

Annex 1: Regulatory Framework Modernization Plan, Implementation Mechanisms, and Timelines

The commencement of work on modernizing the regulatory framework has already been legally secured by the adoption of amendments to the Energy Law in November 2024, which lifted the moratorium on the construction of nuclear power plants [1]. However, for the practical and organizational launch of these efforts, the Government of Serbia must issue a Decree (*Uredba Vlade*) on the establishment of the Directorate for Nuclear Energy Development, which will serve as the specialized coordinating body — **NEPIO** (Nuclear Energy Programme Implementing Organization).

This document must define the following key aspects:

- **Institutional Status and Structure:** The Decree should establish the Directorate as a body within the Ministry of Mining and Energy.
- **Coordination Mechanisms:** The structure of inter-agency working groups (including legal, technical, and commercial clusters) should be defined, involving representatives from other ministries, scientific institutes (e.g., "Vinča"), and energy companies.
- **Tasks and Powers:** The Directorate should be empowered to prepare the "Peaceful Nuclear Energy Development Programme," analyze 19 basic infrastructural issues according to IAEA methodology, select technologies, and assess financing needs.
- **Separation of Functions:** The document must strictly define the separation between the promotion and development of the nuclear program (the Directorate's task) and independent regulation and oversight (the regulator's task, such as SRBATOM) to ensure compliance with international safety requirements.

This foundational document should be prepared and issued at the very beginning of **Phase 1** according to IAEA standards, i.e., in early 2025. The formal approval of the NEPIO structure by the government is a priority step to ensure the completion of all basic research and the preparation of the national legal position by the established deadline of mid-2027.

Implementation Plan Table

Stage	Recommended Document Title / Implementation Activity	Required and Expected Timeline	Author / Executor	Approving Authority	Possible Involvement of NuclearSerbia
Stage 1	Government Decree on the Establishment of the Directorate for Nuclear Energy Development (NEPIO)	2025	Ministry of Mining and Energy	Government of the Republic of Serbia	Information support, publication of analytics on the role of NEPIO, expert consultations.
Stage 1	Peaceful Nuclear Energy Development Programme (Roadmap)	2025–2027	Ministry of Energy, Directorate	Government / National Assembly	Providing an independent platform for public hearings and roadmap publication.
Stage 1-2	Law on the Peaceful Use of Atomic Energy (Atomic Code)	2026–2028	Inter-agency working groups, Directorate, SRBATOM	National Assembly of the Republic of Serbia	Transfer of international competencies through the Knowledge Center, independent expertise of the bill.
Stage 1-2	Transposition of Euratom Directives (2009/71/Euratom and 2014/87/Euratom)	2028–2030	SRBATOM, Ministry of Energy	National Assembly	Monitoring compliance with EU requirements, education on EU standards.

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/	GAP-analysis and Action Plan within the framework of the EU Acquis Adoption Programme (NPAA 2024–2027)	2025–2027	Ministry of European Integration, Ministry of Energy	Government of Serbia	Publication of reports on the compliance of Serbian law with EU norms.
/	Rulebook on Periodic Safety Review (PSR) and Stress Tests	2028–2030	SRBATOM with TSO support	Regulatory Body	Formation of a knowledge base on ENSREG and WENRA methodology.
/	Decree on Transparency and Public Participation in Licensing (as per 2014/87/Euratom)	2028–2029	SRBATOM, relevant ministries	National Assembly	Digital advocacy, educational campaigns to reduce radiophobia.
Stage 2	Introduction of "Joint Licensing" mechanism (Recognition of foreign base design certificates within IAEA NHSI)	2027–2029	SRBATOM (or new regulator)	National Assembly / Government	Analytical support for the integration of international certification.

Stage	Recommended Document Title / Implementation Activity	Required and Expected Timeline	Author / Executor	Approving Authority	Possible Involvement of NuclearSerbia
/	Bilateral Memoranda of Understanding (MoU) with regulators of technology vendor countries	2027–2028	SRBATOM, Ministry of Foreign Affairs	Government of Serbia	Organization of expert panels with the participation of international regulators.
/	Rulebook on the recognition of foreign base design certificates (based on TECDOC-2098/2105)	2028–2029	SRBATOM with TSO support	Regulatory Body	Analytical support and adaptation of IAEA tools (RCT).
Stage 2	Formal engagement of Technical Support Organizations (TSO) for independent safety assessment	2028–2029	Government, SRBATOM	Government	Acting as an independent TSO or providing subject matter experts.
Stage 2	Law on Civil Liability for Nuclear Damage	2027–2029	Ministry of Finance, Ministry of Energy	National Assembly	Publication of reviews of international liability regimes, clarification of risks for society.

Stage	Recommended Document Title / Implementation Activity	Required and Expected Timeline	Author / Executor	Approving Authority	Possible Involvement of NuclearSerbia
Stage 2	Package of bylaws and rules on nuclear safety and licensing (including safety programs, physical protection, and licensing conditions)	2028–2030	SRBATOM with TSO involvement	Government / Regulator	Translation and adaptation of ENSREG/WENRA standards, formation of a knowledge base for engineers.
Stage 2-3	Law on Financing Decommissioning and Radioactive Waste Management (Directive 2011/70/Euratom)	2029–2031	Inter-agency working groups, Ministry of Energy	National Assembly	Countering radiophobia by explaining safe waste management mechanisms.