KONSULTANTSKO INZENJERSKA KOMPANIJA
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Strategy for the Formation of the Regulatory Framework of the Republic of Serbia for Joining the Global Nuclear Club: Comprehensive Analysis and Roadmap

Content

Introduction and Strategic Context

The global energy landscape is undergoing fundamental transformations driven by the imperatives of decarbonization, the need to ensure national energy security, and the rapidly growing demand for reliable baseload generation. In this context, the Republic of Serbia finds itself at a historic crossroads. For a long time, the development of nuclear energy in the country was paralyzed: in 1989, amidst the aftermath of the Chernobyl disaster, a strict legislative moratorium on the construction of nuclear power plants was introduced.[1] This ban was in effect for 35 years, freezing not only the construction of physical facilities but also the development of corresponding competencies, institutions, and the regulatory and legal architecture.

However, at the end of 2024, the National Assembly of the Republic of Serbia made a historic and strategically calculated decision by approving amendments to the Law on Energy, which officially lifted the moratorium.[3] This step was dictated by the harsh realities of the country's energy balance, which currently relies on coal for approximately 70% of its generation.[1] Under the tightening European climate agenda and commitments to reduce greenhouse gas emissions, the continued operation of coal capacities (such as the planned Kolubara B block) becomes economically and environmentally unsustainable in the long term.[5] According to the updated Energy Sector Development Strategy of the Republic of Serbia up to 2040 with projections to 2050, as well as the Integrated National Energy and Climate Plan (INEKP), nuclear energy has been reintegrated into the national agenda as a critically important tool for achieving carbon neutrality.[1]

Target indicators announced at the highest political level envisage the creation of up to 1,200 MW of nuclear generating capacities.[3] Special emphasis is placed on small modular reactors (SMRs), which are viewed as the most suitable technological solution for integration into Serbia's existing power grid.[3] Together with the French corporation EDF and the engineering firm Egis Industries, a preliminary technical study has already been developed that defines the roadmap: a final decision on launching the program is expected by 2027, technology selection and contracting by 2032, and the commissioning of the first NPP in the early 2040s.[7]

Nevertheless, political will and the existence of a roadmap are merely the very initial elements of the highly complex architecture required to implement a peaceful nuclear program. The most critical and fundamental challenge for Serbia at the current stage is the total absence of an institutional and regulatory framework capable of governing the lifecycle of a commercial nuclear facility.[7] As the leadership of the Serbian Ministry of Mining and Energy rightly points out, the country does not yet have the necessary legal framework for a peaceful nuclear program.[7] Joining the "nuclear club" requires an unprecedented level of transparency, the strictest oversight, technical expertise, and absolute legal clarity. This analytical report is dedicated to a comprehensive study of ways to expand and modernize Serbia's regulatory framework, identify priority documents, critically analyze the experience of leading nuclear powers (France, South Korea, China, and Russia), and formulate the optimal conceptual approach to creating a national nuclear regulatory system.

Current Status of Serbia's Regulatory Framework and its Deficiencies

Before designing a new regulatory architecture, it is necessary to objectively assess the current status of nuclear and radiation safety regulation in Serbia. Today, the central document in this sphere is the Law on Radiation and Nuclear Safety and Security (Official Gazette of the Republic of Serbia, No. 95/18 and 10/19), adopted in 2018-2019.[9] This normative act establishes the Serbian Radiation and Nuclear Safety and Security Directorate (SRBATOM) as the national regulatory body.[10]

According to the Law, SRBATOM's powers include issuing authorizations for activities, conducting regulatory inspections, assessing compliance with safety requirements, and applying sanctions (including fines from 1.5 to 3 million dinars for operating without a license).[11] Inspectors are empowered to prohibit the operation of nuclear facilities and the trade of nuclear materials in case of failure to implement prescribed safety measures, as well as to monitor compliance with protection measures for exposed workers and the environment.[11]

However, an analysis of this legislation shows that it is exclusively focused on managing the historical nuclear legacy and regulating the use of ionizing radiation sources in medicine, industry, and science. The existing framework allows SRBATOM to oversee the decommissioning of old research reactors at the Vinča site (e.g., the heavy-water RA reactor), the management of historical radioactive waste, the safe storage of spent nuclear fuel, and the remediation of abandoned uranium mines.[13]

This system is completely inadequate for regulating commercial nuclear power. There are massive legal gaps in the current legislation. It lacks detailed licensing mechanisms for NPP site selection, design, construction, commissioning, commercial operation, and long-term severe accident management.[12] Furthermore, as highlighted in the European Commission's progress reports on Serbia's EU accession (Chapter 15: Energy), national legislation only partially complies with the Euratom *acquis*.[14] The Serbian parliament has still not ratified the European Community Urgent Radiological Information Exchange (ECURIE) agreement, and the country is not a full member of the Nuclear Suppliers Group (NSG), although the accession procedure has been initiated.[13] All this renders the current regulatory base unsuitable for implementing an ambitious project to build 1,200 MW of new nuclear capacity and demands its radical, systemic reconfiguration.

Priority Documents and Institutional Architecture

Modernizing the regulatory framework must not be done through a chaotic introduction of amendments to existing acts, but based on a strict methodology. The International Atomic Energy Agency (IAEA) has developed a comprehensive "Milestones" approach, which is a phased method covering 19 infrastructure issues.[15] This approach is divided into three phases, in the first of which a country must consciously prepare to make a commitment to introducing a nuclear program.[15]

Based on IAEA recommendations and the requirements for harmonization with European Union legislation, Serbia must, as a matter of priority, develop and adopt the following hierarchy of strategic and legal documents.

Strategic and Institutional Acts

A fundamental step preceding any technical licensing is the establishment of a Nuclear Energy Programme Implementing Organization (NEPIO). The IAEA insists that the government must create a mechanism to

coordinate the work of all involved organizations.[15] Steps in this direction have already been taken in Serbia: the 2024 amendments to the Energy Law envisage the establishment of a Directorate for Nuclear Energy Development.[6]

A government decree on the creation of this Directorate is a top-priority document. It must strictly separate the functions of promoting nuclear energy from its regulation. The Directorate (as a NEPIO structure) should handle issues of financing, technology selection, human resource development, and strategic planning. Simultaneously, a "Peaceful Nuclear Energy Development Program" must be drafted—a strategic master plan outlining long-term goals, phases for integrating NPPs into the grid, production localization, and spent fuel management strategies.[6]

Basic Nuclear Legislation (Atomic Energy Code)

The central element of the new legal system must be an entirely new, codified "Law on the Peaceful Use of Nuclear Energy" (Atomic Code). The IAEA provides detailed instructions for this, notably the "Handbook on Nuclear Law" published in 2003 and subsequently updated.[18] This document must institutionalize three key principles:

First, the absolute independence of the regulatory body (a reformed SRBATOM or a new agency). The regulator must be endowed with decision-making autonomy, its own protected budget, and be completely insulated from political or commercial pressure from the Ministry of Energy or operating companies.[15]

Second, the law must unambiguously assign the primary, absolute, and non-delegable responsibility for the safety of a nuclear facility to the operating organization (owner/operator).[15] The operator has no right to shift responsibility onto designers, equipment suppliers, or subcontractors.

Third, it is necessary to stipulate an exhaustive licensing system covering all lifecycle phases: site selection, design, construction, commissioning, operation, and decommissioning.[11]

Legislation on Liability and Financial Guarantees

To join the nuclear club, Serbia must integrate into the global regime of civil liability for nuclear damage. A priority task is the adoption of a Law on Civil Liability for Nuclear Damage, which must be fully harmonized with the Vienna or Paris conventions. This law will establish the principle of strict (objective) liability of the operator for any nuclear incident, limit this liability in time and amount, and oblige the operator to have financial security (insurance) to cover potential claims.[19] Without such a law, no international vendor (whether EDF, KEPCO, or Westinghouse) will commence construction on Serbian territory due to unacceptable financial risks.

Additionally, a Law on the Financing of Decommissioning and Radioactive Waste Management is required. This normative act must establish a sovereign fund, independent of the state budget. The NPP operator will be legally obligated to make regular contributions to this fund for every kilowatt-hour of electricity produced. This guarantees that the financial burden of dismantling the plant and the geological disposal of high-level waste in 60-80 years will fall on energy consumers, rather than on future generations of taxpayers.[22]

Harmonization with the Euratom Acquis

Since Serbia sets full membership in the European Union as a strategic goal, its regulatory framework must be built from the very beginning taking into account the mandatory requirements of Euratom.[14]

Key documents that need to be transposed into national law are Council Directive 2009/71/Euratom (amended by Directive 2014/87/Euratom), establishing a Community framework for the nuclear safety of nuclear installations, and Council Directive 2011/70/Euratom, establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.[24] The integration of these directives will require the introduction of mandatory periodic safety reviews (typically every 10 years), the execution of stress tests according to the ENSREG methodology, and the establishment of a national waste management policy with clear implementation timelines.[25]

Comparative Analysis of Global Nuclear Regulatory Paradigms

To design an optimal national model, Serbia should not reinvent the wheel. The global civil nuclear power industry, boasting around 20,000 reactor-years of operational experience, has developed several successful but conceptually different approaches to regulation.[26] Five countries—the USA, France, China, Russia, and South Korea—dominate the global landscape, accumulating 71% of global nuclear generating capacities.[27] For the purposes of this study, an in-depth critical analysis of the regulatory frameworks of France, South Korea, China, and Russia was conducted to identify elements suitable for adoption and critical mistakes that Serbia must avoid.

To illustrate the fundamental differences between the jurisdictions under study, an aggregated comparative matrix of nuclear regulation parameters is presented below.

Analysis Parameter	France (ASN)	South Korea (NSSC/KINS)	China (NNSA)	Russia (Rostechnadzor/Rosatom)
Organizational model of the regulator	Independent administrative authority, not accountable to ministries	Split model: Political commission (NSSC) and technical institute (KINS)	Government agency within the Ministry of Ecology and Environment	Federal service subordinate to the Government with a broad mandate (not only nuclear)
Degree of institutional independence	Absolute (benchmark model)	Moderate (improved after 2011 reforms, but industry influence remains)	Low (integrated into the government vertical)	Variable (historically shifted between different departments)
Level of transparency and public involvement	Exceptionally high (legislatively secured via TSN Act, HCTISN, local CLI committees)	Medium (substantially improved after 2012-2013 corruption scandals)	Limited (publication of monitoring data, but weak public participation in design)	Specific (limited by state security requirements and civil-military integration)
Approach to	Highly prescriptive,	Efficient, risk-	Pragmatic,	Export-oriented,

Analysis Parameter	France (ASN)	South Korea (NSSC/KINS)	China (NNSA)	Russia (Rostechnadzor/Rosatom)
licensing and oversight	rigid, perfectionist; focus on multi-level redundancy	oriented, adapted for serial construction of standard designs (OPR, APR)	integration of global standards, active implementation of AI and digitalization	focus on providing comprehensive turnkey solutions (BOO model)
Vulnerabilities and risks for newcomers	Bureaucratic paralysis, massive time and financial overruns during licensing	Risk of "regulatory capture," operator-oversight symbiosis, supply chain corruption	Legal framework fragmentation, transparency deficit in crisis situations	Dependence on a single supplier, geopolitical and sanction risks

The Experience of France: Uncompromising Transparency and Regulatory Perfectionism

The French nuclear program, providing over 60 GW of installed capacity [27], relies on a regulatory framework that many European countries view as the gold standard for independence and transparency. The core of this system is the Nuclear Safety Authority (ASN), which functions as an absolutely independent administrative body.[21]

The most crucial element that Serbia should carefully study and adopt is the French Transparency and Nuclear Security Act (TSN Act), adopted in 2006.[21] This historic document was developed after lengthy parliamentary debates on the need to overcome the secrecy of the nuclear industry.[21] The TSN Act institutionalized transparency as a fundamental right of citizens. Under this law, Local Information Committees (CLI) were created around every nuclear facility, as well as the High Committee for Transparency and Information on Nuclear Security (HCTISN), which brings together representatives of parliament, trade unions, environmental NGOs, and operators.[21] Operators are obliged to annually publish detailed reports on risks and preventive measures.[21] For Serbia, where the return to nuclear energy after a 35-year moratorium will inevitably face public skepticism or radiophobia, implementing a Serbian equivalent of the TSN Act is an absolute prerequisite for gaining a sustainable "social license" to build an NPP.[1]

However, the French model harbors serious threats for newcomer countries. ASN's uncompromising independence has evolved over the years into hypertrophied bureaucratic perfectionism. France's regulatory framework is highly detailed and prescribes excessive requirements, leading to colossal delays and economic losses.[31] A classic example of the dysfunction of the French approach was the construction of the third-generation EPR reactor at the Flamanville NPP. The initial budget of 3.3 billion euros ballooned to an astronomical 23 billion euros, and the timeline dragged on for over a decade.[28] This occurred largely because ASN in 2014 detected elevated carbon content in the steel alloy of the reactor vessel (0.30% against a norm of 0.22%), which could lead to brittleness.[32] Subsequently, ASN demanded the

remanufacturing of dozens of complex welds in hard-to-reach places, flatly refusing to compromise to accelerate the launch.[31]

Serbia should absolutely not adopt the French penchant for excessive micromanagement and the endless complication of design requirements. The Serbian regulator must remain pragmatic and focus on assessing overall safety performance, rather than bureaucratically obstructing the implementation of standardized global technologies. Furthermore, the French licensing process, requiring sequential approval of various stages by political and administrative bodies (public debates, Prime Minister's decree, ASN authorization), is too cumbersome for Serbia's developing institutional environment.[21]

The Experience of South Korea: Speed, Efficiency, and Destructive "Regulatory Capture"

South Korea represents a phenomenal example of a country that managed not only to quickly increase its national generating capacities (to 26 GW) but also to become a successful exporter of nuclear technologies (the Barakah project in the UAE).[27] The Korean regulatory architecture is interesting for its institutional design. It is divided into three key structures: the Nuclear Safety and Security Commission (NSSC) acts as the supreme coordinating and political body; the Korea Institute of Nuclear Safety (KINS) provides deep technical expertise and inspections; and the Korea Institute of Nonproliferation and Control (KINAC) is responsible for physical security and safeguards.[35]

This functional separation is a highly useful concept for Serbia. Given the limited human and scientific resources during the industry's revival phase [7], Serbia could create a small political-administrative agency (an analogue of the NSSC) for decision-making, and delegate all complex technical work to a specialized Technical Support Organization (TSO, an analogue of KINS), formed, for example, on the basis of a reformed Vinča Institute.

The Korean system is renowned for its efficiency and reliance on design standardization. However, the Korean experience also demonstrates the most destructive pathology that can afflict the nuclear industry—"regulatory capture."[37] Prior to the Fukushima NPP accident in 2011, Korean regulation was closely subordinated to bodies responsible for economic growth and scientific development, which generated an obvious conflict of interest.[38]

This institutional flaw, coupled with a culture of corporate solidarity and industry secrecy (the so-called "nuclear mafia"), led to a series of catastrophic scandals in 2012-2013.[40] It was discovered that, as a result of cartel collusion and systemic corruption, the NPP operator and equipment suppliers systematically falsified safety certificates for reactor parts. The investigation showed that over 2,100 component testing reports were forged, leading to the urgent shutdown of reactors and the replacement of more than 7,500 potentially defective parts (including control cables unable to withstand severe accident conditions).[41] As a result, more than a hundred officials, engineers, and suppliers were brought to trial.[43] Furthermore, a gross cover-up of a loss of power at the Kori-1 reactor was revealed, where management intentionally destroyed records, violating the law on mandatory notification to the regulator.[41]

For Serbia, the South Korean experience serves as a critical warning. When creating its own regulatory framework, Serbia must implement the strictest anti-corruption mechanisms and ensure the complete isolation of the regulatory body from the state generating company (e.g., Elektroprivreda Srbije - EPS) and lobbyists. Serbian law must expressly prohibit the "revolving door" practice (the transition of regulatory officials to work for the operator), introduce mandatory independent testing of components in third-country laboratories, and create a protected legal mechanism for industry "whistleblowers."

The Experience of China: Pragmatism of Scaling and Digital Transformation of Oversight

China is implementing the world's most massive NPP construction program: alongside 55 GW of operating capacity, the country is building another 32 units and planning dozens more.[27] The regulation of this unprecedentedly fast-growing sector is carried out by the National Nuclear Safety Administration (NNSA), which sits within the structure of the Ministry of Ecology and Environment (MEE).[45]

The Chinese approach is based on rigid technocratic pragmatism, which Chinese officials openly call "borrowlism"—a doctrine of actively borrowing, adapting, and integrating the best advanced international practices and IAEA standards while taking national specifics into account.[46] For Serbia, this principle is the most adequate. Under tight time constraints, Serbia should not invent its own unique design standards; the law must allow for the direct implementation of proven international norms.

The most valuable element that Serbia should borrow from NNSA's experience is the advanced application of digital tools and artificial intelligence in regulatory activities. A recent IAEA IRRS (Integrated Regulatory Review Service) mission highly praised China's use of AI to support oversight effectiveness.[44] The Chinese system has implemented 24/7 remote radiation monitoring, automated systems for analyzing operational feedback, and digital platforms for evaluating facility performance.[46] For Serbia, which will inevitably face a colossal shortage of qualified inspectors in the first decades of program development [7], the implementation of the "digital regulator" concept is a matter of survival. Investments in smart monitoring systems and data analysis will allow Serbia to conduct effective oversight even with a limited SRBATOM staff.

At the same time, China's regulatory framework has significant flaws. Experts note the fragmentation and somewhat disjointed nature of the body of laws and by-laws, which for a long time existed without a single, top-level overarching Atomic Energy Law.[49] Furthermore, despite the publication of monitoring data, the real level of public participation in licensing and site selection processes remains unacceptably low by European standards.[47] The institutional subordination of NNSA to a ministry also casts doubt on its absolute independence in the event of a conflict of interest with powerful state energy corporations.[46] Serbia should avoid such administrative subordination and legislative fragmentation.

The Experience of Russia: Comprehensive Solutions and Geopolitical Contradictions

The Russian Federation possesses colossal experience across the entire nuclear fuel cycle and is the world's leading exporter of nuclear technologies. Oversight in the country is carried out by the Federal Environmental, Industrial and Nuclear Supervision Service (Rostechnadzor).[51] Russia's regulatory framework relies on a developed system of federal norms and rules, which are largely harmonized with IAEA standards, as confirmed by IRRS missions.[52]

The attractiveness of the Russian approach for newcomer countries lies in the business model offered by the State Corporation "Rosatom". This model, known as BOO (Build-Own-Operate), is successfully being implemented, for example, at the Akkuyu NPP project in Turkey.[54] As part of a comprehensive offer, Russia takes on financing, design, construction, operation, fuel cycle management, and personnel training, while the recipient country guarantees the purchase of electricity under long-term contracts.[54] Moreover, Rosatom offers direct assistance in shaping the client country's national nuclear infrastructure and regulatory framework in accordance with IAEA norms.[52] For Serbia, which lacks its own capital for multi-

billion-dollar investments, such a model might appear highly attractive in the short term, lowering barriers to entry. Russia also has advanced experience in licensing non-standard facilities, such as small floating NPPs and fast reactors [56], which correlates with Serbia's interest in SMRs.

However, integrating elements of the Russian regulatory framework or orienting towards the Russian approach carries unacceptable strategic risks for Serbia. First, the history of Rostechnadzor's institutional status demonstrates instability: the agency has been reorganized repeatedly, placed under the control of the Ministry of Natural Resources (in 2008), which raised concerns about a loss of independence amidst massive Rosatom construction, and then returned to direct government subordination (in 2010).[58] The close integration of state interests, Rosatom's monopoly position, and the intertwining of the military and civilian sectors of the nuclear program make the concept of the Russian regulator incompatible with Western standards of independent oversight.[59]

Second, in the current international climate, Russia's export model faces growing criticism and sanction threats. Experts express concern over the movement of dual-use personnel and technologies between sectors, as well as the dependence of client states on Russian financing, which creates leverage for long-term geopolitical influence.[60] For Serbia, which officially declares the strategic goal of joining the European Union [63], adopting a regulatory framework oriented towards Russian technological standards will inevitably enter into direct conflict with the requirements of Chapter 15 (Energy) of the EU negotiation process and Euratom Directives.[14] This could block both the European integration process itself and the possibility of diversifying equipment and fuel supplies from Western vendors.

Conceptual Approach to Creating Serbia's National Framework

The comparative analysis conducted convincingly proves that Serbia must not completely copy the regulatory framework of any of the examined world powers. The optimal approach is to create a hybrid, eclectic legal system that synthesizes the most effective elements of global experience while discarding their historical and bureaucratic dysfunctions.

The strategic reference point and benchmark for Serbia should be the regulatory framework of the United Arab Emirates (UAE).[64] The UAE is the only example in the 21st century of a newcomer country that managed to build and successfully put into commercial operation a fleet of powerful reactors (the Barakah NPP) from scratch, in the shortest possible time, and within initial budgets.[34] The UAE's success was driven precisely by sound institutional design: from day one, they established the independent Federal Authority for Nuclear Regulation (FANR) and the operating Emirates Nuclear Energy Corporation (ENEC), providing them with robust funding and separating their powers.[34] The FANR framework relies on the deep integration of IAEA standards and the active use of the "four eyes" principle (dual independent control) in decision-making, which precludes corruption failures akin to the South Korean scenario.[65] Serbia should take the UAE's organizational structure as an institutional framework, but fill it with European safety requirements (Euratom, ENSREG, WENRA) and the French approach to ensuring absolute transparency (an analogue of the TSN Act).

Furthermore, the regulatory approach in Serbia must differ fundamentally from traditional methods due to the focus on small modular reactors (SMRs). Traditional regulatory frameworks (like in France or Russia) were created evolutionarily for large, gigawatt-class light-water reactors, where safety is ensured by a massive number of redundant active systems. For SMRs with a target capacity of 1,200 MW in Serbia, such an approach is inapplicable.[6] SMRs rely on passive safety systems (gravity, natural circulation), factory assembly, and long component procurement cycles.[66]

Consequently, Serbia must integrate into its legislation the principle of a "Graded Approach," actively promoted by the SMR Regulators' Forum at the IAEA.[67] Serbia's regulatory framework must be performance-based, rather than prescriptive. Instead of dictating the thickness of specific pipes or the number of pumps, the regulator should establish high-level safety criteria (e.g., no need for public evacuation outside the emergency planning zone under any accident scenarios). This will allow SMR developers the flexibility to prove the safety of their innovative concepts without forcing them into the Procrustean bed of outdated standards for large NPPs.

Ideas and Innovative Mechanisms for Implementation

In order for the transformation process from the lifting of the moratorium in 2024 to the pouring of the first concrete in the early 2030s to be successful, Serbia needs to implement a series of advanced legal and institutional ideas. These mechanisms are designed to compensate for the lack of national experience and resources, as well as to guarantee the highest level of safety and trust.

1. Implementation of a Collaborative Review Mechanism

The biggest mistake for the new Serbian regulator would be to attempt a full-scale, independent technical review of a reactor's basic design (Design Certification). Serbia has neither hundreds of highly specialized professionals, nor the computational power, nor the time for this.[7]

The new Atomic Energy Law must integrate a legal mechanism for "collaborative licensing" or the recognition of foreign certificates. This idea is based on the current IAEA Nuclear Harmonization and Standardization Initiative (NHSI), in which the SMR Regulators' Forum actively participates.[67] The essence of the mechanism is that the Serbian regulator is legally empowered to recognize the results of a basic design review already conducted by a reputable foreign regulator (e.g., ASN in France, NRC in the US, or ONR in the UK), provided that this design complies with basic European safety requirements.

Under this approach, the Serbian SRBATOM (or its successor) will focus its modest intellectual and human resources exclusively on verifying the design's adaptation to the specifics of the Serbian site (seismicity, hydrology, availability of cooling water), on overseeing the quality of construction and installation works, and evaluating environmental impacts. This will radically accelerate the licensing process without the slightest compromise on safety levels.

2. Creation of an International Advisory Board with Veto Power

To overcome the initial crisis of confidence both domestically (following the 35-year moratorium) and internationally, Serbia should establish a special International Advisory Board attached to the national regulatory body. Outstanding, retired heads of leading global regulators (for example, former NRC commissioners or heads of the Finnish STUK) should be invited to join it.

This Board must not be a nominal advisory body. Legislation should stipulate a procedure whereby key regulatory acts and fundamental decisions on issuing construction licenses must receive a mandatory positive assessment from this Board. The presence of international experts of such caliber will guarantee protection from political pressure, eliminate the risk of a South Korean-style "regulatory capture" scenario, and serve as a powerful signal to institutional investors and EU structures that the Serbian program is being implemented to the highest global standards.

3. Establishment of a National Technical Support Organization (TSO) Based on Public-Private Partnership

As the analysis of the Korean (KINS) and French (IRSN) models has shown, a political regulator critically needs robust scientific and technical support.[28] The Serbian regulator should not employ hundreds of physicists and materials scientists on its staff. Instead, the creation of an independent Technical Support Organization (TSO) must be legally formalized.

Serbia possesses significant scientific potential, concentrated particularly in the Vinča Institute of Nuclear Sciences, which has a rich history and experience interacting with the IAEA in legacy remediation.[13] This potential must be transformed. The TSO should be created in the form of an autonomous institute or a public-private partnership, backed by long-term targeted grants. The TSO's functions will include independent modeling of accident processes, analyzing safety justification reports provided by SMR vendors, and conducting complex laboratory testing of materials. Separating these functions from the state regulator will increase the objectivity of technical expertise.

4. Integration of the "Digital Oversight" Doctrine and Smart Contracts in the Supply Chain

Adapting the strengths of the Chinese system [44] and aiming to prevent document falsification (as occurred in South Korea and France) [32], Serbia must embed requirements for the digitalization of oversight into its regulatory framework from the very beginning.

The law should enshrine an obligation for the operator and all subcontractors to use a unified national blockchain platform or a secure cloud environment for uploading and certifying absolutely all quality control reports on welds, equipment seismic resistance testing, and radiation durability. Blockchain technology will make it impossible to delete or retroactively forge certificates, as was done at the Kori-1 NPP.[41] Furthermore, the regulator must have a legally secured right to 24/7 direct telemetry access to reactor diagnostic systems during commissioning and operation, using artificial intelligence algorithms for predictive analysis of equipment performance deviations.[44]

5. Normative Consolidation of Regional Strategic Integration Mechanisms

A nuclear program cannot develop in a vacuum, especially for a state like Serbia. Nuclear energy is viewed by Belgrade as a tool for "strategic connectivity," allowing integration into European energy grids and strengthening geopolitical positions in the Balkans.[2] Consequently, national nuclear law must contain open protocols for regional integration.

Legislation must envision legal mechanisms for creating joint ventures with neighboring states (for example, with Hungary, Romania, or Slovenia, which already have experience operating NPPs). These mechanisms may pertain to the creation of common regional reserve funds for severe accident mitigation equipment, the formation of cross-border training centers for SMR operators, or even the legal possibility of joint investment in a regional geological high-level waste repository (creating a dedicated repository for a single NPP in Serbia would be economically irrational).[22] Such cross-border cooperation fully aligns with the spirit of European directives and will significantly reduce Serbia's sovereign costs.

Staffing Strategy and Solving the Human Resources Shortage in Working Groups

Developing a new regulatory framework, the mechanisms and implementation timelines for which are detailed in Appendix 1 to this document, entails a colossal volume of drafting and document expertise, traditionally requiring the involvement of hundreds of specialized professionals.

For a newcomer country like Serbia, where human resources are critically limited, the NEPIO and the regulatory body must optimize their work on the document package using the following strategies:

- **Clustering of Competencies:** Instead of forming fragmented working groups for each of the 19 IAEA infrastructure issues, Serbia should consolidate them into 3-4 macro-clusters (for example: Regulatory/Legal, Technical and Licensing, Commercial/Financial clusters). This will prevent duplication of functions and make more efficient use of the limited pool of experts.
- **Outsourcing Drafting to TSOs and Specialized Consultants:** Civil servants (employees of ministries and the regulator) should not write documents "from scratch." The functions of initial drafting and gap analysis should be outsourced to independent Technical Support Organizations (TSOs) and engaged international consultants (including the NUCON team and the NuclearSerbia platform). The permanent state apparatus retains exclusively the high-level "Review and Approve" function.
- **Utilization of Existing IAEA and Euratom Templates:** Instead of inventing their own phrasing, working groups are instructed to directly adapt model texts from the IAEA's "Handbook on Nuclear Law" and use the Regulatory Cooperation Toolkit (RCT) developed under the NHSI initiative.

To address the acute shortage of qualified personnel and provide them with adequate remuneration, the consolidation of specialists into macro-clusters should be organized on the basis of existing, albeit modernized, institutional platforms, applying a hybrid financing model.

1. Territorial and Organizational Placement of Clusters

Given the specific nature of the tasks, the 3-4 macro-clusters do not necessarily have to be located in the same office, but their work should be centralized in Belgrade (or its immediate vicinity) based on three key structures:

- **Administrative and Regulatory/Legal Clusters:** Should be located directly in Belgrade, within the structure of the Ministry of Mining and Energy. The coordinating center function will be assumed by the newly established Directorate for Nuclear Energy Development, acting as the NEPIO (Nuclear Energy Programme Implementing Organization).
- **Technical and Licensing Cluster (Technical Support Organization — TSO):** The optimal location for basing engineers, physicists, and safety specialists is the Vinča Institute of Nuclear Sciences, located 15 km from the center of Belgrade. This is the largest scientific institute of national significance in Serbia, currently employing over 300 PhDs and already featuring a commission for atomic energy.
- **Commercial/Financial and Project Cluster (including work with international vendors):** To attract modern managers, international experts, and IT specialists, the Science Technology Park

Belgrade (NTP Belgrade), situated in the Zvezdara Forest, is an excellent fit. This platform has already proven itself as a hub for integrating science and business and has participated in developing regulatory changes in the innovation sector.

2. Remuneration Models for Specialists

Since the standard civil service salary scale (even accounting for indexation) does not allow for competing for rare nuclear specialists in the international market, Serbia must apply a hybrid remuneration system:

- **Incentive Bonuses for Scientific Expertise:** For specialists working within academic institutes (e.g., the Vinča Institute), a model recently introduced by the Ministry of Science can be applied. Under this system, the best researchers (the top 10%), selected based on objective criteria, receive a 30% salary bonus.
- **Tax Exemptions for the R&D Sector and Diaspora Return:** Serbia has introduced unprecedented tax incentives—an exemption from 70% of payroll taxes and contributions for employees engaged in research and development (R&D). This measure, combined with the "Returning Point" (Tačka povratka) program, should be used to financially incentivize highly qualified Serbian nuclear engineers to return from abroad (USA, France, Russia, etc.).
- **Grant and Project Financing (TSO Model):** To bypass strict public sector salary limits, a significant portion of the technical work (gap analysis, project reviews, document drafting) must be outsourced to Technical Support Organizations or consulting firms. In this case, work is paid through targeted grants and contracts, allowing for market-rate salaries to be set. Statistics show that average salaries in Serbia's scientific research and high-tech sectors now reach 206,000 dinars and above, making such positions competitive.
- **International Co-financing:** To pay for the work of independent expert committees, it is necessary to attract technical assistance from EU funds (e.g., within the framework of IPA/PLAC legislative harmonization programs) or targeted funds from the World Bank, which already has experience financing innovative projects in Serbia with high requirements for professional committees.

The Role of the NuclearSerbia Platform and NUCON Company in Shaping Serbia's Regulatory Framework and Nuclear Ecosystem

In the context of reviving Serbia's nuclear program, independent expert and information platforms play a critical role, contributing to the formation of a transparent and professional ecosystem.

A striking example of such an initiative is the digital platform NuclearSerbia (nuclearserbia.rs), owned and curated by the engineering and consulting company NUCON d.o.o. Belgrade. NUCON specializes in expert consulting in key sectors of the economy, with a primary focus on construction within the nuclear industry.

The main strategic goal of the NuclearSerbia website is to create a "digital platform for the national nuclear ecosystem."

In a situation where Serbia is pursuing a multi-vector risk hedging strategy and negotiating with leading global vendors (Russia, South Korea, France), the platform acts as a necessary neutral and technically competent information environment.

An important aspect is its function as a "neutral bridge," which is ensured, among other things, by maintaining content in three languages: Serbian, English, and Russian.

The "Opinions" section on the site serves as a key tool for thought leadership, publishing analytical reports, expert reviews, and curated content on various issues of nuclear energy.

An analysis of the materials in this section (for example, the April 2026 report "Serbia's Atomic Revival: Geopolitics, Macroeconomics and the Strategy of Institutional Transformation") shows deep expert elaboration of strategic issues.

The publications provide detailed analyses of the vulnerabilities and financial risks of key international partners (such as the EU antitrust investigations against France's EDF, intellectual property disputes surrounding South Korea's KHNP, or the impact of the severe macroeconomic crisis on the export capabilities of Russia's Rosatom), assess political transit risks, and propose concrete steps to bridge the personnel gap.

In the process of creating and modernizing Serbia's regulatory framework, the platform itself and its curator NUCON can play several fundamental roles:

- **Center for Regulatory Competence Transfer:** The site features a structured Knowledge Center that accumulates regulatory documents, instructions, guidelines, and training materials. This forms a valuable database, allowing Serbian lawmakers to rely on advanced international experience when developing their own regulations.
- **Platform for Adapting International Models:** NuclearSerbia experts propose specific ways to integrate successful global practices. In particular, the materials justify the need to adapt the regulatory and organizational roadmap of the Barakah NPP (UAE) to Serbian realities through a "hybrid strategy" involving expatriate specialists.
- **Ensuring Transparency and Combating Radiophobia:** Implementing a new regulatory framework is impossible without public support. The platform engages in digital advocacy, public education, and expert consultations, helping to overcome the skepticism accumulated over decades of the moratorium and restore trust in peaceful atomic energy. This directly impacts the program's ability to obtain a "social license."
- **Independent Expertise on National Legislation:** By publishing independent development concepts (for example, the creation of a vendor-independent educational module in nuclear engineering based at the University of Belgrade), NUCON builds the intellectual foundation for legislative development. Such an approach helps to establish a sovereign framework that protects Serbia's interests, rather than lobbying for specific technology suppliers.

Thus, the consulting company NUCON, through its NuclearSerbia resource, acts not merely as an information aggregator, but as a strategic integrator.

The company is capable of providing the newly established Directorate for Nuclear Energy Development and Serbian lawmakers with the independent analytical and technical support vital for building a modern, safe, and politically balanced regulatory architecture.

Conclusion

Lifting the 35-year moratorium on nuclear power development marks the beginning of a highly complex transformational journey for the Republic of Serbia.

The ambitious goal of integrating 1,200 MW of nuclear capacity based on advanced small modular reactors by 2040 is unattainable without creating a robust, sovereign regulatory and legal framework from scratch that is deeply integrated into the international context.

The analysis conducted shows that Serbia's current legislation, focused on radiation monitoring and historical legacy remediation, is critically inadequate for the tasks at hand.

The country faces a titanic effort to adopt a basic Atomic Code, laws on nuclear liability and waste management funds, as well as to ratify key Euratom agreements.

In searching for the optimal model, Serbia must avoid extremes: the bureaucratic paralysis of the French system, the destructive symbiosis of regulator and industry characteristic of South Korea prior to 2011, the legal fragmentation of China, and the geopolitical risks of Russia's export model.

The only correct path is a synthesis of best practices: institutional independence and efficiency modeled on the UAE, uncompromising transparency and compliance with European Union environmental standards (in the spirit of the French TSN Act), as well as the pragmatic use of digital technologies and flexible mechanisms for recognizing international licenses for SMRs.

Only the implementation of such a comprehensive, innovative approach, uncompromising on safety issues, will allow Serbia to successfully enter the global nuclear club, ensuring its energy security, sustainable economic growth, and long-term public trust.

Sources

1. The Debate on a Nuclear Energy Roadmap Continues in Serbia, дата последнего обращения: апреля 24, 2026, https://www.euronuclear.org/news/the-debate-on-a-nuclear-energy-roadmap-continues-in-serbia/
2. Nuclear Energy in Serbia: Between Legislative Reforms and Regional Integration | Pupin Initiative · Пупин Иницијатива, дата последнего обращения: апреля 24, 2026, https://www.pupin.org/analysis/nuclear-energy-in-serbia-between-legislative-reforms-and-regional-integration
3. Serbia - World Nuclear Outlook Report, дата последнего обращения: апреля 24, 2026, https://world-nuclear.org/our-association/publications/world-nuclear-outlook-report/serbia---world-nuclear-outlook-report
4. Serbia lifts nuclear moratorium after 35 years, дата последнего обращения: апреля 24, 2026, https://www.ans.org/news/article-6617/serbia-lifts-nuclear-moratorium-after-35-years/
5. Technical concepts for the transition of the energy system into a smart, sustainable and renewable energy system in the TRACER t, дата последнего обращения: апреля 24, 2026, https://tracer-h2020.eu/wp-content/uploads/2020/08/TRACER-D3.2-Technical-Concepts.pdf
6. Serbia Lifts Moratorium on Nuclear Energy Development, дата последнего обращения: апреля 24, 2026, https://www.trade.gov/market-intelligence/serbia-lifts-moratorium-nuclear-energy-development
7. Serbia and EDF discuss roadmap to nuclear energy, дата последнего обращения: апреля 24, 2026, https://www.world-nuclear-news.org/articles/serbia-and-edf-discuss-roadmap-to-nuclear-energy
8. Serbia Considering First Nuclear Plant Construction Before 2035, Minister Says - NucNet, дата последнего обращения: апреля 24, 2026, https://www.nucnet.org/news/serbia-considering-first-nuclear-plant-construction-before-2035-minister-says-3-1-2026
9. National Law - СРБАТОМ, дата последнего обращения: апреля 24, 2026, https://www.srbatom.gov.rs/srbatomm/national-law/?lang=en
10. Serbian Radiation and Nuclear Safety and Security Directorate (SRBATOM) - WENRA, дата последнего обращения: апреля 24, 2026, https://wenra.eu/node/43
11. Republic of Serbia First National Report Convention on Nuclear Safety - International Atomic Energy Agency, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/21/07/national_report_of_serbia_for_the_8th_review_meeting.pdf
12. Republic of Serbia Second National Report Convention on Nuclear ..., дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/23/03/serbia_nr_9th_cns.pdf
13. Chapter 15: Energy - European Stability Initiative | ESI, дата последнего обращения: апреля 24, 2026, https://www.esiweb.org/pdf/Serbia%20-%20EU%20questionaire%20answers%20-%20Chapter%2015%20-%20Energy.pdf
14. EUROPEAN COMMISSION Brussels, 4.11.2025 SWD(2025) 755 final COMMISSION STAFF WORKING DOCUMENT Serbia 2025 Report Accompanying t - Enlargement and Eastern Neighbourhood, дата последнего обращения: апреля 24, 2026, https://enlargement.ec.europa.eu/document/download/6e68ce26-b95b-48e1-921a-c60c12da8f00_en?filename=serbia-report-2025.pdf
15. Milestones Approach | IAEA, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/topics/infrastructure-development/milestones-approach

16. E-learning for Nuclear Newcomers | IAEA, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/topics/infrastructure-development/e-learning-for-nuclear-newcomers
17. Milestones Guide Newcomer Countries on Road to Nuclear Power, дата последнего обращения: апреля 24, 2026, https://www.ans.org/pubs/magazines/download/article-935/
18. Handbook on Nuclear Law, дата последнего обращения: апреля 24, 2026, https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1160_web.pdf
19. Handbook on Nuclear Law | IAEA, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/publications/6807/handbook-on-nuclear-law
20. Handbook on Nuclear Law: Implementing Legislation | IAEA, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/publications/8374/handbook-on-nuclear-law-implementing-legislation
21. France - Regulatory framework [Mode de compatibilité], дата последнего обращения: апреля 24, 2026, https://gnssn.iaea.org/main/ANNuR/Activity%20Documents%20%20Public/Regional%20Workshop%20on%20self%20assessment%20of%20%20NPP%20projects/France%20-%20Regulatory%20framework.pdf
22. Emerging Nuclear Energy Countries, дата последнего обращения: апреля 24, 2026, https://world-nuclear.org/information-library/country-profiles/others/emerging-nuclear-energy-countries
23. The European Union - ASNR, дата последнего обращения: апреля 24, 2026, https://regulation-oversight.asnr.fr/international-relations/multilateral-relations-in-europe2/the-european-union
24. Europe | Portal on Nuclear Safety, дата последнего обращения: апреля 24, 2026, https://www.nuklearesicherheit.de/en/europe-and-international/organisations-and-institutions/europe/
25. Nuclear safety - what is it about? - BMUKN, дата последнего обращения: апреля 24, 2026, https://www.bundesumweltministerium.de/en/topics/nuclear-safety/overview-nuclear-safety/nuclear-safety-what-is-it-about
26. Nuclear Power in the World Today, дата последнего обращения: апреля 24, 2026, https://world-nuclear.org/information-library/current-and-future-generation/nuclear-power-in-the-world-today
27. Ranked: Nuclear Power Capacity by Country (2025) - Visual Capitalist, дата последнего обращения: апреля 24, 2026, https://www.visualcapitalist.com/ranked-nuclear-power-capacity-by-country-2025/
28. France's Nuclear Gamble: Status, Challenges and the Road Ahead | Bracewell LLP, дата последнего обращения: апреля 24, 2026, https://www.bracewell.com/resources/frances-nuclear-gamble-status-challenges-and-the-road-ahead/
29. ASNR: French Authority for Nuclear Safety and Radiation Protection, дата последнего обращения: апреля 24, 2026, https://regulation-oversight.asnr.fr/
30. Harmonising the Nuclear Licensing Process for Emerging Technologies: A Global Path Forward, дата последнего обращения: апреля 24, 2026, https://www.oecd-nea.org/upload/docs/application/pdf/2022-04/7616_harmonising_licensing_process_2022-04-06_17-14-45_681.pdf
31. Lessons From France's Nuclear Program | Reports & Briefings | Sep 2, 2025 | ITIF, дата последнего обращения: апреля 24, 2026, https://itif.org/publications/2025/09/02/lessons-from-frances-nuclear-program/
32. Why we shouldn't be ignoring the French nuclear problem - Watt-Logic, дата последнего обращения: апреля 24, 2026, https://watt-logic.com/2016/11/25/french-nuclear-problem/

33. French nuclear power in 'worst situation ever', says former EDF director - The Guardian, дата последнего обращения: апреля 24, 2026, https://www.theguardian.com/environment/2016/nov/29/french-nuclear-power-worst-situation-ever-former-edf-director
34. Energy Security and Strategic Ambition: Evaluating the UAE's Nuclear Journey, дата последнего обращения: апреля 24, 2026, https://globalsecurityreview.com/energy-security-and-strategic-ambition-evaluating-the-uaes-nuclear-journey/
35. Enhancing the Safety-Security Interface: A Comparative Analysis of the US NRC's ROP and South Korea's Regulatory Framework with, дата последнего обращения: апреля 24, 2026, https://resources.inmm.org/sites/default/files/2023-07/finalpaper_187_0503115633.pdf
36. IAEA Mission Reviews Republic of Korea's Regulatory Framework for Nuclear Safety, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/newscenter/pressreleases/iaea-mission-reviews-republic-of-koreas-regulatory-framework-for-nuclear-safety
37. KINS checklist for assessing regulatory capture, дата последнего обращения: апреля 24, 2026, https://www.nrc.gov/docs/ML1412/ML14128A431.pdf
38. Nuclear Safety: The Republic of Korea's Experience in Eliminating Capacity Deficits, дата последнего обращения: апреля 24, 2026, https://www.apln.network/analysis/policy-briefs/policy-brief-37-nuclear-safety-the-republic-of-koreas-experience-in-eliminating-capacity-deficits
39. Japan's Nuclear Safety Regulation after the Fukushima Accident : Regulatory Framework Changes and Current Restart Status of NPPs, дата последнего обращения: апреля 24, 2026, https://www.kns.org/files/pre_paper/37/17S-189%EC%9E%84%EC%A7%80%ED%99%98.pdf
40. South Korea's nuclear power industry: recovering from scandal - Oxford Academic, дата последнего обращения: апреля 24, 2026, https://academic.oup.com/jwelb/article/13/1/47/5837954
41. South Korea's corrupt and dangerous nuclear industry - WISE International, дата последнего обращения: апреля 24, 2026, https://www.wiseinternational.org/south-koreas-corrupt-and-dangerous-nuclear-industry/
42. South Korea nuke plant operator honcho steps down over forged reactor cabling scandal, дата последнего обращения: апреля 24, 2026, https://bellona.org/news/nuclear-issues/2013-06-south-korea-nuke-plant-operator-honcho-steps-down-over-forged-reactor-cabling-scandal
43. Indictments for South Korea forgery scandal - World Nuclear News, дата последнего обращения: апреля 24, 2026, https://world-nuclear-news.org/Articles/Indictments-for-South-Korea-forgery-scandal
44. IAEA Mission Reviews China's Regulatory Framework for Nuclear Safety, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/newscenter/pressreleases/iaea-mission-reviews-chinas-regulatory-framework-for-nuclear-safety
45. Modernising nuclear safety regulation, дата последнего обращения: апреля 24, 2026, https://www.oecd-nea.org/jcms/pl_98982/modernising-nuclear-safety-regulation
46. China Nuclear and Radiation Safety Management System, дата последнего обращения: апреля 24, 2026, https://www.caea.gov.cn/english/n6759372/c6809184/part/6783596.pdf
47. the eighth national report for the convention on nuclear safety - International Atomic Energy Agency, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/national_report_of_china_for_the_8th_review_meeting.pdf
48. China advances nuclear security measures, advocates fairness and win-win cooperation under GSI_National Nuclear Safety Administration, дата последнего обращения: апреля 24, 2026, http://nnsa.mee.gov.cn/english/Picnews/202410/t20241015_1089300.html

49. governance of nuclear power in China | The Journal of World Energy Law & Business, дата последнего обращения: апреля 24, 2026, https://academic.oup.com/jwelb/article/13/1/23/5818940
50. Improved Administrative System to Ensure China's Nuclear Security | Environmental Science & Technology - ACS Publications, дата последнего обращения: апреля 24, 2026, https://pubs.acs.org/doi/full/10.1021/es201312e?src=recsys
51. Regulatory framework - rostechnadzor, дата последнего обращения: апреля 24, 2026, https://en.gosnadzor.ru/framework/
52. the eighth national report of the russian federation on the fulfillment of commitments resulting from the convention on nuclear safety - International Atomic Energy Agency, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/21/07/national_report_of_the_russian_federation_for_the_8th_review_meeting.pdf
53. THE FOURTH NATIONAL REPORT OF THE RUSSIAN FEDERATION, дата последнего обращения: апреля 24, 2026, https://rosatom.ru/upload/iblock/8c0/8c0b6fba95869e6673962ee96f467da2.pdf
54. Rosatom State Atomic Energy Corporation ROSATOM global leader ..., дата последнего обращения: апреля 24, 2026, https://www.rosatom.ru/en/integrated-offer/
55. An uncertain future for Rosatom's nuclear technology exports - OSW, дата последнего обращения: апреля 24, 2026, https://www.osw.waw.pl/en/publikacje/osw-commentary/2026-01-14/uncertain-future-rosatoms-nuclear-technology-exports
56. Nuclear Power in Russia, дата последнего обращения: апреля 24, 2026, https://world-nuclear.org/information-library/country-profiles/countries-o-s/russia-nuclear-power
57. Newcomer countries face common challenges in nuclear infrastructure development - International Atomic Energy Agency, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/publications/magazines/bulletin/bull57-1/5712832-iaeanews.pdf
58. Federal Service for Environmental, Technological, and Nuclear Oversight (Rostekhnadzor), дата последнего обращения: апреля 24, 2026, https://www.nti.org/education-center/facilities/federal-service-for-environmental-technological-and-nuclear-oversight-rostekhnadzor/
59. In Nuclear Organisations, Russia Continues to Wield Outsized Influence - RUSI, дата последнего обращения: апреля 24, 2026, https://www.rusi.org/explore-our-research/publications/commentary/nuclear-organisations-russia-continues-wield-outsized-influence
60. The Geopolitics of Nuclear Energy: New Dynamics of Supply and Demand - The International Institute for Strategic Studies, дата последнего обращения: апреля 24, 2026, https://www.iiss.org/globalassets/media-library---content--migration/images/comment/analysis/2018/december/iiss-ceness-moscow-workshop-report-2018.pdf
61. Russia's nuclear energy exports: Status, prospects and implications - SIPRI, дата последнего обращения: апреля 24, 2026, https://www.sipri.org/sites/default/files/2019-02/eunpdc_no_61_final.pdf
62. ROADMAPS TO NEW NUCLEAR 2025, дата последнего обращения: апреля 24, 2026, https://www.oecd-nea.org/upload/docs/application/pdf/2025-11/roadmaps_to_new_nuclear_-_brief_for_ministers_and_ceos.pdf
63. EUROPEAN COMMISSION Brussels, 30.10.2024 SWD(2024) 695 final COMMISSION STAFF WORKING DOCUMENT Serbia 2024 Report Accompanying - Enlargement and Eastern

Neighbourhood, дата последнего обращения: апреля 24, 2026, https://enlargement.ec.europa.eu/document/download/3c8c2d7f-bff7-44eb-b868-414730cc5902_en?filename=Serbia%20Report%202024.pdf

64. Nuclear Power in the United Arab Emirates, дата последнего обращения: апреля 24, 2026, https://world-nuclear.org/information-library/country-profiles/countries-t-z/united-arab-emirates
65. The UAE is a successful non-proliferation model for nuclear newcomers, дата последнего обращения: апреля 24, 2026, https://energyforgrowth.org/article/the-uae-is-a-successful-non-proliferation-model-for-nuclear-newcomers/
66. SMR Regulators' Forum Pilot Project Report: Considering the Application of a Graded Approach, Defence-in-Depth and Emergency Planning Zone Size for Small Modular Reactors, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/sites/default/files/18/01/smr-rf-report-no-appendixes-150118.pdf
67. Briefing: The SMR Regulators' Forum - World Nuclear News, дата последнего обращения: апреля 24, 2026, https://www.world-nuclear-news.org/articles/viewpoint-smr-regulators-forum-looks-to-future-after-first-10-years
68. Small Modular Reactor (SMR) Regulators' Forum | IAEA, дата последнего обращения: апреля 24, 2026, https://www.iaea.org/topics/small-modular-reactors/smr-regulators-forum