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Implementation status of Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations

Accompanying the document

REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

Implementation of Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations

{COM(2015) 573 final}

List of abbreviations

IAEA	International Atomic Energy Agency
IRRS	Integrated Regulatory Review Service (peer review of the national regulatory and organisational framework conducted under AIEA auspices)
NPP	Nuclear Power Plant (including all nuclear power units at one site)
WANO	World Association of Nuclear Operators
WENRA	Western European Nuclear Regulators Association

1. Preliminary remarks

This Staff Working Document contains background information used for drafting the report presented by the Commission pursuant to Article 9.2 of Directive 2009/71/Euratom ("the Directive")[1].

It is based on the information provided in the national reports transmitted by the Member States in 2014, in accordance with Article 9.1 of the Directive.

This document presents the main measures reported by the Member States as implementing the Directive. It does not aim at providing an exhaustive view on all activities performed by Member States nor does it constitute an evaluation of the transposition of the Directive in each Member State. Such an evaluation will be performed by the Commission, on the basis of the national provisions transposing Directive 2014/87/Euratom amending the 2009 Nuclear Safety Directive, once the transposition deadline has passed[2].

Although some Member States reported on all measures related to nuclear safety, including those implementing obligations arising from the amended Nuclear Safety Directive, this document only contains information on the measures taken in implementation of the obligations of Directive 2009/71/Euratom.

[1] Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations. OJ L 172, 2.7.2009, p. 18.

[2] 15 August 2017.

2. Situation in each Member State

2.1. Austria

Austria has no nuclear power plant. As a result of a public referendum in 1979, Austria follows a strict non-nuclear energy policy. There is one research reactor.

Legislative, regulatory and organisational framework

The main legal texts on nuclear safety is the Radiation Protection Act of 1969, which was last amended in 2013 as well as the corresponding ordinances on radiation protection and nuclear safety (e.g. the General Radiation Protection Ordinance) amended in 2012, which contain detailed provisions concerning radiation protection, installation safety, emergency preparedness and the handling of radioactive waste.

The Radiation Protection Act requires a licence for the operation of a nuclear research reactor and explicitly prohibits the construction or operation without appropriate licence. It provides for a system of nuclear safety supervision and corresponding enforcement actions.

The competent regulatory authority

For the single Austrian research reactor, the Federal Ministry of Science, Research and Economy is the competent regulatory authority.

Austria reported that this competent regulatory authority, including the commissioning of experts, is taken into account in the ministerial financial calculation.

Licence holders obligations

The Vienna University of Technology, which owns the TRIGA research reactor, gets its resources in the frame of the performance agreements that are signed every three years with the Federal Ministry of Science, Research and Economy. The financing of the performance agreement is supplied by the Federal Ministry of Finance. The University has to provide reserves for investments in the future, like for the decommissioning of the reactor after the reactor shutdown.

Expertise and skills in nuclear safety

Austrian regulations contain legal requirements concerning education and training of the staff of the operator. Austria reported that operational experience is collected and shared among the TRIGA reactors worldwide as well as through the IAEA to the international research reactor community.

Information to the public

Legally fixed rules pertain to the information of the public by the Federal Ministry of Science, Research and Economy.

2.2. Belgium

Belgium has 7 nuclear power reactors, 4 research reactors (one of which is being dismantled, another one has been definitively shut down) and 2 fuel cycle plants (one being dismantled).

Legislative, regulatory and organisational framework

The basic law on nuclear safety is the Law of 15 April 1994 on the protection of the public and the environment against the dangers of ionising radiation and on the Belgian Federal Agency for Nuclear Control. Several implementing decrees have been enacted, notably the Royal Decree of 20 July 2001, known as the General Regulations for the protection of the population, the workers and the environment against the dangers of ionising radiation and the Royal Decree of 30 November 2011 on the Safety requirements for nuclear installations[3].

The General regulations of 2001 prohibits operating a nuclear facility without a licence, describes the licensing and the supervision system, including inspections and enforcement in nuclear facilities.

Enforcement tools are provided in the Law of 15 April 1994 and several of its implementing regulations.

The maintenance and improvement of the national framework through the development of regulation and guides is reported to be one of the regulatory authority's core processes.

The competent regulatory authority

The Belgian regulatory authority for nuclear facilities is composed of the Federal Agency for Nuclear Control (FANC)[4] and its subsidiary body, Bel V. The major part of the safety assessments and on-site inspections related to nuclear facilities are delegated by the FANC to Bel V.

The FANC is supervised by the Federal Minister of Home Affairs via a Government Commissioner who attends the meetings of the Board of Directors. The members of the Board of Directors are appointed by Royal Decree, on the proposal of the Council of Ministers.

The staffing of the regulatory authority amounts up to more than 200 people.

The FANC is directly financed by the licensees by means of annual taxes, administrative fines and fixed fees paid for the delivery of administrative acts such as licences. The taxes and fees are defined by the Law of 1994 and by Royal Decree respectively. They are said to be regularly adapted to sustain the needs of the FANC.

Licence holders obligations

The national legislation expresses the prime responsibility of the operator for safety.

Operators are required by law to perform safety review of each nuclear facility every 10 years.

[3] This Decree introduced the WENRA reference levels for nuclear facilities.

[4] The FANC has been provided with its legal missions by the Law of 15 April 1994.

Belgium has included in its legislation the requirement for a nuclear power plant operator to implement Plant Specific Emergency Operating Procedures (EOPs) and Severe Accident Management guidelines (SAMGs).

Pursuant to regulatory obligations, an integrated management system giving priority to safety shall be established, implemented, assessed and improved on a continuous basis by the operator.

Expertise and skills in nuclear safety

In its national report, Belgium noted that when performing assessment tasks, the regulatory authority is confronted with evolving technology which requires that it develops new expertise. For this purpose, arrangements are in place to update the knowledge of the regulatory authority's staff in the field of R&D.

Information to the public

Belgium reported on the FANC's activities in the field of information. Relevant laws and regulations are published in the Belgian official journal, as well as notification of decisions.

International peer review of the national framework

In December 2013, an IRRS mission of the national regulatory framework was conducted.

2.3. Bulgaria

There are 2 nuclear reactors currently in operation in Bulgaria. In addition, 4 reactors have been shut down for decommissioning. One research reactor was shut down in 1989.

In 2012 the Bulgarian Government took the decision to build a new nuclear power unit.

Legislative, regulatory and organisational framework

The Act on the Safe Use of Nuclear Energy (ASUNE), adopted in 2002 and supplemented in 2010, provides for the legislative, regulatory and organisational framework for nuclear safety. In implementation of the ASUNE, 22 Regulations have been adopted.

The ASUNE establishes an authorisation licensing regime of issuing licences and permits. It assigns the regulatory authority the responsibility to carry out regulatory control over nuclear installations.

The Bulgarian regulatory authority maintains a programme for the review of the ASUNE implementing regulations. The programme includes review and update of existing regulations, as well as developing new ones. Operational experience, periodic safety reviews, science and technology development are taken into account.

The competent regulatory authority

The regulatory authority is the Nuclear Regulatory Agency (NRA) which is a legal person. Bulgaria reported that, as an independent regulatory body within the system of the executive power, the NRA Chairman reports directly to the Prime Minister. In addition, he shall inform the National Assembly on matters of nuclear safety when invited to do so.

The NRA submits annually its annual report to the Council of Ministers.

NRA's activities are financed from the State budget and revenues from collected fees.

Licence holders obligations

As reported by Bulgaria, the ASUNE, inter alia:

- requires the operators to perform an assessment of the nuclear safety of their nuclear facilities and to undertake actions and measures for their enhancement, taking into account the plant and the international experience, and scientific achievements in this area;

- specifies the requirements for emergency preparedness during operation of nuclear facilities;

- requests that activities which affect the safety of nuclear facilities are carried out by professionally qualified personnel.

Expertise and skills in nuclear safety

Pursuant to the ASUNE, persons who perform activities on using the nuclear energy are obliged to ensure personnel training as well as qualification improvement and control.

Information to the public

The NRA provides the public with information about the condition of the nuclear safety and radiation protection in normal operation, as well as in emergency situations. Information provided on its website is available in Bulgarian as well as in English.

In its report, Bulgaria highlighted the fact that communication between specialists and the general public is a challenge. For this purpose, NRA organises seminars for journalists training with representatives of the national media as well as public relation experts of stakeholders. In these seminars, the journalists become familiar with the terminology and innovations in nuclear technology and its applications which aims at improving the quality of media publications.

International peer review of the national framework

An IRRS evaluation of the regulatory activities in Bulgaria has been conducted in April 2013.

2.4. Cyprus

There are no nuclear reactors in Cyprus.

The main instruments in this field are the Protection from Ionising Radiation Laws of 2002 and 2009 amended by the Protection from Ionising Radiation and Nuclear Safety Law of 2011.

The Minister of Labour, Welfare and Social Insurance, acting through the Radiation Inspection and Control Service of the Department of Labour Inspection, is the regulatory authority in Cyprus for radiation protection and has the responsibility for the administration of relevant legislation and authorisation of all sources and practices involving risks of exposure to ionising radiation.

2.5. Croatia

Croatia has no nuclear reactors. However, State power utilities of Croatia and Slovenia constructed a nuclear power plant on the territory of the Republic of Slovenia. Presently, both States share the nuclear liability and the ownership of this plant. In March 2003, an intergovernmental agreement on the status, investment, use and dismantling of the plant was signed.

Nowadays, the Croatian regulatory body does not play any role related to this plant, the Slovenian regulatory body being in charge of the regulatory control.

The Act on ionising radiation is the Act on Radiological and Nuclear Safety of 2013, which founded the regulatory authority: the State Office for Radiological and Nuclear Safety (SORNS) The SORNS reports to the Government and the Director of SORNS is appointed by the Government. It is funded from the State budget only.

An IRRS mission is planned in Croatia in June 2015.

2.6. Czech Republic

There are 6 nuclear power reactors and 3 research reactors in the country.

Legislative, regulatory and organisational framework

The main legislative act in the area of nuclear safety is the Atomic Act No. 18 of 1997 which, inter alia, entrusts the State Office for Nuclear Safety (SÚJB) with regulatory powers in this field.

The current Atomic Act forbids operation of nuclear installations without a licence and provides for infringements actions.

A new Atomic Act and its implementing provisions are currently being prepared. As explained by the Czech Republic, this preparation is primarily driven by the need to supplement, specify and extend the existing legal regulations on the basis of experience obtained from seventeen-year application of the current Atomic Act.

The competent regulatory authority

The SÚJB was established as a central governmental body. It is responsible to the Government of the Czech Republic. Its chairperson is appointed by the Government and is

responsible for the execution of all the SÚJB duties stipulated by the Atomic Act directly to the Prime Minister.

According to the Czech Republic, the independence of the SÚJB as regards the regulatory decision making process is guaranteed by Article 14 of the Atomic Act where it is stipulated that the SÚJB proceeds in administrative proceedings independently from any other administrative bodies.

The number of staff at the SÚJB in 2013 was 201.

The SÚJB has its own chapter within the State budget. Approximately 60% of SÚJB budget comes from fees paid by the licence holders.

Licence holders obligations

As reported by the Czech Republic, pursuant to the Atomic Act:

- the responsibility for nuclear safety rests with licensees throughout the lifecycle of facilities and the duration of activities;

- the operator shall verify nuclear safety during all stages of the lifetime of the installation. It shall assess it in a systematic and comprehensive manner from the aspect of the current level of science and technology, and it shall ensure that the results of such assessments are transformed into practical measures. The safety assessment is reviewed by the SÚJB, both analytically and as part of its inspection activities.

The principle of priority to nuclear safety has been incorporated into the Atomic Act which establishes general conditions for the performance of activities related to the utilisation of nuclear energy.

The obligations of licence holders to provide for and maintain adequate financial and human resources to fulfil their obligations with respect to nuclear safety of a nuclear installation are set down in the Atomic Act.

Expertise and skills in nuclear safety

Pursuant to the Atomic Act, nuclear operators must entrust performance of the specified activities only to such persons who fulfil conditions of special professional competence and are physically and mentally sound.

The licensee is also obliged to provide a system of training and verification of competence of personnel in accordance with the importance of the work they perform.

Information to the public

Act No. 106/1999 on Free Access to Information, as amended, sets the rules for the provision of information and further regulates the terms of the right to free access to information. The Act has been incorporated in an internal regulation of the SÚJB.

Pursuant to this Act, all bodies of the State administration, including the SÚJB, provide information related to their competencies.

International peer review of the national framework

The IAEA conducted an IRRS mission to review the regulatory framework for nuclear safety in the Czech Republic in November 2013.

2.7. Denmark

There are no nuclear power reactor in Denmark. One research reactor is under decommissioning and two research reactors have been fully decommissioned.

Legislative, regulatory and organisational framework

The Danish legislative, regulatory and organisational framework for nuclear safety is based on Act No. 170 of 16 May 1962 on Nuclear Installations and on Circular Letter of 21 December 2011 from the Minister of Health and Prevention to the Nuclear Regulatory Authorities.

The competent regulatory authority

The competent nuclear regulatory authorities are the National Institute of Radiation Protection under the Danish Health and Medicines Authority and the Nuclear Division of the Danish Emergency Management Agency.

Administratively, the National Institute of Radiation Protection is an agency under the Ministry of Health and Prevention while the Nuclear Division of the Danish Emergency Management Agency is an agency under the Ministry of Defence.

The operator responsible for the current decommissioning is an entity under the Ministry of Higher Education and Science.

Licence holder obligations and expertise and skills in nuclear safety

Under Act No. 170 of 16 May 1962 on Nuclear Installations, construction and operation of nuclear installations are subject to authorisation from the Minister of Health and Prevention.

Requirements regarding competences and training of the operator are stipulated in regulations.

Information to the public

As reported by Denmark, pursuant to the above-mentioned Circular Letter of 2011, the nuclear regulatory authorities provide relevant information of importance to nuclear safety.

2.8. Estonia

There are no nuclear power reactor in Estonia. However, there is a Soviet Union former military nuclear submarine training centre in a decommissioning state. Based on the agreement between the Republic of Estonia and the Russian Federation, the reactors were defueled in 1994 and the spent nuclear fuel was shipped to Russia. Estonia has never used this centre as a military facility. Therefore, the facility has been considered as falling within the scope of the Directive.

Legislative, regulatory and organisational framework and competent regulatory authority

The main legal document in the field of radiation safety in Estonia is the Radiation Act of 2004, amended in 2011.

Pursuant to the Radiation Act, the performance of activities related to the field of radiation safety is managed by the Ministry of the Environment within the limits of its competence through the Environmental Inspectorate and the Environmental Board.

International peer review of the national framework

An application to receive an IRRS mission has been sent to the IAEA. Estonia is envisaging hosting such a mission in 2016.

2.9. Finland

There are 4 nuclear power reactors in Finland. There is also an EPR unit under construction. In May 2010, the Government granted two Decisions-in-Principle for new reactors, which were ratified by Parliament. The related programme is on-going.

There is one research reactor for which decommissioning activities have started.

Legislative, regulatory and organisational framework

The Finnish nuclear safety legislation is based on the Nuclear Energy Act originally from 1987. The Act has been amended more than 20 times, notably in 2011.

Recent amendments to the Nuclear Energy Act included:

- the licensee's responsibility to provide adequate training for staff having responsibilities relating to the nuclear safety;
- the prohibition to delegate the licensee's responsibility of nuclear safety;
- the Ministry of Employment and the Economy's responsibility to arrange periodic self-assessments and invite an international peer review.

The Act provides for the rights and responsibilities of the Finnish nuclear safety authority. It also defines the enforcement system and rules for suspension, modification or revocation of a licence.

Pursuant to the Act, the safety of nuclear energy use shall be maintained at as high a level as practically possible. For the further development of safety, measures shall be implemented that can be considered justified considering operating experience and safety research and advances in science and technology.

Finland reported that the safety authority regularly updates the regulatory guides, taking into account advances in science and technology, results of safety research, analysis of operational experience, international guidance such as IAEA standards and WENRA reference levels for existing reactors and safety objectives for new reactors, as well as lessons learnt from the Fukushima accident.

The competent regulatory authority

The Radiation and Nuclear Safety Authority (STUK) has been established as an independent governmental organisation for nuclear safety. STUK is placed under the Ministry of Social Affairs and Health.

Finland made clear that no ministry can take for its decision-making a matter that has been defined by law to be on the responsibility of STUK and that STUK has no responsibilities or duties which would be in conflict with regulatory control.

Amendments to the Nuclear Energy Act and the Radiation Act have been prepared.

The resources of STUK have been increased to meet the needs to oversee the construction of the new nuclear power plant unit in Finland.

At the end of 2013, the total number of staff at STUK was 347 and in the department of Nuclear Reactor Regulation 113. New personnel have been recruited since 2003, mainly for the safety review and assessment and inspection activities related to the reactor under construction.

STUK receives about 33% of its financial resources through the Government budget. However, the costs of regulatory oversight are charged in full to the licensees who pay the regulatory oversight fees directly to STUK.

Licence holders obligations

The responsibility for nuclear safety rests with the licensee as prescribed in the Nuclear Energy Act.

It is the responsibility of the regulatory body to verify that the licensees fulfil the regulations. This verification is carried out through continuous oversight, safety review and assessment as well as inspection programmes established by STUK.

According to Government Decree n°717/2013 on the Safety of Nuclear Power Plants, several independent defence levels have to be provided in the design of a nuclear power plant. Moreover, regulations concerning emergency preparedness and response arrangements at the powers plants are provided for in the Nuclear Energy Act and implementing Decrees.

In addition, the Nuclear Energy Act and Government Decree n°717/2013 state that when designing, constructing, operating and decommissioning a nuclear power plant, a good safety culture must be maintained by making sure that the decisions and activities of the entire organisation reflect commitment to safety. Licensees have to ensure that these requirements are applied in all organisations that participate in safety significant activities.

The Nuclear Energy Act also defines as a condition for granting a construction or operating licence that the applicant has sufficient financial resources, necessary expertise and, in particular, that the operating organisation and the competence of the operating staff are appropriate. The financial preconditions are primarily assessed by authorities other than STUK, mainly by the Ministry of Employment and the Economy.

Expertise and skills in nuclear safety

As underlined by Finland, the plans for new nuclear reactor construction projects require additional resources for the nuclear power utilities and the regulatory body as well as from technical support organisations. Therefore, Finland stated that "*ensuring an adequate national supply of experts in nuclear science and technology and ensuring high quality research infrastructure are continuous challenges*". It reported that during 2010-2012, a committee set up by the Ministry of Employment and the Economy worked on a report aiming at giving recommendations and steps to be taken until the 2020's for ensuring competence and resources needed for the nuclear sector. In addition, the Ministry of Employment and the

Economy set up at the end of January 2013 a working group to prepare a research and development strategy. This report was published by the Ministry at the end of April 2014.

Information to the public

Finland described activities performed by STUK to inform public and interested stakeholders about the risks related to radiation and use of nuclear energy, safety requirements, the roles and responsibilities of STUK, current activities and operating experience, significant regulatory decisions taken, and safety research.

STUK web pages can be found in Finnish, Swedish and English. STUK has also made itself available in social media (facebook, twitter and YouTube).

International peer review of the national framework

As stated above, an IRRS mission was carried out in October 2012 and STUK has developed its action plan for improvement on the basis of the IRRS mission results and the self-assessment. A follow-up mission will be conducted in June 2015.

2.10. France

France has 58 nuclear power reactors as well as one under construction, 7 research reactors and a complete set of fuel-cycle plants.

Legislative, regulatory and organisational framework

The main legal instruments on nuclear safety is the Act No. 2006-686 of 13 June 2006 on Transparency and Security in the Nuclear Field (the "TSN Act"), now codified in the Environment Code and implementing decrees, in particular Decrees Nos 2007-830 of 11 May 2007 (the 'Basic Nuclear Installations -BNI- Nomenclature' Decree) and 2007-1557 of 2 November 2007 (the 'BNI Procedures' Decree). Moreover, significant technical changes were also introduced by the Order of 7 February 2012 laying down the general rules applicable to BNI (the "BNI Order").

French legislation and regulatory provisions prohibit the operation of a BNI without a licence and provides that the regulatory authority is to ensure the monitoring of compliance with the general rules and specific requirements in relation to nuclear safety. In the event of an established breach, French law provides for coercive measures and administrative penalties.

As regards the maintenance and improvement of the national framework, France reported that the BNI Order of 7 February 2012 is a key element. Detailed provisions pertaining to that order will be laid down by some fifteen regulatory decisions, six of which have been adopted. France indicated that the new French regulations incorporate the reference levels of WENRA and that the new regulatory provisions take into account the experience acquired as part of the operation of the installations.

The competent regulatory authority

The competent regulatory authority for nuclear safety is the Nuclear Safety Authority (ASN), which has been established by Law No 2006-686 of 13 June 2006 as an independent administrative authority.

The ASN is managed by a college composed of five commissioners. Three of them, including the president, are appointed by the President of the Republic. The two other commissioners are appointed by the President of the National Assembly and the President of the Senate respectively. A Commissioner may be removed from his functions if he is prevented from performing his duties or resigns from his position, as determined by the college acting on the basis of the majority of commissioners. The President of the Republic may also remove a member of the college from his functions in the event of a serious breach of his duties.

As at 31 December 2013, the total number of ASN employees was 478.

All the personnel and operational resources contributing to the performance of the tasks entrusted to the ASN come from the general State budget.

Licence holders obligations

The principle of the prime responsibility of the operator is contained in French Law.

France reported that over the course of the operation, installations' safety assessments and checks are carried out continuously. In addition, operators are required by law to conduct periodic safety reviews every 10 years.

The General Operating Rules pertaining to a nuclear installation include the operating procedures in the event of an incident or accident, the purpose of which is to return the installation to a safe condition or to mitigate the consequences of the accident.

The operator of a nuclear installation is required to prepare an internal emergency plan.

As reported by France, the application of the defence-in-depth principle involves taking account of the occurrence of serious accidents that are very unlikely when drawing up the emergency plans, so as to define the measures necessary to protect the site staff and the general public and to manage the accident at the site.

The above-mentioned BNI Order requires operators to establish an integrated safety management system which enables safety to be maintained and continuously improved, in particular during the operation of nuclear installations. That management system is used to ensure, inter alia, that the nuclear-safety-related requirements are systematically taken into account every time a decision is taken regarding the installation.

As required by law, when delivering a licence to construct a nuclear installation, the technical and financial capacities of the operator are to be taken into account. Those capacities must enable the operator to carry out its responsibilities, including the ability to cover the costs of the decommissioning and of the rehabilitation, monitoring and maintenance of its site. The legal arrangements require nuclear operators to make a prudent assessment of the cost for decommissioning their installations. They must also estimate the costs of managing their spent fuel and their radioactive waste. Nuclear operators submit three-yearly reports and annual updates to the French authorities.

Expertise and skills in nuclear safety

France reported that the social, organisational and human factors (SOHF), defined as all work-related and organisational factors which will have an impact on the activity of the operators, are of crucial significance to safety and must be taken into account throughout the lifetime of a nuclear installation.

As indicated in the report, the monitoring of SOHF by the ASN is primarily based on the control of the actions adopted by the operator to improve the integration of SOHF into all stages of the lifecycle of an installation.

Information to the public

The TSN Act significantly extended the scope of the provisions governing information to the public.

The Act requires all nuclear operators to produce an annual report covering, inter alia, the arrangements made in relation to safety and radiation protection. It assigns to the ASN the task of providing information to the public within its areas of competence. It also established the HCTISN (*Haut Comité pour la Transparence et l'Information sur la sûreté nucléaire*), a national forum for information, discussion and debate on nuclear activities, their safety and their impact on public health and the environment. The Act also broadened the use of Local Information Committees which have been established for each major nuclear installation; those committees have a general role of monitoring, providing information and debate in matters of nuclear safety, radiation protection and the impact of nuclear activities on people and the environment. The HCTISN and these committees are pluralist bodies in which the stakeholders are represented.

It is indicated in the report that in France, every inspection is followed within 21 days by a follow-up letter which is made public on the ASN's website.

France reported having made its report on the implementation of the Nuclear Safety Directive publicly available, although this was not requested.

International peer review of the national framework

The French national framework and the ASN have been reviewed through an IRRS mission in 2006 and 2014.

2.11. Germany

Germany has 8 nuclear power reactors, 3 research reactors, 4 small training reactors as well as fuel cycle facilities. The phasing out of the nuclear programme in Germany has been decided.

Legislative, regulatory and organisational framework

As reported by Germany, the nuclear legislative framework was established in the 1970s and is constantly being developed.

The framework conditions for legislative and administrative powers in general are stipulated in the Constitution (Basic Law/GG). The Atomic Energy Act (the "AtG") provides the legal framework for the use of nuclear energy and the safe operation of all nuclear installations in Germany. In addition to the general provisions of the Atomic Energy Act, several ordinances stipulate more detailed rules. Technical details are established in a system of guidelines, technical standards and requirements.

The licensing of nuclear installations is governed by the AtG.

Nuclear safety supervision is organised in the context of a federal State, notably on the basis

of the AtG.

According to the AtG, the competent licensing authority and safety regulator may decree that the operator of a nuclear installation should rectify a situation which contravenes the specifications of the AtG, the nuclear regulations, the provisions of the licence or a condition imposed subsequently or which may lead to dangers for life, health or property.

Germany reported that the Federal and Länder authorities responsible for drawing up the legislative framework shall revise and, if necessary, update the regulations. To this end, the international state of the art of science and technology is monitored by the Federal regulatory authority (BMUB) by taking part in international committees and evaluating the results of the work of relevant international, multilateral and bilateral committees and institutions, based on the results of research programmes sponsored by the BMUB and a variety of specialist international contacts and specialist international literature.

Furthermore, it is indicated that operating experience is analysed by the Federal Government and the Länder so that the resulting findings can be utilised. This is achieved by evaluating all national and relevant international events.

The competent regulatory authority

In Germany, the regulatory authority is composed of entities within the Federal Government and Länder authorities.

On the federal level the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and the Federal Office for Radiation Protection (BfS) are the entities in charge.

Licensing and regulatory duties at Land level are performed by the highest Land authorities, i.e. by the Länder ministries. Some individual tasks are also performed by subordinate authorities. The ministries' responsibilities in the individual Länder are laid down by statutory regulations issued by the respective Land Government.

As regards the independence of the regulatory authority, Germany indicated that at Federal level, all decisions relating to nuclear safety are made by the BMUB while the Federal Ministry for Economic Affairs and Energy is responsible for energy policy, thus guaranteeing a clear delineation. Germany also stated that at Länder level, the separation principle is taken into account by the organisational precautions taken by the individual Länder. Effective separation of the bodies responsible for regulation and licensing from other bodies that are concerned with the economic interests relating to the peaceful use of nuclear energy guarantees that different ministries are responsible for the respective tasks. It is also reported that the BMUB monitors the legality and fitness for purpose of the administrative actions of the competent Länder authorities.

According to the Federal Budget, the BMUB has access to approximately €23 million a year for studies in the field of reactor safety. Additional budget resources are also used to finance the activities of the advisory committees and to cover the cost of external experts participating in international cooperation work.

As a general rule, charges are made for issuing licences for nuclear installations and for regulatory activities by the Länder. The costs are paid to the General Treasury Department in the Land in question by the licence holder.

Licence holders obligations

The AtG stipulates that the holder of the licence for the nuclear installation is responsible for nuclear safety and that this responsibility cannot be delegated.

Under the terms of the licence, the licence holder is legally obliged to prove by regular periodic inspections that plant features which are important for the safety of the plant and safety and barrier functions are in place and that the quality and effectiveness of safety-related measures and equipment is guaranteed. In addition, in accordance with the AtG, comprehensive safety reviews are performed periodically, on a ten-yearly basis, in operational commercial nuclear power plants.

Pursuant to the AtG, the necessary precautions to prevent damage during construction and operation of nuclear installations must be taken in the light of the state of the art in science and technology. In the case of damage precautions, this entails the concept of graduated safety precautions on the basis of the defence in depth concept. Beyond preventive measures, mitigating actions are also provided for.

The AtG as well as implementing regulation require the operator to set up and apply a management system granting due priority to nuclear safety.

As regards the necessary resources of the operator, according to the AtG, a licence to construct, operate or make a substantial modification to a nuclear power plant may only be granted if there are no doubts as to the reliability of the applicant which includes the necessary financial standing and economic credibility of the applicant.

According to the AtG, the operator is required to provide and maintain permanent appropriate financial and staff resources to fulfil its obligations concerning nuclear safety of a nuclear installation.

Expertise and skills in nuclear safety

In accordance with the AtG, the plant operator must prove to the licensing authority that he permanently maintains an adequate number of qualified staff to operate his plant and is required to train his staff.

Germany reported that, as far as the regulatory authority is concerned, in addition to the safety regulators' in-house official training and further training programme offered by the Federal Academy for Public Administration, the safety regulators' staff has access to the same training opportunities as the plant operating staff, as a general rule.

Information to the public

Among the public information activities performed by the BMUB, it is reported that the Federal regulatory authority informs the general public in all matters relating to developing national, international regulations and risks. It is stated in the report that the draft regulations are published in the Federal Gazette, along with a timescale for comments. All laws, regulations and the entire set of subordinate nuclear regulations can be accessed by the public on-line or by publication in the Federal Gazette. The Safety Requirements for Nuclear Power Plants are also published in English along with regulations.

Germany reported having made its report publicly available, although this was not requested.

International peer review of the national framework

Germany hosted an IRRS in 2008.

2.12. Greece

Greece has no nuclear power reactor but one research reactor which is shutdown.

Legislative, regulatory and organisational framework

Presidential Decree 60/03.05.2012 ("PD 60") is the legislative document of the highest level for nuclear safety of nuclear installations. A Ministerial Decision on "Basic requirements-principled of nuclear safety and regulatory supervision of research reactors" was issued in October 2012 to specify the safety requirements, and the licensing and regulatory supervision system for research reactors.

On the basis of PD 60, the Greek Atomic Energy Commission (EEAE) is responsible for the implementation of the licensing systems for nuclear installations and for the prohibition of operation without a licence. EEAE has the authority to modify, revoke or suspend a licence or make a relevant proposal to the Minister. It is responsible for proposing actions for maintaining and improving the national framework for nuclear safety of nuclear installations.

The competent regulatory authority

The jurisdiction for EEAE Board appointment is given to the Minister of Education. Nevertheless, it is reported that EEAE is an autonomous public organisation, with no supervision by this Minister on its regulatory decisions.

It is explicitly stated in PD 60 that EEAE shall be functionally separated from any other body or organisation concerned with the promotion or utilisation of nuclear energy, including electricity production.

According to PD 60, EEAE has legal powers and human and financial resources necessary to fulfil its responsibilities. The staff of EEAE is currently 74.

EEAE is financially supported by two sources: the governmental budget and a special account whose revenues come from fees, provision of services and research projects.

Licence holders obligations

According to PD 60:

- the prime responsibility for nuclear safety of a nuclear installation rests with the licence holder and this responsibility cannot be delegated;
- that licence holders, under the supervision of EEAE, shall assess and verify regularly, and continuously improve the nuclear safety or their installations, in a systematic and verifiable manner;
- Licence holders of nuclear installation shall establish and implement a management system that gives priority to safety;
- licence holders of nuclear installations shall maintain adequate human and financial resources.

Expertise and skills in nuclear safety

Greece reported that the requirements regarding expertise and skills of research reactor staff are included in the legislation. It is also required that EEAE shall have the human and financial resources required to fulfil its responsibilities in relation to nuclear safety.

Information to the public

Pursuant to PD 60, EEAE provides information on nuclear safety issues to the workers and the public.

EEAE has established communication mechanisms, in order to inform interested parties about its decisions and actions. The language mainly used for all kinds of information activities is Greek. However, information is available also in English.

International peer review of the national framework

An IRRS mission was conducted in Greece in 2012.

2.13. Hungary

Hungary has 4 nuclear power reactors, a research reactor and a training reactor.

The Government of Hungary and the Government of the Russian Federation have entered into an agreement on cooperation in the maintenance and development of the capacity of the Paks power plant, including the design, construction, commissioning and decommissioning of two new units to replace the capacities of Units 1 to 4 to be shut down in the future.

Legislative, regulatory and organisational framework

Nuclear energy is regulated on the basis of Act CXVI of 1996 on atomic energy (the "Act") as well as Government Decree 112/2011 (VII. 4) on the scope of activities of the Hungarian Atomic Energy Authority (HAEA) and Governmental Decree 118/2011 (VII.11.) on the nuclear safety requirements for nuclear facilities and the procedures of the HAEA in nuclear safety regulatory matters.

Pursuant to the legislation in force, regulatory licences are required for all phases of the service life of the nuclear power plant.

The Act allows the nuclear energy supervisory body to oblige the licence holder to pay a fine for infringing any legislation or safety regulation and for failing to comply with the specifications of standards obligatorily applicable on the basis of the orders of the authority or an individual regulatory licence issued on the basis of the foregoing.

The Act makes it mandatory to regularly review and update the legislation and the safety requirements, taking into consideration state-of-the-art science and technology and international experiences. Moreover, pursuant to Government Decree 118/2011, nuclear safety codes shall be reviewed at least every five years and shall be updated, as required, by taking into consideration scientific results and domestic and international experience. The guidelines shall be reviewed at the intervals specified by the nuclear safety authority or, on the recommendation of the licence holders, urgently.

The competent regulatory authority

The nuclear safety regulator in Hungary is the Hungarian Atomic Energy Authority (HAEA), which is a government office whose responsibilities are specified in the Act and Government Decree 112/2011.

The Minister for National Development oversees the lawfulness of the operations of the HAEA. However, Hungary reported that, on the merits, the decisions of the HAEA may not be altered by any supervisory powers. The head of HAEA is appointed by the Prime Minister.

As regards resources, the actual HAEA staff dealing with nuclear installation is 40, while the total HAEA headcount permitted by Government is 80.

Supervisory fees account for the greatest part of the revenues of the HAEA, which are paid by nuclear installations being established and operated.

Licence holders obligations

The Atomic Energy Act makes the licence holder primarily responsible for the safe application of nuclear energy and the fulfilment of safety requirements.

Pursuant to the Act, the licence holder has to comprehensively analyse and evaluate the nuclear safety of its nuclear installation.

Periodic Safety Review have to be carried out every 10 years.

Pursuant to the Act, the user of nuclear energy is obliged to use its best endeavours to prevent nuclear or radiation accidents and to mitigate their consequences. The release of radioactive materials or radiation into the environment has to be avoided by applying defence in depth, and it has to be ensured that accidents resulting in significant radiation damage as a result of failures or their combination can occur only with an appropriately low probability.

As stated in Government Decree 118/2011, in order to maintain defence in depth, the licence holder shall operate an efficient management system. Its management shall be firmly committed to nuclear safety and to maintaining a strong safety culture.

As regards its resources, on the basis of the Act, the licence holder is obliged to provide the technical, technological and personal conditions for the safe application of nuclear energy and the maintenance and development of safety and to continuously monitor the radiation conditions in accordance with the latest verified results of science and international requirements and experience.

Expertise and skills in nuclear safety

The statutory background for the training requirements of the personnel of nuclear installations is provided by the Atomic Energy Act, Government Decree 118/2011 and Decree 55/2012 of the Minister for National Development on special professional and in-service training of employees of nuclear installations.

Hungary reported on the establishment of a system of safety indicators to measure, inter alia, the performance of the human and organisational factors in nuclear safety as well as the existence of a maintenance practise centre which include full scale main primary equipment as well as training mock-ups.

Information to the public

As indicated by Hungary, the purpose of the information activities of the HAEA is to facilitate and ensure the accurate and quick provision of information to the public and accessibility to the data of public interest.

The 2013 amendment of the Atomic Energy Act prescribes that the authority is obliged to hold public hearings in connection with all licensing procedures described in the Act.

International peer review of the national framework

An IRRS mission is planned in Hungary in May 2015.

2.14. Ireland

Ireland does not have any nuclear reactor.

The main legislative framework governing nuclear safety and radiation protection in Ireland is the Radiological Protection Act 1991, as amended by Section 26 of the Energy Act, 1995 and by the Radiological Protection Act 2002.

Ireland reported that the Radiological Protection Institute of Ireland (RPII) is an independent public body under the aegis of the Department of Environment, Community and Local Government. It was established by the Radiological Protection Act 1991 which assigned it a range of functions, including to carry out a licensing system relating to the custody, use, manufacture, importation, distribution, transportation, exportation or other disposal of radioactive substances, nuclear devices or irradiating apparatus. The Radiological Protection Bill 2014 provides for the dissolution of the Radiological Protection Institute of Ireland, RPII, and the transfer of its functions to the Environmental Protection Agency.

The RPII's income is made up of a grant from the Exchequer and earnings from licence charges and commercial measurement services.

Under the Radiological Protection Act, 1991, the RPII is required to provide information to the public on any matters relating to radiological safety which the Institute deems fit.

Ireland requested an IRRS of its regulatory framework for August 2015.

2.15. Italy

Italy has 4 nuclear power reactors in decommissioning or pre-decommissioning phase. Italy has also 5 research reactors in operation, one under decommissioning and 3 ones shut down without fuel. It has also nuclear fuel fabrication as well as reprocessing facilities in decommissioning or pre-decommissioning phase.

Legislative, regulatory and organisational framework

The requirements on nuclear safety are notably established in Act n° 1860/1962 and in Legislative Decree n° 230/1995 and subsequent amendments, notably Legislative Decree n° 185/2011.

Act n° 1860/1962 establishes that the operation of nuclear installations is authorised by the Minister of Industry (now Minister of Economic Development).

As regards the current status of most of the nuclear installations, the decommissioning licensing procedure is described in Legislative Decree n° 230/1995. The decommissioning of a nuclear installation is subject to prior authorisation by the Minister of Economic Development in accordance with Minister of Environment, Land and Sea Protection (from now on Minister of Environment), Minister of Interior, Minister of Labour and Social Policy, Minister of Health and the Region concerned, as well as relevant local authorities.

Italy reported that during the nuclear installations lifetime, regulatory inspections on the sites are regularly conducted, aiming at verifying compliance with rules established in Legislative Decree n° 230/1995 and with technical specifications and conditions which are part of the licence.

Enforcement of applicable regulations and of licence conditions is ensured on the basis of the sanction system as established by Act n° 1860/1962 and Legislative Decree n° 230/1995.

As indicated by Italy, Legislative Decree n° 230/1995 defines the procedure for the issue of further decrees that are required for updating the conditions of applicability of the same decree, taking into account the technical developments and the directives and recommendations of the European Union.

The competent regulatory authority

ISPRA is the competent regulatory authority for technical regulation, control and supervision in the field of nuclear safety of nuclear installations.

A new competent regulatory authority in the field of nuclear safety and radiation protection, named National Inspectorate for Nuclear Safety and Radiation Protection (ISIN), to be set up based upon structures of Nuclear Department of ISPRA, was established by the Legislative Decree n° 45/2014. This Decree states that ISIN will have regulatory, managerial and administrative autonomy and will be independent from any entity involved in the promotion or utilisation of nuclear energy and not subject to the supervision of any minister.

The financial resources for ISIN ordinary activities will consist of the resources currently allocated to the Nuclear, Technological and Industrial Risk Department of ISPRA, and resources arising from the fees that the ISIN is authorised to collect from the licence holders.

As regards human resources, Italy underlined that particular attention will be given on the recruitment of new personnel, also to cope with the personnel retirements and the expected increase of regulatory activity on spent fuel and radioactive waste management as well as decommissioning.

Licence holders obligations

Legislative Decree n° 230/1995, as amended by Legislative Decree n° 185/2011, made explicit that the holder of a licence has the prime responsibility for the safety of nuclear installations and that this responsibility cannot be delegated.

Legislative Decree n° 230/1995 and subsequent amendments requires that licence holders regularly assess and verify the nuclear safety of existing installations. A systematic review of the plant status, with regard to nuclear safety, is requested to be provided in the application for the decommissioning licence. For research reactors a periodic review is foreseen every 5 years.

Emergency planning at nuclear installations is regulated by Legislative Decree n° 230/1995 and subsequent amendments.

The principle of priority to safety is addressed in the Legislative Decree n° 185/2011.

On the basis of Act n° 1860/1962, Italian legislation required that the applicant for an authorisation related to a nuclear installation must demonstrate adequate technical and financial capacity. Legislative Decree n° 230/1995 set up specific requirements for the licence holder to provide adequate financial and human resources in order to properly

discharge its responsibility for safety. Italy indicated that, as all Italian nuclear installations are public owned or financed, the financial resources to fulfil the nuclear safety requirements are guaranteed by the State.

Expertise and skills in nuclear safety

Legislative Decree n° 230/1995 sets up requirements for the licence holder to maintain and enhance the experience and expertise of its staff who have responsibility in the field of nuclear safety and in the management of spent fuel and radioactive waste, through appropriate trainings.

Information to the public

Pursuant to Legislative Decree March n° 230/1995, the competent regulatory authority takes the necessary actions to make available to the general public and workers information on the regulation of nuclear safety and provides to publish on its website the results of its performed regulatory activity and all useful information in its fields of competence. For instance, the Minister of Environment has developed a dedicated portal on Environmental Impact Assessments, also available in English.

In addition, Italy reported that information is regularly provided to stakeholders in the context of periodic public meeting (Transparency Tables) organised by the Regions concerned.

International peer review of the national framework

An IRRS mission is foreseen to be carried out in 2016.

2.16. Latvia

Latvia has no nuclear power reactor but has a research reactor, which is under decommissioning.

Legislative, regulatory and organisational framework

In 2000, the Law on Radiation Safety and Nuclear Safety (the "Law") establishing a regulatory framework in the field of radiation safety and nuclear safety was adopted. On the basis of the Law, Cabinet regulations have been issued which establish a general legislative and institutional framework in the field of radiation safety and nuclear safety.

The Law, inter alia, stipulates the powers of the regulatory authority to ban operations with sources of ionising radiation if the legal provisions in the field of radiation safety and nuclear safety are violated.

The competent regulatory authority

Pursuant to the Law, in 2001, the Radiation Safety Centre (the "Centre") was established as the regulatory authority in the field of radiation safety and nuclear safety.

After the amendments of 12 June 2009 to the Law and the Cabinet of Ministers Order No 339 of 28 May 2009, the Centre has been included, as of 1 July 2009, in the organisational

structure of the State Environmental Service, an administration under the supervision of the Ministry of Environmental Protection and Regional Development.

The Centre's budget consists of a grant from the State budget funds.
In the report submitted to the Commission, it is indicated that "Latvia's priority is to solve the issue of the liquidation of the Salaspils Nuclear Reactor, as well as to solve issues related to the involvement of qualified employees, increasing financial resources and capacity building of the Centre".

Licence holders' obligations, expertise and skills in nuclear safety

Latvia reported that the operator's responsibility is stipulated in the Law.

Pursuant to Cabinet Regulation No 723 and Cabinet Regulation No 149 of 9 April 2002, in order to obtain a licence, an operator has to develop a quality assurance programme for radiation safety and nuclear safety. Pursuant to Cabinet Regulation No 149, in order to implement the requirements laid down in the quality assurance programme, the operator provides for the necessary financial resources for taking protection measures and regularly performs inventory of the material resources, and ensures regular training of its employees.

Requirements regarding expertise and skills in nuclear safety are stipulated in the Law and the Cabinet regulations arising from the Law.

Information to the public

The Law stipulates requirements for the provision of information.

Latvia reported on information activities, stressing that special attention is paid to the population living in the vicinity of an installation.

Pursuant to the above-mentioned Cabinet of Ministers Regulations No 149, the Centre must promote the education of residents in relation with radiation safety and nuclear safety issues and distribute information on the latest findings in the field of radiation safety and nuclear safety.

2.17. Lithuania

Lithuania has 2 nuclear power reactors which are both closed. Decontamination and dismantling activities are in progress.

There is also a waste storage facility which was closed in 1989 and is under a post-closure surveillance licence.

In the vicinity of the plant, there is an interim spent nuclear fuel storage facility and a cemented radioactive waste storage facility. Facilities for spent fuel storage, treatment of waste and waste repository are under implementation.

Proceedings for the construction of a new nuclear power plant are on -going.

Legislative, regulatory and organisational framework

The main legal documents associated with nuclear safety in Lithuania are the Law on Nuclear Energy and the Law on Nuclear Safety.

These laws establish the licensing system for activities related to nuclear safety of nuclear installations.

The Law on Nuclear Safety mandates the regulatory authority to set basic nuclear safety requirements, entrusts it with supervision functions and empowers it to impose following administrative enforcement measures. This law mandates the regulator to create, maintain and improve the State regulatory and supervision system for nuclear safety, including preparation of relevant nuclear safety requirements.

Lithuania underlined that when drafting nuclear safety requirements, advanced practice of foreign countries, recommendations of IAEA and other international organisations or institutions are taken into account.

The competent regulatory authority

The State Nuclear Power Safety Inspectorate (VATESI) regulates nuclear safety.

Lithuania indicated that the national legislation provides clear division between the responsibilities and functions of VATESI and those organisations or bodies engaged in development or promotion of the nuclear energy or use of nuclear energy.

As reported, VATESI acts as independent governmental institution subordinated directly to the President and the Government.

Pursuant to the Law on Nuclear Energy, the Head and Deputy Heads of VATESI in their official capacity shall act independently from the persons engaged in activities in the field of the nuclear energy sector, also from other agencies, institutions or organisations engaged in expansion of the nuclear energy or use of nuclear energy, including generation of electricity.

VATESI has 72 full-time staff positions approved by the Government of Lithuania, 68 of these 72 positions being occupied.

According to the Law on Nuclear Energy, VATESI activities are financed by the Lithuanian State budget appropriations and other income.

Licence holders obligations

The Law on Nuclear Safety:

- states that full responsibility for the nuclear safety of a nuclear installation shall solely fall on licence holders;
- contains the legal provisions to perform systematic safety assessments within the licensing process for different stages in the lifetime of the nuclear installation. The licence holder is required, at least every ten years, to perform periodic safety review and prepare a report to be submitted to the VATESI for review and assessment;
- along with the law on nuclear energy, establishes the general requirements for the responsibility of the licence holder in the area of the prevention of accidents and mitigation of their consequences;
- provides that effective administration and management with the view to secure safety shall be maintained by all persons related to the activities of nuclear installations;

- imposes a requirement that organisations operating nuclear installations must have the material, financial and human resources that are sufficient for ensure nuclear safety in compliance with the legal acts and technical standard documents of nuclear safety. As regards the Ignalina decommissioning programme, which was created under the Act of Accession of Lithuania into the EU, Lithuania recalled that it is financed by the European Union budget.

Expertise and skills in nuclear safety

Lithuania reported that the National Energy Strategy of 2007 provided that "It is necessary to draft a national programme for the training of energy specialists […]. When drafting and implementing this programme, national priority has to be given to ensuring the timely preparation of specialists for work in the new nuclear power plant." Accordingly, the Ministry of Education and Science of Lithuania is responsible for the implementation of The National Training Programme of Qualified Specialists in Nuclear Energy for 2008–2015.

Information to the public

Pursuant to the Law on Provision of Information to the Public and other legal acts, VATESI and the licence holders must inform both the State and municipal institutions and the general public as well as stakeholders about nuclear safety.

Lithuania indicated that up to date information is provided in Lithuanian and English languages on VATESI's website.

International peer review of the national framework

Pursuant to the Law on Nuclear Safety, the Government shall organise, with a frequency no less than every 10 years, regular evaluations of the legal regulatory system of nuclear safety and the activities of the competent regulatory authorities, and shall ask to perform an international expert-level evaluation of the legal regulatory system. On this basis, VATESI informed the IAEA about its commitment to accept an IRRS mission in 2016.

2.18. Luxembourg

Luxembourg has no nuclear power reactor, no research reactor and no other nuclear facility.
In 1963, a framework law was enacted on the Protection of the Public Against the Hazards of Ionising Radiation, last amended in 1995. It is the legal basis for executive regulations concerning all types of uses of ionising radiation emitting products. It sets out the basic principles regarding radiation protection and nuclear safety, defines competences for ad-hoc decisions in a radiological or nuclear emergency situation and sets the frame for enforcement.

The Department of radiation protection (DRP) within the Directorate of Health of the Ministry of Health is the acting regulatory body charged with the protection of the population against the hazards of ionising and non-ionising radiation, as well as with nuclear safety. Its missions are defined in the law of 21 November 1980 on the organisation of the Directorate of Health. Luxembourg stressed that the Ministry of Health is not involved in any energy policy activities, which fall under the competence of the Directorate of Energy of the Minister of Economy.

In the Luxembourgish report, information can be found on transparency and information measures in the context of Emergency Preparedness. Indeed, Luxembourg has several NPPs located at less than 100 km from its border: France's Cattenom NPP (8,5 km) and Chooz NPP (70 km), Belgium's Tihange NPP (65 km).

Luxembourg reported that, through amending regulatory act of 14 December 2000, new obligations were introduced on:

- the obligation to organise every 10 years at least a self-assessment in order verify whether the competent regulatory authority is given the legal powers and human and financial resources necessary to fulfil its obligations in connection with the national framework. The result of the auto-evaluation shall be published.
- the obligation to invite every 10 years at least an international peer review of the competent regulatory authority, the relevant segments of the national framework and national emergency preparedness arrangements. Outcomes of any peer review shall be reported to the Member States, the Commission and the public, when available.

Luxembourg has tentatively scheduled its first IRRS mission for 2018.

2.19. Malta

Malta does not operate or plans to operate, any nuclear reactor.

The regulatory system governing the issues covered by the Directive is included within the Nuclear Safety and Radiation Protection Regulations 2003.

The regulatory authority for Malta is the Radiation Protection Board (RPB) which was created by a Legal Notice 44 of 2003. The RPB is an inter-ministerial body with representatives from Health, Environmental, Occupational Health and Safety, and Civil Protection agencies.

Malta said that the RPB is constantly looking to enhance its effectiveness and is currently preparing for an IRRS mission in 2015.

2.20. The Netherlands

There is one operating nuclear power reactor in the Netherlands, one power reactor under decommissioning, 2 operating research reactors, one research reactor preparing for decommissioning and an enrichment plant.

Legislative, regulatory and organisational framework

The Nuclear Energy Act is the main legal instrument regulating the use of nuclear energy. It is a framework law, which sets out the basic rules on the application of nuclear technology and materials, makes provisions for radiation protection, designates the competent authorities and outlines their responsibilities. Subordinate to this act, a number of Decrees contain additional regulations which continue to be updated in the light of ongoing developments. At a lower level there are the Ordinances which can be issued by the minister responsible for conducting the regulatory process under the Nuclear Energy Act.

The Nuclear Energy Act stipulates that a licence must be obtained to construct, commission, operate, modify or decommission a NPP.

In the event of deviation from or non-compliance with the regulatory conditions and requirements, enforcement actions could lead to shutting down the nuclear installation and/or revoking the licence. Reporting to the public prosecutor is also foreseen.

The Netherlands said that current practice provides for periodic review of the expertise and effectiveness of the authorities in performing their duties and associated follow-up actions to guarantee the national framework remains effective.

The competent regulatory authority

At present responsibilities and tasks of the Regulatory Body (RB) are spread over several organisations and ministries. However, the report mentions a very significant reorganisation of the competent regulatory authority to come. This new organisation is said to be implemented at the beginning of 2015 and consists mainly of bringing together existing entities under different ministries into one single independent organisation. About one year later the final legal formalities should be completed.

The new RB will be an Independent Administrative Authority, and will be positioned at the ministry of Infrastructure and the Environment.

This new RB, which will be responsible for regulating nuclear safety and radiation protection, will have a staff of about 150 and will optimally unite and utilise the expertise and experience available within the various entities that currently constitute the RB, and exercise all of its regulatory functions.

Licence holders obligations

The Nuclear Energy Act states that a licence issued pursuant to this Act is personal to the holder who is responsible for the safety requirements related to the licence of the installation.

An ordinance of 2011 prescribes the systematic evaluation and investigation of the nuclear safety of nuclear installations during their operating life.

Licence holders are expected to establish and maintain their management systems with priority to safety. They are also required to analyze their operating experience (including incidents) and those of other installations and findings of research programmes systematically. The lessons learnt may result in modifications in installations, procedures or the organisation of the licence holder.

The Netherlands reported that since about 20 years, one of the conditions of the licence is that the safety of the nuclear installation is to be periodically reviewed in the light of operating experience and new safety insights. A review of operational safety aspects must be performed once every two years, while a more comprehensive safety review must be conducted once every 10 years.

The safety assessments that have to be performed and documented with the licence application and the criteria which have to be met are prescribed by law. The prescribed analyses extend to the assessment of severe accidents.

Licence holders are required to establish a management system where priority to safety is paramount.

The Nuclear Energy Act contains requirements related to financial solvability.

The Act states that an application for a licence must contain an estimate of the total number of employees plus details of their tasks and responsibilities, and, where applicable, their qualifications. The RB can verify whether the licence holder has sufficient financial and human resources.

Expertise and skills in nuclear safety

Education and training programmes are required to guarantee adequate qualification of staff working in the nuclear installation.

The nuclear power plant of the Netherlands has a training department responsible for maintaining the personnel qualification register, qualification activities, coordination of training activities, training records keeping and delivering of in-house developed training courses as well as organising training courses that are delivered by contractors.

The Netherlands indicated that the RB provides tailor-made training for its staff and mentioned international workshops, but also conferences and visits to other regulatory bodies, in addition to information exchange through international organisations and associations.

Information to the public

Information in relation to the regulation of nuclear safety is made available to the workers and the general public in various ways. Information targeted at informed groups and peers in other countries is mainly published in English, usually with a summary in Dutch.

The different entities of the RB have strategies for external communication. However, in preparing for the new organisation that will bring together the various entities of the RB, a new integrated strategy will be developed.

International peer review of the national framework

Netherlands said that an IRRS mission was organised in November 2014.

2.21. Poland

At the moment, Poland has no nuclear power reactor but has an operating research reactor and another one under decommissioning.

The introduction of nuclear electricity generation was decided by the Government. The first nuclear unit is set to start by the end of 2024 and the second unit by the end of 2035.

Legislative, regulatory and organisational framework

The main legislative act in the field of nuclear safety is the Act of 29 November 2000 (the "ALA"), which sets out the basic rules on the application of nuclear technology and materials, designates the competent authorities and outlines their responsibilities. The ALA has been amended several times in the recent years, lastly in 2014. The ALA is supported by over 40 implementing acts.

The licensing system is based on provisions of the ALA. Construction, commissioning, operation and decommissioning of nuclear facilities are not allowed without licence.

Supervision and inspection of nuclear facilities is executed by the regulatory authority.

The ALA defines the enforcement system. As a result of findings identified during inspections, different types of enforcement actions can be undertaken by the regulatory body including suspension, modification or revocation of a licence.

Poland reported that the sources of information relevant for updating the system of regulations and guides include international safety standards, international cooperation and the revision of the reference levels adopted by WENRA. For example, pursuant to the ALA, applicable guidelines of the IAEA and WENRA shall be considered by the Council of Ministers while establishing requirements for commissioning and operation of nuclear facilities. Poland also indicated that the continuous improvement of the functions of the regulatory authority is based on internal and external assessments (self-assessments or staff surveys) and external assessments.

The competent regulatory authority

The regulatory authority responsible for nuclear safety is the National Atomic Energy Agency (PAA). The PAA President is appointed for an indefinite period of time by the Prime Minister while its administrative supervision is provided by the Minister of Environment.

The PAA President exercises its powers without needing the approval of a minister or referring to any body of State administration. No organ can supervise PAA President regulatory decisions except for the Administrative Courts of Law.

Poland indicated that the needs for recruitment and training of the staff were identified, so that PAA could meet the requirements of a nuclear regulatory body posed by the programme for nuclear power. An analysis has been performed with regard to necessary organisational changes and development of the staff. On the basis of this analysis the plans and costs of the staff development have been identified.

PAA is funded directly from the State budget. Although companies are charged for the costs of regulatory oversight, these costs are remitted to the State rather than PAA.

Licence holders obligations

Pursuant to the ALA, construction, commissioning, operation or decommissioning of nuclear facilities cannot be conducted by an organisational entity which fails to comply with the requirements concerning, inter alia, nuclear safety and radiological protection.

Further responsibilities of licence holders are provided through the Regulation of the Council of Ministers of 11 February 2013 on requirements for the commissioning and operation of nuclear facilities. The licence holder is required to conduct systematic analyses with regard to operating experience, development of international safety requirements, technological developments and new knowledge, and conclusions from these analyses shall be used to improve the safety state of the nuclear facility.

Licence holders are also required to have a management system which includes a quality assurance programme.

According to the ALA, the licence for nuclear activities shall only be granted to an organisational entity which has sufficient funding to cover the costs of nuclear safety at the subsequent stages of the nuclear facility operation, until the facility is decommissioned. PAA will be assessing financial provisions with other documentation required in the licensing process.

Furthermore, the ALA provides for a system of financing the costs of the spent nuclear fuel and radioactive waste disposal and the costs of nuclear power plant decommissioning. The licence holder shall make quarterly payments to a "decommissioning fund", with dedicated bank account assigned to the fund.

Expertise and skills in nuclear safety

Poland indicated that PAA is actively recruiting and training new staff to prepare itself to the regulatory role in the nuclear power programme, mentioning agreements on cooperation with between PAA and several foreign regulatory authorities.

The requirements concerning competence of the staff of the operator are specified in the ALA.

Information to the public

Among the description of various information activities, Poland reported that in 2014, the PAA's document "National Atomic Energy Agency (PAA) Communication Strategy for the years 2014-2018" entered into force. It contains communication plans until 2018. This strategy include implementing several activities such as: organising workshops for journalists and local authorities, conducting debates on nuclear safety in the media, holding regular press briefings, cooperating with universities.

International peer review of the national framework

Poland hosted an IRRS mission in May 2013.

2.22. Portugal

Portugal has no nuclear power plant, but one research reactor.

Legislative, regulatory and organisational framework

The Decree-Law 30/2012 created the Regulatory Commission for the Safety of Nuclear Installations (COMRSIN) and establishes its attributes and responsibilities.

Decree-Law 262/2012 sets up the obligations of the licence holders for the operation of nuclear installations under the supervision of the regulatory authority.

Both Decree-Laws state that nuclear installations cannot operate without a valid licence.

Under these Decree-Laws, COMRSIN has the legal power to enforce measures that are meant to improve nuclear safety. In extreme cases the licence may be suspended, revoked or not renewed until corrections are made.

The competent regulatory authority

COMRSIN has been legally structured as an independent body, although operating with the administrative support of the Ministry of Education and Science.

The leadership of COMRSIN is appointed by the Prime Minister.

According to the Portuguese report, COMRSIN is functionally separate from any other body or organisation concerned with the promotion or utilisation of nuclear energy.

The strengthening of legal and technical expertise within COMRSIN is presented as being under way.

Licence holders obligations

Pursuant to Decree-Law 262/2012, the operator has the prime responsibility for the safety of the installation under the control of the regulatory authority and need to have the human, material and financial resources that are adequate to the safe operation of the installation. Principles such as transparency, defense in depth, priority to nuclear safety at all times are enshrined in this Decree.

The operator is also required, inter alia, to have a safety management system that gives priority to nuclear safety at all times and an emergency plan. It has the prime responsibility for the periodic safety review of the installation and for the continuous improvement of safety.

Expertise and skills in nuclear safety

COMRSIN, together with other stake holders and other competent authorities, has the responsibility to prepare plans for education and training of human resources of nuclear installations and of entities related with nuclear safety, to preserve and develop the required qualifications and skills in the field of nuclear safety.

Information to the public

Information to the public is mainly given through a COMRSIN website both in Portuguese and English, which, at the time of the report, was presented as being under construction.

2.23. Romania

There are 2 nuclear power reactors in operation in Romania. The Government has plans to further increase nuclear generating capacity through the resuming of construction and commissioning of two more units. In addition there are two operating research reactors and one under decommissioning.

Legislative, regulatory and organisational framework

The Law no. 111/1996 (the "Law") on the safe deployment, regulation, licensing and control of nuclear activities provides the legislative framework governing the safety of nuclear installations.

The Law empowers the National Commission for Nuclear Activities Control (CNCAN) to issue mandatory regulations, to issue licences for nuclear installations and activities, to perform assessments and inspections to verify compliance with the nuclear safety requirements and to take any necessary enforcement actions.

Pursuant to the Law, CNCAN has the responsibility for reviewing the regulations whenever it is necessary to be consistent with relevant European and international legislation, and for establishing the measures for the application thereof. Various other sources relevant for updating the system of regulations are used, including the development of international safety standards, international cooperation, the revision of the reference levels adopted by WENRA, the feedback from the operators and the feedback from CNCAN inspectors based on their experience with the enforcement of the regulations.

The competent regulatory authority

The CNCAN is the competent regulatory authority in the field of nuclear safety in Romania.

The Ministry of the Environment and Climate Change is the central authority for environmental protection and has specific responsibilities in the licensing and control of nuclear installations.

The State Inspectorate for Boilers, Pressure Vessels and Hoisting Installations (ISCIR), subordinated to the Ministry of Economy is responsible for the licensing and control of the pressure retaining systems and equipment, including those used in nuclear installations, with appropriate consultation and collaboration with CNCAN.

CNCAN reports to the Prime Minister, through the General Secretariat of the Government. It is chaired by a President nominated by the Prime Minister. The position of the CNCAN President is assimilated to that of State Secretary.

The total number of staff in CNCAN is 89.

As regards the financing, before November 2009, CNCAN was collecting money for its budget from fees charged for performing inspection activities and technical assessments and for granting licences, permits and authorisations and was self-financed. From November 2009, all the money collected from taxes and tariffs for CNCAN activities have become revenue to the State budget and CNCAN is currently financed from the State budget through the General Secretariat of the Government.

Licence holders obligations

The Law stipulates that the prime responsibility for the safety of a nuclear power plant rests with the licence holder and that this responsibility cannot be delegated.

As indicated by Romania, the obligation of the licensees to regularly assess and verify and continuously improve nuclear safety is stated in the specific regulations and licence conditions. The implementation of this obligation is verified by CNCAN through review and inspection activities on a current basis, as well as on the occasion of the renewal of the licences for nuclear installations and on the occasion of the issuance of new or revised nuclear safety regulations.

Detailed regulations are in place for NPPs on siting, design, construction, commissioning and operation, covering all relevant aspects of defence-in-depth, both technical and administrative.

The licensees have procedures for normal operation and for response to abnormal conditions.

Romania reported that its legislative and regulatory framework relevant to quality assurance for activities related to nuclear installations has been subject to continuous development since 1982. A comprehensive framework is currently in place to govern the management systems for nuclear installations and associated activities and to ensure that the licensees give due priority to nuclear safety.

Explicit requirements on the assurance of sufficient and adequate financial and human resources are established in the Law both for applicants and for licensees.

CNCAN requires the licence holders to report periodically on their resources and the regulatory staff performs reviews and inspections to determine the actual status of the licensees' human and financial resources, as well as the associated changes and trends.

Expertise and skills in nuclear safety

Regulations related to training, qualification and retraining for operating personnel for nuclear operators have been in place in Romania since 1975. They have been periodically reviewed and revised. Examinations are administered by CNCAN in order to verify the qualification of staff with safety-related duties and to grant practice permits.

As regards the competence management within the regulatory authority, CNCAN has a process to develop and maintain the skills of its staff, as an element of knowledge management. An annual plan for staff training is in place and each staff member has an individual training plan, elaborated by the respective line manager.

Training for CNCAN staff is provided either in-house or through technical cooperation programmes with the IAEA and with other States and organisations.

Information to the public

The general Romanian legislation on public information and on transparency in the decision-making process of public authorities applies to the regulatory activities of CNCAN.

Information activities performed by CNCAN are detailed in the report.

Prior to the enactment of new or revised regulations, CNCAN posts the proposed drafts on its website and sends them for consultation to all interested organisations for gathering information from the public, from licensees and applicants and from other interested parties.

International peer review of the national framework

Romania hosted an IRRS mission in 2011.

2.24. Slovakia

There are 4 power reactors in operation in Slovakia and 3 reactors under decommissioning. There are 2 power reactors under construction.

Legislative, regulatory and organisational framework

The most relevant laws in the nuclear field are:

- Act No. 541/2004 on peaceful use of nuclear energy (the "Atomic Act");
- Act No. 575/2001 on organisation of governmental activities and on organisation of the central State administration (the "Competence Act"), which sets out tasks and responsibilities of central bodies of State administration, including provisions on the regulatory authority responsible for nuclear safety;
- Act No. 251/2012 Coll. on energy sector (the "Energy Act"), which inter alia cover the rights and obligations of nuclear operators and State supervision.

In accordance with the licence for operation, the requirements for nuclear safety and conditions of nuclear safety established or approved by the regulatory authority are being monitored. In case of non-compliance with the requirements or violation of a legal requirement, the regulatory authority is authorised to impose sanction to the licensee, including financial penalty. As provided for in the Atomic Act, the regulatory authority can suspend the operation of a nuclear installation.

As indicated by Slovakia, since the entry into force of the Atomic Act, there have been 11 amendments with the aim to take into account the experience gained in the implementation of this Act, as well as EU Directives, the development of international standards (IAEA, WENRA) and operating experience of nuclear installations. Implementing decrees have also been amended, the last amendments taking into account WENRA's reference levels.

The competent regulatory authority

The Nuclear Regulatory Authority of the Slovak Republic (ÚJD SR) is the central body of State administration, having legal personality, in charge of nuclear safety. It reports to the Government and it is headed by a chairman appointed by the Government.

The ÚJD SR has 108 employees.

The Act No.94/2007 amending the Atomic Act imposes an obligation to the licensees to pay annual contributions for execution of State regulation in nuclear safety. The aim of this obligation is to secure sufficient funding for regulatory activities, for maintaining the expertise of its staff and for their stabilisation, for safety research and it aims at reducing demand on the State budget by raising other external sources.

Licence holders obligations

According to the Atomic Act the licensee is responsible for the fulfilment of requirements concerning nuclear safety. This responsibility cannot be eliminated.

ÚJD SR Decree No. 33/2012 Coll. on periodic, comprehensive and systematic nuclear safety assessment of nuclear installations provides for details on the intervals and extent of the performance of regular, comprehensive and systematic evaluation of nuclear safety of nuclear installations.

ÚJD SR Decree No. 430/2011 on the requirements for nuclear safety specifies the details for siting, design, construction, commissioning, operation and decommissioning of nuclear installations.

ÚJD SR Decree No. 431/2011 Coll. governs the requirements for quality management system of the licensee.

The licensee is required to give priority to safety aspects among all other aspects.

It is also required to maintain financial and human resources for ensuring nuclear safety. As regards in particular the financial resources for the decommissioning programmes, Act No. 238/2006 established a national nuclear fund for decommissioning of nuclear installations and for the management of spent nuclear fuel and radioactive waste. The basic source of the Fund are mandatory contributions from the licensee.

Expertise and skills in nuclear safety

Among the description of training arrangements for operators, it is indicated in the report that the system of professional training is updated on the basis of operational experience, implemented organisational changes, modernisation of equipments, requirements of regulatory bodies, audits, reviews and recommendations from external organisations, including from the IAEA and the WANO.

ÚJD SR caters for professional advice and services or exchanges knowledge, experience and information to support its regulatory activities.

Information to the public

Act No. 211/2000 ("Freedom of Information Act") provides the citizens with a statutory way of obtaining necessary information. This Act along with the Atomic Act and Act No. 24/2006 ("Act on Environmental Impact Assessment") constitutes the legal framework for public relations with respect to nuclear energy.

Each nuclear power plant in Slovakia has a Civil Information Commission ("CIC") composed of elected and other representatives of the regional public. Members of CIC hold regular meetings with the management of licence holders and thus receive first-hand information about the work of the operator.

In addition to the information provided on a regular basis in its field of its operation, ÚJD SR issues an Annual Report, published in Slovak-English version and distributed to ministries, other central government authorities, State organisations, regional Government offices and

municipalities at nuclear installation sites, libraries, schools, embassies of foreign countries in the SR, embassies of the SR abroad, foreign regulatory bodies, international and other organisations.

International peer review of the national framework

Slovakia hosted an IRRS mission in 2012.

2.25. Slovenia

Slovenia's nuclear facilities include one nuclear power reactor and one research reactor.

Legislative, regulatory and organisational framework

The main act in the area of nuclear and radiation safety is the Act on Ionising Radiation Protection and Nuclear Safety (the "2002 Act") which entrusted the Slovenian Nuclear Safety Administration (SNSA) with the control of nuclear safety.

The most important rules are the JV5 “Rules on the Radiation and Nuclear Safety Factors” and the JV9 “Rules on Operational Safety of Nuclear or Radiological Facilities”. The JV5 contains, inter alia, the details of the licensing procedure, while JV9 gives instruction about the methodology to be used for the classification and notification of plant modifications.

The inspection of nuclear and radiation safety rests with the SNSA. The enforcement of applicable regulations and of the terms of the licences is ensured by the application of penal provisions, inspection provisions and provisions related to licence withdrawal and suspending of the operation of a nuclear facility.

Slovenia reported on several mechanisms in place for communication between the SNSA and the licensees in support of the regulatory review process, consisting of regulatory requirements established in regulations (2002 Act, decrees and rules), regulatory letters, licensing meetings, regulatory inspections, regular licensee reports.

As indicated in the report, the updating and maintaining of the national regulatory framework is conducted notably through a regular checking of the international standards (e.g. IAEA, WENRA). The domestic and foreign operating experience is also considered for the potential changes and improvements of the legislation and regulatory practices.

It is reported that the SNSA has transposed all WENRA's reference levels into the legally binding documents.

The competent regulatory authority

The SNSA is an autonomous institution within the Ministry of the Agriculture and Environment.

In 2013 the SNSA had 41 employees.

It has its own share in the Ministry’s budget and is independent in allocating the programmes, projects and other expenses from the budget.

The operators of nuclear or radiation installations and other licensees do not pay any licensing or inspection fees. The only fee, which is envisaged by the general Act on Administrative Fees, is the so-called administrative tax for the licensing procedure, which is of symbolic value. Such fee is paid to the State budget and not directly to the SNSA.

Licence holders obligations

The provisions on the prime responsibility of the licence holder for the safety of nuclear and radiation facilities are comprised in the legislation.

The "2002 Act" requires that the licensee of a nuclear facility ensures regular, complete and systematic assessment and examination of radiation and nuclear safety of the facility by the periodic safety review which has to be performed in the period of ten years.

The secondary legislation (above-mentioned "JV5") contains the principles of defence in depth, single failure, redundancy, independence, diversity, safe failure and graded approach. There are also general design basis requirements, inter alia, prevention of accidents with excessive exposure of people including severe accidents.

The requirements regarding the management systems defined in the Slovenian legislation are reported to be in accordance with the WENRA reference levels.

Operators are required to ensure sufficient financial resources guaranteed throughout the operating lifetime of a facility for implementing the prescribed measures of radiation and/or nuclear safety.

Expertise and skills in nuclear safety

Training and qualification activities for the operator are governed by the "2002 Act" and the Rules on qualification requirements to be met by workers performing duties and tasks of safety significance in nuclear and radiation installations.

Supervisory personnel also get specific training.

The regulatory authority has established a system of safety indicators to measure, inter alia, the performance of the human and organisational factors in nuclear safety.

Information to the public

The “transparency principle” is presented as being one of the main principles of the "2002 Act", to make sure that the public receives comprehensive information.

The SNSA regularly informs the general public and the workers about work in its fields of competence. Legislative initiatives (in the form of draft legislation) are published on the special governmental webpage for the purposes of public hearing.

International peer review of the national framework

Slovenia hosted an IRRS mission in 2011.

2.26. Spain

Spain has 8 nuclear power reactors. There are also 2 reactors under decommissioning.
There is one installation responsible for the design, manufacture and supply of nuclear fuel.

Legislative, regulatory and organisational framework

The *basic regulatory framework* for nuclear installations and activities in Spain consists of the following regulations:

- Law on nuclear energy (LEN) (Law 25/1964 of 29 April 1964, as amended);
- Law establishing the Nuclear Safety Council (Law 15/1980 of 22 April 1980, as amended). This law establishes the regulatory body for nuclear safety and radiation protection in Spain.

The Spanish legal framework provides for a system of licensing and prohibition of operation of nuclear installations without a licence.

The national framework clearly defines and sets out the responsibilities assigned to the various bodies and authorities involved in the infringement and penalty procedures.

The Spanish regulatory framework for nuclear energy has been updated and adapted to take into account, among other things, changes made to the structure of the institutional framework with responsibilities in the matter, experience gained from the operation of nuclear installations and technological progress.

Spain reported that the regulatory authority has a strategic objective to complete and keep up to date a robust set of rules covering the requirements of the EU directives, taking into account the rules of the IAEA and the benchmarks agreed under the harmonisation plan of WENRA.

The competent regulatory authority

The Nuclear Safety Council (CSN) is the State body with responsibility for nuclear safety. It is an independent body under public law of the Central State Administration, which reports to Parliament on the conduct of its activities.

The technical staff consists of officials from the Nuclear Safety and Radiation Protection Corps.

The Law establishing the CSN empowers it to prepare the draft of its annual budget in accordance with the provisions of the General Budget Law. The CSN transmits it to the Government for inclusion in the State Budget and approval by Parliament.

Licence holders obligations

Spanish legislation enshrines the basic principle that the prime responsibility for nuclear safety of a nuclear installation rests with the licence holder.

Spanish legislation requires the operational nuclear power plants to carry out a periodic safety review every 10 years, in connection with the renewal of the operating permits.

The regulatory framework contains requirements for planning and preparedness for nuclear emergencies (inter alia: provisions of the basic civil protection regulations, general provisions

in the Law establishing the CSN, Council of Ministers decision on public information about health protection measures to be applied and procedures to be followed in the event of a radiological emergency).

Furthermore, the CSN is implementing inspection plans tailored to each type of existing nuclear installation, and has requested the licence holders of the installations to set up integrated management systems to improve the safety performance of the installation and to foster and promote a robust safety culture.

In several of the mandatory documents (operating rules, quality assurance manual and internal emergency plan), which are included in the licences of nuclear installations, specific regulatory requirements are defined governing the organisation and human resources of the licence holder.

Expertise and skills in nuclear safety

Licence holders have programmes for qualification, initial training and retraining of the personnel of installations, also including analysis and lessons learned from their own and others' operating experience, as well as specific requirements relating to the safety culture.

Spain indicated that the CSN pays special attention to the qualification and continuous training of its human resources by implementing annual training plans to maintain their skills, knowledge and competencies over the medium and long term.

Information to the public

Spain said that it treated transparency, communication and information to the public as fundamental pillars of the development of effective nuclear safety regulation. Accordingly, the CSN has made significant efforts in recent years to improve the body's transparency and achieve greater public confidence in its activities.

In its Strategic Plan for the period 2011-2016, the CSN also recognises the principle of transparency as one of its core values, based on the ability to provide citizens with relevant, valid and verifiable information on everything related to security nuclear and radiological protection.

The Law establishing the CSN, as amended by Law 33/2007, provides for the establishment of an advisory committee for information and public participation, which began work in 2011. The purpose of this Committee is to make recommendations to the CSN to improve transparency, access to information and public participation in the matters within its competence. The advisory committee consists of representatives of the key national stakeholder groups including ministries, universities, professional associations, bodies of the electricity industry, mayors of the neighbourhoods where there are nuclear power plants and NGOs.

International peer review of the national framework

An IRRS mission was hosted in Spain in 2008.

2.27. Sweden

There are 10 nuclear power reactors in Sweden as well as shutdown research reactors and a nuclear fuel fabrication plant.

In June 2010 the Swedish Parliament lifted a ban on new-build of nuclear reactors. The legislation, which entered into force in 2011, allows for new reactors on the condition that they replace existing ones being permanently shut down, and if they are built on a site with already operating reactors.

An application for a licence to construct, own and operate a nuclear facility consisting of one or two nuclear power reactors was submitted to the regulatory Authority in July 2012. The applicant intends to replace old units by the planned new capacity from operation by 2025 - 2035.

Legislative, regulatory and organisational framework

The most relevant act in the nuclear safety field are:

- the Act on Nuclear Activities (1984:3);
- the Radiation Protection Act (1988:220);
- the Environmental Code (1998:808)

It is reported that today's parallel application of these acts results in a 'dual' licensing process with overlapping of the regulatory processes and the issuance of two permits with similar legal requirements. The plans for the consolidation of the legislation into a single act are progressing and the Government has completed an extensive consultation.

The legislation gives a mandate to the regulatory authority and supervisory as well as enforcement powers. The authority is authorised to issue legally binding requirements regarding all aspects of nuclear activities and radiation protection.

The regulatory authority is currently revising its regulations. The improvement of the national framework is notably based on incidents reports, the outcome of the periodic safety reviews and international peer reviews, as well as recommendations from bodies such as WENRA.

The competent regulatory authority

The regulatory authority in the field of nuclear safety is the Swedish Radiation Safety Authority (SSM) which was established on July 1, 2008.

Its Director-General is appointed by the Government for a period of six years and reports the directly to the Government. SSM has an advisory council with maximum ten members, all of them appointed by the Government. Those are usually members of the Parliament, agency officials or non-governmental organisations or acting as independent experts. The functions of the council are to advise the Director General and to ensure public transparency in the authority´s activities.

The regulatory activities of SSM are financed by the State budget. The costs are largely recovered from the licensees in the form of fees covering the cost of regulatory activities and related research. The fees are distributed to revenue heading and funding made through yearly budget appropriations.

At the end of 2013, SSM had staff totalling 312 persons. Although salary levels may be higher for certain categories of personnel within competing segments of industry and private sector, SSM can offer other professional advantages that weigh up these salary differentials.

Licence holders obligations

Sweden reported that the Act on Nuclear Activities is clear about the prime responsibility for safety.

The periodic safety reviews which are conducted at least once every ten years are presented as an important part of the safety supervision.

Radiological accidents shall be prevented through a facility-specific and fundamental design which shall incorporate multiple barriers as well as a facility-specific system for defence-in-depth. Defence-in-depth shall be achieved by preventing accidents and mitigate the consequences if an accident does occur.

The SSM general safety regulations SSMFS 2008:1 require that nuclear activities with regard to design and construction, operation and decommissioning, shall be managed, controlled, assessed and developed through a management system so designed that requirements on safety will be met.

According to the Act on Nuclear Activities (1983:4), a licensee is obliged to have an organisation for the activity with sufficient financial, administrative and human resources to uphold safety and to take protective measures in the event of disruptions in the operations or accidents in the facility.

In addition to this basic requirement above, licensees must pay a fee on every produced kWh to the Nuclear Waste Fund, in order to ensure the financing of decommissioning, handling and disposal of spent fuel and nuclear waste, including the research needed for these activities.

If the SSM finds indications for concern regarding the lack of financial resources, it has extensive legal powers to take actions.

As regards the adequacy of the licensees´ human resources, SSM evaluates their process for competence assurance every third year.

Expertise and skills in nuclear safety

SSM general safety regulations (SSMFS 2008:1) deal with the staffing, competence and training of personnel at the nuclear facilities. The licensee has to ensure that the staff has the competence and suitability needed for all tasks of importance for safety and this has to be documented.

Sweden provided details on various initiatives in the academic world such as the launching of a graduate programme in the nuclear field.

Within the regulatory authority, competence development has been conducted in all departments and units in 2013.

Information to the public

Pursuant to the SSM’s missions and tasks, as defined in the Ordinance (SFS 2008:452), the SSM is responsible for contributing toward public insight into all activities performed by the authority.

On SSM's website, the main language is Swedish, but information that would be of use for citizens or authorities in other countries is provided in English.

Five of the nuclear facilities have a Local Safety Council. The Local Safety Councils are so-called "Board authorities" whose members are appointed by the Government. A majority of Board Members are appointed on the recommendations of the municipality in which the nuclear facility is located. Local Safety Councils gather information on the safety and radiation protection work carried out or planned at the nuclear facility. They shall, inter alia, responsible for informing the public, authorities and institutions at the local level.

International peer review of the national framework

An IRRS review was performed in Sweden in February 2012.

2.28. United Kingdom

The UK has 16 operating nuclear power reactors, 25 permanently closed (defueling or decommissioning) reactors, 5 decommissioning nuclear research facilities, including research reactors.

In November 2012, ONR granted a site licence for Hinkley Point C where two nuclear power reactors are to be built. This was the issue of the first nuclear site licence for a nuclear power plant in 25 years.

Legislative, regulatory and organisational framework

The Energy Act 2013 ("TEA13") established the ONR as a statutory body and sets out its purposes and powers. It requires that a Nuclear Power Plant (NPP) is not installed or operated unless ONR has granted a site licence.

The Nuclear Installations Act 1965 establishes a system of licensing for nuclear installations.

The UK made clear in its report that it remains committed to learning from its experiences and the experience of others as part of its approach of seeking continuous improvements to nuclear safety. In particular, it periodically subjects its nuclear safety framework to international peer review to identify any shortcomings that need to be addressed.

The competent regulatory authority

The designated UK nuclear regulatory authority responsible for regulating safety and security is the Office for Nuclear Regulation (ONR). Since 1 April 2014 ONR has operated as an independent statutory body.

As the Secretary of State for Energy and Climate Change is accountable to Parliament for nuclear safety in Great Britain, ONR provides assurance through factual information and advice to this minister on nuclear safety matters. However, the Government cannot direct ONR with respect to regulatory functions in a particular case.

ONR is sponsored by the Department of Work and Pensions (DWP). The ONR's CEO, as Principal Accounting Officer, is directly accountable to Parliament.

ONR recovers some 98% of its costs from the licensees it regulates. Indeed, ONR charges fees to nuclear licensees to recover the expenses incurred through its regulation of the nuclear site licensing regime. In addition, further expenses are recovered from licensees in respect of safety research programmes agreed between ONR and the industry. ONR can also charge for other safety regulation carried out on licenced nuclear sites.

Since the establishment of ONR as a public corporation in April 2014, it is free to recruit staff.

Licence holders obligations

As indicated in the report, the holder of a nuclear site licence is responsible for the safety of its nuclear installations and also for the health and safety of those employees and members of the public that may be affected by the installation's operations.

Safety justifications to demonstrate compliance with legal requirements are required prior to the start of construction, before commissioning, before first operation, after steady reliable operation has been achieved, before plant modification and prior to decommissioning. During the operational and decommissioning phases, the safety case is updated as necessary to reflect changes to plant or procedures, new safety analysis techniques, research findings and the outcome of periodic safety reviews (PSRs).

Major PSRs are carried out by licensees, no later than every ten years or when subject to a review following a major event on the site or elsewhere.

The licensee are required to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects.

In July 2011, ONR amended its regulations in order to place a duty on licensees to establish and implement management systems which give due priority to safety. ONR requires that a licensee's quality management arrangements are based on current national or international quality management system standards and that the arrangements adequately address all matters which may affect safety.

As regards the operators' resources, under UK company law, a registered company must have sufficient assets to meet all of its liabilities to continue in business. The costs of making any necessary safety improvements during the operating life of a nuclear installation are treated as part of the installation's normal operating costs. In addition, special financial provision is made for the particular liabilities relating to the reprocessing and storage of spent fuel, the storage and disposal of nuclear waste and a nuclear installation's decommissioning costs.

Expertise and skills in nuclear safety

Regulations require the licencee to make and implement adequate arrangements for suitable training of all persons on site who have responsibility for any operations which may affect safety.

In its report, the UK explained that the nuclear sector currently employs around 44,000 people in the country. Existing operations, decommissioning and clean-up, together with a potential programme of new nuclear build, means that the nuclear industry has a sustained recruitment demand and continued requirement for skills training and refreshment of the workforce. The Government is working closely with the National Skills Academy for Nuclear and the industry to ensure that the UK has a clear, shared understanding of the key skills priorities for the nuclear sector, and how skills demand can be met.

The UK reported that ONR has had intensive recruitment campaigns since 2011, necessitating a radical revision of the training and assimilation of new inspectors.

Information to the public

The UK report provides details on activities performed by ONR in the field of transparency.

All ONR's major regulatory decisions are now published on the ONR's website, with details underpinning each decision. In addition, ONR is currently piloting the publication of its intervention reports. These reports provide details of ONR's findings whilst carrying out its inspection and other regulatory activities.

Every three months, ONR produces a report for each licenced site which summarises its regulatory activities associated with the site.

International peer review of the national framework

The UK has invited a series of modular IRRS missions in 2006, 2009 and 2013.

3. Conclusion

All Member States have established a framework allocating responsibilities between relevant public bodies and most of them mention regular updates thereof and international benchmarking. By the end of 2015, all Members States with a nuclear power programme will have hosted at least one IRRS mission over a ten-year period. Some of the other Member States have not received such a mission so far.

All Member States have a regulatory authority with specific tasks and corresponding licence holders' obligations. They have also put in place national regulations pertaining to expertise and skills in nuclear safety. They made arrangements for information to the public.

However, challenges in the implementation of the Directive have been identified as regards the regulatory authority’s legal powers and human and financial resources.

Safety arrangements imposed on nuclear operators under the supervision of regulatory authorities, including development of expertise and skills, are reported by the Members States. However, as confirmed by the stress tests performed on nuclear power reactors in Europe, there are differences between the Member States as regards the identification and management of key safety issues. The amendment of the Directive addresses this situation, notably through the new obligations related to the safety objective and its implementation.

Reference

[1] Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations. OJ L 172, 2.7.2009, p. 18.