

## National legislative and regulatory activities

### Argentina

#### **Organisation and structure**

Decree of the Executive Power No. 231/2015 of 23 December 2015 reorganised the main institutions of the nuclear sector in Argentina. New sub-offices were created within the Ministry of Energy and Mining to subsume responsibilities previously undertaken by other ministries and offices. Within the Ministry of Energy and Mining, the Secretary of Energy was replaced by the Secretary of Electricity, and within this a new office was created called the Undersecretary of Nuclear Energy.

Previously, Nucleoeléctrica Argentina S.A. (NASA), which operates the three nuclear power plants in Argentina, and the National Atomic Energy Commission (Comisión Nacional de Energía Atómica) (CNEA) reported to the Secretary of Energy, which reported to the Ministry of Energy and Mining. Now, NASA and the CNEA will report to the new Undersecretary of Nuclear Energy, under the administrative jurisdiction of the Secretary of Electricity.

### France

#### **Radioactive waste management**

Act No. 2016-1015 of 25 July 2016 *specifying the procedures for creating a reversible deep geological repository for long-lived medium and high-level radioactive waste*<sup>1</sup>

This Act amends in particular Article L. 542-10-1 of the French Environmental Code (Code de l'environnement) relative to the legal status of a deep geological repository of radioactive waste so as to introduce new notions therein:

- reversibility, which is defined as “the capacity, for future generations, either to continue to construct and operate successive storage structures, or to reassess previous choices and develop waste management solutions”. This requires the French National Radioactive Waste Management Agency (Agence nationale pour la gestion des déchets radioactifs) (Andra) to integrate technological progress and to adapt to possible changes in the waste inventory, in particular after development of the energy policy. Implementation reviews of the principle of reversibility are carried out at least every five years;
- the pilot industrial phase of the repository: when operations begin, the purpose of this phase is to consolidate both the reversible nature and the safety of the installation, and to carry out recovery tests on waste packages;
- the master plan for disposal operations, issued by Andra and updated every five years, in order to ensure the involvement of civil society throughout the lifetime of the centre.

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1. *Journal officiel* “Lois et Décrets” [Official Journal of Laws and Decrees] (J.O.L. et D.), 26 July 2016, text no. 1.

The Act also introduces amendments to the derogation procedure for the authorisation to build this basic nuclear installation (*installation nucléaire de base*) (INB), also provided for under Article L. 542-10-1 of the French Environmental Code. In particular, it is stated that:

- the outcomes of the pilot industrial phase shall be the subject of a report by Andra, an opinion by the commission responsible for assessing research and studies into radioactive waste management, an opinion by the French Nuclear Safety Authority (Autorité de sûreté nucléaire) (ASN), and the opinion of the regional and local authorities located in the vicinity;
- on the basis of these documents, the Parliamentary Office for Scientific and Technological Assessment (Office parlementaire d'évaluation des choix scientifiques et technologiques) (OPECST) delivers an assessment that is submitted to the competent commissions within the French Parliament (National Assembly and Senate) (Assemblée nationale et Sénat);
- the government presents a bill adapting the operating conditions for the reversibility of disposal that takes into account, where appropriate, the recommendations of OPECST; and
- the ASN grants the authorisation for the full commissioning of the repository, guaranteeing reversibility under the terms set out in the law.

### **Liability and compensation**

*Decree No. 2016-333 of 21 March 2016 implementing Article L. 597-28 of the French Environmental Code and relating to third party liability in the field of nuclear energy*<sup>2</sup>

*Ministerial Order of 19 August 2016 listing the sites benefitting from a reduced amount of liability pursuant to decree No. 2016-333 of 21 March 2016 implementing Article L. 597-28 of the French Environmental Code and relating to third party liability in the field of nuclear energy*<sup>3</sup>

Article L. 597-28 of the French Environmental Code (Code de l'environnement), as amended by Act No. 2015-992 of 17 August 2015 on Energy Transition for Green Growth, sets the amount for which the operator of a nuclear installation shall be liable for a given nuclear incident at EUR 700 million, which can be reduced to EUR 70 million for the same nuclear incident when only low risk installations are operated on a given site.

The decree of 21 March 2016 sets out the characteristics of low risk installations. In order to be considered as such, the operator of the nuclear installation needs to submit a supporting report to the ministers responsible for energy and nuclear safety that shows that the site only comprises installations demonstrating the aforementioned characteristics.

Pursuant to Article 3 of this decree, the Annex to the Ministerial Order of 19 August 2016 lists the nuclear sites deemed to be low risk and entitling their operators to a reduced amount of liability.

The list includes:

- the Aube waste disposal facility (centre de stockage de l'Aube) (CSA), operated by the French National Radioactive Waste Management Agency (Agence nationale pour la gestion des déchets radioactifs) (Andra);

2. J.O.L. et D., 22 March 2016, text no. 2.

3. J.O.L. et D., 24 August 2016, text no. 3.

- the Manche disposal facility (Centre de stockage de la Manche) (CSM), operated by Andra;
- the industrial facility for grouping, storage and disposal (Centre industriel de regroupement, d'entreposage et de stockage) (CIRES), operated by Andra;
- the facility for the decontamination and repackaging of radioactive materials and substances by means of various processes (Installation de décontamination et de reconditionnement par divers traitements de matériels et de substances radioactives) (TRIADE), operated by the Société des Techniques en Milieu Ionisant (STMI);
- the installation for the maintenance and decontamination of equipment (Centre d'entretien et de décontamination d'outillage) (CEDOS), operated by AREVA NP;
- the equipment servicing centre (Centre de maintenance des outillages) (CEMO), operated by AREVA.

### **Nuclear facilities**

*Decree No. 2016-846 of 28 June 2016 related to the modification, final shutdown and decommissioning of basic nuclear installations, and to subcontracting<sup>4</sup>*

This decree amends decree No. 2007-1557 of 2 November 2007 concerning basic nuclear installations (*installations nucléaires de base*) (INBs) and the supervision of the transport of radioactive materials with respect to nuclear safety.

It amends the regulations for modifying INBs, which fall, depending on the extent of said modifications, under the scope of a new authorisation according to the form of the initial authorisation, or under an authorisation or declaration regime of the French Nuclear Safety Authority (Autorité de sûreté nucléaire) (ASN).

Moreover, the decree amends the procedure for final shutdown and decommissioning in order to increase the speed at which the installations in question could be decommissioned. Moreover, it contains specific provisions for installations dedicated to storing radioactive waste.

Lastly, the decree introduces a new title to the decree of 2 November 2007, which provides for limiting and controlling use of service providers and subcontractors.

## **Germany**

### **Nuclear trade (including non-proliferation)**

*Amendments to the Foreign Trade Act and the Foreign Trade Ordinance (2015)*

The 2013 Foreign Trade Act<sup>5</sup> was amended by Article 297 of the Ordinance of 31 August 2015 on Adapting Competences and by Article 6 of the Act of 3 December 2015 on the Re-Organisation of the Customs Administration.<sup>6</sup> The amendments do not directly relate to the use of nuclear energy.

4. J.O.L. et D., 29 June 2016, text no 2.

5. For more information on the 2013 Foreign Trade Act, see NEA (2014), *Nuclear Law Bulletin*, No. 94, OECD, Paris, pp. 124-125.

6. *Bundesgesetzblatt* 2015 I, pp. 1474, 2178. The consolidated version of the Act is available (in German) at: [www.gesetze-im-internet.de/awg\\_2013/BJNR148210013.html](http://www.gesetze-im-internet.de/awg_2013/BJNR148210013.html).

The Export List is published as Annex AL to the Fourth Ordinance to Amend the Foreign Trade Ordinance of 13 July 2015.<sup>7</sup> The Ordinance is explained by the Circular Foreign Trade No. 2/2015 of 13 July 2015.<sup>8</sup> The Ordinance and the Export List mainly deal with the export of weapons and related material, including dual-use goods.

### **Radioactive waste management**

*Act on the Organisational Restructuring in the Field of Radioactive Waste Management (2016)*

The 2013 Repository Site Selection Act (RSSA)<sup>9</sup> establishes the procedure for the search for a site for the final disposal of radioactive waste and at the same time specifies the overall responsibilities regarding final disposal.<sup>10</sup> The purpose of the 2016 Act on the Reorganisation of the Organisational Structure in the Field of Final Disposal<sup>11</sup> is to enable companies and authorities to fulfil their functions. Moreover, existing organisational structures will be improved and the attribution of responsibilities will be more clearly structured.

Particularly, the following changes have to be stressed:

- A state-owned company will be established that will be entrusted with the operative tasks of searching for the site, as well as for the construction and the operation of the final disposal installation and of the Asse II mine. The headquarters of the company will be located in the town Peine (Lower-Saxony).
- State supervision and licensing will be centralised at the Federal Office for Nuclear Waste Disposal (Bundesamt für kerntechnische Entsorgungssicherheit), which was established in accordance with section 3 of the RSSA.
- The Federal Office for Radiation Protection (Bundesamt für Strahlenschutz) will be responsible for the governmental functions in the field of radiation protection, e.g. nuclear emergencies and radioactivity monitoring.

The 2016 Organisational Restructuring Act (ORA) amends the following laws and ordinances:

- Atomic Energy Act of 15 July 1985, as last amended by Article 73 of the Act of 8 July 2016:<sup>12</sup> sections 9a, 12, 12b, 19, 21, 23, 23d, 24, 46, 57b and 58.
- Repository Site Selection Act of 23 July 2013, as last amended by Article 309 of the Ordinance of 31 August 2015:<sup>13</sup> sections 6-10, 12-19, 21 and 23-28.

7. *Bundesanzeiger* of 17 July 2015 V 1, p. 1.

8. *Bundesanzeiger* of 17 July 2015 B 2, p. 1.

9. *Gesetz zur Suche und Auswahl eines Standortes für ein Endlager für Wärme entwickelnde radioaktive Abfälle und zur Änderung anderer Gesetze (Standortauswahlgesetz – StandAG)* [Act on the Search and Selection of a Site for a Final Repository for Heat-Generating Radioactive Waste and to amend other Acts (Repository Site Selection Act or RSSA)], *Bundesgesetzblatt* 2013 I, p. 2553.

10. More information on the 2013 Repository Site Selection Act (RSSA) can be found in NEA (2013), *Nuclear Law Bulletin*, No. 92, OECD, Paris, pp. 103-105.

11. *Gesetz zur Neuordnung der Organisationsstruktur im Bereich der Endlagerung (EndLaNOG)* of 26 July 2016 (*Bundesgesetzblatt* 2016 I, p. 1843).

12. *Bundesgesetzblatt* 1985 I, p. 1565; 2016 I, p. 1594.

13. *Bundesgesetzblatt* 2013 I, p. 2553; 2015 I, p. 1474. For more information on the Repository Site Selection Act of 23 July 2013, please see NEA (2013), *Nuclear Law Bulletin*, No. 92, OECD, Paris, pp. 103-105.

- Act on the Establishment of a Federal Office for Radiation Protection of 9 October 1989, as last amended by Article 4, paragraph 24 of the Act of 18 July 2016:<sup>14</sup> section 2, paragraph 1.
- Act on the Establishment of a Federal Office for Nuclear Waste Disposal of 23 July 2013, as last amended by Article 310 of the Ordinance of 31 August 2015:<sup>15</sup> title of the Act, sections 1-3.
- Act on the Transport of Dangerous Goods of 7 July 2009, as last amended by Article 487 of the Ordinance of 31 August 2015:<sup>16</sup> sections 5 and 7a.
- Ordinance on the Transport of Dangerous Goods by Road, Railway and Inland Waterway of 30 March 2015, as last amended by Article 17 of the Ordinance of 2 June 2016:<sup>17</sup> sections 8 and 11.
- Ordinance concerning Costs under the Atomic Energy Act of 17 December 1981, as last amended by Article 77 of the Act of 8 July 2016<sup>18</sup>: sections 2, 5 and 6.
- Radiation Protection Ordinance of 20 July 2001, as last amended by Article 5 of the Ordinance of 27 April 2016:<sup>19</sup> sections 17, 29, 71 and Annex X.
- Ordinance on Advance Financial Contribution towards Construction of Federal Installations for Safe Containment and Final Disposal of Radioactive Waste of 28 April 1982, as last amended by Article 1 of the Ordinance of 6 July 2004:<sup>20</sup> sections 1, 4 and 6.
- Ordinance on the Verification of Reliability to Protect Against Theft or Release of Radioactive Substances under the Atomic Energy Act (Nuclear Reliability Verification Ordinance) of 1 July 1999, as last amended by Article 10 of the Act of 26 July 2016:<sup>21</sup> sections 1 and 6.
- Act on a Federal Central Criminal Register of 21 September 1984, as last amended by Article 1 of the Act of 20 November 2015:<sup>22</sup> section 41.
- Air Traffic Licensing Order of 10 July 2008, as last amended by Article 2 of the Act of 28 June 2016:<sup>23</sup> section 78.
- Ordinance on the Costs of the Transport of Dangerous Goods of 7 March 2013, as last amended by Article 3 of the Ordinance of 26 February 2015:<sup>24</sup> Annex 2.
- Ordinance on the Transport of Dangerous Goods by Sea of 9 February 2016:<sup>25</sup> sections 12 and 13.

14. *Bundesgesetzblatt* 1989 I, p. 1830; 2016 I, p. 1666.

15. *Bundesgesetzblatt* 2013 I, pp. 2553, 2563; 2015 I, p. 1474.

16. *Bundesgesetzblatt* 2009 I, pp. 1774, 3975; 2015 I, p. 1474.

17. *Bundesgesetzblatt* 2015 I, p. 366; 2016 I p. 1257.

18. *Bundesgesetzblatt* 1981 I, p. 1457; 2016 I, p. 1594.

19. *Bundesgesetzblatt* 2001 I, p. 1714; 2016 I, p. 918.

20. *Bundesgesetzblatt* 1982 I, p. 562; 2004 I, p. 1476.

21. *Bundesgesetzblatt* 1999 I, pp. 1525; 2016 I, p. 1843.

22. *Bundesgesetzblatt* 1984 I, p. 1229; 1985 I, p. 195; 2015 I, p. 2017.

23. *Bundesgesetzblatt* 2008 I, p. 1229; 2016 I, p. 1548.

24. *Bundesgesetzblatt* 2013 I, p. 466; 2015 I, p. 265.

25. *Bundesgesetzblatt* 2016 I, p. 182.

- Traffic Services Act of 23 July 2004, as last amended by Article 16 the Act of 24 May 2016:<sup>26</sup> section 7.

The 2016 Act on the Reorganisation of the Organisational Structure entered into force on 30 July 2016 in accordance with its Article 16.

*Final report of the Commission to Review the Financing for the Phase-out of Nuclear Energy*

The financing of the consequences of Germany's phasing out nuclear energy used for electricity generation purposes is still a matter of politically controversial discussions in Germany. A main issue is the final disposal of radioactive waste. In order to find a solution, the Cabinet of Federal Ministers on 14 October 2015 established a "Commission to Review the Financing for the Phase-out Nuclear Energy". It was commissioned to develop recommendations on how the financing of decommissioning, of dismantling and of waste disposal could be ensured and organised in a way that the companies remain in a long-term economic position to meet their obligations in the nuclear field. The Committee consisted of 20 renowned personalities of all social groups including representatives of science, industry, administration, churches and trade unions. It was convened for 12 meetings. It heard a great number of experts, and on 27 April 2016 agreed on its Final Report of 48 pages "*Verantwortung und Sicherheit – Ein neuer Entsorgungskonsens*" (Responsibility, Safety and Certainty – A New Consensus on Nuclear Waste Disposal).<sup>27</sup> The Chairpersons of the Committee called their proposal for a long-term financing of the nuclear phase-out a fair compromise for taxpayers and companies. The Committee identified joint responsibility but separated duties to act for the operators and for the state.

The basis of the compromise is a merger of the duties and responsibilities of the state and the operators:

- The costs for dismantling, decommissioning and packaging and bringing back of radioactive waste from foreign reprocessing plants have to be borne by the companies. These costs amount to approximately half of the total costs for disposal.
- An unlimited follow-up liability for dismantling, decommissioning and packaging applies to the companies. In order for companies to easier calculate this risk, it is limited in time until the dismantling is completed.
- The costs for the interim storage of radioactive waste and for its final disposal have to be secured by the state. This is the second half of the total costs for disposal.
- The financial contribution of the companies, which amounts to roughly EUR 23.6 billion, shall be transferred to a newly established fund under public law. The risk of the state will be limited by a risk-adjusted surcharge, to be paid by the companies. But this application of the follow-up liability of the companies may be reduced step-by-step in correspondence to the payment of the surcharge.

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26. *Bundesgesetzblatt* 2004 I, p. 1865; 2016 I, p. 1217.

27. The Report is available at: [www.bmwi.de/English/Redaktion/Pdf/bericht-der-expertenkommission-kernenergie,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf](http://www.bmwi.de/English/Redaktion/Pdf/bericht-der-expertenkommission-kernenergie,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf).

- The consensus has to be implemented in conformity with the requirements of the European law. By limiting the risks, it will increase safety for both companies and the public.

The federal government welcomed the result of the Commission's work. On the basis of the proposed compromise it promptly started deliberations on how to implement the proposal.<sup>28</sup>

*Draft Bill of an Act on the Reorganisation of the Responsibility of Nuclear Waste Disposal (2016)*

On 19 October 2016, the federal government adopted a Draft Bill of an Act on the Reorganisation of the Responsibility in the Field of Nuclear Waste Disposal (RRA), which was introduced to Parliament on 20 October 2016.<sup>29</sup> The Bill is a legislative package that consists of four new acts (RRA Articles 1, 2, 7 and 8) and amendments to the Atomic Energy Act, to the Repository Site Selection Act, to the Ordinance on Advance Financial Contribution towards Construction of Federal Installations for Safe Containment and Final Disposal of Radioactive Waste and to the Radiation Protection Ordinance (RRA Articles 3, 4, 5 and 6).

The Reorganisation of the Responsibility Act shall enter into force on the day in which the European Commission adopts a positive decision with regard to state aid.

The following new acts shall be introduced by the Reorganisation of the Responsibility Act:

- Act to Establish a Fund for the Financing of Nuclear Waste Disposal (Nuclear Waste Disposal Fund Act). By the Act, a public Fund law shall be established to reimburse the costs incurred by the federal state in connection with nuclear waste management. It is meant to organise the internal structure of the Fund and the obligations of the companies that have to pay their contributions into the Fund. The Act consists of 15 sections and two Annexes.
- Act to Regulate the Transition of the Operators' Financial Obligations and Obligations to Act Regarding Nuclear Waste Disposal (Nuclear Waste Disposal Transition Act). The obligations of the companies to finance the intermediate storage of nuclear waste (Atomic Energy Act, sections 21a and 21b; Repository Site Selection Act, section 21) will be transferred to the Fund if a company has paid the defined basic amount of its total financial obligation or an agreed instalment of it to the Fund (transition of the financial obligations). The duty of the operators to deliver nuclear waste to an intermediate storage facility as defined in the Atomic Energy Act, section 9a, paragraph 2, sentence 1 may be transferred to a third party who is entrusted with the task of intermediate storage of waste by the federal state. The third party will then have the duty to safely dispose of the nuclear waste at an intermediate storage facility and at a final disposal repository (transition of the obligation to act). The companies will transfer the intermediate waste storage facilities,

28. See the article at the website of the German Federal Government "Atomausstieg: Kommission stellt Abschlussbericht vor" (Atomic Exit: Commission Presents Final Report), 27 April 2016 at: [www.bundesregierung.de/Content/DE/Artikel/2016/04/2016-04-27-finanzierung-kernenergieausstieg.html](http://www.bundesregierung.de/Content/DE/Artikel/2016/04/2016-04-27-finanzierung-kernenergieausstieg.html).

29. *Entwurf eines Gesetzes zur Neuordnung der Verantwortung in der kerntechnischen Entsorgung (Bundesrats-Drucksache 620/16)*. The Bill is available (in German) at: [www.bundesrat.de/SharedDocs/drucksachen/2016/0601-0700/620-16.pdf;jsessionid=5034F4CBDEDA79B63FE9BA4A9E4215C4.2\\_cid382?\\_\\_blob=publicationFile&v=1srats-Drucksache%20620/16](http://www.bundesrat.de/SharedDocs/drucksachen/2016/0601-0700/620-16.pdf;jsessionid=5034F4CBDEDA79B63FE9BA4A9E4215C4.2_cid382?__blob=publicationFile&v=1srats-Drucksache%20620/16).

as defined in the Annex to the Act, to that third party free of costs. The costs incurred by the federal state for waste disposal under this act will be reimbursed by the Nuclear Waste Disposal Fund. The act consists of four sections and an Annex.

- Act on Transparency of the Costs of Decommissioning and Dismantling of Nuclear Power Plants Including Packages of Radioactive Waste (Transparency Act). The operators of nuclear power plants situated in Germany shall be obliged to annually inform the Federal Office for Economic Affairs and Export Control (Bundesamt für Wirtschaft und Ausfuhrkontrolle) (BAFA) in detail about their provisions to ensure their financial obligations. The act consists of six sections.
- Act on Continued Liability for Decommissioning and Disposal Costs in the Field of Nuclear Energy (Continued Liability Act). If the operator of a nuclear power plant situated in Germany is not in a position to fulfil its current and future legal obligations to pay the costs connected to decommissioning and dismantling of the plant and to the safe disposal of radioactive waste, the controlling parent company is held jointly liable with the operator. A controlling parent company under this act is an entity that directly or indirectly holds at least half of the corporate shares of the operator or which may hold at least half of the voting rights or which, independently of these cases, may alone or jointly exert a dominant control over the operator. The continued liability does not cease if the controlling parent company position ends after 1 June 2016. The operator shall be released from liability at the latest at the date when all nuclear waste to be disposed of has been delivered to a final disposal repository and the repository has been closed. The act consists of four sections.

## Lithuania

### ***Nuclear safety and radiological protection (including nuclear emergency planning)***

On 1 May 2016, the amendments to the Law on Radiation Protection came into force.<sup>30</sup> The Law on Radiation Protection establishes the legal basis for the protection of people and the environment from the harmful effects of ionising radiation. It also establishes a licensing system for the use of radioactive materials and radiation sources, and prescribes general rules for their use. The amendment introduced the following changes concerning the responsibility of the State Nuclear Power Safety Inspectorate (VATESI), which is now empowered to:

- set requirements in the nuclear energy area for obligatory radiation protection training, briefing and evaluation of knowledge of workers and persons responsible for radiation protection, and supervise their implementation; and
- set requirements for the certification of persons seeking to obtain the right to train workers and persons responsible for radiation protection, to supervise their implementation and perform the certification.

Subsequently, Nuclear Safety Requirements BSR-1.9.4-2016 “On Procedure of Obligatory Radiation Protection Training, Examination, Briefing of Radiation Workers

30. Law on the Amendment of Articles 2, 6, 7, 71, 8, 83, 84, 10, 11, 15, 21, 23, Supplementing Articles 85, 86, 151 and Repealing Articles 81, 82 of the Law on Radiation Protection, No. XII-2190, 15 December 2015, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/d2a7a1e0ae3111e5b12fbb7dc920ee2c](http://www.e-tar.lt/portal/lt/legalAct/d2a7a1e0ae3111e5b12fbb7dc920ee2c).

and Radiation Protection Officers Involved in Activities with Sources of Ionising Radiation in Nuclear Energy Area and of Certification of Natural Persons Seeking to Obtain the Right to Teach Radiation Protection”,<sup>31</sup> regulating obligatory radiation protection training, briefing of workers and certification of persons seeking to obtain the right to train workers and persons responsible for radiation protection, were approved on 10 June 2016.

Additionally, the amendments to the Law on Radiation Protection clarified provisions on permits to transport radioactive material and permits to transport radioactive waste generated outside of the nuclear fuel cycle. These provisions were further detailed in the amendment of the Rules on Shipment, Import, Transit and Export of Radioactive Material, Radioactive Waste and Spent Nuclear Fuel by extending the list of application documents.<sup>32</sup>

On 21 October 2016, a new version of requirements for radiation safety at nuclear facilities was adopted: Nuclear Safety Requirements BSR-1.9.3-2016 on “Radiation Protection at Nuclear Facilities”.<sup>33</sup> The amendment introduced the following main changes:

- requirements are supplemented with quantitative criteria and management requirements for the controlled zone of the nuclear facility;
- requirements for contamination control are improved; contamination limits for people leaving the controlled area and for items that are removed from the controlled area are specified;
- more detailed requirements are set for monitoring the exposure of workers and workplaces to ionising radiation. Accreditation of dosimetry services in accordance with ISO 17025 standard “General requirements for the competence of testing and calibration laboratories” became mandatory; and
- new requirements were set for the use of technical measures for the protection of workers, individual means of protection and the optimisation process.

The amendment comes into force on 1 May 2017.

## **Nuclear security**

### *Physical security of sources of ionising radiation*

The amendments to the Law on Radiation Protection also introduced changes concerning VATESI’s responsibility for physical security. VATESI is now empowered

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31. Order No. 22.3-73 (2016) of the Head of the State Nuclear Power Safety Inspectorate “On the Approval of Nuclear Safety Requirements BSR-1.9.4-2016 ‘On Procedure of Obligatory Radiation Protection Training, Examination, Briefing of Radiation Workers and Radiation Protection Officers Involved in Activities with Sources of Ionising Radiation in Nuclear Energy Area and of Certification of Natural Persons Seeking to Obtain the Right to Teach Radiation Protection’”, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/8675a1e00dfa11e6bae4eb98746971fa](http://www.e-tar.lt/portal/lt/legalAct/8675a1e00dfa11e6bae4eb98746971fa).
  32. Order No. V-553/22.1-71 (2016) of the Minister of Health and the Head of the State Nuclear Power Safety Inspectorate “On the Amendment of Order No. V-1271/22.3-139, 24 December 2008, On the Approval of Rules on Shipment, Import, Transit and Export of Radioactive Material, Radioactive Waste and Spent Nuclear Fuel”, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/19eaab100dff11e6bae4eb98746971fa](http://www.e-tar.lt/portal/lt/legalAct/19eaab100dff11e6bae4eb98746971fa).
  33. Order No. 22.3-171 (2016) of the Head of the State Nuclear Power Safety Inspectorate “On the Amendment of Order No. 22.3-95, 6 October 2011, On the Approval of Nuclear Safety Requirements BSR-1.9.3-2011 ‘Radiation Protection at Nuclear Facilities’”, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/b93b4230978211e69ad4c8713b612d0f](http://www.e-tar.lt/portal/lt/legalAct/b93b4230978211e69ad4c8713b612d0f).

to set requirements for the physical security of sources of ionising radiation used in the area of nuclear energy and supervise their implementation. Following that, new Nuclear Safety Requirements BSR-1.6.2-2016 on “Physical Security of Sources of Ionising Radiation used in Activities in the Area of Nuclear Energy involving Sources of Ionising Radiation” were approved on 29 April 2016.<sup>34</sup>

### **Radioactive waste management**

On 22 July 2016, the Head of the State Nuclear Power Safety Inspectorate approved a new version of requirements for the management of spent nuclear fuel: Nuclear Safety Requirements BSR-3.1.1-2016 on “Management of Spent Nuclear Fuel at Storage Facility of the Dry Type”.<sup>35</sup> The amendment supplements the requirements with provisions on external and seismic hazards, site assessment, content of the site assessment report and monitoring the site characteristics, content of the commissioning programme and on content of the periodic safety analysis report. Additionally, the definitions were renewed to correlate with latest amendments to the Law on Management of Radioactive Waste and with the Law on Nuclear Safety.

### **Licensing and regulatory infrastructure**

#### *Enforcement measures*

A new version of the requirements regulating the procedures to apply VATESI’s enforcement measures (Nuclear Safety Requirements BSR-1.1.4-2016 “Rules of Procedure for Applying the Enforcement Measures Set by the State Nuclear Power Safety Inspectorate”<sup>36</sup>) was approved on 31 March 2016 and comes into force on 1 January 2017. The new version of the requirements was adopted in order to:

- implement the provisions of the new Code of Administrative Offences, regulating administrative enforcement measures, applicable for natural persons; and
- describe the actions to be taken in case any violations are detected during activities other than inspections (e.g. during safety assessments).

On 10 October 2016, these Requirements were further amended to introduce a list of criteria, describing which infringements of the legal requirements are

34. Order No. 22.3-109 (2016) of the Head of State Nuclear Power Safety Inspectorate “On the Approval of Nuclear Safety Requirements BSR-1.6.2-2016 ‘Physical Security of Sources of Ionising Radiation used in Activities in the Area of Nuclear Energy involving Sources of Ionising Radiation’”, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/00fb21802ee711e69cf5d89a5fdd27cc](http://www.e-tar.lt/portal/lt/legalAct/00fb21802ee711e69cf5d89a5fdd27cc).

35. Order No. 22.3-130 (2016) of the Head of State Nuclear Power Safety Inspectorate “On the Amendment of Order No. 22.3-59, 21 July 2010, On the Approval of Nuclear Safety Requirements BSR-3.1.1-2010 ‘General Requirements for Spent Nuclear Fuel Storage Facility of the Dry Type’”, available (in Lithuanian) at: [www.e-tar.lt/portal/legalAct.html?documentId=29af9e80522d11e6b72ff16034f7f796](http://www.e-tar.lt/portal/legalAct.html?documentId=29af9e80522d11e6b72ff16034f7f796).

36. Order No. 22.3-59 (2016) of the Head of State Nuclear Power Safety Inspectorate “On the Amendment of Order No. 22.3-106, 24 October 2011, approved by the Head of State Nuclear Power Safety Inspectorate ‘On the Approval of Nuclear Safety Requirements BSR-1.1.4-2011 ‘Rules of Procedure for Applying the Enforcement Measures Set by the State Nuclear Power Safety Inspectorate’”, available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/fc460800f73a11e58a059f41f96fc264](http://www.e-tar.lt/portal/lt/legalAct/fc460800f73a11e58a059f41f96fc264).

considered insignificant.<sup>37</sup> The amendment implements the nationwide initiative to streamline the procedures of enforcement measures and ensure that enforcement measures applied to economic entities are proportional. According to the regulation in question, generally, insignificant infringements have to be immediately addressed in the presence of an official exercising oversight and the economic entity shall be given an oral remark only. The amendment concerning the insignificant infringements comes into force on 1 May 2017.

## Luxembourg

### Radioactive waste management

*Agreement between the Grand Duchy of Luxembourg and the Kingdom of Belgium on the Management and Final Disposal of the Radioactive Waste of the Grand Duchy of Luxembourg on the Territory of the Kingdom of Belgium, signed on 4 July 2016*

As a small non-nuclear country, Luxembourg only generates a very limited quantity of radioactive waste and has a management policy based on the minimisation of such waste. Under the law, disused radioactive substances must preferentially be sent back to their producer or to a recycling facility. Consequently, disposal at a radioactive waste disposal facility is the least favoured option and is possible only when no other solution exists. For those reasons the Government of Luxembourg considers that building a dedicated radioactive waste disposal site would not be a realistic proposition.

Since 1994, the final disposal of the Grand Duchy's radioactive waste has been governed by an exchange of letters constituting a ministerial agreement between the Kingdom of Belgium and the Grand Duchy of Luxembourg. Since that date, several shipments of small quantities of waste from Luxembourg to Belgium have taken place under this agreement.

However, this agreement did not meet the criteria of Directive 2011/70/Euratom.<sup>38</sup> In line with previous agreements, both countries have signed a new bilateral agreement that is awaiting ratification in each country's respective Parliament. Before being finalised, it was submitted to the relevant authorities in order for them to assess its possible environmental impacts.

Under the agreement, Belgium agrees to take over Luxembourg's radioactive waste. The main aspects of the agreement can be summed up as follows:

- Belgium shall import a limited quantity of Luxembourg's radioactive waste over a limited period of time for final storage on its territory;
- Belgium may refuse any waste coming from Luxembourg should it not be in a position to ensure its safe management on its territory;

37. Order No. 22.3-165 (2016) of the Head of State Nuclear Power Safety Inspectorate "On the Amendment of Order No. 22.3-106, 24 October 2011, approved by the Head of State Nuclear Power Safety Inspectorate 'On the Approval of Nuclear Safety Requirements BSR-1.1.4-2016 'Rules of Procedure for Applying the Enforcement Measures Set by the State Nuclear Power Safety Inspectorate'", available (in Lithuanian) at: [www.e-tar.lt/portal/lt/legalAct/451cac208ec411e6b6098daee0c9a94f](http://www.e-tar.lt/portal/lt/legalAct/451cac208ec411e6b6098daee0c9a94f).

38. Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, *Official Journal of the European Union (OJ) L 199* (2 August 2011).

- Luxembourg's conditioned radioactive waste shall be stored in an interim storage facility in Belgium until it is transferred to a final disposal facility according to Belgian law; and
- a retroactivity clause allows for the extension of the agreement to Luxembourg's radioactive waste dating from 1995-2010 that is already stored on Belgium's territory.

The operational details of the waste shipments shall be set by contract between Belgium's National Organisation for Radioactive Waste and Enriched Fissile Material (Organisme national des déchets radioactifs et des matières fissiles enrichies) (ONDRAF) and Luxembourg's relevant administration, which for all intents and purposes, shall be deemed a Belgian producer of waste in strict observance of the framework set by this intergovernmental agreement.

This bilateral agreement that allows for the disposal of the radioactive waste of one country on another country's territory is unique. Once it has been ratified, Belgium and Luxembourg will be the first countries to be parties to such an agreement, demonstrating their determination to contribute to the safe and sustainable management of radioactive waste. This could set an example for many other small countries that are in a position similar to that of Luxembourg.

## Poland

### *Organisation and structure*

On 10 September 2016, the latest amendment of the Atomic Law of 6 July 2016 entered into force. The Act changed the rules of dismissal of vice-presidents of the National Atomic Energy Agency (Państwowa Agencja Atomistyki) (PAA) and the rules for appointing and dismissing members of the advisory body of the PAA President. This small volume of legislation has caused changes in the structural position of the PAA President. The law has to some degree limited the PAA President's autonomy and weakened the PAA President's position while strengthening the supervising minister by increasing the ability to influence both the PAA President and the PAA President's office.

The role of the nuclear regulatory body in Poland is exercised by the PAA President. According to "3S" concept developed under the auspices of the International Atomic Energy Agency (IAEA), the PAA President is responsible for regulating nuclear safety and radiation protection, physical protection of nuclear installations and nuclear materials (nuclear security) and safeguarding of nuclear materials. The PAA President supervises approximately 5 500 operations carried out in almost 4 000 entities using over 12 000 radioactive sources. Currently, oversight of radioactive sources is the main area of activity of the PAA President although the PAA President also supervises two research reactors (one in decommissioning), two spent fuel storage facilities and a radioactive waste repository. In 2015, the PAA President issued over 1 500 administrative decisions and conducted over 800 inspections. The PAA President operates with the help of nuclear regulatory inspectors and with the support of the PAA office.

In Poland, the regulatory bodies are in mostly central governmental bodies (around 40) subordinated to individual ministers or directly to the President of the Council of Ministers (the Prime Minister) and few exceptionally report fully or partly to the Parliament. Structural provisions for this group of bodies are similar but not uniform.

According to the new wording of Article 109, paragraph 3 of the Atomic Law, the Vice-President of the PAA is no longer dismissed at the request of the National Atomic Energy Agency (NAEA) President. Although the Minister of the Environment

makes the appointment, as has been done thus far, at the request of the PAA President, the Minister of the Environment has the discretion to dismiss the Vice-President at any time without giving reasons and without a previous request. This situation legitimises the possibility of interfering with the PAA President's management autonomy. First, it prevents the PAA President from formally requesting the Vice-President's dismissal, with whose work the PAA President would be disappointed. Second, the Minister of the Environment may dismiss at any time a Vice-President with whom the PAA President would continue to work.

The current regulation differs from the Polish practice in regulating the structure of central governmental bodies. Although it is not uniform, in most cases, the vice-president can be dismissed only at the request of the president of the respective office.

Pursuant to Article 112, paragraph 2 of the Atomic Law, the PAA President is supported by the permanent advisory and consultative body, the Council for Nuclear Safety and Radiation Protection (the Council). The tasks of the Council include issuing opinions on: 1) licenses for construction, commissioning, operation and decommissioning of nuclear facilities; 2) draft legislation; and 3) organisational and technical recommendations issued by the PAA President. In addition, the Council undertakes initiatives for the improvement of the safety oversight system. To date, members of the Council have been appointed by the PAA President who has the autonomy to shape the composition of the Council limited only by the requirement of the competence of its members. The PAA President also appoints the chairman, vice-chairman and secretary among council members. No other body was empowered to influence decisions of the PAA President in this regard.

According to the new wording of Article 112, paragraph 3 of the Atomic Law, the members of the Council shall be appointed and dismissed by the Minister of Environment. In addition the Minister shall appoint the chairman, deputy chairman and secretary of the council. Both the appointment and the dismissal are made at the discretion of the Minister. Formally, the Minister is obliged to obtain the PAA President's opinion. But, this does not affect the freedom of action of the Minister, who retains decisive dominion in shaping the composition of the board, as this opinion is not binding. The new process not only removes the PAA President's power to select members of the Council, but also does not give the PAA President the ability to block unwanted candidates. From this point of view, the Council can be regarded as practically no longer a PAA President's Council but rather the Minister's giving the Council the possibility to exercise indirect influence on the PAA President's administrative and policy decisions.

## **Slovak Republic**

### ***International co-operation***

On 18 November 2015, the Agreement between the Government of the Slovak Republic and the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) on Mutual Cooperation for Training and Exercise Activities of the Commission Related to On-Site Inspection was signed in Vienna. This Agreement shall establish the procedures and arrangements for the co-operation between the parties in the areas of the conduct of on-site inspections-related (OSI) trainings and exercises, testing and evaluation of OSI equipment and OSI procedures, and any other area of co-operation mutually agreed to by the parties. Within this scope, subsequent Implementing Protocols agreed to on a case-by-case basis shall provide the CTBTO with access to sites, infrastructure, equipment, personnel and/or experts of the Slovak Republic in order to fulfil its assigned role. This Agreement was ratified by the President of the Slovak Republic

on 8 June 2016, notified in the Collection of Laws by the Ministry of Foreign and European Affairs of the Slovak Republic on 5 August 2016<sup>39</sup> and entered into force on 12 August 2016.

### **Nuclear security**

#### *Entry into force of the Amendment to the Convention on the Physical Protection of Nuclear Material*

With regard to the entry into force of the Amendment to the Convention on the Physical Protection of Nuclear Material on 8 May 2016, the Ministry of Foreign and European Affairs of the Slovak Republic notified in the Collection of Laws that this Amendment entered into force<sup>40</sup> and the Slovak Republic shall be bound by its provisions since this date. The current domestic legislation of the Slovak Republic already fully implements the obligations articulated by this international legal instrument.

#### *Act No. 91/2016 Coll. on Criminal Responsibility of Legal Persons*

Act No. 91/2016 Coll. on Criminal Responsibility of Legal Persons replaced the indirect criminal responsibility of such persons with the concept of their direct accountability. Hence, a legal person may be held criminally responsible for the crime of illicit manufacturing and possession of nuclear materials and radioactive substances as defined by sections 298 and 299 of the Criminal Code and the crime of terrorism and some forms of participation in terrorism (including various activities directly connected to the acts of nuclear terrorism) defined in section 419 of the Criminal Code. The possible punishments for a legal person range from the sole publication of a verdict of guilty up to the possibility of legally dissolving such entity by the criminal court. The new Act on Criminal Responsibility of Legal Persons incorporated minor amendments adjusting the statutory terminology in the Act No. 541/2004 Coll. on Peaceful Use of Nuclear Energy (the Atomic Act).

### **Liability and compensation**

#### *Newly adopted Civil Procedural Code*

The newly adopted Civil Procedural Code, which entered into force on 1 July 2016, introduced the causal jurisdiction of the District Court in Nitra (and the Regional Court in Nitra as an appellate court) in disputes on civil liability for nuclear damage. This approach is fully in line with the relevant principles embodied in international instruments on civil liability for nuclear damage, namely the principle of exclusive domestic jurisdiction and the principle of channelling of jurisdiction. The Civil Procedure Code also incorporated minor amendments adjusting the statutory terminology in the Atomic Act.

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39. Notification of the Ministry of Foreign and European Affairs of the Slovak Republic No. 227/2016 Coll.

40. Notification of the Ministry of Foreign and European Affairs of the Slovak Republic No. 170/2016 Coll.

## Slovenia

### **Nuclear safety and radiological protection (including nuclear emergency planning)**

*Decree on the programme of the systematic monitoring of working and living environments and raising awareness about measures to reduce public exposure to natural radiation sources*<sup>41</sup>

This Decree establishes the programme that is intended to provide protection against increased exposure to workers and members of the public due to natural sources of ionising radiation in areas and activities where there is an increased risk due to radiation of these sources. This Decree shall determine the scope and frequency of monitoring of the working and living environments, measures to reduce exposure and the criteria for the adoption of measures.

The areas or activities referred to in the preceding paragraph include:

- handling of materials or waste that have an increased content of natural radionuclides because of their characteristics (hereinafter referred to as NORM) or as a result of technological processing (hereinafter TENORM), storage or disposal of such material and waste in activities listed in the Annex of this Decree, and other activities that lead to exposure to NORM and TENORM;
- karstic and other caves;
- mines;
- spas, pools and other water sources of radon;
- air transport; and
- other areas or activities where workers and members of the public are exposed to radon or thoron and their descendants, gamma radiation or any other exposure from natural sources in the living environment and workplaces.

Implementation of this Decree is provided by the Slovenian Nuclear Safety Administration (SNSA) and the Slovenian Radiation Protection Administration (SRPA). Both the SNSA and SRPA ensure awareness of workers and members of the public by the organisation of seminars, technical meetings and workshops and issuing publications on exposure to natural radiation sources.

This Decree entered into force on the day following its publication in the Official Gazette of the Republic of Slovenia.

### *Rules on authorised experts for radiation and nuclear safety*<sup>42</sup>

These rules were adopted based on the fourth and fifth paragraphs of Article 59 of the Ionising Radiation Protection and Nuclear Safety Act, which was amended last year.<sup>43</sup> The Act provides that the operator of nuclear and radiation facilities have to obtain the opinion of an authorised expert for radiation and nuclear safety on specific issues with regards to radiation protection and nuclear safety. Authorised experts for radiation and nuclear safety are legal persons who have obtained authorisation from the authority responsible for nuclear safety (SNSA).

41. Official Gazette of the Republic of Slovenia (RS), No. 19/2016.

42. Official Gazette of the RS, No. 50/2016.

43. Official Gazette of the RS, No. 74/2015.

These rules stipulate the process of obtaining an authorisation for an authorised expert for radiation and nuclear safety and provides:

- a programme for checking the authorised expert's compliance with conditions;
- requirements for data and record keeping by the SNSA about authorised experts;
- the manner and extent of the periodic reporting;
- the form and content of the expert opinion; and
- other conditions that must be met by the authorised experts.

These rules entered into force on the 15<sup>th</sup> day following its publication in the Official Gazette of the Republic of Slovenia. Upon entry into force of these Rules, the previous Rules on authorised experts for radiation and nuclear safety<sup>44</sup> cease to apply.

## United States

### **General legislation, regulations and instruments**

*Nuclear Regulatory Commission approved a final rule amending licensing, inspection and annual fee regulations to establish a variable annual fee structure for light-water small modular reactors*

The US Nuclear Regulatory Commission's (NRC) fee regulations are governed by the Independent Offices Appropriation Act of 1952 (IOAA) and the Omnibus Budget Reconciliation Act, as amended (OBRA-90).<sup>45</sup> OBRA-90 requires the NRC to "establish, by rule, a schedule of charges fairly and equitably allocating" various generic agency regulatory costs "among licensees". OBRA-90 also states that, "to the maximum extent practicable, the charges shall have a reasonable relationship to the cost of providing regulatory services and may be based on the allocation of the Commission's resources among licensees or classes of licensees".

Due to the significant anticipated differences between light-water small modular reactors (SMR) and the existing reactor fleet, US NRC staff determined that applying the current fee structure to SMRs could be contrary to OBRA-90's aforementioned requirements of fairness and equity. The significant anticipated differences include modular design, factory component fabrication, thermal power capacities, and safety and security design features that could ultimately result in lower regulatory oversight burden.

In anticipating the submission of license applications for SMRs, NRC staff amended the annual fee structure for 10 CFR 171 to address anticipated design characteristics of SMRs. The final rule provides a variable annual fee structure for SMRs. Under the variable annual fee structure, an SMR's annual fee will be calculated as a function of its licensed thermal power rating.

Specifically, the fee structure computes SMR annual fees on a site basis, considering all SMRs on the site up to a total licensed thermal power rating of 4 500 MWt to be a single "bundled unit" that would pay the same annual fee as the current operating reactor fleet. Bundled units with a total licensed thermal power

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44. Official Gazette of the RS, No. 51/2006.

45. Variable Annual Fee Structure for Small Modular Reactors, 81 Fed. Reg. 32 617 (24 May 2016) (to be codified at Title 10 Code of Federal Regulations (CFR) Parts 170-171).

rating at or below 250 MWt would only pay a minimum fee. Fees for bundled units with a total licensed thermal power rating greater than 250 MWt and less than or equal to 2 000 MWt would be computed as the minimum fee plus a variable fee based on the bundled unit's cumulative licensed thermal power rating. For a bundled unit with a licensed thermal power rating comparable to a typical large light-water reactor (greater than 2 000 MWt and less than or equal to 4 500 MWt), the annual fee assessed to that bundled unit would be the same annual flat fee that is paid by a power reactor licensee in the current operating fleet. For an SMR site with a licensed thermal power rating that exceeds 4 500 MWt, the licensee would be assessed the maximum fee for the first bundled unit, plus a variable annual fee for the portion of the thermal rating above 4 500 MWt and less than or equal to 6 500 MWt for the second bundled unit. Lastly, if a site rating exceeds 6 500 MWt and also is less than or equal to 9 000 MWt, then a second maximum fee would be assessed for the second bundled unit.