National Legislative and Regulatory Activities

Brazil

General legislation

Resolution of the National Council on Energy Policy on the Resumption of Construction of a Thermonuclear Plant (2007)

By Resolution No. 3 of 25 June 2007, published in the Official Journal on 7 August 2007, construction of the thermonuclear plant UTN Angra 3 was resumed. It will become part of the nuclear power plant complex, Almirante Alvaro Alberto – CNAAA, and it is scheduled to commence operation in 2013.

France

General legislation

Decree on Technical Enquiries in the Event of Incidents or Accidents Relating to Nuclear Activities (2007)

Decree No. 2007-1572 of 6 November 2007 provides that when the Nuclear Safety Authority decides to conduct a technical enquiry according to Article 4 of the Law on Nuclear Transparency and Safety (see *Nuclear Law Bulletin* No. 77), i.e. in the event of incidents or accidents relating to nuclear activities, it establishes an enquiry mission and specifies its composition. The Nuclear Safety Authority defines the purpose and the scope of investigations to be carried out, according to provisions of the Law No. 2002-3 of 3 June 2002 governing the security of infrastructures and systems of transport, technical enquiries and underground storage of natural gas, hydrocarbon and chemicals.

The decree includes a number of provisions on the implementation and progress of a technical enquiry.[1]

1. The text of this decree is available (in French) on the website of *Légifrance* at the following URL: www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=DEVQ0767188D.

Organisation and structure

Order on the Organisation of the General Directorate of Enterprises (GDE) within the Ministry of Industry (2007)

This order, adopted on 6 April 2007, re-organises the Ministry of Industry to take account of the transformation of the Directorate-General for Nuclear Safety and Radiation Protection (DGSNR) into the Nuclear Safety Authority, which has, according to the Law on Nuclear Transparency and Safety (see *Nuclear Law Bulletin* No. 77), the status of an independent administrative authority.

Within the GDE, the Directorate of Regional Activity, Quality and Industrial Security proposes, together with the ASN, governmental policy concerning nuclear safety and radiological protection, with the exception of nuclear activities and installations for defence purposes and the protection of workers against ionising radiation.

Regime of nuclear installations

Decree on the Listing of Basic Nuclear Installations (2007)

Decree No. 2007-830 of 11 May 2007 on the Listing of Basic Nuclear Installations was adopted with a view to implementing Article 28-III of the Law on Nuclear Transparency and Safety (see *Nuclear Law Bulletin* No. 77). That law provides that basic nuclear installations (*installations nucléaires de bas*e – INB) are:

- nuclear reactors;

and, as defined by decree after consultation with the *Conseil d'État*:

- installations for the preparation, enrichment, manufacture, processing or disposal of radioactive waste;
- installations containing radioactive or fissile substances;
- accelerators.

This decree, published in the Official Journal of 12 May 2007, specifies the features of these four categories of INB. It repeals Article 2 of Decree No. 63-1228 of 11 December 1963 which defined previous categories of INB. However, Article 2 still applies to activities and nuclear installations for defence purposes.

Decree on Basic Nuclear Installations and Verifying the Nuclear Safety of Radioactive Materials Transport (2007)

Article 1 of Decree No. 2007-1557 of 2 November 2007 establishes an advisory commission on basic nuclear installations (*installations nucléaires de bas*e – INB) to assist ministers in charge of nuclear safety.

Ministers who are in charge of nuclear safety must submit draft decrees on licence requests for the construction, modification, dismantling or final shutdown of basic nuclear installations and the transition into the supervision phase to the advisory Commission for its opinion.

This decree contains a number of provisions relating to:

- the advisory Commission of INB;
- general provisions with regard to INB;
- creation and operation of INB;
- final shutdown and dismantling of INB;
- administrative measures and criminal sanctions; and
- transport of radioactive substances.

It contains provisions for the implementation of the Law on Nuclear Transparency and Safety (see *Nuclear Law Bulletin* No. 77) and, notably, specifies constitutive elements of the file to be sent by the operator to the Nuclear Safety Authority, with a view to commissioning a basic nuclear installation [Article 20].[2]

Italy

Radiological protection

Decree Implementing Council Directive 2003/122/Euratom of 22 December 2003 on the Control of High-activity Sealed Radioactive Sources and Orphan Sources (2007)

Decree No. 52 of 6 February 2007 was published in the Italian Official Gazette No. 95 on 24 April 2007. It implements Council Directive 2003/122/Euratom of 22 December 2003 whose purpose is to prevent the exposure of workers and the public to ionising radiation arising from inadequate control of high-activity sealed radioactive sources and orphan sources.

The decree, *inter alia*, designates the competent national authorities to carry out tasks relating to the Directive: the Minister for Economic Development, together with the National Sources and Holders Register Authority, is the contact point which Member States must designate. The National Agency for New Technologies, Energy and the Environment (ENEA) ensures that both management and workers in installations where orphan sources are most likely to be found or processed are informed, advised and trained. The ENEA also runs the integrated service for disused sources.

The decree sets out a number of requirements for holders of high-activity sources. They have to obtain prior authorisation for any practice involving a source; they have to ensure that suitable tests are undertaken regularly in order to control and maintain the integrity of each source and they have to verify that each source and equipment containing a source is in good condition at its place of use or of storage. The decree further requires holders to ensure that each source is subject to adequate documentation. They must prevent unauthorised access to, loss and theft of the source or damage to it by fire. The holders have to notify any loss or theft, return each disused source to the supplier or place it in a recognised installation. They shall ensure training of workers and keep records of all sources under their responsibility, their location and transfer. Finally, they shall provide the competent authority with an electronic or written copy of all parts of the records (a booklet for any source and a register of all sources).

2. The text of this decree is available (in French) on the website of *Légifrance* at the following URL: www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=DEVQ0762539D.

A national authority will keep and update records of authorised holders and sources (National Sources and Holders Register) and will be designated by an inter-ministerial decree.

Environmental protection

Amendment to the Environmental Law Decree (2007)

On 13 September 2007, the Italian Government approved a proposal to amend the Decree on Environmental Law 2006.[3] The 2006 Decree[4] implements Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on Environmental Liability with Regard to the Prevention and Remedying of Environmental Damage (see *Nuclear Law Bulletin* No. 73).

The governmental proposal to amend the 2006 Decree aims to simplify part III and IV of the Decree concerning the environmental impact procedure and the regulation of wastes. In particular, Italian definition of "waste" was criticised by the European Court of Justice (ECJ) as too restrictive in respect of European Environmental Directive. Now, the new definition of "waste" is based on the considerations of the ECJ.

The 2006 Decree shall not apply to such nuclear risks or environmental damage or imminent threat of such damage as may be caused by the activities covered by the Treaty establishing the European Atomic Energy Community or caused by an incident or activity in respect of which liability or compensation falls within the scope of any of the international nuclear instruments, which are referred to in Annex IV of the directive.

Of particular interest is the definition of "environmental damage" which is defined as:

- damage to protected species and natural habitats, which is any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species;

- water damage, which is any damage that significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential, as defined in Directive 2000/60/EC, of the waters concerned;

- coastal water damage and those in the territorial sea by the actions aforesaid, even if carried out in international waters;

- land damage, which is any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms.

The key consequences for the operator are the following:

- The operator must notify, without delay, a number of local and provincial authorities, of which the Prefect notifies the Minister of Environment. If there is an imminent threat of environmental damage, the operator must – after informing the competent authorities –

3. Decree No. 152 of 3 April 2006.

4. Decree published in the Italian Official Gazette No. 88 on 14 April 2006.

take the necessary preventive measures within 24 hours. The Minister of Environment can require information and the adoption of specific preventive measures by the operator.

- A mechanism of state intervention will be introduced for the remediation/restoration of environmental damage, as well as preventive measures that can be taken by non-governmental organisations, which promote the protection of the environment and other interested bodies.

- A more incisive mechanism for the compensation of the environmental damage will be introduced by an injunction decree of the Ministry of Environment, specific for each case that obliges the operator to take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants. If the operator does not comply with this injunction decree, the Ministry of Environment can order the payment of a sum as compensation for damage.

Japan

Radioactive waste management

Amendment to the Law on Final Disposal of High-level Radioactive Waste (2007)

In June 2007, the Diet adopted Law No. 84 of 2007 to Amend the Law on the Final Disposal of High-level Radioactive Waste (see *Nuclear Law Bulletin* No. 66). The law was promulgated in the Official Gazette on 17 June 2007 and will enter into force on 1 April 2008.

The amendment specifies additional wastes which are subject to disposal regulations and provides a framework for the formulation of disposal plans and the allocation of disposal costs. It is designed to ensure that the final disposal of these radioactive wastes is appropriately planned and carried out, this being essential to the promotion of the nuclear fuel cycle.

The nuclear fuel cycle consists of a series of processes to recycle (separate and collect) uranium, plutonium and other recyclable substances from spent fuel discharged from nuclear reactors and to reuse them as fuel. These processes generate radioactive wastes (high-level radioactive waste, trans-uranium waste known as TRU-waste, etc.) that need to be disposed of in deep geological formations.

With the amendment, transuranium waste, which is covered by the amended Enforcement Order for the Specified Radioactive Waste Final Disposal Act, and high-level radioactive waste acquired by substitution will be added to those subject to final disposal.

Lithuania

General legislation

Law on the Nuclear Power Plant (2007) (The text of the law is reproduced in the annex to this chapter)

Law No. X-1231 of 28 June 2007 aims at replacing the electricity generating capacity to be lost as a result of the decommissioning of the Ignalina Nuclear Power Plant (see *Nuclear Law Bulletin*

Nos. 66 and 68) and at creating the legal, financial and organisational preconditions for the construction of a new nuclear power plant in Lithuania.

A project implementing company, situated in the Republic of Lithuania shall be responsible for carrying out the required activities in compliance with the safety requirements imposed on nuclear activities and become the operator of the nuclear power plant. According to the new law, "project" shall mean a new nuclear power plant project being developed and implemented, involving the preparation of a feasibility study on a new nuclear power plant, as well as its design, construction, financing, operation, decommissioning and radioactive waste management.

The law allows for strategic partners to participate in the project implementing company provided they fulfil criteria laid down in Article 2(2) of the act. Investors shall participate in the implementation of the project on equal terms; their contributions, rights and obligations in implementing the project must be proportionate to their participation in the capital of the project implementing company.

Article 8(2) of the act ensures that "the national investor shall own a block of at least 34% of shares in the project implementing company carrying at least 34% of votes at the general shareholders' meeting of the project implementing company". In emergency situations as defined in Article 9 of the act, the operator of the new nuclear power plant must carry out the instructions issued by the Government of the Republic of Lithuania. In case the operator fails to carry out the instructions, the Government shall have the right "to take over the management of the project implementing company, suspend or revoke its licence or take other necessary measures to ensure nuclear safety, radiation protection and the operation of the project implementing company". The measures shall be applied only to the extent necessary to overcome the encountered difficulties and they shall not exempt the project implementing company from liability [Article 9 of the act]. The national investor is described in Article 10 of the act, meaning "independent private legal entity registered in the Republic of Lithuania, established and operated for an indefinite period of time under laws of the Republic of Lithuania, with the aim of gaining benefits for itself and all shareholders in a socially responsible manner". The law further determines that the "national investor shall be the public company Lietuvos Energija which has shown a private initiative to invest in the project and fulfils the requirements laid down in this law" [Article 10(1) of the act]. The Republic of Lithuania itself shall own a block of more than 50% of shares in the national investor carrying more than 50% of the votes at the general shareholders' meeting of the national investor.

Chapter V provides that the construction site for the nuclear power plant shall be designated in accordance with the procedure laid down by the Law on Territorial Planning, the Law on Environmental Impact Assessment of Planned Economic Activities, the Law on Nuclear Energy, this law and other legal acts, taking into account the recommendations of the International Atomic Energy Agency [Article 12 of the act].

Special security measures for ensuring national security interests in respect of the project shall be established by laws and other legal acts at a later stage.

The law does not interfere with the decommissioning works of the State Enterprise Ignalina Nuclear Power Plant which shall be carried out separately and independently from the project this law allows for, and the State Enterprise Ignalina Nuclear Power Plant shall not participate in the new nuclear power plant project. It is expected that the new plant will be constructed near the existing Ignalina plant and it is hoped that completion of this project will take place by 2015.

Luxembourg

Radiological protection

Grand-ducal Regulations on the Protection of the Public Against the Risks Resulting from Ionising Radiation (2006)

Grand-ducal Regulations of 21 July 2006 Governing the Protection of the Public Against the Risks Resulting from Ionising Radiation modifies a number of provisions of the Grand-ducal Regulations of 14 December 2000 on the same subject (see *Nuclear Law Bulletin* No. 67).

New regulations establish, *inter alia*, provisions on transport of radioactive materials and also set out rules concerning radiological emergency situations resulting from orphan sources.

Law on Approving the Agreement Between Luxembourg and Belgium Relating to Information Exchange in the Event of an Incident or Accident (2006)

This law, adopted on 27 April 2006, reinforces the agreement concluded by Luxembourg and Belgium on 28 April 2004, whose purpose is to ensure a mutual exchange of information:

- in the event of an incident or accident which occurs on the territory of one of the parties and results or may result in a release of radioactive materials, involving respective nuclear and radiological emergency plans; and
- which results or may result in a transboundary release of radioactive materials, which may be significant in terms of the radiological safety of the other party.

The agreement provides that implementation arrangements and events covered by the agreement will be specified by an exchange of letters between the parties. The mutual information exchange system, introduced by the agreement, aims explicitly to complement current international and European plans, by maintaining a more direct communication between parties.

People's Republic of China

Regime of nuclear installations

Regulations on the Management and Monitoring of Nuclear Safety Equipment for Civilian Use (2007)

Regulations on the Management and Monitoring of Nuclear Safety Equipment for Civilian Use were adopted by the State Council on 4 July 2007 and will become effective as of 1 January 2008.[5]

The regulations include provisions on licensing, design, manufacture, installation, non-destructive testing, import and export, surveillance and inspection, legal liability and supplementary provisions.

5. Adopted at the 183rd Executive Meeting of the State Council, promulgated by Decree No. 500 of the State Council of the People's Republic of China on 4 July 2007.

Third party liability

Official Reply of the State Council to Questions on the Liabilities of Compensation for Damages Resulting from Nuclear Accidents (2007) (The text of the reply is reproduced in the annex to this chapter)

The "Official Reply of the State Council to Questions on the Liabilities of Compensation for Damages Resulting from Nuclear Accidents" of 30 June 2007 (2007 Reply) was published in the State Council Gazette No. 23 Serial No. 1238 on 20 August 2007.

In the 2007 Reply [Section 2], the State Council stipulates that the operator shall be liable to compensate personal injuries, property losses or environmental damage arising out of nuclear accidents and that no person other than the operator shall be liable. Where a nuclear accident causes transboundary damage, such damage shall be compensated in accordance with the treaty or protocol between the People's Republic of China and the relevant country. If there is no such treaty or protocol, transboundary damage shall be compensated according to the principle of reciprocity [2007 Reply Section 3]. The maximum amount of compensation payable for damages caused by any one nuclear accident is limited to 300 million[6] Yuan Renminbi (CNY) for operators of nuclear power plants and of spent fuel storage facilities, transportation and spent fuel post-treatment facilities. Other operators shall be liable up to a maximum amount of CNY 100 million.[7] Where the total amount of damages exceeds the maximum amount of compensation payable by an operator, the state shall provide a financial indemnity of up to CNY 800 million.[8] The only exonerations from liability lie in the case of damage caused by a nuclear accident directly resulting from armed conflict, hostile action, war or riot.

The State Council Reply further provides that an operator shall make appropriate financial arrangements to ensure timely and effective performance of its liabilities for compensation for damage, and that before "operating a nuclear power station or carrying out the storage, transportation or post-treatment of spent fuels, an operator must purchase sufficient insurance to cover its limits of liability" [2007 Reply Section 8].

In 1986, the State Council had issued a Reply, entitled "Written Reply of the State Council of the People's Republic of China on Handling the Question of Third Party Nuclear Liability" to the Ministry of Nuclear Industry, the State Nuclear Safety Bureau and the State Council Leading Group on Nuclear Energy (1986 Reply, see *Nuclear Law Bulletin* No. 61). This Reply incorporated principles which are similar to those forming the basis of the international nuclear liability regimes. With respect to a nuclear accident occurring at a nuclear installation or in connection with nuclear materials coming to or from a nuclear installation, the operator of that installation:

- is "strictly" liable for nuclear damage suffered by third parties as a result thereof;
- is "exclusively" liable for nuclear damage suffered by third parties as a result thereof;
- is liable for such nuclear damage only up to an imposed maximum amount;
- is liable for such nuclear damage only where claims are brought within a specified time period following the accident; and
- has the benefit of unity of jurisdiction rules for all nuclear damage claims.

6. Approximately 40.1 million US Dollars (USD) or 27.9 million euros (EUR).

7. Approximately USD 13.4 million or EUR 9.3 million.

8. Approximately USD 107 million or EUR 74.3 million.

The two Replies vary in a number of provisions.

Compared to the 1986 Reply, the compensation amounts for damage caused by a nuclear accident have increased significantly. The maximum compensation payable by the operator to victims has increased from CNY 18 million[9] to CNY 300 million. The state obligation to provide compensation amounted CNY 300 million while the 2007 Reply provides for a state intervention of CNY 800 million. Furthermore, the 2007 Reply introduces the term "extraordinary nuclear accident" and stipulates that for damage arising from such accidents the increased amount of indemnity required from the state shall be decided upon after appraisal by the State Council. The 2007 Reply further introduces the obligation of the operator to maintain financial security for the amount of its liability [2007 Reply Section 8, *supra*], a principle which was not alluded to in the 1986 Reply.

Both Replies stipulate the exclusive liability of the operator; however only the 1986 Reply provides for the operator's strict liability.

With respect to the definition of damage, the 2007 Reply specifies damage as "personal casualties, property losses or environmental damages" [2007 Reply Section 2] while the 1986 Reply makes no specifications at all. Another difference between the two Replies is that the 2007 Reply does not exempt the operator from liability for damage caused by nuclear accidents directly resulting from a "catastrophic natural disaster" [see 2007 Reply Section 6 and 1986 Reply Section 5]. Finally, unlike the 1986 Reply, the latest Reply addresses the issue of transboundary nuclear damages [Reply Section 2, *supra*].

On the other hand, the 1986 Reply had introduced two principles governing nuclear liability on which the 2007 Reply remains silent. The first one is the time limit of 10 years within which victims have the right to claim damages and the "discovery rule" requiring claims to be filed within 3 years of the date upon which victims discovered the damage [1986 Reply Section 6]. The second principle concerns the applicable laws and the unity of jurisdiction [1986 Reply Section 7], which finds no equivalent in the latest Reply of the State Council.

At the end of the 2007 Reply, it is indicated that the Atomic Energy Law of the People's Republic of China shall be drafted to expressly provide for the foregoing matters as well as the limitation of actions, jurisdiction, etc.

Romania

Radiological protection

Government Decision on the Monitoring of the Health of Personnel (2007)

Government Decision No. 355 of 11 April 2007 Regarding the Monitoring of the Health of Personnel was published in the Official Gazette, Part I, No. 332 on 17 May 2007.

The decision sets the minimum requirements for the monitoring of professionally exposed personnel in relation to any health and safety risks, in order to prevent occupational health disorders caused by any hazardous chemical, physical, physic-chemical or biological exposure associated with their workplace, as well as overtaxing of different organs or body systems during work. Monitoring is performed by doctors specialising in occupational medicine.

9. Approximately USD 2.4 million or EUR 1.7 million.

Under the government decision every employer, regardless of its business and regardless of whether it operates in the public or private sector (including employers in the nuclear field), shall comply with current health monitoring regulations. Employers shall provide the funds and furnish the necessary conditions to enable such monitoring to be carried out.

Transport of radioactive materials

Order on Physical Protection of Nuclear Materials During Transport (2007)

Order No. 303 approves the Guideline on the Physical Protection of Nuclear Materials During Transport. It was issued on 29 August 2007 by the President of the National Commission for Nuclear Activities Control and published in Official Bulletin No. 657 on 26 September 2007.

This guideline establishes the measures which have to be taken by the licence holder to ensure physical protection of nuclear materials during transport. The principles in this guideline are the following:

- The authorisation for the transport of nuclear materials is issued only if physical protection against attacks or other interventions which, directly or indirectly, are a danger for the public health or safety are ensured;
- The responsibility for physical protection against attacks or other interventions which, directly or indirectly, are a danger for the public health or safety, is incumbent on the licence holder.

By numerous measures on the physical protection of nuclear materials during transport, the licence holder has to make sure that:

- it is permanently informed on the location of the transported material;
- the carrier and the accompaniment can communicate;
- the carrier can notify the response force in case of an attack and can keep the contact with the response force until this takes the protection over the transport.

This guideline establishes that the measures for physical protection of nuclear materials during a transport are different from the surveillance measures, constructive measures, other technical measures as well as organisational and personnel measures. Likewise, this act provides general and special requirements for the road transport of nuclear materials from the first to the third category.

Regime of radioactive materials (including physical protection)

Order on Preventive Protection of Nuclear Installations (2007)

Order No. 304 approves the Guideline on Preventive Protection of Nuclear Installations. It was issued on 29 August 2007 by the President of the National Commission for Nuclear Activities Control and published in Official Bulletin No. 636 on 17 September 2007.

This guideline is to be used by the licence holder as a basis for the assessment of the supplementary physical protection measures. It is based on the principle that the supplementary measures taken by the licence holder have to consider the construction characteristics, the technical and administrative-organisational issues, the alarming plans and the risks and vulnerabilities analysis.

Likewise, the guideline provides for the supplementary measures which have to be taken by the licence holder for situations, in which the nuclear installation is attacked and jeopardised and in which the nuclear installation is attacked but not jeopardised. The licence holders are to issue procedures for the threat situations.

Order on the Verification of the Physical Protection System of Nuclear Installations (2007)

Order No. 305 approves the Guideline on Periodic Verification of the Physical Protection Systems of Nuclear Installations. It was issued on 29 August 2007 by the President of the National Commission for Nuclear Activities Control and published in Official Bulletin No. 652 on 25 September 2007.

This guideline includes provisions for the verification of the physical protection systems and aims at the establishment of measures which have to be taken by the licence holder regarding construction and technical, administrative-organisational and personnel issues.

By means of a periodical verification system of physical protection measures, the efficient functioning of the system and its objections shall be ensured.

For the periodic verification of the physical protection system, the licence holder has to send to CNCAN:

- the system vulnerabilities analysis;
- the probable consequences of vulnerabilities analysis;
- the proposed measures for the elimination of the vulnerabilities.

Radioactive waste management

Ordinance on the Safe Management of Radioactive Waste (2007)

Ordinance No. 11 of 30 January 2003 on the Management of Spent Fuel and Radioactive Waste, including final disposal (see *Nuclear Law Bulletin* No. 71), was re-published in the Official Gazette of Romania No. 289 on 2 May 2007. Under the ordinance, the safe management of radioactive waste is to be carried out in accordance with the national norms and regulations, as well as in accordance with the provisions of the international agreements and conventions to which Romania is a party.

The objective of this ordinance is to regulate the responsibilities of bodies, which are involved in different stages of the management of radioactive waste and to allocate financial resources necessary to sustain activities relating to the management of radioactive waste generated during the operation and decommissioning of nuclear and radiological installations. It aims at the radiological protection of workers at risk, the general public, the environment and property, without jeopardising the needs and expectations of future generations.

The ordinance is equally applicable to the safe management of radioactive waste from the nuclear fuel cycle and radioactive waste from the applications of nuclear processes and technologies in industry, medicine, agriculture and other fields of socio-economical interest, including those from the decommissioning of nuclear and radiological facilities. The provisions of the ordinance do not apply to the management of radioactive waste arising from mining and processing of uranium and/or

thorium ores, to the decommissioning of mining and processing installations for uranium and/or thorium ores. They further do not apply to any controlled release of effluents into the environment.

Under the ordinance, the licensees have the obligation to safely manage the radioactive waste resulting from the operation of nuclear and radiological installations over their entire useful life-span, including radioactive waste arising after their decommissioning, with the view of final storage of such waste. Any activity relating to the safe management of radioactive waste is to be carried out in accordance with the medium and long term national strategy regarding the safe management of spent nuclear fuel and radioactive waste that is part of the nuclear development strategy.

This strategy is to be drafted by the National Agency for Radioactive Waste (ANDRAD), after consultations with the licensees. ANDRAD is the competent authority to co-ordinate nationwide the safe management of radioactive waste. It is in charge of the final storage of spent nuclear fuel and radioactive waste, including those from the decommissioning of nuclear and radiological installations.

ANDRAD is a public institution having legal personality subordinated to the Ministry of Economy and Finances.

ANDRAD's activities include siting, designing, construction, commissioning, operation and maintenance, upgrading, shutting-down and follow-up operations in connection with spent nuclear fuel and radioactive waste final storage facilities. ANDRAD's activities further include the radiological protection of the population and the environment in the vicinity of final storage facilities, monitoring the radioactivity in the environment around final storage facilities, and informing and ensuring participation of the public in the vicinity of a final storage facility in order to achieve consensus for the construction and operation of such facilities. Finally, ANDRAD will engage in the promotion of national and international activities related to the safe management of radioactive waste.

The financial resources that are to sustain ANDRAD's activities shall consist of the annual direct contributions of the licensees due for its activities. In addition, ANDRAD is to receive funds from the state budget for some types of activities, and finally, ANDRAD may have any other sources of funds as prescribed by law.

The licensees are responsible for the decommissioning of the nuclear and/or radiological installations and the management of the radioactive waste resulting from the operation and decommissioning of nuclear and radiological installations up to their final storage. Any liability related to decommissioning may be transferred by the licensee to the ANDRAD at the end of the operational phase.

Under the ordinance, the import of spent nuclear fuel and radioactive waste for the purpose of their final storage is forbidden and legal sanctions are provided in case of infringement. Any spent nuclear fuel and radioactive waste resulting from co-operation programmes and international partnerships to which Romania is a party shall be managed by the state on whose territory they have been generated, provided no special agreement provides otherwise.

Government Decision Regarding Financial Resources Necessary for the Safe Management of Radioactive Waste (2007)

Governmental Decision No. 1080 addresses the creation and management of financial resources required for the safe management of radioactive waste and the decommissioning of nuclear and

radiological installations. It was approved on 5 May 2007 and published in the Official Bulletin No. 636 on 17 September 2007.

This decision establishes the amount of contribution due by a licensee for carrying out nuclear activities and the manner of setting aside the financial resources necessary to cover the costs of decommissioning, and the safe management of radioactive wastes produced by the operation and decommissioning of nuclear and radiological installations. The decision also sets out the manner in which those financial resources shall be administrated and managed. Furthermore, it establishes the method of payment for the radioactive waste disposal services which the National Agency for Radioactive Waste (ANDRAD) carries out for small producers of radioactive waste. The decision is neither applicable to the disposal of radioactive waste resulting from the operation and decommissioning of uranium and/or thorium mines nor to installations for the purification and filtering of uranium.

Licensees that are owners of nuclear power plants are obliged to pay two types of contribution:

- an annual contribution to provide the funds required for the decommissioning of each nuclear power plant; and
- direct annual contributions to provide the funds required for the final storage of radioactive waste generated by the operation and decommissioning of nuclear power plants.

The rates of contribution are to be set following estimates of decommissioning costs for each nuclear power plant and for the cost of final storage of the radioactive waste resulting from their operation and decommissioning. Contribution rates are based on the net amount of electric power estimated to be generated over the following year by each nuclear power plant.

The annual contributions for decommissioning costs are due over the entire useful life-span of the nuclear power plant units. The direct annual contributions for final storage costs are due over the operation of the nuclear power plant units.

Third Party Liability

Amendment of the Law on Civil Liability for Nuclear Damage (2007)

Law No. 115 was adopted on 27 April 2007 and published in the Official Bulletin No. 298 on 4 May 2007. It amends Article 41 of Law No. 703 of 2001 on Civil Liability for Nuclear Damage by providing for compensation for nuclear damage from state funds where such damage is:

- the direct and immediate result of a terrorist act; or
- the direct and immediate result of a nuclear accident for which the operator of the nuclear facility is unable to obtain coverage for civil liability for nuclear damage from the national and/or international insurance market or any other appropriate form of financial guarantee, and which inability must be proved by the operator to the competent authorities.

In such cases, compensation for nuclear damage is provided by the state from public funds in the amount prescribed by law (see 2001 Law on Civil Liability for Nuclear Damage, *Nuclear Law Bulletin* No. 69, text of the law is reproduced in the Supplement to No. 69; see also 2003 Norms of

Enforcement of the Law, *Nuclear Law Bulletin* No. 72 and 2004 Amendment, *Nuclear Law Bulletin* No. 75).

Russian Federation

Organisation and structure

Reform of the Russian Nuclear Power Industry (2007)

On 27 April 2007, the President of the Russian Federation signed the Decree on Restructuring the Atomic Energy Industry Complex of the Russian Federation. Pursuant to this decree, the part of the Federal Atomic Energy Agency (Rosatom) in charge of the civil nuclear power programme, will be reformed.

A state-owned holding company, *Atomenergoprom* (AEP) will be established (see *Nuclear Law Bulletin* No. 79) for all enterprises involved in the Russian civil nuclear industry. Together with its affiliates, AEP will be responsible for a wide range of activities related to nuclear industry, including research and development, uranium mining, nuclear power plant construction and radioactive waste management. The new state-owned company will incorporate:

- nuclear power plant operator – *Rosenergoatom*;
- nuclear fuel producer and supplier – TVEL;
- uranium trader – Tenex;
- nuclear facilities constructor – *Atomenergomash*; and
- nuclear constructor for overseas projects – *Atomstroyexport*.

It is expected that AEP will be created by January 2008, constituting one of the biggest nuclear companies in the world, encompassing the full nuclear fuel cycle, nuclear design, construction, engineering and the key business of power generation itself.

The charter of AEP was approved by Governmental Order No. 432 of 6 July 2007. In addition, the Prime Minister has approved the members of the AEP's Board of Directors. The Head of Rosatom, Sergei Kirienko, has been appointed as Chair, while his Deputy, Vladimir Travin, has been appointed as a Director of AEP.

A new state atomic energy corporation "Rosatom" will also be established in the form of a non-commercial organisation and it will control 100% of AEP's shares and its property on behalf of the state. It will also manage both AEP and the nuclear weapons complex. The state corporation will be created by re-organisation of the Federal Atomic Energy Agency.

On 4 October 2007, the President of the Russian Federation submitted the draft Law on the State Atomic Energy Corporation (Rosatom) for consideration to the State Duma. Pursuant to the President's order, the creation of a vertically-integrated civil nuclear complex AEP and the state corporation "Rosatom" should be completed during the first quarter of 2008. According to this draft law, a newly created state corporation with the same name "Rosatom" shall take the place of Rosatom, to which AEP, nuclear weapons complex facilities, institutes of fundamental science and the entities working in the sphere of nuclear and radiological protection will be subordinated. The state corporation will be created by the re-organisation of the Federal Atomic Energy Agency.

Slovak Republic

General legislation

Atomic Act Amendment on Alternative Financing of the Nuclear Regulatory Body (2007)

In February 2007, the National Council adopted the new Act No. 94/2007 Coll., which introduces major changes to the 2004 Atomic Act (see *Nuclear Law Bulletin* No. 74) with respect to the financing of the regulatory body. This act will enter into force on 1 January 2008. The basic aim of the act is to change the source of financing substantially, whereupon the Nuclear Regulatory Body (UJD) will be financed both from the state budget and by all licence holders. The amount of annual contribution will depend on the authorisation type, as well as the type of the licensed nuclear installation. As a result, it is expected that the budged of UJD will increase. The consolidated version of the atomic act including the last amendment is published on UJD web site.[10]

Slovenia

Radiological protection

Decree on the Control of Radioactive Contamination in the Shipment of Scrap Metal (2007)

A Decree on the Control of Radioactive Contamination in the Shipment of Scrap Metal was adopted on 6 September 2007 by the Slovenian Government and published in the Official Gazette No. 84/07. It shall enter into force on 1 January 2008.

The basic provision of this decree is that every shipment of scrap metal with its final destination in Slovenia shall be subject to the measurement of radioactivity which has to be paid by the consignee. The results of the measurement must be presented to the recipient, and to custom officers in the case of import. The measurement can be performed only by organisations authorised by the Slovenian Nuclear Safety Administration (SNSA) and which fulfil a minimum set of prescribed criteria (measurement devices, training, reporting forms and procedure), which may include the consignee. In the case of increased radiation of more than 50% above natural background levels the SNSA shall be informed, and corrective measures will be assigned by the SNSA inspectors. Radiological protection measures should be stricter if the maximum dose rate is 50 times higher than natural background. Where elevated radiation is noticed in shipments of scrap metal in transit, the shipments shall be returned to the country of origin.

The decree covers also the inner control, in particular in those facilities where recycling of metals occurs (e.g. melting). The measurement in these cases should also be performed in order to prevent radioactivity in metal stream.

10. www.ujd.gov.sk.

Spain

Third party liability

Amendment to the Nuclear Energy Act (2007)

In July 2007, new transitory provisions have been approved to amend the nuclear liability regime and introduce parts of the revised Paris Convention and Brussels Supplementary Convention. The purpose of the amendment is to:

- Increase the amount of liability and coverage for existing heads of nuclear damage, up to 700 million euros (EUR), with no less than EUR 30 million in the case of transport of nuclear substances or low risk installation, subject to the approval of the Ministry of Industry, Tourism and Trade.
- Introduce a new head of damage, namely the environmental damage which might arise within the national territory. This damage will be covered up to EUR 700 million, with no less than EUR 30 million in the cases mentioned above. The sum is separate from the above-mentioned increase for existing damage and is dedicated only to environmental damage. That means that nuclear operators will have to face separately – and therefore cumulatively – the liability for each type of nuclear damage ("conventional" and environmental).

While nuclear damage of persons and properties is being covered through private insurance (still during the prescription period of 10 years), a new mechanism has been established to cover nuclear environmental damage. The electricity tariff will guarantee this coverage, thus being a service rendered by the state. The payment for this service will take place in the form of premiums to be paid by nuclear operators to the Spanish Energy Regulator (*Comisión Nacional de la Energía*). The concrete amount of the so called *nuclear environmental liability premiums* has not been determined yet; it will be established by the government upon the recommendation of the Ministry of Industry, Tourism and Trade.

Although the question of how to cover nuclear environmental liability has been addressed in this manner, other aspects of the revised liability conventions have not been implemented yet, e.g. the extension of prescription and extinction periods to 30 years for claims for personal damage. Therefore, it is important to stress that this amendment is a transitory regime until the revised Paris Convention and Brussels Supplementary Convention are fully implemented.

These provisions have been included in the act which amends, in a much wider frame, the Law of the Electricity Sector [Act 17/2007 of 4 July 2007, modifying Act 54/1997, of 27 November, of the Electricity Sector, to adapt it to Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 Concerning Common Rules for the Internal Market in Electricity and Repealing Directive 96/92/EC].

The first additional provision of this act amends Article 57 of the Nuclear Energy Act, Law 25/1964 (see *Nuclear Law Bulletin* No. 2) so that it will now read as follows:[11]

> "In the case of nuclear facilities, the coverage that may be demanded, in accordance with Article 55 of the present Law, shall be EUR 700 million. Nevertheless, the Ministry of Industry,

11. Unofficial translations provided by the Spanish correspondent.

Tourism and Trade may impose some other limit, of no less than EUR 30 million, in the case of the transport of nuclear substances or of any other activity whose risk does not require higher coverage in the opinion of the Nuclear Safety Council. These figures may be modified by the Government, on proposal by the Ministry of Industry, Tourism and Trade, in order to take into account the evolution of the international agreements subscribed by the Spanish State and the passing of time or variation in the consumer price index, in order to maintain the same level of coverage."

The second additional provision includes a new provision to the Nuclear Energy Act, Law 25/1964, worded as follows:

"Nuclear civil liability for environmental damage"

1. Without prejudice to what is set out in the present law in relation to the civil liability arising as a result of nuclear damage, the licensees of nuclear facilities and the transport of nuclear substances shall be responsible for whatever environmental damage of nuclear origin might arise within the national territory as a result of the accidental release of ionising radiations to the environment having their origin in such facilities or transport operations, such damage being understood as that defined in Section 3 of this additional provision. For this purpose, the said licensees shall avail themselves of coverage for risk to the sum of EUR 700 million, although the Ministry of Industry, Tourism and Trade may impose some other limit, of no less than EUR 30 million, in the case of the transport of nuclear substances or of any other activity whose risk does not require higher coverage in the opinion of the Nuclear Safety Council.

2. In order to address this responsibility, the said licensees shall deposit in the specific account of the National Energy Commission referred to in point 1.9 of Annex I of Royal Decree 2017/1997, of 26 December, an environmental liability premium in order for the electricity tariff to guarantee the coverage indicated in the previous section, which shall be independent from the coverage established in the first paragraph of article 57 of this law. The sum of this premium shall be established by the Government in response to a proposal from the Ministry of Industry, Tourism and Trade.

3. The damage established in the first section of this additional provision includes the following categories:

   a) the cost of the measures for restoration of the degraded environment, except in those cases in which such degradation is insignificant, if such measures have been effectively adopted or are to be adopted;

   b) the loss of profit directly relating to the use or enjoyment of the environment and resulting from significant degradation thereof;

   c) the cost of preventive measures and any loss or damage caused by such measures.

   For these purposes the following terms shall be understood as set out below:

   "*Restoration measures*"*:* all reasonable measures approved by the Ministry of the Environment, following a report from the Nuclear Safety Council, tending to restore or re-establish the elements of the environment damaged or destroyed or to introduce into the environment, whenever reasonable, the equivalent of such elements.

"*Preventive measures*"*:* all reasonable measures adopted by any person, in the wake of a nuclear accident or of any event creating a serious and imminent threat of nuclear damage, in order to prevent or reduce to a minimum the aforementioned nuclear damage, subject to approval by the Ministry of the Environment, following a report from the Nuclear Safety Council.

4. Claims against the licensees of facilities and transport operations for compensation for the damages established in Section 3 shall be made before the civil jurisdiction, the proceedings to be jointly directed against the National Energy Commission.

5. The right to claim for nuclear environmental damages shall expire if the corresponding action is not initiated within a period of 10 years as from the date on which the emission occurred.

6. The Government shall, within its realm of competence, issue whatever provisions might be required for the execution and enactment of what is established in the present additional provision."

Sweden

Organisation and structure

Decision on the Merger of Regulatory Authorities (2007)

The Swedish Government has decided that the Swedish Nuclear Power Inspectorate (SKI) and the Swedish Radiation Protection Authority (SSI) shall be merged into one authority, in charge of nuclear safety and radiation protection.

The Government has appointed Ms. Ann-Louise Eksborg as Chairman of the Government Commission that will investigate how the new authority shall be structured and organised. Ms. Eksborg will also be the Director General of the new authority. According to the government directives to the Commission, the new authority will commence its operation in July 2008, when SKI and SSI will be terminated.

A merger of SKI and SSI has been investigated a number of times over the years, but the previous governments have not concluded that the benefits of a merger would outweigh the possible downsides. The present Government has expressed a general desire to reduce the number of authorities and also concluded that there are substantial co-ordination benefits to gain from a merger of the two authorities.

Turkey

General Legislation

Law Concerning the Construction and Operation of Nuclear Power Plants and the Sale of Energy Generated from Those Plants (2007) (The text is reproduced in the annex to this chapter)

The act was adopted by the Turkish Parliament on 9 November 2007 and signed by the President on 21 November 2007. It is published in the Turkish Official Gazette No. 26707 of

21 November 2007. The aim of the law is to provide, within the energy plan and policy, the procedures and principles for the construction and operation of nuclear power plants and the sale of energy generated from those plants.

The law sets up steps and deadlines for the realisation of the nuclear power plant project. Within one month following the coming into force of the law, the Turkish Atomic Energy Authority (TAEK) shall publish the criteria which constructing and operating enterprises will have to fulfil. Two months after the day on which the law comes into effect, a decree with the procedures and principles regarding, *inter alia*, the:

- selection criteria of the competing enterprises;
- site selection and licensing conditions;
- incentives regarding the infrastructure;
- duration of the selection;
- fuel supply and generating capacity;
- amount, duration and cost of the energy;

shall be issued by the Ministry of Energy and Natural Resources with the approval of the Council of Ministers. Not later than a month after the publication of the regulation, the Turkish Electricity Trade and Contract Corporation (TETAŞ) shall call for tenders.

According to Section 5(4) of the law, the enterprise must obtain insurance for third party liability during the construction of the nuclear power plant for compensation of any damage. With respect of transport of nuclear fuel, radioactive material or radioactive waste and with regard to incidents that could occur at the nuclear installation, the 1960 Paris Convention on Nuclear Third Party Liability, its additional amendments and other national and international liability regimes shall apply.

The law provides that a public enterprise could also realise the nuclear installation, invest in similar projects abroad or participate in investments. For this purpose, the Council of Ministers can decide to establish a corporation, subject to private law, and entitled to establish, commission the establishment, operate and/or commission the operation and perform the sales of electricity. Private participation in the corporation will be permitted.

United States

General legislation

Final Rule Amending Regulations Applicable to the Licensing of New Nuclear Power Plants (2007)

On 28 August 2007, the Nuclear Regulatory Commission (NRC) issued a final Rule Amending its Regulations Applicable to the Licensing and Approval Processes for New Nuclear Power Plants.[12] Primarily, the revisions affected the NRC's "combined licensing" process contained in 10 CFR Part 52. The NRC originally issued its combined licensing regulation in 1989 to reform the NRC's

12. Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352 (28 August 2007).

licensing process for future nuclear power plants. The combined licensing process provides an alternative to the "two step" licensing process previously used by the NRC, through which an applicant would first apply for a construction permit and later for an operating licence. A combined licence (COL) authorises construction of the facility in a manner similar to a construction permit but also authorises the holder to operate the facility, subject to certain approvals, after construction is complete. The COL regulations require the applicant to specify in the application the inspections, tests, and analyses that the applicant must perform prior to being authorised to operate. The application must also specify acceptance criteria that are necessary to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the licence and the applicable regulations.

The regulations in 10 CFR Part 52 also contain provisions for the issuance of design certifications for standard nuclear reactor designs, which can be referenced in a COL application by any applicant intending to use that design at a site. Reliance on a design certification promotes standardisation and can aid the efficiency of the review process for a COL application. Part 52 also allows applicants to obtain early site permits, through which an early review of the environmental characteristics and site suitability can be obtained before a full commitment to construct a plant is made. The early site permit can be later referenced in a COL application.

The most recent revision to the rule reflects the NRC's continuing efforts to enhance the NRC's regulatory effectiveness and efficiency in implementing its licensing and approval processes. By mid-2007, the NRC had been informed that it might receive applications for about 32 new plants over the next few years.

Final Rule Implementing a National Source Tracking System (2006)

In November 2006, the Commission issued a final Rule Implementing a National Source Tracking System (NSTS) to enhance controls for certain radioactive materials used in industry, academia and medicine.[13] The tracking system is a secure web-based system to allow NRC licensees to record certain types of radioactive source transfers directly over the internet, and was developed through close co-operation with other federal and state agencies as part of the NRC's efforts to enhance controls over radioactive materials. The final rule closely follows recommendations of a joint NRC-Department of Energy report on Radiological Dispersion Devices (RDDs, or "dirty bombs") published in May 2003 and is based upon an interim database of radiological sources initiated in 2004 and currently in use by the NRC. The rule also implements provisions of the Energy Policy Act of 2005.[14]

The NSTS will apply to radioactive sources that fall in category 1 or category 2 of the International Atomic Energy Agency's "Code of Conduct for the Safety and Security of Radioactive Materials." There are an estimated 44 000 sources in these categories (considered to be of the greatest concern from a security standpoint) in approximately 16 000 devices in use in the United States. They are typically used in devices such as irradiators, radiography cameras, well-logging devices, Gamma Knife® surgical devices and radioisotope thermoelectric generators.

The final rule requires licensees to report to the NSTS the manufacture, transfer, receipt, disassembly and disposal of nationally tracked sources. Basic information to be collected will include

13. Final Rule, *National Source Tracking of Sealed Sources*, 71 Fed. Reg. 65,686 (8 November 2006).

14. See Pub. L. 109-58 § 651(d), 119 Stat. 594, 802 (2005).

the manufacturer, model number, serial number, radioactive material, activity and manufacture date of each source. Information on the facilities involved in any transaction will also be included.

Once fully operational, the NSTS will enhance the accountability of radioactive sources by helping the NRC and Agreement States (the 34 states that have been given authority by the NRC to regulate the medical, industrial and academic uses of radioactive material) conduct inspections and investigations, communicate nationally tracked source information to other government agencies and verify legitimate ownership and use of nationally tracked sources.

Final Rule on Design Basis Threat (2007)

In March 2007, the Commission issued a final Rule to Enhance its Security Regulations Governing the Design Basis Threat (DBT) applicable to all nuclear power plants and to certain materials licensees.[15] The NRC's DBT regulation provides a general description of the attributes of potential adversaries who might attempt to commit radiological sabotage or theft or diversion of strategic special nuclear material. Certain NRC licensees, including nuclear power plants, are required to use the DBT as the design basis for their physical protection systems. The revised rule modified and enhanced the DBT based on experience and insights gained by the Commission from its assessment of security requirements and implementation of security orders following the September 2001 terrorist attacks, as well as extensive consideration of 12 factors specified in the Energy Policy Act of 2005.[16]

The final rule provides a general description of the modes of attack, weaponry, capabilities and intentions of the adversary. It contains provisions related to multiple, co-ordinated groups of attackers, suicide attacks, active and passive insiders and cyber threats.

The revised DBT rule is the first of several planned security-related rules that will enhance the NRC's regime for the protection of nuclear power plants. Other rules being developed by the NRC include proposals to revise and update requirements for physical protection at existing and new reactors and proposals to establish how technical requirements, including those related to security, are to be examined in applications for NRC review of new reactor designs and operations.

15. Final Rule, Design Basis Threat, 72 Fed. Reg. 12, 705 (19 March 2007).

16. Pub. L. 109-58 §651(a), 119 Stat. 594, 799 (2005).