

Nuclear Legislation in **OECD and NEA Countries**

Regulatory and Institutional
Framework for Nuclear Activities



Czech Republic

Czech Republic

I. General regulatory regime	2
1. Introduction	2
2. Mining regime	3
3. Sources of ionising radiation, nuclear items and spent fuel	4
<i>a) Sources of ionising radiation</i>	4
<i>b) Nuclear items</i>	5
<i>c) Spent fuel</i>	5
4. Nuclear installations	6
<i>a) Licensing and inspection, including nuclear safety</i>	6
<i>b) Radiation extraordinary event management</i>	9
<i>c) Decommissioning</i>	11
5. Trade in nuclear materials and equipment	12
6. Radiation protection	12
7. Radioactive waste management	14
8. Non-proliferation and nuclear security	16
9. Transport and type-approval	17
10. Nuclear third party liability	18
II. Institutional framework	20
1. Regulatory and supervisory authorities	20
<i>a) State Office for Nuclear Safety (SUJB)</i>	20
<i>b) Ministry of Industry and Trade</i>	21
<i>c) Ministry of the Interior</i>	21
<i>d) Ministry of the Environment</i>	21
<i>e) Ministry of Health</i>	21
<i>f) Ministry of Defence</i>	22
2. Public and semi-public agencies	22
<i>a) ČEZ, a. s.</i>	22
<i>b) National Radiation Protection Institute (NRPI)</i>	22
<i>c) Radioactive Waste Repository Authority (RAWRA)</i>	22
<i>d) DIAMO, s.p.</i>	23
<i>e) Nuclear Physics Institute (NPI)</i>	24
<i>f) National Institute for Nuclear, Chemical and Biological Protection (SÚJCHBO, v. v. i.)</i>	24
<i>g) Nuclear Research Institute Řež, a. s. (NRI)</i>	24
<i>h) Research Centre Řež, s.r.o.</i>	24

I. General regulatory regime

1. Introduction

On 1 January 1993, the former Czechoslovakia (hereinafter “Czechoslovakia”) was divided into the Czech Republic and the Slovak Republic. To ensure a smooth and continuous transition, it was agreed that all acts, regulations and decisions in the field of nuclear energy and ionising radiation would continue to apply until subsequent legislation was enacted. Since then, multiple acts and regulations have been adopted to establish a comprehensive legal system in this field.

In the Czech Republic, nuclear power generated electricity constitutes about 34,5 % of the country’s supply (2019). There are two nuclear power plants, one at Dukovany in South Moravia and another at Temelin in South Bohemia. The Dukovany nuclear power plant has four operational units (VVER-440/213) each of which has a thermal power of 1 375 MWt representing a total installed capacity of 2040 MWe (4 x 510 MWe). The Temelin nuclear power plant has two operational units (VVER-1000), the first of which began trial operation in mid-2002. Temelin 2 began trial operation on full power (1 000 MWe) in April 2003. Full operation began in October 2004. The two units have each a thermal power of 3 000 MWt representing a total installed capacity of 2164 MWe (2 x 1 082 MWe).

In addition, the Czech Republic has three research reactors, several radioactive waste storage facilities and interim spent fuel storage facilities (operated at Temelin and at Dukovany) and a medium and low-level institutional radioactive waste repository (operated at Dukovany). Finally, the Czech Republic also has historically undertaken uranium ore mining, but commercial mining was stopped in April 2017). The state-owned company DIAMO, s.p. (formerly Československý Uranový Průmysl – CSUP) acts as the operator of all the uranium production facilities.

In Czechoslovakia, the predominant regulatory body was the Czechoslovak Atomic Energy Commission. By Constitutional Act No. 4/1993 Coll., on Measures Related to the Dissolution of the Czech and Slovak Federative Republic and Act No. 21/1993 Coll., Amending and Supplementing Act of the Czech National Council No. 2/1969 Coll., on Establishing Ministries and Other Central State Administration Bodies of the Czech Socialist Republic, as Amended, and Implementing Other Measures in the System of Central State Administration Bodies of The Czech Republic, the functions and responsibilities of the Commission were transferred to the State Office for Nuclear Safety (Státní úřad pro jadernou bezpečnost, hereinafter “SUJB”), which is the state supervisory and regulatory body responsible for state administration of the safe utilization of nuclear energy and ionising radiation for peaceful purposes.

The general act governing all activities in the field of nuclear energy was adopted on 24 January 1997, titled the Act on Peaceful Utilisation of Nuclear Energy and Ionising Radiation (the Atomic Act) and on Amendments and Alterations to Some Acts¹. Act No. 18/1997 Coll. fully entered into force on 1 July 1997 and has been amended several times since then. One of the most important amendments was made by Act No. 13/2002 Coll., which mainly aimed to ensure full compliance of the Czech legislation in the nuclear field with Euratom regulations and directives (especially Directive 96/29/Euratom²). It

1. Act No. 18/1997 Coll.

2. Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation, *Official Journal of the European Union* (OJ) L 159/1 (29 June 1996).

entered into force on 1 July 2002 with the exception of certain provisions that came into effect upon the date of accession of the Czech Republic to the European Union (EU) (and Euratom community) on 1 May 2004.

Recent legislation, Act No. 263/2016 Coll., Atomic Act (hereinafter “the Atomic Act”), was adopted on 14 July 2016 and fully entered into force on 1 January 2017. The new Atomic Act replaced the prior Act No. 18/1997 Coll., except for the part that deals with nuclear third party liability, which will remain valid until new legislation on this subject is adopted. The new Atomic Act enhances both the form and content of the 1997 legislation in the field of nuclear law and adopts a number of new features aiming to increase the level of protection against harmful effects of nuclear energy and ionising radiation. New legislation transposes the latest Euratom norms and standards of the International Atomic Energy Agency. The Atomic Act was followed with the adoption of a set of implementing regulations.

The main purpose of the Atomic Act is to create the legal basis for the regulation of all activities involving the utilisation of nuclear energy and ionising radiation and to protect the public and the environment against their harmful effects. The Atomic Act aims to ensure that nuclear energy and ionising radiation are used exclusively for peaceful purposes and that the benefits of their use are balanced against their potentially harmful effects. The Atomic Act covers administrative issues, incorporates rules on labour law and environmental law, and it addresses other areas such as public health.

The following activities involving the use of nuclear energy and ionising radiation are covered by the Atomic Act:

- the conditions for the peaceful uses of nuclear energy (siting, design, construction, commissioning, operation, reconstruction and decommissioning of nuclear installations);
- the conditions for performing activities in exposure situations;
- radioactive waste and spent fuel management;
- the type-approval of certain products in the area of peaceful utilization of nuclear energy and ionising radiation and the conditions for carriage of radioactive or fissile materials, radioactive waste or spent fuel;
- radiation situation monitoring;
- radiation extraordinary event management;
- the conditions for security of nuclear installations, nuclear materials and sources of ionising radiation;
- the requirements for ensuring the non-proliferation of nuclear weapons;
- the exercise of state administration in the area of the peaceful utilization of nuclear energy and ionising radiation.

Numerous decrees and regulations have been adopted to implement the Atomic Act, and these are described hereinafter within the appropriate section according to subject matter.

2. Mining regime

Uranium mining in the Czech Republic started in 1946 and reached its peak in 1960 with an annual production of 3 000 tonnes. The operator of all uranium production facilities is the exclusively state-owned company DIAMO, s.p.

In 1988, Czechoslovakia adopted Act No. 44/1988 Coll., on the Protection and Use of Mineral Resources (Mining Act), which laid down general rules concerning the use of resources and the protection of mineral wealth. That same year, the Czech National Council adopted Act No. 61/1988 Coll., on Mining Activities, Explosives and the State Mining Administration, which more specifically dealt with the safety and procedures of mining operations. The licensing of mining activities is regulated by the Decree of the Czech Mining Office No. 15/1995 Coll., on Authorisation of Mining Activities and Activities Carried Out by Mining Methods as Well as Projects for Buildings and Facilities That Constitute Components of Such Activities.

According to Government Resolution No. 1086/2014 of 22 December 2014, DIAMO, s.p. would continue the mining and processing of uranium ore in the Dolní Rožínka mine until 2017. Subsequently, the Dolní Rožínka mine was closed in April 2017 but still some research and remedial activities are under way on the site. In the other areas, DIAMO, s.p. has been carrying out gradual remedial works after mining and processing of uranium ore.

3. Sources of ionising radiation, nuclear items and spent fuel

The rules specifying procedures for the safe and secure handling and use of sources of ionising radiation, nuclear items and spent fuel have now largely been incorporated into the Atomic Act and implementing decrees such as Decree No. 422/2016 Coll., on Radiation Protection and Security of a Radioactive Source and Decree No. 379/2016 Coll., concerning the Approval of Some Products in the Field of Peaceful Use of Nuclear Energy and Ionising Radiation and the Carriage of Radioactive or Fissile Material.

a) Sources of ionising radiation

According to Section 2(2)(c) of the Atomic Act, a “source of ionising radiation” means a radioactive substance or an article or facility containing or releasing it, or a radiation generator, which is a device capable of generating ionising radiation.

Sources of ionising radiation are divided into five categories. The list of them is laid down in an implementing regulation.³ These are:

- 1) non-significant sources,
- 2) minor sources,
- 3) simple sources,
- 4) significant sources, and finally
- 5) very significant sources (nuclear reactors).

In justified cases, SUJB may, by decision, change a category of a source of ionising radiation within the categories set out in the regulation.

A licence or registration is required for the management of all sources of ionising radiation, except insignificant sources or type-approved minor sources.

Decree No. 378/2016 Coll., on Siting of a Nuclear Installation, sets out criteria for the siting of nuclear facilities.

3. Decree No. 422/2016 Coll., on Radiation Protection and Security of a Radioactive Source, secs. 12-16.

b) Nuclear items

Atomic Act Section 2(1)(f) defines the term “nuclear item” as follows:

Nuclear material, a selected nuclear item, a dual-use nuclear item, or another item significant from a perspective of ensurance of non-proliferation of nuclear weapons.

Further,

- nuclear material means any source material, special fissile material and other fissile material significant from a perspective of ensurance of non-proliferation of nuclear weapons (Section 2(1)(c)),
- selected nuclear item means material, equipment and technology, including software, designed and manufactured for use in the nuclear field (Section 2(1)(d)), and
- dual-use nuclear item means material, equipment and technology, including software, which are not designed and manufactured for use in the nuclear field, but can be used in this field (Section 2(1)(e)).⁴

Pursuant to Atomic Act Section 2(1)(a), “source materials” are

- 1) uranium containing the mixture of isotopes occurring in nature,
- 2) uranium depleted in the isotope ^{235}U ,
- 3) thorium,
- 4) an item referred to in the preceding Points 1 to 3, in the form of metal, alloy, chemical compound or concentrate, or
- 5) material containing an element referred to in Points 1 to 3.

“Special fissile materials” (Section 2(1)(b)), on the other hand, are

- 1) isotope ^{239}Pu ,
- 2) isotope ^{233}U ,
- 3) uranium enriched in the isotopes ^{235}U or ^{233}U , or
- 4) material containing a radionuclide as referred to in the preceding Points 1 to 3, unless it is a source material.

With respect to the international transfer of nuclear items, the Atomic Act prohibits such transfers where they would be in breach of the international commitments of the Czech Republic (Section 7(6)).

c) Spent fuel

In Czechoslovakia, spent fuel from the Dukovany nuclear power plant was originally sent to Russia for disposal until such time as Russia decided to accept it only for reprocessing. Following this decision it was sent to an interim spent fuel storage facility at the Bohunice nuclear power plant in the Slovak Republic. However, in 1993 the Slovak utility SEP, which operated the Bohunice plant, decided to no longer accept the fuel. In November 1995, the

4. See also Decree No. 376/2016 Coll., on Dual-Use Items in the Nuclear Area, Annex 1.

Slovak utility began shipping the spent fuel from the Dukovany nuclear power plant back to the Czech Republic with the objective of returning all such spent fuel by 1997.

To address this problem, the operator of the Dukovany nuclear power plant (the utility, ČEZ, a. s.) began re-racking the fuel assemblies in its spent fuel ponds and this increased capacity by about 90%. In addition, ČEZ, a. s. built a 600 metric ton interim dry storage facility on site, which began trial operation in March 1997. A similar facility is operated for the Temelin nuclear power plant. In addition, the Czech Republic has launched a project, under the auspices of the Nuclear Research Institute, to study the disposal of waste in a deep geological repository. The chosen repository site is not due to become operational until 2065.

The management of spent or irradiated fuel will be subject to the same requirements as for radioactive waste until the generator or SUJB (in case of delay) declare it to be radioactive waste (Atomic Act Section 110(1)); see also *id.*, Title IV, "Radioactive waste and spent fuel management".

According to the agreement between the governments of the United States and the Czech Republic, highly enriched spent fuel from the research reactor NRI Řež was delivered back to the Russian Federation in 2007.

4. Nuclear installations

The definition of a "nuclear installation" under Atomic Act Section 3(2)(e) covers a variety of facilities:

- a facility or plant comprising a nuclear reactor using fission chain reaction or other nuclear chain reaction,
- a storage facility for spent fuel,
- a storage facility for fresh nuclear fuel, unless part of another nuclear installation,
- an enrichment plant, nuclear fuel fabrication plant or spent fuel reprocessing plant,
- a storage facility for radioactive waste, except installations for the storage of radioactive waste, which is part of another nuclear installation or workplace where activity involving radiation are performed, and
- a radioactive waste disposal facility, except repositories containing exclusively natural radionuclides.

a) Licensing and inspection, including nuclear safety

i) Licensing

In accordance with Atomic Act Section 9, a licence granted by SUJB is required for:

- the siting of a nuclear installation,
- the construction of a nuclear installation,
- the first physical start-up of a nuclear installation with a nuclear reactor,
- the first power-generation start-up of a nuclear installation with a nuclear reactor,
- the commissioning of a nuclear installation without a nuclear reactor,
- the operation of a nuclear installation,
- the individual phases of decommissioning of a nuclear installation, and

- the carrying out of modifications affecting nuclear safety, technical safety and physical protection of a nuclear installation.

Under the Atomic Act, licence applications must be submitted to SUJB with documents giving basic information about the licence applicant and the proposed activity for which a licence is sought. Furthermore, specific documents required to be submitted to SUJB for each licensed activity are set out in Appendix 1 to the Atomic Act. According to Act No. 100/2001 Coll., on Environmental Impact Assessment, an environmental impact assessment is a necessary condition for the issuance of a licence for siting, construction or decommissioning of a nuclear facility or workplace with ionising radiation sources of the most severe type. The requirements for this assessment are set out in Act No. 100/2001 Coll., and the Ministry of Environment is the competent authority for environmental impact assessment.

Since 2011, a system of “expertise” fees was set up pursuant to Act No. 249/2011 Coll. to cover costs of professional activity performed by SUJB. According to that amendment, enumerated applicants (currently Atomic Act, Section 36(1)) for a licence⁵ are obliged to pay the application fee, and enumerated licensees (Section 36(2)) are similarly obliged to pay a maintenance fee on a monthly basis. The licence application fee rates shall not be more than CZK 150 million (in fact, fee rates vary from CZK 4.2 million to CZK 126 million depending on the type of licence) and the maintenance fee rates shall not be more than CZK 4 million per each calendar month to which expertise fee liability applies. Specific fee rates are specified in Governmental Order No. 347/2016 Coll., on the Rates of the Fees of the Professional Activity of the State Office for Nuclear Safety. SUJB is the administrator of the expertise fees and fees are the revenue of the state budget (see *infra* Part II.1.a. on SUJB).

SUJB’s decision must be issued within a specified time period after the applicant has submitted its documentation. This period varies depending upon the type of licence sought (Section 19). SUJB has the exclusive power to change or revoke a licence under conditions specified in the Atomic Act. Termination of the licence will generally take place after its expiration (a licence is issued for an indefinite period, with exceptions enumerated in Section 21(2)) or upon the licensee’s death or cessation. The revocation of a licence, on the other hand, can be imposed in the case of severe non-compliance with requirements under the Atomic Act or it can be sought by the licensee upon written application, provided that requirements under the Atomic Act are satisfied (Section 22). All licensees are registered by SUJB in its national register.

After the issuance of a licence, the commissioning and operation of a nuclear installation remains subject to the provisions of the Atomic Act and its implementing decrees. Some of the more relevant implementing decrees in this field are listed below:

- Decree No. 361/2016 Coll., on Security of Nuclear Installation and Nuclear Material,
- Decree No. 358/2016 Coll., on Requirements for Assurance of Quality and Technical Safety and Assessment and Verification of Conformity of Selected Equipment,
- Decree No. 377/2016 Coll., on the Requirements for the Safe Management of Radioactive Waste and on the Decommissioning of Nuclear Installations or Category III or IV Workplaces,

5. Such as those applying for a licence for the: siting of a nuclear installation; construction of a nuclear installation or category IV workplace having unsealed ionising radiation sources; first operation of a nuclear installation; category III workplace comprising mining and processing of uranium ore; individual stages of decommissioning of a nuclear installation; etc.

- Decree No. 378/2016 Coll., on Siting of a Nuclear Installation,
- Decree No. 408/2016 Coll., on Management System Requirements,
- Decree No. 21/2017 Coll., on Ensuring Nuclear Safety of a Nuclear Installation,
- Decree No. 162/2017 Coll., on Requirements for Safety Assessment according to the Atomic Act, and
- Decree No. 329/2017 Coll., on Requirements for Design of Nuclear Installation.

ii) Inspection

Inspection activities are performed by inspectors appointed by the chairperson of SUJB. According to the Act No. 234/2014 Coll. on Civil Service, and SUJB internal regulations, an inspector must be competent to perform legal acts, have a relevant degree and three years of professional experience, be competent and of moral integrity and fulfil other requirements.

Inspectors verify whether licensees (and other registered users of radiation sources) under the Atomic Act are adhering to the Atomic Act's provisions, its implementing regulations and the relevant licence conditions. While on inspection, inspectors are, according to the Atomic Act and Act No. 255/2012 Coll. on Inspection (Inspection Code), authorised, *inter alia*, to:

- enter, at any time, the licensee's premises, vehicles and other workplaces where activities involving nuclear energy utilisation or resulting in radiation exposure take place,
- check compliance with requirements and conditions of nuclear safety, radiation protection, physical protection, and emergency preparedness and other pertinent legal requirements,
- carry out measurements and collect samples,
- perform a physical inspection of nuclear items or ionising radiation sources, including checks on nuclear material accounting and control procedures,
- make video or audio recordings,
- demand the full provision of necessary information, and
- verify professional competence.

If SUJB identifies discrepancies in the inspected person's behaviour, it is authorised under Sections 203 and 204 and other provisions of the Atomic Act to:

- require the inspected person to remedy the situation within a determined time period,
- issue binding orders (e.g. prohibit until a remedy is ensured nuclear material or other source of ionising radiation management, discharge of radioactive substances from a workplace),
- impose penalties up to CZK 100 million,
- impose provisional corrective measures at the licensee's cost (according to Act No. 500/2004 Coll., Code of Administrative Procedure),

The aforementioned rules concerning licensing and inspections are also applicable in other fields on Czech nuclear law – radiation protection, management of nuclear material, import/export of nuclear materials, radioactive waste management, etc.

On this basis and according to Atomic Act Section 200(2) SUJB inspects:

- licence holders, registered persons and notifying persons,
- manufacturers, importers and distributors of products type-approved by the SUJB,
- persons performing activities in the context of the peaceful use of nuclear energy and ionising radiation not subject to authorisation under the Atomic Act,
- persons engaged in radiation situation monitoring,
- holders of authorisations for the performance of activities of particular relevance to nuclear safety and radiation protection,
- authorised and accredited persons performing assessment of conformity of selected equipment with technical requirements,
- persons in respect of whom there are reasonable grounds for believing that they are breaching obligations laid down in atomic legislation (e.g. the Atomic Act, international treaties).

iii) Nuclear safety

Under the Atomic Act, nuclear safety falls entirely under the jurisdiction of SUJB. Responsibility for nuclear safety lies with the licence holder (Sections 5(2), 5(4) and 49(1)(b)) and cannot be transferred to another person. "Nuclear safety" is defined as the state and capability of nuclear installations and natural persons operating the installation to prevent uncontrolled self-sustaining fission chain reaction or release of radioactive substances or ionising radiation into the environment and to mitigate the consequences of accidents (Section 4(2)(a)). Anyone who uses nuclear energy, manages a nuclear item or performs activities in exposure situations shall as a matter of priority, ensure nuclear safety, safety of nuclear items and radiation protection, while respecting the present level of science and technology and good practice (Section 5(2)).

The Czech Republic has been a party to the 1994 Convention on Nuclear Safety since 18 September 1995.

b) Radiation extraordinary event management

The Czech Republic succeeded to both the 1986 Convention on Early Notification of a Nuclear Accident and the 1986 Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency on 24 March 1993. The Atomic Act sets out the general rules for radiation extraordinary event management in accordance with these conventions. As provided in Atomic Act Section 4(1)(e), "radiation extraordinary event management" means a system of procedures and measures to ensure:

- 1) analysis and assessment of impacts of potential radiation extraordinary event which means analysis of radiation extraordinary events coming into consideration and assessing their impact,
- 2) radiation extraordinary event response preparedness,
- 3) radiation extraordinary event response, and
- 4) remedial action after a radiation accident.

A "radiation extraordinary event" is defined in Atomic Act Section 4(1)(a) as an event that leads or may lead to exceeding of exposure dose limits and requires action to prevent the exceeding of the limits or deterioration of the situation from the standpoint of radiation protection assurance. Under Section 4(1)(b)-(d), a radiation extraordinary event has three degrees:

- “First degree radiation extraordinary event” means a radiation extraordinary event that can be handled by forces and means of the operator or shift personnel of the person whose activities gave rise to the radiation extraordinary event;
- “Radiation incident” means a radiation extraordinary event that cannot be handled by forces and means of the operators or shift personnel of the person whose activities gave rise to the radiation extraordinary event or has resulted from the finding, misuse or loss of a radionuclide source which does not require taking urgent action to protect the general public.
- “Radiation accident” means a radiation extraordinary event that cannot be handled by forces and means of the operators or shift personnel of the person whose activities gave rise to the radiation extraordinary event or has resulted from the finding, misuse or loss of a radionuclide source which requires taking urgent action (Section 104) to protect the general public. An “emergency plan” is a set of planned measures to deal with a radiation incident or radiation accident and to limit their consequences.

“Emergency planning zone” means the area surrounding the nuclear installation grounds or category IV workplace in which, based on radiation extraordinary event analysis and assessment, the requirements for preparation for taking urgent protective action, other measures to protect the general public as a result of the expected exceedance of reference levels and other measures to protect the general public apply (Section 4(1)(k)).

According to the Atomic Act there are four types of emergency plans:

- an on-site emergency plan, designed for the grounds of nuclear installations or ionising radiation source workplaces (Section 155(2)),
- an emergency rule for the transport of nuclear materials or ionising radiation sources (Appendix 1(4)(e)),
- an off-site emergency plan for the region in the vicinity of a nuclear installation or ionising radiation source workplace where an emergency planning zone has been established (Section 155(2)), and
- a national radiation emergency plan drawn up for the territory of the Czech Republic outside nuclear installation grounds or category IV workplaces to prepare for the management and implementation of a response to a radiation incident or radiation accident with an impact outside the emergency planning zone (Section 4(1)(l)).

The Atomic Act lays down the licensees’ obligations in the event of a radiation incident (Sections 156 to 158). The licensee must have an on-site emergency plan approved by SUJB and, in the event of an existing or potential radiation accident, the licensee must immediately notify the relevant local authority, SUJB and other relevant bodies, and ensure that a warning is issued to the public within the emergency planning zone. In addition, the licensee must stop or limit the consequences of a radiation accident while taking protective measures for employees and other persons. In the event of a radiation accident, the licensee must, in addition, participate in the operation of the National Radiation Monitoring Network (NRMN). Similar obligations apply for radiation incidents or accidents during transport. Emergency rules should be included in the documentation for a licence to transport nuclear materials and radionuclide sources.

The licensee must also submit information to the relevant regional authority to help it prepare an off-site emergency plan and co-operate to ensure radiation extraordinary event response preparedness in the emergency planning zone. In addition, the licensee is also obliged to provide for radiation situation monitoring systems at the nuclear installation

grounds and in the emergency planning zone and take part in radiation situation monitoring in the territory of the Czech Republic. Finally, the licensee must participate in running a press and information campaign to ensure that the public is prepared for radiation emergencies.

In the event of a radiation accident, SUJB is obliged to ensure mobilisation of its Emergency Crises Staff (ECS) and the changeover of the NRMN into emergency mode. Based on its assessment of the radiation situation and current information from the operator, the ECS prepares the background information necessary to take decisions aimed at reducing or averting radiation exposure. Expert and technical support is provided to the ECS by the Emergency Response Centre (ERC).

Decree No. 359/2016 Coll., on Details of Ensuring Radiation Extraordinary Event Management, outlines in detail emergency management of nuclear facilities and workplaces with ionising radiation sources and the requirements on the content of on-site emergency plans and rules. This decree, moreover, specifies the scope and requirements of compulsory documentation relating to radiation extraordinary event management (e.g. on-site emergency plans, emergency rules, etc.) It transposes certain provisions of Council Directive 2013/59/Euratom⁶ and Council Directive 2014/87/Euratom.⁷

c) Decommissioning

"Decommissioning" means in accordance with Atomic Act Section 3(2)(g) the administrative and technical activities aimed at complete decommissioning or decommissioning of a nuclear installation, a category III workplace or a category IV workplace with restrictions on its use for other activities related to the use of nuclear energy or activities in exposure situations. The decommissioning of a nuclear installation or a category III or IV workplace requires a licence issued by SUJB, which in turn requires an environmental impact assessment, a management system programme, an on-site emergency plan, physical protection assurance plan and other appropriate measures. Decree No. 377/2016 Coll., on the Requirements for the Safe Management of Radioactive Waste and on the Decommissioning of Nuclear Installations or Category III or IV Workplaces, sets out further details on the decommissioning of nuclear installations or category III or IV workplaces and necessary documentation for authorised activities.

Atomic Act Section 9(7) also requires a licence for complete decommissioning. Complete decommissioning is defined under Section 3(2)(f) as putting a nuclear installation, a category III workplace or a category IV workplace into a state that allows its use for another purpose or use of the area where it was located without restrictions.

Finally, the operator of a nuclear installation or ionising radiation source workplace is required to keep a financial reserve for the decommissioning of the facility. Further details in this respect were set out in Decree No. 360/2002 Coll., Laying down the Method on Formation of the Reserves Ensuring a Decommissioning of Nuclear Installations or Type III or IV Workplaces. A new decree is expected to be issued soon.

6. Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom, OJ L 13/1 (17 Jan. 2014).

7. Council Directive 2014/87/Euratom of 8 July 2014 amending Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations, OJ L 219/42 (25 July 2014).

5. Trade in nuclear materials and equipment

Nuclear trade is now regulated by the Atomic Act and Decrees No. 374/2016 Coll., on the Accountancy and Control of Nuclear Materials and Reporting of Information on Them, No. 375/2016 Coll., on Selected Items in the Nuclear Area, and No. 376/2016 Coll., on Dual-use Items in the Nuclear Area.

A licence issued by SUJB is required for the import or export of a nuclear item or transit of nuclear material and a selected nuclear item (Section 9 of the Atomic Act). The export or transit licence from SUJB in the nuclear field is the necessary condition for an authorisation to be issued by the Ministry of Industry and Trade under Act No. 594/2004 Coll., Implementing the European Community Regime for the Control of Exports of Dual-use Items and Technology, whereby the European Community regime for the control of exports of dual-use items and technology is implemented. In principle, the Atomic Act prohibits the international transfer of nuclear items into states that would contravene its international commitments under international agreements, such as the Non-Proliferation Treaty⁸ and the Sea-Bed Treaty.⁹ Import of radioactive waste and spent fuel into the Czech Republic is prohibited. However, the Atomic Act does allow the re-import of radioactive waste from materials exported from the Czech Republic for processing or reprocessing, if approved by SUJB.

Decrees No. 375/2016 Coll. and No. 376/2016 Coll. establish trigger list items and nuclear-related dual-use items in the nuclear sector that take into account the applicable international legislation, especially International Atomic Energy Agency (IAEA) recommendations in this field and Council Regulation (EC) No. 428/2009.¹⁰ These decrees are regularly revised according to the amendments approved by the international control regimes.

6. Radiation protection

The Atomic Act defines “radiation protection” as a system of technical and organisational measures to reduce exposure of natural persons and protect the environment from the effects of ionising radiation (Section 2(2)(g)). State supervision over radiation protection is entrusted to SUJB pursuant to the Atomic Act. Dose limits, constraints and reference levels are set out in Decree No. 422/2016 Coll., on Radiation Protection and Security of a Radioactive Source.

Dose limits must take into account exposures from other practices. Medical exposures, natural exposures and exposures received during a radiation accident are regulated by reference levels corresponding to reasonably achievable levels of radiation protection. In general, the extent to which natural radiation exposures must be reduced is dependent upon the detriment caused, balanced against the benefits to be gained.

8. Treaty on the Non-Proliferation of Nuclear Weapons (1968), IAEA Doc. INFCIRC/140, 729 UNTS 169, entered into force 5 March 1970 (NPT or Non-Proliferation Treaty).

9. Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof (1971), 955 UNTS 116, entered into force 18 May 1972 (Sea-Bed Treaty).

10. Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, OJ L 134/1 (29 May 2009).

Radiation protection must also be respected during transportation of nuclear materials and within radioactive waste management activities. Compliance with applicable limits will be verified by SUJB's inspectors and violations can result in the imposition of penalties.

The Atomic Act, together with the implementing legislation in the field of radiation protection, is based on the Recommendations of the International Commission for Radiological Protection (ICRP) and the International Basic Safety Standards for Protection against Ionising Radiation and for the Safety of Radiation Sources. It corresponds to Council Directives 2013/51/Euratom and 2013/59/Euratom.¹¹ The general principles of radiation protection, such as justification of radiation practices and the optimisation of radiation protection and dose limitation, are covered.

Radiation protection is regulated by means of planned, existing and emergency exposure situations. An "exposure situation" means any circumstance that may lead to exposure of a natural person or the environment to ionising radiation (Section 2(2)(e)).

In accordance with Atomic Act Section 9(2), a licence granted by SUJB is required for:

- the construction of a category IV workplace, except workplaces with a nuclear installation,
- the operation of category III workplace or category IV workplace,
- the carrying out of reconstruction or other modifications affecting radiation protection, radiation situation monitoring and radiation extraordinary event management in a category III workplace or category IV workplace,
- the individual phases of decommissioning of a category III workplace or a category IV workplace,
- the discharge of a radioactive substance from a workplace, if not set otherwise by this act,
- the management (production, import, distribution...) of a source of ionising radiation,
- the addition of a radioactive substance to a consumer product when manufacturing or preparing it and for importing and exporting such a consumer product,
- the performance of services relevant to radiation protection, the performance of personal dosimetry, monitoring of a category III workplace or category IV workplace, the continuous surveillance of radiation protection...),
- the provision of services in the controlled area to the operator of a category IV workplace,
- the making available on the market of building materials,
- the mixing of radioactive substances discharged from a workplace,
- carriage of fissile material,
- carriage of radioactive substances,

11. Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption, OJ L 296/12 (7 Nov. 2013); Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom, OJ L 13/1 (17 Jan. 2014).

- carriage of radioactive or fissile materials under special conditions,
- training and further training of workers performing activities of particular relevance to nuclear safety and radiation protection,
- training of a natural person ensuring the radiation protection of a person who has been registered.

In accordance with Atomic Act Section 10, a registration conducted by SUJB is required for usage of dental or veterinary x-ray equipment or x-ray bone densitometers, which are the simplest sources of ionising radiation and also for import, export and distribution of radiation generators.

Several decrees were adopted between in order to bring domestic radiation protection legislation in line with EU requirements and to further implement the provisions of the Atomic Act:

- Decree No. 422/2016 Coll., on Radiation Protection and Security of a Radioactive Source, lays down basic safety standards for protection of the health of workers and the general public against the dangers arising from ionising radiation. It aims to implement Council Directives 2013/51/Euratom and 2013/59/Euratom;
- Decree No. 409/2016 Coll., on Activities Especially Important from Nuclear Safety and Radiation Protection Viewpoint, Special Professional Qualification and Training of Persons Ensuring Radiation Protection of the Registrant
- Decree No. 360/2016 Coll., on Radiation Situation Monitoring, establishes the details of the functioning and the organisation of the NRMN established under the supervision of the SUJB;
- Decree No. 362/2016 Coll., on the Conditions for the Award of the Grant from the State Budget in Some Existing Exposure Situations, which regulates the conditions for the award of the grant from the state budget for the adoption of justified measures to reduce the level of exposure to the presence of radon and to reduce the content of natural radionuclides in drinking water.

The NRMN is co-ordinated by SUJB. Under normal circumstances, it monitors radiation levels for the early detection of accidents; under emergency conditions, it evaluates the consequences of a radiation accident. Normal monitoring involves the following:

- an early warning network, which comprises 71 measuring points,
- a territorial network of 185 measuring points equipped with thermoluminescent dosimeters (TLD),
- local TLD networks with 92 measuring points in the surroundings of the Dukovany and Temelin nuclear power plants,
- a territorial network of 10 air contamination measuring points, and
- a network of 12 laboratories with gamma spectrometric and radiochemical analytical instrumentation and ad hoc mobile groups.

The monitoring results are published in the Annual Reports on the Radiation Conditions in the Czech Republic.

7. Radioactive waste management

The handling, disposal and management of radioactive waste is governed by the Atomic Act and corresponding regulations such as Decree No. 377/2016 Coll., on the Requirements

for the Safe Management of Radioactive Waste and on the Decommissioning of Nuclear Installations or Category III or IV Workplaces. According to Atomic Act Section 3(2)(a), "radioactive waste" means an item which is a radioactive substance or an article or equipment containing or contaminated by a radioactive substance, for which no further use is foreseen and which does not satisfy the conditions laid down in this Act for the discharge of radioactive substances from a workplace. Such waste shall be disposed of in radioactive waste repositories, i.e. a site, installation or facility used for the disposal of radioactive waste. "Radioactive waste and spent fuel storage" refers to the temporary (for a period restricted in advance) emplacement of radioactive waste or spent or irradiated nuclear fuel into areas, facilities or installations designed for this purpose, whereas "disposal" refers to the permanent emplacement of radioactive waste into areas, facilities or installations without the intention of its retrieval.

In accordance with Atomic Act Sections 9(3) and 9(4)(d), a licence granted by SUJB is required for:

- radioactive waste management, except collection, segregation and storage of radioactive waste directly by the radioactive waste producer, who is authorised to manage the waste as an unsealed radionuclide source,
- the closure of a radioactive waste disposal facility,
- the re-import of radioactive waste produced during the processing of a material exported from the Czech Republic or re-transfer thereof from a Member State of the Euratom,
- the import or transfer of radioactive waste from a Member State of the Euratom to the territory of the Czech Republic for the purposes of processing or reusing it,
- transboundary shipments of radioactive waste or spent fuel, if their activity and the activity concentration of radionuclides contained in them exceed the clearance levels established in implementing legislation.

The Atomic Act further provides that the licence holder for management of radioactive waste or generator (if radioactive waste was not handed to the holder of a licence) of radioactive waste is financially responsible for its management, from its generation to its disposal, including monitoring after closure of the radioactive waste repository and any necessary research and development activities (these costs are financed by fees paid to the "nuclear account" maintained by the Czech National Bank and administered by the Ministry of Finance)). The state, on the other hand, is responsible for the safe disposal of all radioactive waste, including monitoring and supervision of repositories after their closure. For this purpose, the Atomic Act required the Ministry of Industry and Trade to establish the Radioactive Waste Repository Authority as a state organisation (RAWRA).

The RAWRA, established on 1 June 1997, is funded through fees imposed on generators of radioactive waste, and is responsible for accepting all radioactive waste, including spent or irradiated fuel, and providing for its safe disposal, including monitoring and supervising repositories after their closure.

The same requirements as those applicable to radioactive waste shall apply to spent fuel until such time that it is declared radioactive waste by the producer in the radioactive waste accompanying document or by the SUJB by a decision.

Governmental Order No. 35/2017 Coll., established details concerning the amounts and method of payment of contributions to the nuclear account by generators of radioactive waste and provides for the annual administration of these resources. The nuclear account is a special fund provided by the state to finance all activities regarding radioactive waste

disposal including those of the RAWRA. The order further provides for an annual contribution to be made to municipalities having a radioactive waste repository within their territorial boundaries.

At the international level, the Czech Republic approved the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management on 25 March 1999 and implemented Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.

8. Non-proliferation and nuclear security

The Atomic Act uses the term “security” for security of nuclear installations, nuclear materials and sources of ionising radiation. The main aspect of security is “physical protection” which is defined as a system of technological and organisational measures preventing unauthorised activities with nuclear installations and nuclear materials (Section 4(4)(a)). The method of ensuring physical protection of nuclear installations and nuclear material shall correspond to the hazards arising from the design basis threat issued by SUJB. For the purposes of physical protection a guarded area, a protected area, an inner area and a vital area should be delineated and physically demarcated within nuclear installations.

The Atomic Act provides that SUJB carries out state supervision of physical protection and non-proliferation issues and authorises it to maintain a national system of accounting for and control of nuclear materials. SUJB approves physical protection assurance plan (Section 24(3) and Appendix 1(f)(14)). It also makes decisions concerning the management of nuclear items, if the owner or other responsible person fails to comply with requirements under the Atomic Act or the owner is unknown (Section 174). Emergency services to protect nuclear installations and to provide for the physical protection of nuclear material during its transportation are ensured in co-operation with the police. The licensee is responsible for ensuring physical protection of nuclear material and nuclear installations (Section 160). The Atomic Act also enumerates in Section 162(2) sensitive activities for which every person performing such activities needs security clearance from the National Security Authority.

The Czech Republic acceded to the Treaty on the Non-Proliferation of Nuclear Weapons¹² on 1 January 1993 and to the Convention on the Physical Protection of Nuclear Material¹³ on 24 March 1993. The Amendment to the CPPNM¹⁴ was ratified on 21 May 2009 and the instrument of ratification was deposited jointly with other EU member states with the depositary on 30 December 2010. The provisions of these conventions, including the CPPNM Amendment, as well as the provisions of The Physical Protection of Nuclear Material and Nuclear Facilities INFCIRC/225/Rev.4 (Corrected), are implemented by the Atomic Act and by Decree No. 374/2016 Coll., on the Accountancy and Control of Nuclear Materials and Reporting of Information on Them; Decree No. 375/2016 Coll., on Selected Items in the Nuclear Area, Decree No. 376/2016 Coll., on Dual-use Items in the Nuclear Area, Decree No. 361/2016 Coll., on Security of Nuclear Installation and Nuclear Material; and Section 282 of Act No. 40/2009 Coll. – the Criminal Code – provision on Illegal Production

12. Treaty on the Non-Proliferation of Nuclear Weapons (1968), IAEA Doc. INFCIRC/140, 729 UNTS 169, entered into force 5 March 1970 (NPT).

13. Convention on the Physical Protection of Nuclear Material, (1980), IAEA Doc. INFCIRC/274 Rev. 1, 1456 UNTS 125, entered into force 8 February 1987 (CPPNM).

14. Amendment to the Convention on the Physical Protection of Nuclear Material (2005), IAEA Doc. INFCIRC/274/Rev.1/Mod.1, entered into force 8 May 2016.

and Handling of Nuclear Material and Special Fissionable Material. The Czech Republic also ratified the 1996 Comprehensive Nuclear Test Ban Treaty on 11 September 1997.

The agreement between the government of the Czech Republic and the IAEA for the Application of Safeguards in connection with the Non-Proliferation Treaty was signed on 18 September 1996 and the Additional Protocol to the aforementioned agreement was signed on 28 September 1999. Following this came the accession of the Czech Republic to the EU and the accession to the Agreement between Belgium, Denmark, Germany, Ireland, Italy, Luxembourg, the Netherlands, the European Atomic Energy Community and the IAEA in implementation of Articles III(1) and (4) of the Non-Proliferation Treaty (78/164/Euratom). These documents were replaced by the Agreement between the Non-nuclear-weapon States which are members of the European Community, the European Atomic Energy Community and the International Atomic Energy Agency in Implementation of Article III (1) and (4) of the Treaty on the Non-Proliferation of Nuclear Weapons (in force since 1 October 2009) and Protocol Additional to the Agreement between the Non-nuclear-weapon States which are members of the European Community, the European Atomic Energy Community and the International Atomic Energy Agency in implementation of Article III (1) and (4) of the Treaty on the Non-Proliferation of Nuclear Weapons (in force since 1 October 2009).

In accordance with Atomic Act Section 9(5), a licence granted by SUJB is required for:

- the management of nuclear material,
- the import or export of a nuclear item or transit of nuclear material and a selected nuclear item.

Inspectors from the IAEA, accompanied by those from SUJB, are authorised to verify the fulfilment of the obligations the Czech Republic assumed under the NPT (Section 205(1)).

Inspectors from the European Commission, together with those from SUJB, are authorised to inspect the system of accounting for and control of nuclear materials by the operators, according to the Treaty establishing the European Atomic Energy Community (Articles 81 and 82) and Atomic Act Section 205(2).

9. Transport and type-approval

The Atomic Act also addresses the transport of radioactive or fissile materials (Section 141). Such transport is subject to a licence to be issued by SUJB in accordance with Decree No. 379/2016 Coll., concerning the Approval of Some Products in the Field of Peaceful Use of Nuclear Energy and Ionising Radiation and the Transport of Radioactive or Fissile Material.

The licensee must also comply with specific legislation on transport, including Act No. 111/1994 Coll., on Road Transport and its implementing Decree No. 478/2000 Coll.; Act No. 266/1994 Coll., on Railways; Appendix 1 to Decree of the Minister of Foreign Affairs No. 8/1985 Coll., on the Convention on International Rail Transport (COTIF); Act No. 114/1995 Coll., on Inland Navigation; and Decree No. 361/2016 Coll., on Security of Nuclear Installation and Nuclear Material.

The Atomic Act specifies rules for carriers in respect of carriage of radioactive or fissile materials subject to authorisation and special rules for transboundary shipments of radioactive waste or spent fuel. Decree No. 379/2016 Coll. establishes a list of radioactive or fissile materials that must be transported, stored or disposed in type-approved packaging assemblies only, sets out prerequisites for such type approvals (system of type

approval is established in Section 137 of the Atomic Act) and lays down details on the transport of radioactive and fissile materials.

Packaging assembly for the carriage, storage or disposal of a radioactive or fissile material, special form radioactive material, or low dispersible radioactive material may be used only if they are type-approved by the SUJB (Section 137(1)). Radiation generator which is not an insignificant source of ionising radiation, sealed radionuclide source and equipment containing a sealed radionuclide source, unsealed radionuclide source and consumer product containing a radionuclide may be used only if they are type-approved by the SUJB.

10. Nuclear third party liability

The Czech Republic acceded to the 1963 Vienna Convention on Civil Liability for Nuclear Damage¹⁵ and the 1988 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention¹⁶ on 24 March 1994. Act No. 18/1997 Coll. incorporated the basic principles of nuclear third party liability provided under the Vienna Convention, including the exclusive liability of the operator for any third party nuclear damage resulting from a nuclear incident occurring at his nuclear power plant and compulsory insurance or other financial security coverage for any such damage.

After 1 January 2017 when the Atomic Act was adopted, part of the old Atomic Act (Act No. 18/1997 Coll.) that concerns nuclear third party liability remained effective.

Act No. 18/1997 Coll. defines an “operator” of a nuclear installation, by reference to the Vienna Convention, as the holder of a licence to (i) operate a nuclear installation, (ii) perform any other activity in relation thereto or (iii) transport nuclear material (Section 33(1)). Act No. 18/1997 Coll., Section 34(1), specifies that the extent and manner of compensation for nuclear damage is to be regulated by Act No. 89/2012 Coll., the Civil Code. Nuclear damage is defined to include the cost of preventive measures and measures of reinstatement of the impaired environment (Act No. 18/1997 Coll., Section 34(2)). The operator’s liability is limited to CZK 8 billion (approximately 256 million Special Drawing Rights (SDR)) for nuclear installations used for power generation purposes, storage facilities and repositories of spent nuclear fuel assigned to these installations, or nuclear materials generated by processing of this fuel, whereas for other nuclear installations and transport activities the liability is limited to CZK 2 billion, which equals approximately SDR 64 million (Section 35). The time limit for bringing claims for compensation is limited to ten years from the occurrence of the nuclear incident with a “discovery period” of three years (Section 38(1)).

To cover this liability, the operator is obliged to arrange and maintain insurance or other financial security of not less than CZK 2 billion for nuclear installations used for power generation purposes, storage facilities and repositories of spent nuclear fuel assigned to these installations, or nuclear materials generated by processing of this fuel, or CZK 300 million for other nuclear installations and transport activities (Section 36(3)). The financial security must be obtained from an authorised insurer and the policy conditions must be approved by the state insurance supervisory authority except if an alternative

15. Vienna Convention on Civil Liability for Nuclear Damage (1963), IAEA Doc. INFCIRC/500, 1063 UNTS 266, entered into force 12 November 1977 (Vienna Convention).

16. Joint Protocol Relating to the Application of the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention on Third Party Liability in the Field of Nuclear Damage (1988), IAEA Doc. INFCIRC/402, 1672 UNTS 293, entered into force 27 April 1992 (Joint Protocol).

type of financial coverage is exceptionally authorised. To cover third party liability claims of an operator, a nuclear insurance pool was established in the Czech Republic in July 1995.

Act No. 18/1997 Coll. further provides for state guarantees to ensure payment of claims for compensation for nuclear damage up to the established liability limits to the extent that the full amount of the operator's mandatory insurance or financial security is inadequate to satisfy such claims (Section 37(1)).

The provisions contained in general regulations on liability for ordinary damage apply to the extent that Act No. 18/1997 Coll. or the international agreements to which the Czech Republic is a party do not provide otherwise (Section 32(2)).

II. Institutional framework

1. Regulatory and supervisory authorities

a) State Office for Nuclear Safety (SUJB)

In 1993, pursuant to its Constitutional Act No. 4/1993 Coll. and to Act No. 21/1993 Coll., the Czech Republic transferred supervisory functions and responsibilities in the nuclear safety area from the former Czechoslovak Atomic Energy Commission to the State Office for Nuclear Safety (Státní úřad pro jadernou bezpečnost – SUJB). Its competence as the regulatory authority responsible for supervising the use of nuclear energy and ionising radiation sources is set out in Atomic Act Section 207(1). In general, SUJB supervises nuclear safety, nuclear security, radiation protection, technical safety and radiation extraordinary event management on the premises of a nuclear installation or in ionising radiation source workplaces. It also supervises the management of radioactive waste. SUJB further co-operates with the IAEA and the European Commission in accordance with its obligations under international commitments in the field of safeguards. The chairperson of SUJB is appointed by the government of the Czech Republic.

SUJB is empowered to issue licences and authorize registered perSUJB for activities regulated by the Atomic Act and to maintain a register of such licences. In addition, it approves documentation for licensed activities, approves types of packaging assemblies for transport and storage of nuclear materials and sources of ionising radiation, draws up the national monitoring programme and national radiation extraordinary event plan. The SUJB maintains the state system of accounting for and control of nuclear materials and determines the requirements for their registration and inspection. It maintains lists and registers in the area of the peaceful utilization of nuclear energy and ionising radiation, e.g. register on radiation exposure of the general public and of persons who have contact with ionising radiation sources in the workplace. It also establishes commissions to verify the special qualifications of selected personnel.

Furthermore, SUJB provides data to municipalities and District Councils on radioactive waste handling within their area of administration, co-ordinates the operation of the NRMN, ensures the operation of the ERC, provides international data on radiation levels and ensures international co-operation with the IAEA, European Commission and other bodies of the EU and Euratom community.

Within its sphere of competence, the SUJB is responsible for developing domestic legislation and negotiating international agreements.

The SUJB has three sections: Nuclear Safety Section, Radiation Protection Section and Section for Management and Technical Support.

The Nuclear Safety Section comprises two departments responsible for assessment of nuclear installations and control of nuclear installations and one independent division responsible for radioactive waste and spent fuel management division.

The Radiation Protection Section comprises three departments responsible for radiation sources, exposure regulation and radiation protection of the fuel cycle. This section also co-ordinates seven regional centres, which report via the various departments to the head of the radiation protection section. Within this section there is also an independent division responsible for emergency management.

The Management and Technical Support Section consists of the departments responsible for non-proliferation, financial management and administration (budget and finance) and operation of the offices and divisions responsible for international co-operation, information and communication technologies (ICT), legal issues, and strategies.

SUJB Finally, SUJB plays a role as a founder of the National Radiation Protection Institute and the National Institute for Nuclear, Chemical and Biological Protection, two non-governmental technical support organisations (TSOs).

b) Ministry of Industry and Trade

The Ministry of Industry and Trade is responsible for:

- developing domestic legislation and preparing intergovernmental treaties in the nuclear field (within the sphere of its competence),
- proposing strategic reserves of nuclear materials,
- co-ordinating activities in the nuclear field in relation to the government's economic policy,
- developing governmental policy in the nuclear area, including the Concept for Radioactive Waste and Spent Fuel Management (updated every 10 years),
- executing the powers of the Construction Office pursuant to Act No. 183/2006 Coll., on Town and Country Planning and Building Code, under which a general construction licence is needed for the construction of structures built for the purpose of the extraction, processing, transport and deposition of radioactive raw materials in a territory reserved for such purposes and for structures of nuclear facilities (planning permission is issued by the general municipal construction office), and
- issuing authorisations for the construction of nuclear power plants with total installed electrical capacity higher than 100 kW, according to Act No. 458/2000 Coll., the Energy Act.

c) Ministry of the Interior

The Ministry of the Interior is responsible for establishing details of crisis regional plans, regional emergency plans and off-site emergency plans (within integrated emergency system). The police are also responsible for providing emergency protection of nuclear installations and for participating in the physical protection of nuclear materials during their shipment.

d) Ministry of the Environment

The Ministry of the Environment is responsible for regulating nuclear activities to ensure that they comply with environmental law. It also ensures that the procedures for environmental impact assessment are applied as a prerequisite to obtaining a licence, based on Act No. 100/2001 Coll., on Environmental Impact Assessment.

e) Ministry of Health

The Ministry of Health simultaneously with SUJB exercises state authority over the use of ionising radiation during medical exposure according the Act no. 373/2011 Coll., on Specific Medical Services. According to the Atomic Act this ministry also creates a system for the provision of special medical assistance to natural persons exposed to radiation in radiation

extraordinary events by selected clinical workplaces or participate in informing and educating the public and professional groups in the area of protection against exposure to radon and developing methods and technologies for reducing this exposure.

f) Ministry of Defence

The Ministry of Defence exercises state authority over the use of ionising radiation by the armed forces of the Czech Republic and by organisational units of the State, budget-funded organisations and State enterprises established by this ministry.

2. Public and semi-public agencies

a) ČEZ, a. s.

Before the dissolution of Czechoslovakia, the utility ČEZ, a. s. was transformed into a joint stock company. As a part of its move to a market economy, the Czech Republic aimed to privatise the ČEZ, and now 30% of its stock is publicly listed while almost all of the remaining 70% is held by the Czech government. The Czech government representatives in ČEZ report to the Czech Ministry of Industry and Trade.

ČEZ is predominately responsible for electricity generation and one of the main electricity distribution companies. ČEZ is also responsible for implementing regulatory decisions and for the operational performance of nuclear undertakings. The national transmission system in the Czech Republic (very high-voltage transmission at the 220-400 kV level) is operated by a separate company, ČEPS, a. s.

b) National Radiation Protection Institute (NRPI)

The National Radiation Protection Institute is a public research institution founded on 1 June 1995 by SUJB, as its expert advisor in the field of radiation protection. It was later transformed into a non-governmental research organisation. The budget of the institute is partially covered by an income from the state technical and scientific research programmes through SUJB. The chairperson of SUJB appoints the director of NRPI.

The major task of NRPI is to perform all scientific activities necessary to support SUJB as the main regulatory body in the field of nuclear safety and radiation protection. NRPI participates in the monitoring of the radiological situation within the national territory and supports SUJB in the co-ordination of the nation-wide NRMN.

c) Radioactive Waste Repository Authority (RAWRA)

The Radioactive Waste Repository Authority (RAWRA) was established by the Ministry of Industry and Trade on 1 June 1997. It is a state organisation responsible for ensuring the safe disposal for radioactive waste and the monitoring and supervision of repositories after their closure.

The RAWRA is responsible for the following waste management activities:

- preparation, construction, commissioning, operation and closure of radioactive waste repositories,
- monitoring of the impact of radioactive waste repositories on their surrounding area,

- institutional control of radioactive waste repositories,
- management of radioactive waste,
- treatment of spent fuel into a form suitable for disposal or subsequent use after it has been declared radioactive waste,
- management of the fees for radioactive waste disposal,
- control of the reserves held by holders of decommissioning licences, including the terms of the contracts for the maintenance of blocked accounts and approval of the use of funds from these reserves,
- provision of services in the area of radioactive waste management,
- radioactive waste management brought into the Czech Republic from abroad which cannot be returned,
- ensuring the safe management of nuclear materials or other sources of ionising radiation that have been found or seized, in accordance with the decision of the office,
- ensuring the safe performing of activities related to a management of nuclear materials or other sources of ionising radiation that are owned by the State,
- administration of radioactive waste and sources of ionising radiation seized in accordance with the Code of Criminal Procedure,
- provision of contributions to municipalities under Section 117 of the Atomic Act,
- provision of subsidies for the remediation of old radiation liabilities under Section 114 of the Atomic Act,
- approving a use of funds of decommissioning reserves, and
- verification of financial coverage.

The RAWRA has a Board of Management and a director, both of whom are appointed by the Minister of Industry and Trade. The director, who is the statutory representative of the RAWRA, may act on its behalf and may participate in board meetings.

The board consists of 11 members, three of whom are representatives of the state administration bodies, four of whom represent the waste generators and a further four represent the public. The board supervises the efficiency with which resources are spent on the RAWRA's activities and recommends activity plans and budgets to the minister.

The RAWRA is funded through fees imposed on the generators of radioactive waste. The fees are put into a "nuclear account" managed by the Ministry of Finance and are used to finance the various operations by the RAWRA.

d) *DIAMO, s.p.*

DIAMO, s.p. (formerly Československý Uranový Průmysl – ČSUP) is an exclusively state-owned company acting as an operator of all uranium production facilities. It is responsible for the extraction and processing of uranium ore and for the implementation of the state programmes on reducing the uranium industry and rehabilitation of former uranium production sites. According to Government Decree No. 565/2007 Coll. of 23 May 2007, DIAMO, s.p. should continue mining and processing of uranium ore in the Dolní Rožínka mine as long as it was economically profitable. Dolní Rožínka mine was closed

in April 2017. In the other areas, DIAMO, s.p. has been carrying out gradual remediation works after the mining and processing of uranium ore.

e) Nuclear Physics Institute (NPI)

The Nuclear Physics Institute (NPI) was founded in 1955 and has undergone various changes since having served as the Nuclear Research Institute of the former Czechoslovak Commission for Atomic Energy. In 1993, after the dissolution of Czechoslovakia, the Nuclear Physics Institute became part of the Czech Academy of Sciences and now includes the Institute of Radiation Dosimetry and the Neutron Activation Analysis Laboratory. The NPI is comprised of the Departments of Theoretical Nuclear Physics, Nuclear Spectroscopy, Neutron Physics, Nuclear Reactions and Radiation Dosimetry.

f) National Institute for Nuclear, Chemical and Biological Protection (SÚJCHBO, v. v. i.)

SÚJCHBO, v. v. i. was founded by SUJB on 1 January 2000 (and transformed into a public research institution on 1 January 2007) with an aim to execute research and development activities within the competence of SUJB. Its budget is covered in compliance with the relevant acts of the Czech Republic (especially Act No. 341/2005 Coll., on Public Research Institutions). The chairperson of SUJB appoints the director of the institute and its supervisory board.

The principal activity of the institute is research and development focused on the identification and quantification of chemical, biological, radiological and nuclear substances, measurements of their impact on persons and the environment, monitoring persons under extreme conditions and technical support provided to the supervision and inspection activities carried out by the SUJB. The institute has been engaged in training and educational activities for professionals from the Integrated Rescue System of the Czech Republic, state and other entities, university students as well as international organisations (IAEA, Organisation for the Prohibition of Chemical Weapons, etc.).

g) Nuclear Research Institute Řež, a. s. (NRI)

The NRI is the successor to the Nuclear Research Institute, which was founded in 1955. In 1971, it came under the authority of the Czechoslovak Atomic Energy Commission and in 1992 it was transformed into a joint stock company. The NRI's objective is to carry out research and development in nuclear technologies and to implement the results achieved. Employing 600 staff members, NRI operates the divisions/departments of nuclear power and safety, integrity and materials, fuel cycle chemistry, reactor services and radiopharmaceuticals.

h) Research Centre Řež, s.r.o.

The research organisation Research Centre Řež was founded on 9 October 2002 as a 100% daughter company of NRI. The main aim of the research organisation is research, development and innovations in the field of power generation (especially nuclear). Research Centre Řež owns unique research infrastructure such as experimental research reactors LVR-15 and LR-0 and technological experimental circuits.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 36 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.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Korea, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Commission takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

*This work is published on the responsibility of the Secretary-General of the OECD.
The opinions expressed and arguments employed herein do not necessarily reflect the official
views of the Organisation or of the governments of its member countries.*

NUCLEAR ENERGY AGENCY

The OECD Nuclear Energy Agency (NEA) was established on 1 February 1958. Current NEA membership consists of 33 countries: Argentina, Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, Norway, Poland, Portugal, Korea, Romania, Russia, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Commission and the International Atomic Energy Agency also take 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 sound and economical use of nuclear energy for peaceful purposes;
- 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 analyses in areas such as energy and the sustainable development of low-carbon economies.

Specific areas of competence of the NEA include the safety and regulation of nuclear activities, radioactive waste management and decommissioning, 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.

This document, as well as any [statistical] data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Corrigenda to OECD publications may be found online at: www.oecd.org/publishing/corrigenda.

© OECD 2020

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgement of the OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to neapub@oecd-nea.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) contact@cfcopies.com.