

CONFERENCE REVIEW NOTES

PROBLEMS AND TENDENCIES OF NUCLEAR LAW*

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The Russian Federation has always been a pioneer in the peaceful uses of nuclear energy. Within the territory of the former Soviet Union, the first nuclear reactor for electricity production began operation in 1954.¹ The Soviet Union also developed other peaceful purposes for nuclear energy than electricity production. This was particularly the case in civil maritime transport, where nuclear energy has long been used as a means of power for Russian icebreakers.

Today, the Russian Federation continues to play an important role in the peaceful worldwide use of nuclear energy. It is one of the world's largest producers of nuclear energy and, in 2018, its 59 nuclear reactors produced 20.8% of all national power generation. The Rosatom State Atomic Energy Corporation announced its targets for future nuclear power generation increasing to 23% of total electricity requirements by

* 2nd round table "Actual Problems and Tendencies of Nuclear Law," which was held on 8 February 2019 at the Moscow State Law University.

¹ This was the Obninsk Nuclear Power Plant, situated about 110 km southwest of Moscow, which was the first worldwide nuclear power plant that produced electricity industrially, albeit at small scale. The first grid connection was made there on 27 June 1954.



2020 and 30% by 2030. To achieve this, plans were announced to build 11 additional nuclear reactors by 2030.

Further, the Russian Federation is currently the leader in developing new nuclear technologies, such as transportable nuclear power plants. Ionising radiation is also used in nuclear medicine and in many other areas of the Russian economy.

The importance of nuclear energy for both their society and economy has been reflected in Soviet and subsequent Russian legal scholarship. The origins of their academic interest in legal issues arising from the peaceful uses of nuclear energy can be tracked to the early 1970s. Among those Soviet legal scientists dealing with these issues, Sergey Malinin² and Abram Iorish³ are most prominent. The centre of academic research in this particular field was established at the Institute of State and Law, Academy of Sciences, where a series of books on “atomic law” had been published through subsequent decades. Among them, *Soviet Atomic Law*⁴ garners the most attention. Published only few months prior to the nuclear incident in *Chernobyl* (1986), the book called for establishing a legal code to govern the peaceful uses of nuclear energy within the Soviet Union. This publication also gained some degree of recognition⁵ abroad.

Today, the legal issues arising from the peaceful uses of nuclear energy also attract the attention of legal academia in the Russian Federation. Books recently published by Aleksey Fatyanov,⁶ Anatoly Grishchenko⁷ and Viktoriya Romanova⁸ highlight this fact.⁹ Most recently, the Department of Energy Law, Moscow State Law University, launched an initiative to further develop legal scholarship in this area.

On 8 February 2019, the 2nd round table on *Actual Problems and Tendencies of Nuclear Law* was organized in order to discuss the most recent issues in this field of law. The round table was chaired by *Viktoriya Romanova*, head of the hosting department in the *Moscow State Law University*. The round table, which took place

² *Малинин С.А. Мирное использование атомной энергии: Международно-правовые вопросы* [Sergey A. Malinin, *Peaceful Uses of Atomic Energy: Questions in International Law*] (Moscow: International Relations, 1971).

³ *Иойрыш А.И. Атом и право* [Abram I. Iorish, *Atom and the Law*] (Moscow: International Relations, 1969).

⁴ *Бургасов П.Н., Иойрыш А.И., Петросьянц А.М. Советское атомное право* [Pyotr N. Burgasov et al., *Soviet Atomic Law*] (Moscow: Nauka, 1986).

⁵ Donald D. Barry, *A Law on Atomic Energy: Preliminary Observations in The Impact of Perestroika on Soviet Law 197* (A.J. Schmidt (ed.), Dordrecht; Boston; London: Martinus Nijhoff, 1990).

⁶ *Фатьянов А.А. Основы правового регулирования в сфере использования атомной энергии (ядерное право)* [Aleksey A. Fatyanov, *Fundamentals of Legal Regulation in Uses of Atomic Energy (Nuclear Law)*] (Moscow: MIFI, 2011).

⁷ *Грищенко А.И. Ядерное право России* [Anatoly I. Grishchenko, *Russian Nuclear Law*] (Moscow: Yurist, 2017).

⁸ *Романова В.В. и др. Проблемы и тенденции правового регулирования в области использования атомной энергии* [Viktoriya V. Romanova et al., *Problems and Tendencies of Legal Regulation in the Area of Use of Atomic Energy*] (Moscow: Yurist, 2017).

⁹ Review of the two last publications in English was published under the title “Nuclear Law in the Russian Federation – Two Books, One Review” in (11)5 *Journal of World Energy Law & Business* 461 (2018).



on the “Day of Russian Science,” provided an excellent opportunity to discuss issues arising at the crossroads of several classical branches of law: international, business, civil and administrative law.

Simultaneously, the topics also involved issues from other scientific branches, such as engineering, technology, international relations and even medicine, as the issues of nuclear medicine were also discussed in those areas. The round table was attended by academicians, representatives of the Rosatom State Atomic Energy Corporation, various enterprises as well as students of the hosting university.

1. Nuclear Law of the Russian Federation: Trends in Current Research

How does current legal science in the Russian Federation consider nuclear law and what is its position within the legal framework? Nuclear law is currently considered to be one of the most developed areas of Federation energy law.¹⁰ The formation of a system of legal regulation for peaceful uses of nuclear energy is to a large extent determined by the instruments of international law, which is the most detailed as compared to international legal regulation in other energy sectors (such as gas, oil, water energy, etc.).

The peaceful uses of nuclear energy and ionizing radiation are currently governed by a vigorous legal framework, established by binding instruments of international law and adopted under the auspices of the International Atomic Energy Agency (IAEA). These instruments of international law cover issues of early notification¹¹ and mutual assistance¹² in case of a nuclear accident or radiological emergency. These include nuclear safety,¹³ nuclear liability¹⁴ and nuclear security¹⁵ as well as

¹⁰ Both A. Grishchenko (*supra* note 7) and V. Romanova (*supra* note 8) follow this line of argumentation. For another possible view, explaining nuclear law as an independent branch of law, see Jakub Handrlica, *Nuclear Law Revisited as an Academic Discipline*, (12)1 *Journal of World Energy Law & Business* 52 (2019).

¹¹ Convention on Early Notification of a Nuclear Accident, adopted 26 September 1986, entered into force 27 October 1985, INFCIRC/335 (CENAC).

¹² Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, adopted 26 September 1986, entered into force 26 February 1987, INFCIRC/336 (CACNARE).

¹³ Convention on Nuclear Safety, adopted 17 June 1994, entered into force 24 October 1996, INFCIRC/449 (CNS).

¹⁴ Vienna Convention on Civil Liability for Nuclear Damage, adopted 21 May 1963, entered into force 12 November 1977, INFCIRC/500 (VC); Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, adopted 21 September 1988, entered into force 27 April 1992, INFCIRC/402 (JP); Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage, adopted 12 September 1997, entered into force 4 October 2003, INFCIRC/566 (VP) and Convention of Supplementary Compensation of Nuclear Damage, adopted 12 September 1997, entered into force 15 April 2015, INFCIRC/567 (CSC).

¹⁵ Convention on the Physical Protection of Nuclear Material, adopted 26 October 1979, entered into force 8 February 1987, INFCIRC/274 (CPPNM) and Amendment to the Convention on the Physical Protection of Nuclear Material, adopted 8 July 2005, entered into force 8 May 2016, INFCIRC/274/Rev.1/Mod.1 (ACPPNM).



issues of radioactive waste management.¹⁶ These instruments of international law are currently binding for a majority of States operating nuclear installations for electricity production within their territory.¹⁷

Consequently, the current system of legal regulation in the field of the peaceful uses of nuclear energy in the Russian Federation is created by legal norms provided by both international *and* national law.¹⁸ The range of relations arising in the sphere of peaceful uses of nuclear energy includes, *inter alia*, relations concerning uranium mining and enrichment, nuclear fuel production, supply, transportation, storage, and disposal, as well as design and construction of the nuclear power plants, etc.¹⁹

The 2nd round table on *Actual Problems and Tendencies of Nuclear Law* was organized as a reflection of the fact that, despite the existing scholarship mentioned above, many aspects of this particular branch of law still deserve to be the subject of separate legal studies. Consequently, the trends of current research in this area were outlined at the beginning of the round table by its Chair.

These trends concern the content of the legal regime of several new types nuclear installations (e.g. underground repositories), the legal status of the subjects of nuclear law (e.g. the Rosatom State Atomic Energy Corporation), features of contractual regulation, etc. In future, many issues must be systematized. Comparative legal studies of the provisions of the national laws of the Russian Federation and the national laws of foreign countries, including those relating to construction of nuclear power plants will be useful, since the Russian Federation has become a leader in terms of the number of power units being built abroad.

Also, considering the importance attributed to development of nuclear medicine, possible applications of isotope products and radioisotope equipment, it seems relevant to conduct legal research on the content of the legal regime of research in the field of isotopic reactors, isotopes, radioisotope equipment used to diagnose and treat various diseases.

Research on the use of public-private partnership in the construction and operation of nuclear medicine centers deserves further attention. For further development of foreign economic cooperation in the sphere of nuclear energy use, it will also be useful to conduct legal research on the legal regulation of supply of nuclear fuel as an object of foreign economic transactions.

¹⁶ Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, adopted 5 September 1997, entered into force 18 June 2001, INFCIRC/546 (JCSSF).

¹⁷ There are currently 157 Contracting Parties to the CPPNM, 121 Contracting Parties to CENAC, 118 Contracting parties to the ACPNPM, 116 Contracting Parties to the Convention on Assistance in the CACNARE, 85 Contracting Parties to the CNS, 79 Contracting Parties to the JCSSF, 40 Contracting Parties to the VC, 28 Contracting Parties to the JP, 13 Contracting Parties to the VP, 16 Contracting Parties to the PC and 10 Contracting Parties to the CSC.

¹⁸ Романова В.В. Энергетический правопорядок: современное состояние и задачи [Viktoriya V. Romanova, *Energy Law Order: Current State and Tasks*] 201–204 (Moscow: Yurist, 2016).

¹⁹ Romanova 2017, at 10–31.



Simultaneously, legal scholarship is called upon to deal with a special legal status of some subjects as provided by the federal laws should be noted. First of all, this concerns the Rosatom State Atomic Energy Corporation, which, among other things, is vested with powers in the sphere of public administration. Recently, there emerged a trend towards expansion of Rosatom State Atomic Energy Corporation powers as a body of state administration and authorizing this entity to exercise the rights of the shareholder of the managing company on behalf of the Russian Federation to participate in management of territories characterized by advanced socio-economic development. Further, they will be tasked with issue permits for construction and commissioning of nuclear facilities, whether or not the entity belongs to the Corporation, and to entitle the officials of the Corporation to execute records of administrative offenses.

Most recently, amendments were introduced into Federal Law of 1 December 2007 No. 317-FZ "On the State Atomic Energy Corporation Rosatom, and into the Code of Administrative Offenses of the Russian Federation." Taking into account these circumstances, it seems important to examine the state of coordination and interaction between various state bodies, including in the sphere of construction and commissioning of the nuclear facilities in the future.

2. Incorporation of the International Conventions into a National Legal Framework

Some of the problematic issues, arising from the problem of incorporation of existing international conventions into the national legal framework, were presented at the round table by *Alexander Bulavinov (Rosatom State Atomic Energy Corporation)*. In his speech, he analysed this problem with respect to the Vienna Convention on Civil Liability for Nuclear Damage. The Vienna Convention provides for a *specific* liability regime, applicable to the situations when a nuclear incident causes nuclear damage in the territory of the Contracting Parties²⁰ to the Convention.

The Vienna Convention contains several uniform rules to be applied by all Contracting Parties. It is, *per se*, only binding on their Contracting Parties. Consequently, it cannot prevent the laws of a non-Contracting State from providing otherwise. In so far as its provisions are self-executing, each Contracting Party can choose between the incorporation of the Vienna Convention in the domestic legal system, thus allowing for its direct application, and the adoption of national legislation specifically implementing the Convention. In this regard, one must bear in mind that the Vienna Convention fails to provide a complete harmonization. Rather, as is stated

²⁰ Argentina, Armenia, Belarus, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Cameroon, Chile, Croatia, Cuba, Czech Republic, Egypt, Estonia, Hungary, Jordan, Kazakhstan, Latvia, Lebanon, Lithuania, Mauritius, Mexico, Montenegro, Niger, Nigeria, North Macedonia, Peru, Philippines, Poland, Republic of Moldova, Romania, Russian Federation, Saint Vincent and Grenadines, Saudi Arabia, Senegal, Serbia, Slovakia, Trinidad and Tobago, Ukraine and Uruguay.



in its Preamble, it establishes “some minimum standards to provide financial protection against damage resulting from certain peaceful uses of nuclear energy.” Consequently, a rather ambiguous degree of discretion is left to national legislation.

In his speech, *Alexander Bulavinov* dealt with the issue of how various Contracting Parties to the Vienna Convention chose to address the issue of *incorporation*, or *adoption* into the national legislation. It is a fact, that several Contracting Parties²¹ to the Vienna Convention have *adopted* specific national legal frameworks governing nuclear liability under the principles established by the Convention.

Consequently, these Contracting Parties used the possibility (as envisaged by the Convention) to address certain issues (e.g. the limits of operator’s liability; a possibility to consider several reactors on one site as a single nuclear installation for insurance purposes, etc.) differently from the general rules provided by the provisions of the Convention.

Such a step has also been considered in the Russian Federation,²² although it has not yet been realised. *Bulavinov* also pointed out several other legal frameworks, where the mutual relation between the Convention and the national legal framework isn’t yet entirely clear (e.g. Egypt).

Consequently, his presentation can be considered a very valuable contribution to the discussion on mutual relationships between international law and national legal frameworks from the perspective of the peaceful uses of nuclear energy. While a number of scientific articles have appeared concerning the Vienna Convention in the past, the issue of incorporation (adaptation) of the provision has been only rarely been addressed from a comparative perspective.

3. Application of Nuclear Law to Specific Technologies

Further, several presenters paid particular attention to those legal issues arising from the application of existing legal frameworks to specific technologies, such as nuclear power plants, nuclear medicine centres and the shared (international) repositories for spent fuel.

In this regard, *Aleksey Chichkanov* (*Department of Energy Law, Moscow State Law University*) addressed the legal issues arising from the construction of the nuclear power plant at Akkiyu, Turkey. This project is governed by an international agreement concluded between the Russian Federation and Turkey in 2010. The new nuclear plant, the first within the territory of Turkey, will be constructed and operated by a subsidiary company of the Rosatom State Atomic Energy Corporation.

Simultaneously, it will become the first nuclear power plant realised as a *build – own – operate* project. The subsidiary company will construct, own *and* operate (hold

²¹ Ukraine, Slovakia, Czech Republic, Romania, etc.

²² For further details, see Yulia Lebedeva, *Draft Federal Act of the Russian Federation “The Civil Liability for Nuclear Damage and its Financial Security,”* (46)1 Nuclear Law Bulletin 105 (2014).



a licence) for the installation in Turkey. During the presentation, various legal issues arising from this concept were presented from both the point of view of the existing international agreement as well as the international conventions concluded under the umbrella of the IAEA.²³

Aleksey Chichkanov emphasised the importance of the legislation governing the issues of nuclear safety in the host country, including its corresponding authorisation procedures and control surveillance by the national regulatory authority.

Further, *Viktoriya Romanova* (*Department of Energy Law, Moscow State Law University*) and *Anton Shargin* (*Rosatom State Atomic Energy Corporation*) addressed the issue of nuclear medicine centres. In their presentation, they addressed various problems arising from the recent legislation of the Russian Federation in this field, including construction, legal support, hygienic standards, etc.²⁴ The presenters called for further unification of existing regulations covering various aspects of nuclear medicine centres in order to support their further development.

Finally, *Jakub Handrlica* spoke, dealing with the prospective legal framework of the shared underground repositories for spent fuel. The Joint Convention on both the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management basically call for disposal of spent fuel *within the territory* of the Contracting Party where it was produced. However, in its Preamble, the Joint Convention also recognised the possibility of addressing the need to dispose of spent fuel by establishing a shared (international) repository.

Such a repository would therefore serve the needs of *several* Contracting Parties and thus considerably decrease the levels of environmental and security burden. The issue of shared repositories was also several times discussed as a prospective project within the Russian Federation. In the past, a joint project entitled “Internationalization of the Civilian Nuclear Fuel Cycle” was launched by the U.S. National Academy of Sciences and the Russian Academy of Sciences in order to research the possibility of establishing a shared repository in the territory of the Russian Federation.²⁵ The Rosatom State Atomic Energy Corporation also promoted the concept of an international spent fuel management centre in the Russian Federation.

Estimates were provided for the resources needed to establish an international regional centre in Russia for storage, reprocessing and disposal of spent fuel. There

²³ In this respect, it would be interesting to note that, in the area of nuclear liability, the Russian Federation is Contracting Party to the Vienna Convention on Civil Liability for Nuclear Damage, while Turkey is Contracting Party to the Paris Convention on Nuclear Third Party Liability, concluded under auspices of the OECD. In order to establish mutual treaty relations in the area of nuclear liability, Russian Federation will need to accede to the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention.

²⁴ See also *Viktoriya Romanova, Legal Regulation of Nuclear Medicine Centers: Current Status and Development Objectives*, (4)4 Energy Law Forum 60 (2018).

²⁵ *Viability of Sharing Facilities for the Disposal of Spent Fuel and Nuclear Waste* 22 (Vienna: IAEA, 2011).



is already Russian, Bulgarian and Ukrainian spent fuel in storage at the Krasnoyarsk site. Potential disposal sites were identified at two locations, 4 and 30 km from the storage site. Current drilling exploration highlights Russia's intent to build a deep repository in the future.²⁶

However, as Handrlica (the author of this review) stated in his presentation, in parallel with technical arrangements, legal arrangements must also be made in the future in order to facilitate both construction and operation of shared repositories. In this regard, the Joint Convention explicitly provides that disposal of spent fuel in a *shared* repository is only possible based on a corresponding international agreement between the States concerned. Consequently, key issues have been identified that must be addressed by such agreements in the future.

Here, it is important to note that while the two issues discussed by the previous presenters (i.e. new nuclear power plants and nuclear medicine centres) deal with problems of today, the issue of shared repositories remains a topic in the far future.

However, this fact does not minimise the importance of the topic and perhaps makes it even more interesting.

Conclusion

The 2nd round table on *Actual Problems and Tendencies of Nuclear Law*, organized by the Moscow State Law University, confirmed that legal issues arising from the peaceful uses of nuclear energy continue to attract the attention of legal scholarship in the Russian Federation. In this concern, such scholarship can build on the solid academic background established in the past.

Further, dynamic developments in the nuclear industries, both in the Russian Federation and abroad, imply several new problems that must be addressed by legal academia. In this area, we can anticipate interesting discussions dealing with several future nuclear technologies: Transportable nuclear power plants, the multiplication of Arctic nuclear fleets and low-enriched international uranium banks represent only few such examples of technologies that will certainly attract the attention of international legal communities in the near future.

Also, the 2nd round table reconfirmed the unique position of the Russian legal academia in the area of research in the field of peaceful uses of nuclear energy. In the past, nuclear law was researched only at several universities in Western Europe, in particular in Germany and Italy. Due to political considerations, this research is no longer supported in these nations.

Thus, the legal academia of the Russian Federation retains its unique *know-how* in this field and demonstrates its capacity to further develop it.

²⁶ *Viability of Sharing Facilities*, *supra* note 25, at 22.



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