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Nuclear Legislation in OECD Countries

Regulatory and
Institutional Framework
for Nuclear Activities

Poland



Poland

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I. General regulatory regime

1. Introduction

There are no nuclear power plants in Poland at present. However, there are two research reactors: the EWA reactor (TANK WWR type of 1 MWe), the decommissioning of which commenced on 24 February 1995, and the MARIA reactor (pool type) which is located at the Institute of Atomic Energy at Swierk. In addition, there is a radioisotope processing centre and a spent fuel storage facility in Swierk. There is also a radioactive waste facility at Rozan.

The Act of 29 November 2000 – Atomic Law¹ (hereinafter referred to as “the act”) entered into force on 1 January 2002 and it is a framework act governing all nuclear activities in Poland. It sets out provisions governing the main supervisory body in the nuclear field, namely the President of the National Atomic Energy Agency (*Prezes Państwowej Agencji Atomistyki*). The President of the NAEA is a governmental body under supervision of the Minister of the Environment.

According to Polish law, all issues relating to radiation protection, radiological monitoring of the environment etc. are treated together with nuclear safety and security regulations. The understanding behind this approach is that safety and security of nuclear materials and facilities should be treated as a secondary issue which originates from the protection against radiation. This is because, in all cases, the hazard potentially caused by any nuclear technology is related to biological effects of ionising radiation. Based on this approach, there is only one joint legal approach to all aspects of radiation protection and nuclear safety in Poland. Furthermore, the state control in that area is executed by a single governmental regulatory authority.

The act determines conditions for activities related to the peaceful uses of atomic energy, which involve actual and potential exposures to ionising radiation and it outlines the duties of the head of the organisational entity conducting such activities. The activities must be developed in a manner which protects life, health, property and the environment. The act contains 18 chapters and includes provisions about:

- Licensing system (Chapter 2).
- Nuclear safety, radiological protection, health protection of the workers (Chapter 3).
- Ionising radiation applications for medical purposes (Chapter 3a).
- Nuclear installations (Chapter 4).
- Manufacture, use of and trade in nuclear materials (Chapter 5).
- Manufacture and use of ionising radiation sources (Chapter 6).
- Radioactive waste and spent nuclear fuel (Chapter 7).
- Transport of nuclear materials, ionising radiation sources, radioactive sources and waste (Chapter 8 and 8a).
- Supervision and inspection of compliance with the conditions for nuclear safety and radiological protection (Chapter 9).

1. O.J. of 2007 No. 42, item 276 and of 2008 No. 93, item 583, No. 227, item 1505 O.J.; Polish Official Journal (*Dziennik Ustaw; DZ.U.*).

- Assessment of the national radiation situation (Chapter 10).
- Radiation emergency management (Chapter 11).
- Nuclear third party liability (Chapter 12).
- Functions of the NAEA President (Chapter 13).
- Construction and operation of radioactive waste repositories (Chapter 14).
- Administrative fines and penal regulations (Chapter 15).

In addition, the act covers nuclear safety and radiation protection control as well as the training and protection of workers. It also provides an assessment of the national radiological situation, radiological emergency management, functions of the President of the NAEA and penal regulations. Several orders, ordinances and decrees have supplemented the act since it came into force. The licensing procedures for nuclear installations are further detailed in decrees issued by the Council of Ministers.

On 1 May 2004, Poland became a member state of the European Community and the European Atomic Energy Community (EURATOM). The European Atomic Energy Law became a part of the Polish legal system. The act accomplishes the transposition of the following EURATOM directives:

- 89/618/Euratom of 27 November 1989 on informing the public of health protection measures and activities to be taken in case of radiation emergency.
- 90/641/Euratom of 4 December 1990 on practical protection of external workers exposed to ionizing radiation during work within controlled area.
- 92/3/Euratom of 3 February 1992 on the supervision and control of radioactive waste shipments between EU Member States, and into the Community and outside its territory.
- 96/29/Euratom of 13 May 1996 establishing basic safety standards for health protection of workers and general public against the dangers of ionizing radiation.
- 97/43/Euratom of 30 June 1997 on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure and rejecting the directive 84/466/Euratom.
- 2003/122/Euratom of 22 May 2003 on the control of high level radioactive sealed sources and radioactive waste.
- 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel.

The new Criminal Code, which entered into force on 1 September 1998 (O.J. of 1997 No. 88, item 553), contains two provisions pertaining to nuclear energy and ionising radiation. A person responsible for an event which poses a threat to the life and health of a significant number of persons, or which causes considerable damage to property through release of nuclear energy or ionising radiation, will be subject to imprisonment for a period of one to ten years [Chapter XX, Article 163(4)]. The Criminal Code further provides that whoever, without permission or contrary to stipulated conditions, possesses, uses, produces, reprocesses, collects or deals with explosive devices or substances, radioactive materials, ionising sources or other objects dangerous to the life or health of a significant number of persons or which is likely to cause considerable damage to property, will be subject to imprisonment for a period of six months to eight years [Article 170(1)].

2. Mining regime

There is no legislation dealing specifically with the prospecting for and mining of radioactive ores in Poland. These activities are therefore governed by the Mining and Geological Act of 4 February 1994 (O.J. of 2005 No. 228, item 1947).

3. Radioactive substances, nuclear fuel and equipment

a) Licensing

The act provides that a licence from the competent nuclear safety and radiation protection authority is required to carry out activities related to the application of atomic energy [Chapter 2, Article 4(1)]. Amongst the activities listed are the production, conversion, storage or use of nuclear materials and radioactive sources. Also included is the manufacture and use of devices incorporating radioactive sources or emitting ionising radiation, the manufacture of dosimetric equipment and equipment and devices for protection against ionising radiation. Practices involving the addition of radioactive substances to foodstuff, toys, jewellery or cosmetic products are prohibited. The import and export of such products in and out of the territory controlled by Polish customs is also prohibited [Article 4(2)]. The Council of Ministers may exempt certain activities from the licence requirements (Article 6). The Regulation exempting Certain Activities from Licensing was adopted on 6 August 2002. It exempts activities where the radiation source is of very low activity or concentration, or where low-level sources are contained in equipment in conformity to specified construction requirements, thereby assuring a satisfactory level of radiation protection. Although exempt from licensing, these activities must nevertheless be registered to permit some level of control by the NAEA.

“Nuclear material” is defined as ores, source materials or special fissile materials and they are referred to in Article 197 of the Treaty establishing the European Atomic Energy Community [Article 3(11)]. “Radioactive source” is defined as any radioactive substance prepared in such a manner as to allow use to be made of the ionising radiation it emits [Article 3(56)]. Licences are issued by the President of the NAEA [Article 5(2)], with the exception of licences to manufacture, purchase, install and use X-ray apparatus emitting radiation of energy equal to or less than 300 keV. These latter licences are granted by the local sanitary inspector [Article 5(3)].

b) Registration and monitoring of nuclear materials and radioactive sources

The act requires any organisational unit licensed to manufacture, convert, store, use and trade nuclear materials, to register and monitor such materials [Article 5(4)]. The rules governing such registration and control are established by the Council of Ministers, pursuant to the Regulation of the Council of Ministers adopted on 4 November 2008 on the Physical Protection of Nuclear Materials (O.J. No. 207, item 1295) and the Regulation of the Council of Ministers adopted on 27 April 2004 on the Accounting of Nuclear Materials [O.J. No. 98, item 982].

The rules set out the principles which apply to the keeping of records and the control of nuclear materials during manufacture, processing, use, removal from one place to another and storage on national territory. Nuclear materials passing in transit through Polish territory are excluded from the application of these rules.

The system for recording and controlling nuclear materials includes internal plant records and audits of nuclear materials as well as central record keeping and audit by the National Atomic Energy Agency.

4. Nuclear installations

a) Licensing and inspection, including nuclear safety

In the act, "nuclear facility" is defined as a facility or an installation designed for manufacturing, use, processing, storage or disposal of nuclear materials in quantities allowing a self-sustained nuclear fusion chain reaction [Article 3(13)]. This definition is further elaborated in Article 34 of the act which refers in particular to nuclear power plants, thermal-electric power plants and heating plants equipped with nuclear power reactors, research, experimental and other nuclear reactors.

In accordance with the act, the obligation to fulfil the requirements with regard to nuclear safety, radiological protection and physical protection of a nuclear facility applies during all stages of the lifetime of the nuclear installation (Article 35). The respective licences to engage in these activities until operation begins are granted by the President of the NAEA on the request of the investor and subsequently when requested by the operator.

Inspection powers, which are part of a wider nuclear surveillance function, are described in Chapter 9 of the act. The tasks related to overview, including inspections, are performed by the President of the NAEA, the chief nuclear regulatory inspector and the regulatory inspectors responsible for nuclear control (Article 64). The principal inspector for nuclear surveillance is responsible for directing the work of the inspectors in charge of nuclear surveillance (Article 52). The principle inspector is appointed by and reports to the President of the NAEA.

Pursuant to Article 66, the inspectors are entitled to:

- A 24-hour access to transport vehicles and the sites of organisational entities where nuclear materials, ionising radiation sources, radioactive waste and spent nuclear fuel are produced, used, stored, disposed of or transported.
- Review the documentation concerning nuclear safety and radiological protection in the controlled organisational entity.
- Check if the activities referred to in article 4(1) are conducted in compliance with nuclear safety and radiological protection regulations and with the requirements and conditions established in the licence.
- Conduct independent technical and dosimetric measurements whenever needed.
- Request written or oral information if this is necessary to clear up an issue.

The procedure to be followed in surveillance matters is governed by the Code of Administrative Procedure. Any decision involving nuclear safety and radiation protection may be contested before the Supreme Administrative Court (*Naczelny Sad Administracyjny*). The act defines "nuclear safety" as the conditions reached through the organisational and technical measures undertaken to prevent radiological emergencies related to practices involving nuclear materials and to mitigate their consequences (Article 3).

Poland ratified the Convention on Nuclear Safety on 14 June 1995.

b) Emergency response

The act distinguishes the following types of radiological emergencies according to the extent of their impact:

- An on-site emergency is a radiological emergency occurring on the site of the organisational entity. The impact is limited to the area within the site boundaries of the organisational entity.

- A public emergency on a regional scale is a radiological emergency occurring on the site of the organisational entity or off-site during field works or during the transportation of nuclear materials, ionising radiation sources, radioactive waste and spent nuclear fuel, with the impact limited to the territory of one region only.
- A public emergency on a national scale, which is referred to as a radiological emergency in the preceding paragraph, is when the impact extends, or may extend, to a territory larger than that of the region.

The President of the NAEA shall issue an order decreasing the power or stopping the operation of a nuclear facility if, in his assessment, further operation of this facility shall endanger nuclear safety. A subsequent increase of power or start-up of the facility shall require the consent of the President of NAEA (Article 39).

If an inspection of the installation reveals a direct threat to nuclear safety or radiation protection, the President of the NAEA, the chief nuclear regulatory inspector or the regulatory inspectors responsible for nuclear control are required to impose emergency measures designed to eliminate the danger (Article 84).

Poland is party to the following international conventions dealing with emergency response:

- 1986 Convention on Early Notification of a Nuclear Accident (ratified on 24 March 1988).
- 1986 Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency (ratified on 24 March 1988).
- Bilateral agreements on early notification of a nuclear accident and on co-operation in nuclear safety and radiological protection concluded with: Denmark (1987), Austria (1987), Norway (1989), Ukraine (1993), Belarus (1994), Russian Federation (1995), Lithuania (1995), Slovak Republic (1996) and the Czech Republic (2005).

By order of the President of the NAEA, the international contact point (ICP) of the early warning system was established. The ICP is located within the structure of NAEA, in the Radiation Emergency Center "CEZAR". The ICP operates on a 24-hour basis and serves as a channel for the exchange of information on radiation emergencies with the International Atomic Energy Agency (IAEA) in Vienna and neighbouring countries, in accordance with international conventions and bilateral agreements.

5. Trade in nuclear materials and equipment

Under Article 62 of the act, the importation and exportation of nuclear materials, radioactive source, and devices containing such sources, from the territory controlled by Polish customs shall be conducted on the basis of licensing conditions provided in Article 4(1)(2). The import of consumer goods emitting ionising radiation shall also be conducted on the basis of licensing conditions provided in Article 4(1)(2).

The Regulation of the Council of Ministers of 20 February 2007 (O.J. No 131, item 911) lays down the rules on the importation and exportation of radioactive waste and spent nuclear fuel and also of nuclear materials, radiation sources and devices containing such sources and their transit through the Polish customs.

Nuclear materials, radioactive sources and equipment containing radioactive sources may be imported from abroad by an entity that has been licensed under Article 4 of the act to:

- use such items;
- deal in nuclear materials or radioactive sources;

- manufacture and process nuclear materials and radioactive sources;
- manufacture devices containing radioactive sources; or
- manufacture articles of general use which emit ionising radiation.

Similarly, nuclear materials, radioactive sources or devices containing radioactive sources may be exported to foreign countries by an entity that has been licensed under Article 4 of the act to:

- distribute nuclear materials or radioactive sources;
- manufacture devices containing radioactive sources;
- use nuclear materials and radioactive sources; or
- manufacture nuclear materials and radioactive sources.

An Act of 29 November 2000 sets out the rules for the foreign trade of goods, technologies and services of strategic importance to the safety of the state and to maintenance of international peace and security (O.J. of 2004 No. 229, item 2315). These control rules apply to a variety of goods and technologies, including those belonging to the nuclear fuel cycle and those capable of producing nuclear explosive devices. The list of such goods and technologies is established in the Council Regulation (EC) No. 1334/2000 of 22 June 2000 setting up a Community regime for the control of exports of dual-use items and technology and by the Minister for the Economy and the Minister for Foreign Affairs. The Minister for the Economy issues import and export certificates after the licence has been granted. The directors of customs offices issue permits for the transit of such goods. Control teams appointed by the Minister for the Economy, which include a member of the National Atomic Energy Agency, carry out licence checks on Polish territory. The Minister for the Economy issued an Order on special controls in foreign trade pursuant to the 1993 Act (Dz. U. No. 19 of 25 March 1994). This order contains provisions relating to articles capable of producing nuclear explosive devices.

6. Radiation protection

Ongoing surveillance of nuclear safety and radiation protection is dealt with in Chapters 3 and 9 of the act with general responsibility being given to the President of the NAEA, the chief nuclear regulatory inspector and other regulatory inspectors responsible for nuclear surveillance. For further details of the nuclear surveillance tasks of the principal inspector and the inspectors, see *supra*, Section 4 "nuclear installations", subsection (a) "licensing and inspections".

The chief nuclear regulatory inspector and the other regulatory inspectors examine the documentation relating to nuclear safety and radiation protection that have been submitted by applicants. This documentation provides opinions regarding the siting of nuclear plants and waste disposal facilities, review training programmes for employees in nuclear installations and give periodic reports on the nuclear safety and radiation protection situation in the country.

Chapter 3 of the act deals with training and health protection of workers in the nuclear industry. Workers may only carry out activities involving nuclear materials, sources of ionising radiation or radioactive waste if they have adequate knowledge of nuclear safety and radiation protection requirements in light of their position. Medical examinations are required to ensure that the worker is suitable for the post and training programmes to educate workers on nuclear safety and radiation protection issues must be periodically organised by the head of the organisational entity which employs them. The Minister for Health and Welfare is responsible for establishing the general content and principles of the training programme for persons responsible for ensuring protection against ionising radiation in X-ray centres (Article 12). The act also requires medical

surveillance of workers likely to be exposed to ionising radiation and provides for compulsory systematic dosimetric readings as part of this surveillance.

The standards for such medical surveillance and dosimetric recordings in the workplace are set out in the Regulation of the Council of Ministers of 23 March 2007 on the subsidy for activities in the field of nuclear safety and radiological protection (O.J. No 131, item 913). Under that regulation, the results of measurements concerning the level of exposure for individuals must be kept for at least 30 years after termination of the work involving exposure to ionising radiation. Similarly, the results of atmospheric dosimetric measurements taken at the workplace must be kept for at least 30 years, unless such results have been handed over to the state nuclear safety and radiation protection surveillance body.

The relevant radiation dose limits are set out in the Regulation of the Council of Ministers of 18 January 2005 on ionising radiation dose limits (O.J. No. 20, item 168). These dose limits apply to workers employed under conditions where there is a likelihood of exposure to ionising radiation and for persons residing in the proximity of ionising radiation sources including nuclear installations.

The Appendices to the regulation set out the formulas used to calculate the applicable dose limits under the regulation. Generally, to identify ionising radiation hazards for workers, there is an annual limit on intake corresponding to one of the following:

- overall effective dose equivalent of 50 mSv;
- 150 mSv for eye lens; and
- 500 mSv for other tissues or organs.

In 1965, Poland ratified the 1960 ILO Convention No. 115 on Workers Protection against Ionising Radiation. As a result, the international safety standards for radiation protection and their amended versions were implemented in Poland. The present law is based on the 1994 Basic Safety Standards for Protection against Ionising Radiation and for the Safety of Radiation Sources (BSS) as approved by the IAEA. The recent revision of the BSS is the basis for bringing the existing regulations in Poland into line with European Union directives.

7. Radioactive waste management

Chapter 7 of the act sets out the general framework for the regulation of radioactive waste. Radioactive waste which is emitted from the manufacture, conversion, temporary or final storage or use of nuclear materials and radioactive sources and also from the operation and decommissioning of nuclear installations, must be treated in such a way as to prevent its constituting a risk to persons and to the environment (Article 50).

Radioactive waste must be registered at the place where it is produced or stored. The rules governing the classification of waste, its characterisation and registration and the conditions for its treatment and storage are determined by the Council of Ministers (Article 51). Licences for the construction and operation of radioactive waste repositories are granted by the President of the NAEA (Article 53). Further, a Regulation of the Council of Ministers of 3 December 2002 lays down rules on classification of radioactive waste, its characterisation, controlling and records keeping as well as on conditions for the storage of radioactive waste and spent fuel (O.J. No. 230, item 1925).

At the international level, Poland ratified the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management on 5 May 2000. Poland also ratified the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter on 23 January 1979.

8. Non-proliferation and physical protection

Poland is party to the following international conventions, treaties and agreements dealing with non-proliferation and physical protection in the nuclear field:

- Treaty on the Non-Proliferation of Nuclear Weapons (ratified on 3 May 1969).
- Safeguards Agreement with the Euratom and IAEA (ratified on 2 August 2006).
- Additional Protocol with the Euratom and IAEA (ratified on 2 August 2006).
- Convention on the Physical Protection of Nuclear Material (ratified on 8 September 1983).
- Amendment to the Convention on the Physical Protection of Nuclear Material (not in force yet; ratified on 20 April 2007).
- 1996 Comprehensive Nuclear Test Ban Treaty (ratified on 25 May 1999).

Poland is also a member country of the Nuclear Suppliers Group (NSG – London Club) and, as a result, observes the NSG guidelines set out in IAEA publication INFCIRC 254/rev.2/Part 1 and Part 2 (export and import control by the state, as laid down by the Act of 2 December 1993; see *infra*).

As discussed *supra*, under Section 5 “trade in nuclear materials and equipment”, an Act of 29 November 2000 sets the rules for the foreign trade of goods, technologies and services of strategic importance to the safety of the state and to maintenance of international peace and security.

Under the act, the physical protection of nuclear materials is the responsibility of the organisational unit to which a licence has been granted to manufacture, convert, store, use or trade in those materials (Article 41).

Chapter 5 of the act defines nuclear materials subject to accountancy requirements, specifies methods and means of maintaining balance. This section of the act also establishes control procedures and presents detailed models of the documents to be submitted. Detailed rules governing physical protection of nuclear materials are provided by the Regulations of the Council of Ministers of 4 November 2008 on physical protection of nuclear materials and nuclear facilities. The rules took effect on 25 December 2008. The Regulation of 4 November 2008 sets out the various categories of nuclear materials and establishes adequate protection levels for each of them. It further determines the organisational methods and technologies which should be used in the field of physical protection, as well as the appropriate procedures for the periodic controls carried out by the President of the NAEA.

9. Transport

Chapter 8 and 8a of the act deal in particular with the transport of nuclear materials and radioactive sources and waste. Licences to transport nuclear materials and radioactive sources are granted by the President of the NAEA. The nuclear materials must be prepared for transport and transported in such a way as to prevent any possibility of a self-sustained fission reaction. The radiation doses to which persons involved in the transport operation are exposed must be monitored and must not exceed the dose limits specified under the act.

The Regulation of the Council of Ministers of 4 November 2008 on physical protection of nuclear materials and nuclear facilities contains specific provisions to ensure safety during the transport of nuclear material falling into one of the three categories set out in the appendix to that regulation.

The conditions and requirements applying to transport within the site of the entities which produce, store or use nuclear materials or radioactive sources and waste are to be specified by the President of the NAEA in the licence for the activity authorised.

The shipment of radioactive waste and spent nuclear fuel onto, from and through the territory of Poland is regulated in Chapter 8a of the act and in the Regulation of the Council of Ministers of 21 October 2008 on granting authorisation and consent to the import onto the territory of Poland, export from the territory of Poland and transit through that territory of radioactive waste and spent nuclear fuel (O.J. No 219, item 1402). These provisions comply with the Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel.

10. Nuclear third party liability

Poland ratified the 1963 Vienna Convention on Civil Liability for Nuclear Damage and the 1988 Joint Protocol on the Application of the Vienna Convention and the Paris Convention on 8 December 1989. The legislative provisions to meet its obligations under the Vienna Convention were already largely in place under Chapter 12 of the act although there are provisions in the convention which are not specifically addressed under the act. The act, channels liability for nuclear damage to the operator of a nuclear installation with the exception of damage caused directly by acts of war or armed conflict [Article 101(1)]. This is true also of the convention and it is done as a matter of principle.

If a person who suffers nuclear damage, by intentional behaviour has caused or aggravated that damage, the court of justice may relieve the operator, either wholly or partially, from his obligation to pay compensation in respect of the damages suffered by such individual.

Pursuant to Article 100(5) nuclear damage includes any one of the following:

- Personal injury.
- Damage to property.
- Damage to the environment – the costs of measures of reinstatement which aim to restore the impaired environment viewed as common property to its natural state, unless such impairment is insignificant.
- Loss of potential income which the injured party could have obtained if it were not for the damages referred to in subparagraphs (a) and (b), as well as the loss of income related to the damage to the environment viewed as common property.

In the event of nuclear damage occurring during the transport of nuclear materials, the operator sending the material remains liable for third party damage unless an agreement between nuclear operators provides for the liability of the other person [Article 101(2)].

The operator's liability is limited to the amount of 150 million Special Drawing Rights (SDR) [Article 102(1)].

The operator of a nuclear installation is required to maintain a financial security covering this liability [Article 103(1)]. The National Treasury shall guarantee the payment of compensation for nuclear damage incurred by an individual where such amount could not be settled from the financial security [Article 103(3)].

The right to compensation for personal injury due to nuclear damage is not subject to a prescriptive time limit. Nuclear damage to property or the environment is subject to a ten year prescriptive period and to a three year discovery rule i.e. the injured party must file suit within three years of the date that he/she knew or should have known of the injury [Article 105].

The provisions of the Civil Code apply to claims for nuclear damage (Article 107) given they are not covered in Chapter 12 of the act. Similarly, the provisions of Chapter 12 of the act do not prejudice the application of other provisions on benefits for industrial injuries or occupational illness (Article 108).

II. Institutional framework

1. Regulatory and supervisory authorities

a) National Atomic Energy Agency (NAEA)

The National Atomic Energy Agency – NAEA (*Panstwowa Agencja Atomistyki*) is the governmental agency, established by the statute conferred by the Minister of Environment and it is directed by the President of NAEA. The President of NAEA is a central organ of governmental administration in charge of nuclear safety and radiological protection (Polish nuclear regulatory body). As such, he is responsible for the co-ordination and control of activities related to the research and safe use of nuclear energy, safeguards for nuclear materials, storage of radioactive waste, education and information of the public, as well as international co-operation in the field of nuclear energy. The NAEA President is proposed by the Minister for the Environment and is appointed by the Prime Minister. The President reports to this minister and he/she is assisted by an advisory body, the Atomic Energy Council and by the Nuclear Safety Chief Inspector who is also the vice President of the NAEA.

The act sets out in Chapter 13 the powers and responsibilities of the President of the NAEA, which are:

The nuclear legislative scheme attributes a particularly important role to the President of the NAEA, especially with relation to the granting of licences and the overall supervision of the nuclear sector (Article 110). The President is responsible for governmental supervision of all aspects of the peaceful uses of atomic energy related to nuclear safety and radiation protection. He is also responsible for radiological emergency preparedness and for decontamination measures. In the event of a radiation emergency, the President puts the emergency plan into operation and establishes protective zones around nuclear facilities. The President also supervises control over foreign trade in and transit through Polish territory of nuclear materials and equipment. Finally, the President, in co-operation with the Minister for Foreign Affairs, co-ordinates international relations in the field of the peaceful and safe use of atomic energy, and represents the government of Poland in the governing bodies of specialised international organisations.

b) Minister for Health and Welfare

The Minister for Health and Welfare is responsible for issuing regulations laying down the conditions for the safe application of ionising radiation for medical purposes. Pursuant to the act, the minister establishes conditions for the safe use of ionising radiation in medical applications and methods of internal control for the fulfilment of these conditions.

c) Minister for the Environment

According to the Atomic Law the Minister of the Environment supervises the President of the NAEA and nominates the Vice President.

d) Minister for the Economy

According to the Act on the Organisation of the Central Authorities in the Republic of Poland of 4 September 1997 (O.J. of 2007 No 65, item 437), the Minister of Economy controls activities

related to peaceful uses of nuclear energy in order to meet social and economic needs of the country. The Minister of Economy supervises research institutes in the field of nuclear energy.

e) Minister for National Treasury

According to the Atomic Law, the Minister for National Treasury supervises the radioactive waste management plant.

2. Advisory bodies

Council for Atomic Affairs

The Council for Atomic Affairs is an advisory body which assists the President of the National Atomic Energy Agency by providing its opinion on questions relating to the NAEA's activities and, in particular, on radiological protection and nuclear safety (Article 112). It comprises a Chairperson appointed by the Prime Minister on the recommendation of the President of the NAEA together with members of the Council appointed by the President of the NAEA.

3. Public and semi public bodies

Radioactive waste management plant

The radioactive waste management plant, established by the Atomic Law (Chapter 14), is a state-owned public utility located in Otwock-Swierk. It conducts activities involving radioactive waste management and spent nuclear fuel management and, above all, ensures permanent feasibility of radioactive waste and spent nuclear fuel disposal. The plant also conducts activities consisting in the collection, transport, storage and disposal of nuclear materials, radioactive sources and other radioactive substances.

The plant is managed and externally represented by the director. The Minister for National Treasury supervises the plant and is responsible for nominating the director.

The plant is a legal entity in its own right and it acts on its own behalf and on its own account in business transactions. It receives an allocated subsidy for radioactive waste management and spent nuclear fuel management from the national budget. Provision is also made in the national budget for the collection, transport, processing, storage and disposal of nuclear materials, radioactive sources and other radioactive substances.

4. Research institutes

a) Central Laboratory for Radiological Protection

The Central Laboratory for Radiological Protection, located in Warsaw, is supervised by the Minister of Economy. Its main activities include supervision and control of radiation hazards, the scientific research programme in radiation protection, the formulation of standards on radiation protection, the safe handling of radioactive sources and the personal dose monitoring service.

b) Institute of Atomic Energy

The Institute of Atomic Energy (IEA), located in Swierk near Warsaw, is supervised by the Minister of Economy. The IEA is responsible for the safe operation and efficient application of the nuclear research reactor MARIA. Its main activities include VVER reactor safety studies, fuel and structural material studies for gas-cooled reactors, analysis of nuclear safety and radiological protection, processing of radioactive wastes and production of equipment applied in reactor technology.

Since 1 January 2007, the IEA Radioisotope Centre POLATOM is a part of the Institute of Atomic Energy. POLATOM is a manufacturer and distributor of the isotopic goods applied in medicine, research and development, industry and environment protection. The activities of the company

contribute to the development of nuclear medicine, biochemistry, radiochemistry, molecular biology and other branches, which apply radioactive isotopes.

c) *Institute of Nuclear Physics*

The Institute of Nuclear Physics, located in Swierk near Warsaw, is supervised by the Minister of Economy. It is a state owned laboratory and it carries out pure and applied research on subatomic physics - i.e. the elementary particle and nuclear physics, the hot plasma physics and related fields. It also produces specialised equipment for various applications (notably for medicine and environmental protection). The staff at the institute includes a number of eminent scientists and technology experts. The Scientific Council of the institute grants Ph.D. and postdoctoral degrees. The institute conducts advanced training for various groups both internally and externally.

d) *Institute of Nuclear Chemistry and Technology*

The Institute of Nuclear Chemistry and Technology (INCT), located in Warsaw, is supervised by the Minister of Economy. The institute was established in 1983 and has been operating since 1955 as the chemistry division of the former Institute of Nuclear Research. The institute has an interdisciplinary character. The activities of the INCT include basic research, development and applications as well as various services related to the profile of its activities. The results of the INCT works are implemented in various branches of national economy, particularly in industry, medicine, environmental protection and agriculture. Its main fields of activity include radiation chemistry and technology, application of nuclear methods in material engineering and process engineering, design and production of instruments based on nuclear techniques, radio-analytical techniques and environmental research.

e) *Institute for Nuclear Physics PAN*

The Institute of Nuclear Physics PAN, located in Krakow, is supervised by the Polish Academy of Science. The institute carries out basic and applied research in physics, with emphasis on nuclear physics. This research is aimed at explaining the structure of matter from microscopic to cosmic scales, through experiments and/or application of theoretical methods. The activity of the institute extends into interdisciplinary research in a range of related fields and also stimulates technology transfer to the industry and to spin-off companies.

The institute is involved in both theoretical and experimental research in the following fields: particle physics and astrophysics, nuclear and strong interactions physics, condensed matter physics, interdisciplinary and applied research (in particular medical physics) nano-materials engineering, environmental physics, dosimetry, radiation and environmental biology, biophysics, nuclear geophysics, radiochemistry and econophysics.

f) *Institute of Plasma Physics and Laser Microfusion*

The institute, located in Warsaw, is supervised by the Minister of Economy. The institute carries out research in the following fields:

- Physics of intense laser beams interaction with matter which includes selected problems of controlled inertial confinement fusion.
- Physics of dense magnetised plasma produced in high current pulse generators of the plasma focus type.
- Theory of tokamak.
- Theory and numerical modelling of physical processes in hot plasmas.
- Physics and technology of high-peak-power lasers.

- Pulsed power generator's technology.
- Application of laser-produced plasma in material science and technology.
- Modern methods for diagnostics of fast-varying processes.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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NUCLEAR ENERGY AGENCY

The OECD Nuclear Energy Agency (NEA) was established on 1st February 1958 under the name of the OEEC European Nuclear Energy Agency. It received its present designation on 20th April 1972, when Japan became its first non-European full member. NEA membership today consists of 28 OECD member countries: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, Norway, Portugal, Republic of Korea, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities also takes part in the work of the Agency.

The mission of the NEA is:

- to assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes, as well as
- to provide authoritative assessments and to forge common understandings on key issues, as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development.

Specific areas of competence of the NEA include safety and regulation of nuclear activities, radioactive waste management, radiological protection, nuclear science, economic and technical analyses of the nuclear fuel cycle, nuclear law and liability, and public information.

The NEA Data Bank provides nuclear data and computer program services for participating countries. In these and related tasks, the NEA works in close collaboration with the International Atomic Energy Agency in Vienna, with which it has a Co-operation Agreement, as well as with other international organisations in the nuclear field.

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