Legal Regulation of Nuclear Power Use in Russia

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Abstract: This paper analyzes the Russian legislation on the nuclear power use and focuses on issues and gaps in legal regulation of economic activities in this area. The author provides some evaluation of nuclear legislation systematization, its role in improving nuclear power sector regulation, and also proposes some changes that might be implemented in the current nuclear legislation.

Keywords: decommissioning, fuel fabrication, ionizing radiation sources, licensing, nonproliferation, nuclear damage recovery, nuclear facilities, nuclear fuel cycle, nuclear legislation codification, nuclear legislation systematization, nuclear materials, nuclear power, nuclear power use management agency, nuclear spent fuel, nuclear waste management, radiation safety, radioactive waste, radioactive waste management, radioactive waste management operator, radioactive waste repositories, radioactive waste storage facilities, Rosatom State Corporation, technical regulation, weapons-grade nuclear facilities

Legal support of social relations in such a potentially dangerous area of human activity as nuclear power requires comprehensive regulations.

The nuclear power sector in Russia is rapidly developing, going through a challenging process of reforms associated with optimization of the industry, primarily of its non-military facilities. Reforming of the nuclear power industry involves optimization of enterprises' forms of incorporation, technology upgrades and construction of new sites. The Government allocates significant appropriations under federal targeted programs to construct new nuclear power plants, develop new technologies, and address nuclear and radiation safety issues, mostly in the area of nuclear waste management. This makes the nuclear industry a strong and competitive sector in the Russian and global markets. But another goal is still as important – development of up-to-date legislation on the use of nuclear power, to provide the nuclear industry with a legal framework for efficient performance in the current Russian market context.
Regulation of relations arising from the use of nuclear power in Russia is based on the legal acts making up a certain hierarchical system where their legal significance depends on the status and jurisdiction of the authority that adopted a relevant instrument.

The IAEA recommends that a nuclear law must be consistent with a general legal and regulation framework of the country and reflect the level and focus of its nuclear program, if it wants to be efficient and effective. It would also be quite beneficial to ensure maximum alignment and consistency between national nuclear legal systems, despite the individual needs of national legislative systems.¹

The nuclear law in Russia is both a product and the main form of consolidation of the government policy on the nuclear power use. The main characteristics and criteria of today’s legislation on nuclear power are as follows:

- Establishment of a system consisting of specific legal acts covering the use of nuclear power, as well as other laws (constitutional, civil, administrative, criminal, tax, etc) associated to a certain extent with relations resulting from entrepreneurial activities in the use of nuclear power. The main requirements are to avoid any gaps in regulation of nuclear power and meet the public expectations;
- Development of mechanisms to support implementation of nuclear and radiation safety requirements on the use of nuclear power;
- Harmonization with nuclear legislation of the European Union and laws adopted at the international level in this area of business activities;

It is worth mentioning, when evaluating the history of nuclear power legal framework development, that a nuclear industry has been operated under a special regime from the very moment of its establishment: it was created primarily to serve military purposes and was developed as a secret industry. As a result, there was no regulation of relations emerging from the use of nuclear power. There was a total secrecy around decision-making on its business processes. At that time, the national regulation of nuclear power used to be

¹ Handbook of Nuclear Law: Implementing Legislation. IAIA. Vienna. 2010. p. 2
achieved mostly through a performance standards system meant to address specific health, safety and technical issues.

This article will discuss legislation on the use of nuclear power which has been developing from the very beginning of a new Russia as an independent state after the collapse of the Soviet Union.

Today there are good reasons to say that the Russian nuclear legislation is available in the national law as a standalone part, still undergoing extensive development and improvement processes, but it also functions as a nuclear legislation system. The architecture of regulatory framework governing the use of nuclear power, nuclear and radiation safety in Russia consists of legal documents at three tiers.

The first-tier documents are international agreements of the Russian Federation, Federal Laws, and Subordinate Acts (decrees and ordinances of the President of the Russian Federation, resolutions and ordinances of the Government of the Russian Federation) governing the nuclear power use and supporting the nuclear and radiation safety.

The second tier consists of legal and regulatory documents (norms, rules, and standards for nuclear and radiation safety) implementing specific provisions of international

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6 Radiation Safety Norms (NRB-99), Safety Rules for Nuclear Power Plant Waste Management (NP-002-04),
laws and federal laws, which are meant to ensure compliance with requirements prescribed by legislation and perform regulatory role in the core business of the industry – generation of nuclear power and use of ionizing radiation sources - and in related industries where ionizing radiation sources are used for research, production, social and community needs.

The third-tier documents are regulations, standards and industry-specific documents facilitating implementation of the requirements specified in the second-tier regulatory documents with a more detailed description of performance indicators (standards) set forth in those requirements and possible options for corrective actions.

International agreements of the Russian Federation on use of nuclear power, standards and guidelines of international organizations play an important role in the Russian nuclear legislation.

The Constitution of the Russian Federation (Article 15, paragraph 4) recognizes the priority of universally recognized provisions of international law and agreements of the Russian Federation, being an integral part of its legislation system. If an international agreement of the Russian Federation prescribes rules other than those set forth in the law, the rules of the international agreement prevail.


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8 Such as: International Atomic Energy Agency (IAEA), International Commission on Radiological Protection (ICRP), International Labor Organization (ILO), and World Health Organization (WHO).
rigorous observance of provisions under agreements and customary law, confirms its commitment to the fundamental principle of the international law, i.e. to meet all its international obligations in good faith. International agreements contribute significantly to the stability of the international regulatory regime and the Russian foreign relations, promoting the rule of law in the country.

The Russian Federation is a member of all major Conventions on civil nuclear power use, being also a successor of the Soviet Union.

The Constitution of the Russia Federation of 1993 (subparagraph J, clause 71) specifies that “...nuclear energy, fissile materials...” are under the national jurisdiction of the Russian Federation.

The constitutional provisions are further elaborated in the national nuclear power policy of the new Russia through legislative and regulatory processes.

Policy documents on strategic development of nuclear industry, and nuclear power sector in particular, occupy a special place in the Russian nuclear legislation. It is worth mentioning The Nuclear Energy Development Strategy for the First Half of the 21st Century as approved by the Russian Government in May of 2000. The Strategy was adopted prior to the Russian Energy Strategy until 2020 (ES-2020). The ES-2020, Section 6. Nuclear Power and Nuclear Fuel Cycle specified that the main nuclear energy development areas had been identified by the nuclear energy development strategy for the first half of the 21st century as approved by the Russian Government. The ES-2020 outlines that specific features of nuclear industry include: a complete complex of “fuel and raw material -energy generation-waste management”, while an important goal of the government strategy for development of fuel cycle and nuclear power industry is to increase export potential of the

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9 Collection of Laws of the Russian Federation, 1. No 7, Article 834.
Russian nuclear technologies: expansion of export of nuclear power plants, nuclear fuel and electricity.

This document is not the first one of its kind in the current Russia.¹¹

The Russian Government Ordinance No1715-r of November 13, 2009 approved the **Russian Energy Strategy Until 2030**¹² where nuclear power is expected to continue playing an important role in meeting the projected power consumption needs and in building up generation capacities.¹³

The **Russian Energy Strategy 2030** has a special place in the system of strategic and policy documents of the Russian Federation. It is worth to note that the Energy Strategy 2030 is consistent with major documents of this type outlining Russia’s long-term development.¹⁴

The **Energy Strategy 2030** declares that this Strategy forms new industry development benchmarks for the Russian economy transition to innovative development as envisaged by the **Russian Federation Concept for Long-Term Social and Economic Development until 2020**, pointing out subordination of the Energy Strategy 2030 to the Concept and defining long-term economic development projections until 2030.

Reforming power industry, the Government of the Russian Federation approved **Major Areas of Power Industry Reforms**¹⁵ envisaging implementation of power industry reform in three stages.

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¹⁵ Resolution of the Russian Federation No 526 dated July 11, 2001
The first stage of the power sector reform included restructuring of a nuclear power industry by establishment of a single generating company. When integrated into the national generation company, state-owned nuclear power plants became full-fledged participants in the emerging competitive electricity market.

A federal law is of primary importance among other pieces of legislation regulating relations in the Russian nuclear industry, as it is adopted through a special process and aimed at the regulation of the most important relations resulting from the use of nuclear power, provision of nuclear and radiation safety.

Article 1 of the Federal Law “On Use of Nuclear Power” of November 21, 1995, No 170-FZ defines that relations resulting from the use of nuclear power for civil and defense purposes are regulated by this Federal Law and other laws and statutory instruments of the Russian Federation.

_Federal Law No 170-FZ “On Use of Nuclear Power” dated November 21, 1995 (hereinafter referred to as the Nuclear Power Law) is a fundamental law in the Russian nuclear legislation._

The Nuclear Power Law was the first one to codify the priority of human and environmental safety, to specify the rights and obligations of nuclear power stakeholders, to lay the foundation for regulation of activities involving the use of nuclear power and ionizing radiation sources, to delineate functions and responsibilities of government authorities and regulating bodies in the use of nuclear power, in rule-making for licensing and supervision in the above area, radiation safety for public and personnel, transportation and management of nuclear material and waste, liability for nuclear damage and some other provisions; this law

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17 Currently it is Rosenergoatom Concern OJSC with Russian nuclear power plants being affiliates of this open joint stock company.
provides a regulatory framework for international obligations of the Russian Federation in nuclear energy.

The Nuclear Power Law consists of 70 articles grouped into 16 chapters defining principles and objectives of nuclear legislation, its applicability and jurisdiction; ownership of nuclear facilities, radiation sources, storage facilities, nuclear and radioactive materials. It regulates all kinds of activities related to nuclear power use including research, design, construction, commissioning, operation, decommissioning of nuclear facilities, radiation sources, radioactive waste storage facilities, as well as management of nuclear materials and radioactive substances.

The fundamental principle of the Nuclear Power Law is attachment of top priority to nuclear and radiation safety and state security, support of various forms of ownership in the use of nuclear power, provision of wide publicity and transparency of decision-making regarding the location and construction of nuclear power projects, radiation sources and radiological waste storage sites.

The Nuclear Power Law makes a clear distinction between the jurisdiction of the Russian Federation and that of its constituent entities in the nuclear energy industry, between legislative and executive authorities at all levels; and defines main functions of various federal executive bodies with respect to nuclear power use.

Pursuing uniform safety standards, all nuclear facilities, radiation sources, storage facilities, nuclear facilities and radioactive waste are referred to the assets of exclusive federal property (Article 5 of the Law) and are subject to a uniform national registration, accounting and control system. Before the nuclear industry reform (2007), private ownership of any nuclear facility has been disallowed (until a relevant law is passed). Article 5 of the Nuclear Power Law was amended in 2007 to allow ownership of nuclear facilities, nuclear materials
and storage facilities by corporate entities.\textsuperscript{20} While permitting ownership rights of nuclear facilities, nuclear materials and storage facilities by corporate entities, the legislature introduced restrictions – because of the safety concerns as we believe – for such rights. A new revision of Article 5 of the Nuclear Power Law requires that Lists of Russian corporate entities that may own nuclear facilities, nuclear materials and storage facilities shall be defined by the President of the Russian Federation. It means that all deals involving a transfer of an ownership title to nuclear facilities and nuclear materials may be executed exclusively between Russian corporate entities entered in the List approved by the President of the Russian Federation. Considering the above, if any party of such a deal is other than a Russian legal entity from the List, that deal shall be deemed void. Further, the President shall define the List of nuclear materials exclusively assigned as federal property. According to the revised Article 5 of the Nuclear Power Law, only properly authorized (licensed) Russian legal entities may operate nuclear facilities and manage nuclear materials owned by legal entities. This provision implies that a Russian entity on the List approved by the Russian President is expected to obtain a relevant license from Rostekhnadzor\textsuperscript{21} following the established procedure to be authorized to handle nuclear materials or operate nuclear facilities. This provision means that an operator (even if he is an owner) of a nuclear facility or materials may not operate nuclear facilities or manage nuclear materials in any possible way, including storage, transportation and production if not properly licensed\textsuperscript{22} for the job.

The above means that implemented amendments provide for continuity in applying nuclear and radiation safety measures in the context of restructured ownership relations in the nuclear industry.


\textsuperscript{21} Federal Service for Environmental, Technological and Nuclear Supervision.

\textsuperscript{22} More details on licensing for activities in nuclear power use will be discussed in special course lecture: "Licensing for Activities in Nuclear Power Use".
The Nuclear Energy Law requires permissions for any activity in the nuclear sector – a major component of a universal safety regime for the use of nuclear power.

The Nuclear Power Law defines responsibilities of such entities and their obligations for provision of safety.

The Nuclear Power Law covers quite an extensive area of relations in provision of nuclear power safety.

The Federal Law "On Use of Nuclear Power" became the basis for further development of Russian nuclear legislation and shaping of its system.\(^{23}\)


In the midst of 2000s, a decision was made to reform the nuclear energy industry.

One of the conditions for a large scale and innovative development of a nuclear industry was improvement of its legal and regulatory framework.

The President of the Russian Federation announced a political decision on industry reforms and further innovative development of a nuclear power industry in his Message to the Federal Assembly of the Russian Federation on May 10, 2006: "Today nuclear power sector development steps are necessary… Restructuring of the industry must serve this purpose".\(^{24}\)

The following federal laws deserve to be mentioned among those adopted to support policy decisions on nuclear industry reforms.

**Federal Law No 13-FZ "On Specific Features of Management and Disposal of Property and Shares of Organizations Involved in Activities Related to Nuclear Power**


The above law expressly precludes its application to the enterprises of weapons-graded nuclear facilities, drawing a final demarcation line between civil and military nuclear energy industries (highlighted by G.A.I).

Law No 13-FZ was aimed at the optimization of legal and business environment for the Russian nuclear power sector (NPS), to promote regulatory conditions for industry restructuring as well as for consideration of specificity of management and disposal of property and shares of entities involved in the use of nuclear power. Law No 13-FZ has discontinued the segregation of enterprises in the nuclear power industry operating as federal state unitary enterprises (FSUE) (mainly in the area of uranium enrichment, power generation and applied science) and as joint stock companies (uranium mining, fuel fabrication, some in mechanical engineering, construction, and export activities). This disconnection objectively has impeded implementation of a sector-wide strategy, investment and technology policy due to different governance approaches employed in management of joint stock companies and FSUE entities as established by the Russian legislation.

Paragraph 13, Article 3 of Law No13-FZ prescribed the establishment of a major joint stock company where a founder is the Russian Federation. The Government of the Russian Federation shall approve Articles of Association of this major joint stock company and provide for other measures necessary for establishing a joint stock company.\textsuperscript{26}

Law No 13-FZ envisaged creation of a vertically integrated holding company. On the 27\textsuperscript{th} of April, 2007, the President of Russian Federation signed a Decree to establish Atomic Energy Industrial Complex open joint stock company (AtomEnergoProm OJSC)" dated July 6, 2007

\textsuperscript{25} Collection of laws of the Russian Federation. 2007, Article No. 834.

\textsuperscript{26} Resolution of the Government of the Russian Federation No 432 On Approval of Article of Association of Atomic Energy Industrial Complex open joint stock company (AtomEnergoProm OJSC)" dated July 6, 2007
Energy Industrial Complex (Atomenergoprom) open joint stock company\textsuperscript{27} with 100\% of federally-owned shares.

In order to expedite implementation of reforms in the nuclear power sector, the law maker included the relevant provisions in Law No 13-FZ aimed at optimization of individual procedures and time limitations in the current legislation. The legal mechanisms provided by the lawmaker to optimize schedules of reforms in the nuclear power sector are as follows: FSUE restructuring on the basis of rules as per paragraphs 15, 16 and 17, Article 4, Federal Law No13-FZ; forming of authorized capital of Atomenergoprom OJSC as per paragraph 3, Article 4, Federal Law No13-FZ; specific features of national registration of rights to real estate property during privatization of nuclear power sector assets (Article 5, Law No 13-FZ); specifics for licensing of activities that require special authorization (licenses) (para 1, Article 6, Law 13-FZ).

Furthermore, paragraph 22, Article 4 of Law No13-FZ defines that all subsidiary joint stock companies of the major joint stock company are not subject to the provision set forth by Article 98 of Civil Code of the Russian Federation and by Article 10 of the Federal Law No 208-FZ "On Joint Stock Companies" dated December 26, 1995 stipulating that a joint stock company may not be owned by another company as a single shareholder consisting of a single legal entity.

The President of the Russian Federation highlighted the core legal concept behind consolidation of nuclear industry enterprises and entities into a state-owned corporation in his message to the Federal Assembly of the Russian Federation on April 26, 2007 \textit{"...I propose to establish a special corporation aimed at implementation of this project by consolidating companies from nuclear energy and industry. It will operate in the domestic and international markets and will also address national interests in military defense. A special}\textsuperscript{27} Decree of the President of the Russian Federation No 556 "On Restructuring of Atomic Energy Industrial Complex of the Russian Federation" dated April 27, 2007.
law must be adopted for this purpose. Now, I am speaking about the nuclear power industry, I'd like to emphasize.\textsuperscript{28} (highlighted by G.A.I)

The message of the President of the Russian Federation pushed for the development and adoption of \textit{Federal Law No 317-FZ "On Rosatom State Atomic Energy Corporation" dated December 1, 2007}\textsuperscript{29} (hereinafter referred to as "Law on Rosatom").

A state-owned corporation is one of the tools for implementation of a national policy in the country's economy. The establishment of state corporations was vigorously debated at various levels in Russia. This was the focus of hearings held in State Duma and Federation Council (lower and upper chambers, respectively) of the Federal Assembly.\textsuperscript{30} Legal issues related to state-owned corporation were discussed in scholar publications.\textsuperscript{31}

The Russian legal doctrine analyses the legal status of Rosatom in detail: legal background for establishment, authorities, functions and activities\textsuperscript{32}. Rosatom State Atomic Energy Corporation was created for the goals defined in Article 4 of Federal Law \textit{On Rosatom State Atomic Energy Corporation}. The information on that list is deemed sensitive information.

\textsuperscript{28} \url{http://kremlin.ru}

\textsuperscript{29} Collection of Laws of the Russian Federation, 2007, No 49, Article 6078.


It should be noted that in accordance with the Law on Rosatom, Rosatom State Atomic Energy Corporation is a nuclear power use management agency with the authorities delegated by the Russian Federation to exercise government regulation of nuclear power use in accordance with Chapter IV of Federal Law No 170-FZ "On the Use of Nuclear Power" dated November 21, 1995, and public administration of activities related to development, fabrication, and disposal of nuclear weapons and weapons-graded nuclear power facilities. Rosatom State Corporation was established to pursue a national policy, provide legal and regulatory function, deliver public services and manage state-owned property in the area of nuclear power use, ensure development and safe operations of nuclear power generation and nuclear weapons sectors, maintain nuclear and radiation safety, support nonproliferation of nuclear materials and technologies, develop nuclear science, technologies and professional education, and promote international cooperation in this area.

It is worth discussing in detail Federal Law No 318-FZ On Amendments to Individual Legal Acts of the Russian Federation dated December 1, 2007 due to adoption of Federal Law On Rosatom State Atomic Energy Corporation which introduced amendments to some federal laws including Part I of the Civil Code of the Russian Federation (paragraph 1, item 4, Article 65). Amendments were made to Nuclear Power Law, namely, Article 10 was revised to read as follows: "Authorities defined in the first part of this article may be exercised by Rosatom State Atomic Corporation as per the Federal Law On Rosatom State Atomic Corporation. The title of Article 20 of the Law “On Use of Nuclear Power” was modified to read as follows: Article 20. Government Authorities to Manage the Use of Nuclear Power. Part 1 of Article 20 was also subjected to amendments to read as follows: Government management of nuclear power use is provided by federal executive authorities and Rosatom State Atomic Corporation (hereinafter referred to as

33 Collection of Laws of the Russian Federation, 2007, No 49, Article.6079
nuclear power use management authorities) in accordance with the procedures established by this federal law, other federal statutes and pieces of legislation of the Russian Federation”.

**Federal Law No 193-FZ On Radioactive Waste Management and Amendments to Individual Acts of the Russian Federation**\(^34\) dated June 11, 2001 deserves to be mentioned among other laws adopted in recent years. The adoption of the law was preceded by vigorous public discussions with involvement of environmental agencies focusing on its provisions and established authorities.

Radioactive waste management had been one the least regulated aspects in the Russian nuclear legislation for a long time, regardless of numerous attempts to develop a special draft law.\(^35\)

Federal Law No 139-FZ On Ratification of Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management\(^36\) was passed on November 4, 2005 mandating the provisions of the Joint Convention for all Russian executive authorities and entities involved in management of nuclear spent fuel and radioactive waste. The Joint Convention was meant to serve as the basis for further improvement of the Russian system of legal norms and instruments that regulate safety of spent fuel and radioactive waste management in accordance with the Russian Federation’s commitments resulting from the Joint Convention’s provisions.


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\(^{35}\) For details see: Titova T.A Legal Regulation of Radioactive Waste Management.// Energy Law. 2006 No 1(6).

\(^{36}\) Collection of Laws of the Russian Federation, 2005 No 45, Article 4587.
waste. *This emphasizes that spent fuel and radioactive waste do not belong to the same category, implying that a new special law should be adopted to regulate spent fuel management* (highlighted by G.A.I).

The above law is aimed at avoiding the existing “postponed decision” practices and creating a system that ensures a “cradle-to-grave” approach to efficiency and safety of radioactive waste management aimed at the ultimate isolation of radioactive waste. This will help address many environmental issues and implement a systemic approach to radioactive waste management.37

The provisions of the above law include the following:

- creation of a single national waste management system where key players will be a Government authority on waste management (Rosatom State Corporation)38 and a national operator for radioactive waste management;
- obligations of radioactive waste generators to bring waste to safe disposal conditions and to transfer it to the national disposal operator;
- maintenance of radioactive waste register and radioactive waste repositories cadastre;
- the authority of the government of the Russian Federation, federal executives, public authorities of constituent entities of the Russian Federation, and local authorities for radioactive waste management;
- contents of federal norms and rules regulating radioactive waste management;
- requirements to entities generating radioactive waste in the course of their activities.

Disposal of radioactive waste is categorized as a natural monopoly which is subject to the government regulation and control by designated authorities.39 Cost of services for radioactive waste disposal will be paid at rates as established by the Federal Tariff Service.

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38 Corresponding amendments were made to Federal Law No 317-FZ On Rosatom State Atomic Energy Corporation dated December 1, 2007.

39 A respective amendment was introduced to Para 1 of Article 4 of Federal Law No147-FZ On Natural Monopolies dated August 17, 1995
We believe however, that activities for collection, sorting and reprocessing, conditioning, trafficking and temporal storage of radioactive waste should not be regulated by the government. This is a common business operation.

Some attention should be paid to a national operator for radioactive waste management whose responsibilities are defined separately in Article 20 of the Law. The law specifies that a national radioactive waste management operator is a legal entity authorized under this Federal Law to carry out disposal of radioactive waste and other activities related to radioactive waste management. The national operator is defined by the Decision of the Government of the Russian Federation as suggested by a government authority on radioactive waste management. The national operator's functions in radioactive waste management are very complex and huge. National operator is in charge of the following:

1) Ensure safe management of nuclear materials received for disposal;
2) Support operation and closure of radioactive waste repositories;
3) Perform a customer function for design and construction of radioactive waste repositories;
4) Develop reports on expected demand for radioactive waste disposal, expansion of waste management infrastructure and publish respective information on a web-site of a national operator and on a web-site of the government authority on radioactive waste management.
5) Provide technical and information support for government control and accounting for radioactive materials and waste.

Radioactive waste located in the Russian Federation may be divided into two categories:

- Legacy of the first nuclear project;
- Radioactive waste resulting from the current activities of entities within Rosatom State Corporation.

This circumstance evokes the question of a legal form of a would-be national nuclear waste operator, not available now among the current entities in the nuclear industry.

It is worth to note that no foreign country using nuclear power for civil purposes has a national radioactive waste management operator.
The next stage of establishment of a national radioactive waste and spent nuclear fuel management system would be a draft law on spent nuclear fuel (SNF). Developers of a draft law would have to resolve the following issues in order to define finally a law's core substance. First, this is an issue of ownership of SNF, i.e. who is in charge of SNF, what are technical properties of SNF. Second, how the future of SNF is defined, because the answer to this question would drive the choice of design and technology. For example, some foreign countries decided that nuclear spent fuel immediately goes to the category of radioactive waste with no prospects of its further use. Other countries believe that spent nuclear fuel can be reprocessed for further use. So there are two essentially different positions in place. Drafters of the SNF law should clearly define their position. If their choice is not clearly defined, in our opinion, this draft law may face a complicated future. Otherwise the draft law may lose its urgency or may experience the same development and adoption process as the law on radioactive waste.

Beside the Nuclear Energy Law and the federal laws above, the Russian Federation has a huge amount of other legal norms and statutes affecting regulation of nuclear power sector in various degrees. Such regulatory instruments include regulatory decrees (ordinances) of the President of the Russian Federation and resolutions (ordinances) of the Government of the Russian Federation, as well as many other norms and regulations of

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41 The Authorities of the President of the Russian Federation, of the Government of the Russian Federation, and federal executives including legal norms and acts issued by them will be discussed in more detail in the following special courses: State Management of Nuclear Power Use and State Regulating of Safety in Nuclear Power Use.
various federal authorities that describe and specify regulatory mechanisms for enforcement of Atomic Energy Law provisions.  

One of the Russian nuclear legislation sources is federal norms and rules of nuclear power use. Development and adoption of the norms and rules are provided under Article 6 of the Atomic Energy Law. Federal norms and rules impose mandatory nuclear power use safety requirements on any activities in the area of nuclear power use. The Government of the Russian Federation shall approve the list of federal norms and rules for nuclear power use as well as all amendments to this list. The Government of the Russian Federation shall approve procedures for development and adoption of norms and rules for nuclear power use.

Procedures for development of norms and rules must include official publication and discussion of drafts of the above norms and rules at a preliminary stage except for those norms and rules for nuclear power use that contain state secrets.

The above norms and rules shall take into account recommendations of nuclear power international organizations where the Russian Federation is a member of.

When enacted, these norms and rules are mandatory for all entities using nuclear power, and they become effective throughout the entire territory of the Russian Federation.

Resolution of the Government of the Russian Federation No 1511 dated December 1, 1997 approved Provision for Development and Approval of Federal Norms and Rules for Nuclear Power Use to further develop provisions of Article 26 of Atomic Energy Law. This Provision defined the List of federal norms and rules on nuclear power use and the list of federal executive authorities in charge of the approval of these documents. The List consists of three parts: 1. Federal norms and rules on nuclear and radiation safety (performance

42 Specifically, Rostekhnadzor : Order No 178 of Federal Service for Environmental, Technological, and Nuclear Supervision On Approval and Inaction of Section II Government Regulation of Safety for Nuclear Power Use form the List of legal norms and acts related responsibilities of Federal Service for Environmental, Technological, and Nuclear Supervision (P-01-01-2009) dated March 17, 2010

43 Collection of Laws of the Russian Federation. 1997, No 49, Article 5600

The Provision defines procedures for development, review, approval and enactment of federal norms and rules for nuclear use as well as their amendments.

The following issue remains and still requires consideration: what Russian authority will be primarily responsible for implementing a national policy in the area of nuclear power use and nuclear and radiation safety.

Considering the above, the nuclear energy specialists suggest the withdrawal of executive powers from Rosatom State Atomic Corporation to transfer them to a special federal agency with a delegated appropriate authority covering nuclear power use and nuclear and radiation safety. It is proposed for such a federal authority to have a special status requiring it to directly report to the President of the Russian Federation, as in 2004, or at least to the Government of the Russian Federation. This body, when created, shall become a leading authority in this area with coordinating, managing and regulating functions.

The need for adoption of a fundamental law on government regulation of nuclear safety issues has been discussed for more than a decade. This is caused by minimum safety requirements laid down by the Federal Law On Technical Regulation\(^4\). Nuclear industry differs from other Russian economy sectors and legislation covering it shall impose higher safety requirements due to higher industry-inherent risks. Such higher risks may lead to a potential nuclear hazard with extensive consequences and a transboundary radiation impact.

The current legislation has serious gaps when it comes to nuclear and radiation safety during the entire life cycle of nuclear facilities, including development and performance of the government regulation of nuclear and radiation safety matters, as well as control and supervision functions. In addition, the current nuclear legislation does not consider current

principles of national regulation of nuclear and radiation safety; first, it does not include
categorization of nuclear facilities and differentiation of the regulation measures depending
on a potential impact scale and nature.45

Law makers made attempts to address the above gaps in 2011.46 Again, issues were
resolved by making amendments to existing laws rather that developing a new federal statute.
Amendments and additions were made to the fundamental nuclear law.47 Articles 1 and 6
were revised and significant amendments were made to Article 26, Permits (Licenses) for
Work in the Area of Nuclear Power Use. Article 26-1 Regular Safety Assessment of Nuclear
and Storage Facilities was added to the law, as well as Article 36-1 Specifics of Regulation of
Activities Involving Use of Radiation Sources Containing Radionuclides, Article 37-1
Organizations of Scientific and Technical Support of the Government Designated Agency for
Safety Regulation. Amendment made to The Code of the Russian Federation on
Administrative Offenses implemented tougher sanctions for violation of Russian laws on the
nuclear power use.48 A failure to timely respond to instructions of a federal executive
authority may result in administrative penalties in the range of 30,000 to 50,000 rubles, if
imposed on individuals in charge or disqualification of them for the period of one to three
years; or 400,000 to 700,000 rubles if a legal entity is at fault.

45 see, e.g.: Novikov G.A On Basics of State Policy and Legal Regulation of Global Nuclear Safety {Internet
resource} /URL:http://www.atomic-energy.ru/articles/2011/10/13/27535/; Nikiforov N.V Nuclear Safety and
Physical Security at Nuclear facilities. Report on Atomexpo-2011 {Internet resource}/

46Federal Law No 347 On Amendments to the Russian Federation Individual Legislative Acts Aimed to
Regulation of Safety in Nuclear Power Use dated November 30, 2001// Published on an official web-site for

4552// Amendments introduced by Federal Law No 347- FZ dated November 11, 2011 are affective at the date

Licensing of nuclear power use experienced the most considerable changes.\textsuperscript{49} Licensing is required for the following nuclear industry activities: placement, construction, operation and decommissioning of nuclear facilities, radiation sources, nuclear and radioactive material storage facilities, radioactive waste storage facilities, closure of radioactive waste repositories, management of nuclear and radioactive materials, management of radioactive waste during storage, reprocessing, transportation and disposal, use of nuclear materials and/or radioactive materials for research and development, design and engineering of nuclear storage facilities, waste storage facilities; development and manufacturing of components for nuclear installations, radiation sources, nuclear and radioactive material storage facilities, implementation of experts’ safety reviews of nuclear facilities and/or activities in the area of nuclear power use (highlighted by G.A.I).

A license applicant or a licensee may seek and obtain a combined license for multiple activities related to nuclear power use at one or several facilities where such activities are conducted. This is a novelty in the nuclear law because the earlier version required a separate license for each type of activity.

Licensing of any activities in the nuclear industry involve safety experts’ opinion (safety justification review) of nuclear facilities and/or activities to be implemented before the decision is made on issuing a license. Such review shall be conducted following procedures as established by a designated government authority on the regulation of nuclear safety; however, such procedures still need to be developed and approved.

The current Russian nuclear legislation does not provide for special norms regulating liability for nuclear damage, and for financing and insurance mechanisms supporting

recovery of such damages. Therefore, among other comprehensive nuclear safety measures, the highest priority is attached to the issue of nuclear damage recovery and adoption of legislation on liability in the course of nuclear power use /highlighted by G.A.I./.

The urgent need for development and adoption of such federal law results directly from the Russian Federation Ratification\(^5\) of Convention on Civil Liability for Nuclear Damage (Vienna Convention, 1963) and participation of the Russian Federation in other international agreements covering safety in nuclear industry. The Vienna Convention has been effective in the Russian Federation since August 13, 2005. Russia shall comply with provisions of Vienna Convention from that date. No provision of Vienna Convention provides the Convention’s member country a waiver from adoption of specials norms and rules. In addition, there are other factors pushing for urgent development and adoption of Federal Law on Financially Secured Civil Liability for Nuclear Damage. They are as follows:

- Impossibility to cover damages from federal budget;
- Operators have limited budgets to cover potential damages in full;
- Current status of the Russian insurance market where absence of appropriate legal framework prevents insurers from having sustainable insurance funds;
- Needs for development of special norms to regulate nuclear damage recovery and nuclear insurance to complement existing regulations;
- National safety regulation agency requires a nuclear facility operator to present a proof of financial capability to cover damages, if inflicted, as a condition for issuing a license; this condition may be met if such a process is legally defined. (The requirement results from Convention, part 1, article VII and from Federal Law On Use of Nuclear Power, Article 56 but, the above norms stipulate that the State shall define types and limitations of liabilities.)

Also it should be taken into account that in accordance with Vienna Convention, Part 1, Article VII, The Installation State shall ensure the payment of claims for compensation for nuclear damage which have been established against the operator by

providing the necessary funds to the extent that the yield of insurance or other financial security is inadequate to satisfy such claims... this norm may be understood in a way that if a nuclear damage occurs, the compensation for such damage would be mostly covered from the national budget in the absence of insurance or any other form of a financial security.

Since Russia is long overdue in satisfying the requirements of Vienna Convention, it may face consequences when interaction with international organizations and partners may result in imposing moral and political procedures on the Russian Federation by international organizations such as the IAEA, in the first place.

Adoption of national legislation on compensation for nuclear damages and nuclear insurance in line with international conventions on civil liability for nuclear damage will allow the Russian Federation to join international legal regime in this area, providing necessary prerequisites for Russia to enjoy full rights in the international nuclear market.

Development of the Russian nuclear legislation has reached the level when there is an urgent need for transition from development of individual pieces of legislation to the so-called "coupling" or alignment of regulations passed with those under development or yet to be developed. Currently, there are two noticeable approaches for improving legal and regulatory regime in the nuclear power sector in Russia.

The first one is nuclear legislation systematization aimed at maintaining the current regulatory framework on nuclear power use as well as developing various industry-wide, cross-sectoral and other laws.

The second one is nuclear legislation codification that would focus on development and adoption of a new revision of the Federal Law On Use of Nuclear Power to cover regulation of all activities in the nuclear power industry and to serve as the basis for further nuclear legislation systematization.
The current system of statutory instruments regulating nuclear power use and safety does not fully meet requirements of nuclear sector development policies aimed at creation of a strong and competitive industry for efficient operation both in the domestic and foreign markets.

Therefore, most important nuclear power regulation objectives in the Russian Federation, among others, are as follows:

− Improve the system of legal norms and statutes of the upper tier on the nuclear power use;
− Incorporate the specific nature of entrepreneurship in the nuclear energy;
− Augment institutional and financial independence of national regulators of the nuclear power use;
− Introduce fundraising mechanisms to support decommissioning of nuclear power plants and other nuclear installations, radioactive waste disposal activities, etc.;
− Provide legislative and financial support for construction of new nuclear facilities.