CHALLENGING ASPECTS OF THE LEGAL REGULATION OF THE USE OF UNMANNED AERIAL VEHICLES AND THE TASKS OF ENSURING SECURITY OF THE FUEL AND ENERGY COMPLEX FACILITIES

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In accordance with the Energy Strategy of the Russian Federation for the Period until 2035, the unmanned and "connected" transport technologies are referred to technologies the application of which can entail organizational and technological changes in management and functioning of electric power systems and facilitate the transition of energetics to a new technological basis (the so-called "energy transition"). Unmanned aerial vehicles can be used by companies of the fuel and energy complex to ensure security and anti-terrorist protection of their facilities and to optimize their business expenses aimed at the production efficiency enhancement. However, the current legal regulation of the use of unmanned aerial vehicles is not developed to a sufficient extent. The author concludes that it is expedient to systematize and consolidate the rules for the use of unmanned aerial vehicles either in specific statutory acts or in a separate statutory act ensuring regulated exploitation of unmanned aerial vehicles in the territory of fuel and energy complex facilities.

Keywords: *energy law, energy transition, unmanned aerial vehicles, energy security.*

In accordance with the Energy Security Doctrine of the Russian Federation, [1] the purpose of assuring energy security is the support of protection of the economy and population of the country against energy security threats on the level corresponding to the requirements of the laws of the Russian Federation. Among the key energy security assurance purposes are such as: support of anti-terrorist protection and security of infrastructure of fuel and energy complex facilities including in conditions of emergencies. Insufficient speed of the development and deployment of new means of anti-terrorist protection of the fuel and energy complex infrastructure and facilities is referred to the energy security risks

related to transborder energy security threats pursuant to the Energy Security Doctrine of the Russian Federation.

The improvement of the regulatory framework with respect to the matters of assurance of secure, reliable and stable functioning of infrastructure and facilities of energetics; the introduction of a new model of state regulation of industrial security considering the accident occurrence risk and the scale of possible consequences; the improvement of the legal mechanisms of imposing liability for violation of industrial security requirements are also named among the key tasks of the improvement of public administration in energy security assurance.

In accordance with the Energy Strategy of the Russian Federation for the Period until 2035, [2] the unmanned and "connected" transport technologies are referred to the technologies the application of which can entail organizational and technological changes in management and functioning of electric power systems and facilitate the transition of energetics to a new technological basis (the so-called "energy transition").

The unmanned aerial vehicle market is now rapidly developing enabling almost anyone willing to do so to purchase the required components and assemble such device for own use or for other purposes on a "do-it-yourself basis". These purposes can, inter alia, include committing of illegal acts in the territory of industrial facilities of the fuel and energy complex (FEC) that may result in damage to the facility infrastructure and rendering important constructions and engineering devices inoperative.

Besides, unmanned aerial vehicles can be used by FEC companies to ensure security and anti-terrorist protection of their facilities and to optimize business expenses aimed at the production efficiency enhancement.

However, the current legal regulation of the use of unmanned aerial vehicles is not developed to a sufficient extent and remains at the moment poorly studied.

The main problem of the use of unmanned aerial vehicles of various types and classes not only in Russia, but globally, is their integration in the regulation of airspace of the international legal environment. In Russia, the Ministry of Transport of the Russian Federation is directly in charge of the legal regulation of UAV, and is developing a Concept for the UAV integration in the common airspace of the Russian Federation that is planned to be completed by 2030; however, the closed regime of the development of this Concept does not allow to form an opinion about its correspondence to the actual UAV application specifics. As a result, alternative projects by Russian entrepreneurs engaged in the UAV development appear in parallel with the Concept. One of such projects is called RUTM1, its key declared task is the "organization of regular joint flights in the common (non-segregated) airspace with the assurance of the required flight safety level". [3]

However, such projects require to update in a way the air traffic management laws as soon as possible as the today's rules were developed in the 1970s based on then current vision of communication, navigation and supervision risks and technologies. The old concepts are not in line with the advanced unmanned technologies and market demands and are irrelevant.

At the same time, the task of assurance of security of fuel and energy complex facilities is closely related to the general regulation of UAV flights as the use of such devices in the protected territory and within the tasks set by energy companies has to be strictly regulated and fixed in the corresponding statutory acts.

One of the main current UAV use scenarios is the monitoring of an FEC facility infrastructure for timely identification of damages or trespassing the protected facility territory. For example, Gazprom Mezhregiongaz Maykop, LLC, monitors illegal connections to gas distribution systems using unmanned aerial vehicles [4] and Rosseti, PLSC, diagnoses electric power transmission lines. [5]

The devices used in the majority of cases weigh a few kilograms and their flights are regulated by Resolution of the Government of the Russian Federation No. 658 of May 25, 2019, Article 49 of Resolution of the

Government of the Russian Federation No. 138 of March 11, 2010, and the Federal Rules on the Use of the Airspace of the Russian Federation.

Thus, each flight of an unmanned aerial vehicle has to be approved by the authorities of the Unified Air Traffic Organization System (UATOS) in accordance with the Federal Rules on the Use of the Airspace of the Russian Federation (FR UA RF) by completing a long-term and complicated procedure.

Moreover, if an FEC facility is located near a military or other facility protected by the state, the approval of the Federal Security Service or the Federal Security Guard Service is also required.

The acts adopted today cover the cases of security assurance only in the airspace, but not in a territory occupied by a dangerous production facility including such facilities.

The existing situation creates a risk of an accident at an FEC industrial facility if an unmanned aerial vehicle gets out of control and crashes down hitting an electric power transmission line, oil pipeline, gas pipeline or damaging containers with dangerous chemical substances or petroleum products.

It seems that it is necessary and quite possible to need and eliminate such risks by introduction of a number of UAV exploitation restrictions and consolidation of specific rules for the UAV use either in the already existing statutory acts or in a separate statutory act ensuring regulated exploitation of unmanned aerial vehicles in the territory of FEC facilities.

The use of unmanned aerial vehicles must be compliant with strategic tasks of energy security assurance and fuel and energy complex development. In this respect, great attention is paid to the legal regulation. As V.V. Romanova correctly notes, "energy security is the key category for energy law, as its legal regulation is the evidence of compliance with the main energy law principles". [6]

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