system as well as the admissibility of their use by grid operators to carry out their primary activities of electric energy transfer within a specific electric power supply reliability category (MicroGrid as a means of upgrading at a consumer's request); carry out their primary activities of technological connection when an alternative in the form of construction or reconstruction of the existing grid is impossible from the engineering standpoint and/or economically ineffective.

Keywords: *energy law, legal regulation of the use of renewable energy sources, digitization of the electric grid complex.*

Reviewing the current status of the legal regulation of the use of renewable energy sources (hereinafter referred to as "RES") in the Russian Federation from the standpoint of identification of the key problems to be solved on the statutory level in the nearest future, one should note that the time to speak of the creation of a consistent legal regulation system has not come yet.

It is obvious that although the significance of renewable energetics as the "energy future" of the humanity is acknowledged on the global scale, there are unfortunately objective reasons why, unfortunately, it cannot compete with traditional energetics on equal market conditions and on a completely independent basis. Taking into account the commissioned generating capacities and target performance of the designed generating objects functioning based on the use of renewable energy sources, the total production of electric energy by the whole RES sector will exceed the level of 12 billion

kWh by 2025 accounting for only to 1% of the electric energy production and consumption balance, while the target value is 4.5% by 2024. [1] Speaking of economic and legal regulation models applied by different countries, all of them are encouragement models, i.e. create conditions for the development and application of technologies using various forms of state support and public-private partnership.

The Russian laws have started to develop in the same way.

The development of the legal regulation of support of RES use in the electric power industry started in 2007. At that time, the first attempt in the Russian legal system at comprehensive regulation of social and economic relationships considering the specifics of RES use was made (Federal Law No. 250-ФЗ of November 4, 2007, On Amending Certain Legal Acts of the Russian Federation in View of Implementation of Measures Aimed at the Reformation of the Unified Energy System of Russia).

The establishment of a two-tier system of support of RES use in the electric power industry has become the result of their consistent implementation: the mechanism of capacity delivery agreements (CDA) in the wholesale market and the mechanism of obligatory purchase of electric energy generated with the use of RES by grid operators to compensate for losses in electric grids in retail markets.

The two most important documents issued in 2009 defined the RES development trend were the Main Areas of the State Policy in Raising the Energy Efficiency of the Electric Power Industry Based on the Use of Renewable Energy Sources for the Period until 2035 approved by Resolution of the Government of the Russian Federation No. 1-p of January 8, 2009, (hereinafter referred as the "Main Areas") and The Energy Strategy of the Russian Federation for the Period until 2030 approved by Resolution of the Government of the Russian Federation No. 1715-p of November 13, 2009. The main emphasis from the standpoint of the target RES use development model has been initially on the Energy Strategy, taking into account the Main Areas. Thus, the special strategy section dedicated to the use of RES and local fuel types has directly stated the need to reach the target values of the total share of electric energy production with the use of RES generation as states in the Main Areas with the help of systematic state support measures. The above documents have also directly named the wholesale market resources as the main economic source of RES encouragement.

Although the legal system of RES encouragement in the Russian Federation has already travelled a rather long way and undergone a number of adjustments, it is the shift of the legal model towards the role of support mechanisms applied on the wholesale market for the whole duration of the system establishment and development against the background the changed world economic reality that is not an insignificant factor of negative influence on the efficiency of RES technology deployment in the energy sector.

The legal bases for the origination of relationships that can indirectly affect the RES use development have also started to emerge lately, namely the mechanisms of encouragement of the application of electric energy of microgeneration objects by consumers and the legal institutionalization of the use of electric energy accumulators in the energy system that are, inter alia, applied to ensure stability of the RES generation functioning schedule (Federal Law No. 471-ФЗ of December 27, 2019, On Amendment of the Federal Law On the Electric Power Industry in Terms of Microgeneration Development).

Nonetheless, the main discussion in the industry related to the efficiency, expediency, and volumes of RES generation support at the cost of participants of electric energy circulation relationships is currently still focusing on the CDA mechanism. The government authorities and specialized associations are actively discussing the issue of the need to lower the earlier declared volumes of further financing of RES generation within the CDA mechanism after 2024. [2] This being said, the level of practical implementation of the system of support of renewable energy sources on retail markets cannot be compared with the one in respect of the RES CDA mechanism.

In 2017, for example, there were absolutely no investment projects implemented within the framework of the support system in retail markets. Only 26 generating objects with total capacity of about 300 MW were selected as of Q1 2020.

It is still too early to evaluate the results of adoption of Resolution of the Government of the Russian Federation No. 1298 of August 29, 2020, On Encouragement of the Use of Renewable Energy Sources and on Amendment of Some Acts of the Government of the Russian Federation and on the Invalidation of Separate Provisions of Some Acts of the Government of the Russian Federation that was aimed to change the existing situation, as too little time has passed from its adoption date.

It is worth mentioning that the energy strategy has initially included a complex of RES use encouragement events that have never been brought to life:

The development and regular update of the layout of generating objects of the electric power industry based on the use of RES;

The incentive taxation of electric power stations and heat supply sources based on the use of RES;

The introduction of a system of guaranteed connection and access to electric grids for electric power stations based on the use of RES.

With this in mind, in the sphere of ensuring guaranteed access to electric grids, it may be noted that there has been no objective necessity of the implementation of such measure as there has lately been achieved such a high level of availability and transparency of technological connection in general, that there is no practical need in any special preferences for RES.

Why other declared measures have not been implemented and whether they have been necessary, is still open for discussion. In particular, the support system in the form of CDA in the wholesale market has functioned and, as it appears, will continue to function with no reference to any future layout of the corresponding generating objects (the development of which has been planned). This has already resulted in the territorial hyper-concentration of investment projects: the place to locate RES generation has been selected not only based on the presence of RES resources in the constituent entities of the Russian Federation, but to a large extent based on the loyalty of the regional government guaranteeing the ease of obtaining documents of title to land and other regional preferences. The factor of impact of the increased concentration of RES generation on the reliability of energy systems, that have been balanced and suffered no generation deficit, has barely been taken into account. It has been postulated that the tiny share of such objects shall not affect the modes of operation of the indicated systems. However, the Grid Operator is already having concerns in view of the influence of the growing RES generation share on the stability of energy system operations in the southern regions of the Russian Federation.

The Energy Strategy of the Russian Federation for the Period until 2035 approved by Resolution of the Government of the Russian Federation No. 1523-p of June 9, 2020 (hereinafter referred to as the "Energy Strategy 2035") has already accounted for the efficiency of the application of the RES CDA mechanism until 2024 to assure investment attraction of the use of renewable energy sources and localization of the research and production base. Nonetheless, there are no targets to develop wholesale RES generation in the Energy Strategy 2035 (as compared to the previous document), while the RES use support measures in the Russian Federation are solely linked to the solution of the problem of raising the efficiency of energy supply to remote and isolated territories.

Specific performance targets of RES use in the Energy Strategy 2035 are reflected directly through the reduction of economically justified costs of production of 1 kWh of electric energy in decentralized electric power supply territories in percentage to the basic year level:

6 per cent by 2024;

17 per cent by 2035.

Thus, the development of RES use in the meaning it is assigned by the Energy Strategy 2035, stipulates the application of RES generation exclusively in the territorial and

technological conditions where its functioning is competitive compared to the facilities using traditional fuel types.

Considering the above, it seems that it is necessary to start building the strategic state planning system in the development of an effective model of the legal regulation in the RES use anew. In fact, neither the above-mentioned Main Areas, nor the applicable Energy Strategy 2035 create the detailed bases for the establishment of a coherent program of state support of RES on retail markets, in general, and in territories of Russia isolated from the unified energy system, in particular. No national project implemented by the present day stipulates encouragement of the RES use in retail markets and the priority of such use in isolated energy systems. Federal and departmental projects in the energy sector are in no way linked to the support of retail RES use either. [3]

There also is no systemic approach to the obligatory character of requirements for the implementation of the regional policy for the small-scale generation development on the level of constituent entities and municipalities. Federal Law No. 261-ФЗ of November 23, 2009, On Energy Saving and on Raising Energy Efficiency and on Amendment of Separate Legal Acts of the Russian Federation, establishing requirements for regional and municipal programs in energy saving and raising energy efficiency, states that such documents shall contain:

- The performance target of raising the number of objects using secondary energy resources and/or renewable energy sources as energy sources.
- The measures aimed at raising the number of cases of the use of secondary energy resources and/or renewable energy sources as energy sources.

However, an analysis of such documents adopted even in those five regions that refer to territorially isolated energy systems (Kamchatka Territory, Magadan Region, Sakhalin Region, Chukotka Autonomous District, Taimyr (Dolgano-Nenets) Autonomous District) where RES are competitive by their nature, shows either full absence of any special RES generation development measures or just declarative provisions on the need for such development. Considering the above, it is obvious that the small-scale RES generation may be effectively used not only in rare territorially isolated energy systems. Non-price zones of the wholesale electric energy market represent rather vast territories, in some hard-to-reach parts of which the opportunities for the centralized energy supply using large-scale wholesale generation are limited to a great extent.

Obviously, one cannot exclude prospects of such application of the RES generation in price zones of the wholesale market in cases when construction or development of the existing electric grid for the purposes of connection of new consumers in remote or hard-to-reach districts or for the purposes of raising reliability of electric power supply, is less effective than the creation of distributed electric power generation sources.

An example of the effective RES use may be, in this case, a joint project of Rosseti, PJSC, and Hevel successfully implemented in the Transbaikal Territory and involving the creation of an autonomous hybrid electric power installation in the Menza village built for uninterrupted electric power supply to three hard-to-reach settlements. This will allow reduction of diesel consumption for electric power supply purposes from 250,000 to 86,000 liters per annum. [4]

Today, there is the information that the construction of 28 hybrid installations (solar panels, diesel generator, and accumulator) by Rosseti Sibir has effectively solved the problem of electric power supply of the whole range of remote territories in Buryatia. For example, the cost of such hybrid installation in the Tarbagataysky district amounted to RUB 1.4 million, while technological connection of power receivers and the construction of an electric grid would require at least 6 million. On the whole, thanks to the use of autonomous hybrid installations in Buryatia since 2019, it has been possible to save approximately RUB 290 million that were meant for inclusion in the tariffs on electric energy transfer services.

Thus, in order to consider the complex approach to the development of the legal model of the regulation of the RES use on retail markets, it is necessary to review the issue of creation of sufficient legal bases on the federal level for the organization of due strategic planning in this sphere. First of all, it includes the following:

- The main areas should contain specific performance targets of the development of the small-scale generation with the use of RES on retail markets;
- As for the requirements to the content of regional and municipal programs in energy saving and energy efficiency, Federal Law No. 261-ФЗ of November 23, 2009, On Energy Saving and on Raising Energy Efficiency and on Amendment of Separate Legal Acts of the Russian Federation should stipulate a "tougher" approach to the obligatory nature of the small-scale RES generation introduction events in territories of some constituent entities of the Russian Federation (it seems necessary to set imperative requirements for the performance of the corresponding events with specific regional performance targets to be approved on the federal level and financed with federal budgetary funds for territorially isolated energy systems and hard-to-reach territories of other constituent entities that need to be determined based on an analysis carried out by the Ministry of Energy of Russia).

Speaking of the development of the legal regulation in terms of specific mechanisms of encouragement of the RES use in retail markets taking into account the world MicroGrid system development trend and the focus on digitization selected by the electric grid complex of the Russian Federation [5] (being an essential prerequisite for the MicroGrid integration in the energy system), one can conclude that the system of relationships where retail RES generators as a MicroGrid element may be effectively developed and used by grid operators remains practically unaddressed in the system of the strategic planning of the RES development and in the applied legal regulation.

The applicable legal regulation now directly prohibits grid operators from carrying out activities in competitive sectors of energetics, which include generation and sales. This prohibition is imperative for price zones of the wholesale market. On the one hand, grid operators have no direct prohibition against the development of additional activity types in the form of RES generation in territories not referred to such zones, but on the other hand, such activities in the form of creation and exploitation of MicroGrid using RES generators, traditional generators and electric energy accumulators is not duly institutionalized and thus not directly linked to the electric grid complex development activities in the legal regulation.

It is obvious that a grid operator as a qualified participant of legal relationships will more likely adequately assess the efficiency of MicroGrid creation in the conditions of limited tariff resources for the development of the existing network infrastructure (especially in respect of organizing electric power supply to the population and small business that are consumer categories having no resources for strategic planning of economically effective electric power supply models). An additional condition of encouragement of adoption of effective decisions by a grid operator in terms of MicroGrid use is that the applicable requirements for indiscriminate access to the network infrastructure now totally demotivate consumers to assess efficiency of their requests for provision of specific capacity in the course of technological connection: such category as "the absence of engineering opportunity for technological connection" is not applied at all in the existing legal regulation in respect of "small" consumers, while its application for large consumers only means the transfer of connection relationships to an individual project format (individual payment setting while preserving the main benefits), and the consumer itself bears no further responsibility for full use of the requested capacity.

It would make sense to give grid operators a legal opportunity to assure the development of the corresponding electric energy production segment within the limits of technological models that are in fact inextricably linked to

their primary electric grid complex development operations on "last mile" sites.

Considering the above, advanced development of the legal regulation requires implementation of complex legal grounds for the use of MicroGrid systems with RES generation elements by grid operators.

In particular, it is required:

- To provide a legal definition of MicroGrid considering the possibility to include RES generation and electric energy accumulators in such system as well as admissibility of their use by grid operators:

— To carry out their primary activities of electric energy transfer within a specific electric power supply reliability category (MicroGrid as a means of raising the category on consumer's request);

— To carry out their primary activities of technological connection when an alternative in the form of construction or reconstruction of the existing grid is impossible from the engineering standpoint and/or economically ineffective.

- To determine the legal models of financing of creation and functioning of MicroGrid systems by grid operators:

— Within the framework of tariffs on the electric energy transfer services (the opportunity to preserve savings of investment and operating expenses in the disposal of grid operators on the account of the implementation of the corresponding projects);

— Within the framework of payment for technological connection to electric networks;

— Within the framework of provision of budgetary subsidies in cases when MicroGrid introduction allows saving of budgetary grants for diesel acquisition for the electric power supply of remote and isolated territories and within the framework of various forms of public-private partnership;

— Within the framework of introduction of a regulated payment for the exploitation of MicroGrid systems power to which the energy receivers of consumers are connected. ■

References

1. Electric Energy Market and Capacities // Market Council Association Non-Profit Partnership. URL: https://www.np-sr.ru/ru/market/vie/index.htm ; VYGON Consulting: Renewable Energetics of Russia Starts to Compete with the Traditional One // Renewable Energy Development Association. URL: https://rreda.ru/russian-analytics.
2. Smertina P. The Green Energetics Program Cannot Be Approximated. The Government Decided to Review The RES Support Scope / P. Smertina, T. Dyatel // Kommersant. 2021. January 20.
3. Projects // The Ministry of Energy of the Russian Federation. URL: https://minenergo.gov.ru/node/11245.
4. The First Solar and Diesel Electric Power Station Is Put into Operation in the Transbaikal Territory // Hevelsolar.com. 2017. January 26.
5. The Digital Transformation of 2030. Concept. Moscow, 2018. 31 p. URL: https://www.rosseti.ru/investment/Kontseptsiya_Tsifrovaya_transformatsiya_2030.pdf.