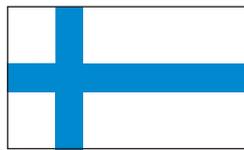


Nuclear Legislation in **OECD and NEA Countries**

Regulatory and Institutional
Framework for Nuclear Activities



Finland

Finland

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I. General Regulatory Regime

1. Introduction

Finland's nuclear activities are governed by three main legislative instruments, which are supplemented by various secondary instruments (decrees, ordinances, rules, etc.). The main acts are the:

- Nuclear Energy Act 1987 ("Nuclear Energy Act") (No. 990/1987, as last amended by Act No. 862/2018);
- Radiation Protection Act 2018 ("Radiation Protection Act") (No. 859/2018);
- Nuclear Liability Act 1972 ("Nuclear Liability Act") (No. 484/1972, as last amended by Acts Nos. 493/2005 and 581/2011).

In 1987, the Nuclear Energy Act replaced the Atomic Energy Act, which dated from the 1950s. The stated purposes of the 1987 Act are to ensure that the use of nuclear energy is safe and for the overall good of the society and the non-proliferation of nuclear weapons (Nuclear Energy Act, Section 1). The Nuclear Energy Act establishes general principles governing the regulation of the use of nuclear energy, the establishment of a licensing procedure and nuclear waste management. The Nuclear Energy Act was amended in 1994 to take into account Finland's accession to the European Union (EU) and the Euratom Treaty. The amendment entered into force on 1 January 1995, by Decree No. 1589/1994. Changes to the Finnish Nuclear Energy Decree of 1988 ("Nuclear Energy Decree") (No. 161/1988) were also required as a result of Finland's entry into the EU.

The new Radiation Protection Act, passed in 2018, replaced radiation protection legislation dating from 1991. The renewal of the legislation was based on Euratom Basic Safety Standards Directive.¹ It aims to protect human health from the adverse effects of radiation.

The Nuclear Liability Act was amended in June 2005 (No. 493/2005) to implement Finland's obligations as a party to the Paris Convention on Third Party Liability in the Field of Nuclear Energy² and the Brussels Convention Supplementary to the Paris Convention.³ The entry into force of this amendment has been on hold, pending the ratification and entry into force of the 2004 Protocols to Amend the Paris Convention⁴ and Brussels Convention.⁵ Meanwhile, in 2011, the Finnish Parliament

1. Council Directive 2013/56/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, *Official Journal of the European Union* (OJ) L 13 (17 Jan. 2014) (Euratom Basic Safety Standards).
2. Convention on Third Party Liability in the Field of Nuclear Energy, Concluded at Paris on 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, 1519 UNTS 329 ("Paris Convention").
3. Convention of 31 January 1963 Supplementary to the Convention on Third Party Liability in the Field of Nuclear Energy, Concluded at Paris on 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (1963), 1041 UNTS 358 ("Brussels Supplementary Convention").
4. Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (2004) (not yet in force), available at: www.oecd-nea.org/law/paris_convention.pdf ("2004 Paris Protocol").
5. Protocol to Amend the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, as amended by the

approved another amendment (No. 581/2011) to the Nuclear Liability Act, by which some of the obligations following the 2004 Protocols were implemented. The amendment came into force on 1 January 2012 and will be repealed when the 2005 amendment enters into force.

These acts and related legislation will be discussed in more detail under the various headings that follow.

There are currently four nuclear power reactors in Finland generating approximately 22 300 GWh(e). Two of them, situated in Olkiluoto, are operated by Teollisuuden Voima Oyj (TVO)⁶ and the other two, situated in Loviisa, are operated by Fortum Power and Heat Oy.⁷

A fifth power reactor is currently under construction at the Olkiluoto plant and is expected to have a net capacity of 1 600 MWe, making it the most powerful nuclear installation in Finland. The construction of this EPR commenced in 2005, after the Council of State ("Government") granted the construction licence. The unit was granted an operating licence in March 2019 and the unit is expected to be connected to the grid in 2020.

A sixth power reactor is currently in the planning stages. In 2009, Fennovoima Oy⁸ filed an application to the Government for a Decision-in-Principle on the building of a nuclear power plant (NPP). The Decision-in-Principle was ratified by the Parliament in July 2010. In March 2014, Fennovoima Oy submitted an application to supplement the Government's Decision-in-Principle and the amendment to the Decision-in-Principle was ratified by the Parliament in December 2014. Fennovoima Oy also submitted an application for a construction licence in June 2015 and it is currently under review. The NPP is planned to be constructed in Hanhikivi, in the Pyhäjoki community, and it is expected to have a net capacity of 1 200 MWe. The construction of this AES-2006 reactor type is expected to commence in 2021, should the Government grant the construction licence. The unit is expected to be connected to the grid in 2028.

In addition, there is a 250kW Triga Mark II research reactor (FiR 1) operated by the Technical Research Centre of Finland (VTT Oy). The reactor is currently in extended shutdown and VTT Oy has applied for a licence for the decommissioning of the reactor.

The NPP utilities, TVO Oyj, Fortum Power and Heat Oy, have chosen to dispose of their spent fuel in a deep geological repository in Finland. At the end of 1999, Posiva Oy,⁹ which is responsible for the disposal of spent nuclear fuel, filed an application to the Government for a Decision-in-Principle on the construction of a final disposal facility. The Decision-in-Principle on siting the spent fuel disposal facility at Olkiluoto was approved by the Parliament in May 2001. This decision was expanded to also cover the spent fuel from the fifth reactor unit by another Decision-in-Principle approved in May 2002.

The excavation work for the deep underground rock characterisation and research facility (ONKALO) started in September 2004. The target repository depth of 400-450 metres has now been reached and construction work is almost completed. ONKALO will be included as a part of the final

Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (2004) (not yet in force), available at: www.oecd-nea.org/law/brussels_supplementary_convention.pdf ("2004 Brussels Protocol").

6. TVO is a private company mainly owned by other private companies.
7. Fortum Power and Heat Oy are wholly owned by Fortum Oyj. The majority shareholder of Fortum Oyj is the state. Its activities cover the generation, distribution and sale of electricity and heat, the operation and maintenance of power plants, as well as energy-related services.
8. Fennovoima Oy is owned by Voimaosakeyhtiö SF and RAOS Voima Oy. Voimaosakeyhtiö SF includes industrial and trading companies as well as local energy utilities which are mainly owned by municipalities. RAOS Voima Oy is a subsidiary of JSC Rusatom Overseas.
9. Posiva Oy is owned by TVO Oyj (60%) and by Fortum Power and Heat Oy (40%).

disposal facility. Posiva Oy submitted an application for the construction licence in December 2012. The licence was approved by the Government in November 2015, which made Posiva the first construction licence holder in the world for an encapsulation and final disposal facility. Posiva started the construction of the encapsulation facility in 2019.

2. Mining regime

All mining activities in Finland are regulated by the Mining Act (No. 621/2011).

The Nuclear Energy Act provides that a mining or enrichment operation aimed at producing uranium or thorium is a “use of nuclear energy” for the purposes of the Nuclear Energy Act (Nuclear Energy Act, Section 3). Since the use of nuclear energy is prohibited without a licence (Nuclear Energy Act, Section 8), any person wishing to engage in mining operations of this kind must obtain a licence to do so from the Government (Nuclear Energy Act, Section 16). Under the Nuclear Energy Act as amended by Act 1420/1994, this kind of licence may be granted to Finnish citizens, corporations or foundations, as well as to natural persons, entities or authorities residing within the member states of the EU.

There are no mining operations aimed at producing uranium or thorium in Finland at the moment. Talvivaara Sotkamo Oy¹⁰ applied to the Finnish Government for a licence to extract uranium as a by-product at its Talvivaara nickel and zinc mine in Sotkamo, eastern Finland. In May 2012, the Finnish Government granted a licence to Talvivaara Sotkamo Oy under the Nuclear Energy Act. However, the Supreme Administrative Court revoked this decision in December 2013 and remanded it for reconsideration by the Government. Talvivaara Sotkamo Oy went bankrupt in 2014 after severe environmental issues were found at the site and the business was bought by a new company, Terrafame Oy,¹¹ in 2015. In 2017, Terrafame announced that it could start extracting the uranium from the ore produced. It submitted the application to the Government in October 2017, in accordance with Nuclear Energy Act. The annual production was stated to be 150-250 tons of uranium (yellow cake). The Government will review the application by the end of 2019.

3. Radioactive substances, nuclear fuel and equipment

The Radiation Protection Act regulates the use of radiation, current radiation exposure and radiation risks. Any use of radiation requires a licence unless the activity in question is exempted from this requirement (Radiation Protection Act, Section 48). Any “use” of nuclear energy, as defined by the Nuclear Energy Act, is regulated and licensed under the Nuclear Energy Act, but the general principles of radiation protection and the Radiation Protection Act’s specific rules to protect workers apply to the use of nuclear energy (Nuclear Energy Act, Section 2 a).

The Nuclear Energy Act prohibits any use of nuclear energy without a licence (Nuclear Energy Act, Section 8). Among the activities defined by the act as “uses of nuclear energy” are the possession, manufacture, production, transfer, handling, use and storage of nuclear materials (Section 2). The Nuclear Energy Act (Nuclear Energy Act, Section 3) and the Nuclear Energy Decree (Nuclear Energy Decree, Section 1) define “nuclear materials” in the same terms as Article XX of the Statute of the International Atomic Energy Agency (IAEA).¹² Nuclear materials thus include uranium, thorium, as well as any substance containing any such materials (including fresh and spent nuclear fuel).

The Nuclear Energy Act also defines the “use” of nuclear energy as any possession or transfer of non-nuclear material, devices or equipment that are related to the production of nuclear energy

10. Talvivaara Sotkamo Oy was owned by Talvivaara Kaivososakeyhtiö Oyj and Outokumpu Oy.

11. Terrafame Oy is 71% owned by the Finnish Government through Suomen Malminjalostus Oy and the rest is owned by the industry.

12. IAEA Statute (1956), entered into force 29 July 1957, as last amended on 28 December 1989, available at: www.iaea.org/sites/default/files/statute.pdf.

and therefore related to the proliferation of nuclear weapons. These activities also require a licence. The Nuclear Energy Decree defines a list of these materials, devices and equipment (Nuclear Energy Decree, Section 8). This list is compatible with the Trigger List in the Annex to IAEA INFCIRC/254/Rev.2/Part 1.¹³

Licences for the uses of nuclear energy described above are granted by the Finnish Radiation and Nuclear Safety Authority (*Säteilyturvakeskus*, "STUK") (Nuclear Energy Act, Section 16). With few exceptions, such licences can be granted only to persons or entities residing within the EU (Nuclear Energy Act, Section 17). The principal criteria for the granting of a licence includes: adequate arrangements for the health and safety of the workforce to be involved in the activity and also for the protection of the public and the environment; adequate arrangements for the management of any nuclear waste produced; adequate arrangements to ensure that STUK has the possibility of monitoring the manufacture of fuel elements, including those manufactured abroad; and sufficient expertise and appropriate financial resources on the part of the applicant (Nuclear Energy Act, Section 21). The licence, if granted, is for a fixed term and may be made subject to conditions (Nuclear Energy Act, Sections 24 and 25). In certain circumstances, the licence may be revoked (Nuclear Energy Act, Section 26). The Nuclear Energy Act establishes criminal offences, in particular for the unauthorised use of nuclear energy (Nuclear Energy Act, Section 69). The offences are punishable by fines and terms of imprisonment of up to the maximum term provided in the Criminal Code, with the exception of a life sentence.

4. Nuclear installations

a) Licensing and inspection, including nuclear safety

The Nuclear Energy Act provides that the construction, operation and decommissioning of nuclear facilities is prohibited without a licence. Licences may only be granted to natural persons, entities and authorities subject to the jurisdiction of an EU member state (Nuclear Energy Act, Section 17). Permission to construct a nuclear facility with a thermal power capacity of more than 50 megawatts requires the Decision-in-Principle of the Government. The Government's decision must be based on whether the project is consistent with "the overall good of society" (Nuclear Energy Act, Section 11). If this approval is obtained, the Government's decision is then submitted to the Finnish Parliament, which may either accept or reject (but may not modify) this decision (Nuclear Energy Act, Section 15).

Before the Government makes a Decision-in-Principle on the merits, a lengthy and wide-ranging consultation procedure must be followed, which includes an assessment in accordance with the Act on Environmental Impact Assessment ("EIA Act") (No. 252/2017, amended by Acts 126/2019 and 768/2019). The Decision-in-Principle process starts with an EIA procedure according to the EIA Act. In this procedure, the applicant must submit an EIA programme to the Ministry Economic Affairs and Employment (MAEA), which must have a public consultation that includes the neighbouring municipalities (EIA Act, Section 17). After the consultation, the MEAE takes all the statements and opinions into consideration and gives a statement about the programme (EIA Act, Section 18) that is followed by the EIA report submitted by the applicant (EIA Act, Section 19). Also this report must undergo the same consultation procedure as described before. This is followed by the MEAE's "reasoned conclusion by the competent authority" about the EIA report. In both cases, also other types of participation can be organised (EIA Act, Section 21).

After the conclusion of the EIA procedure and receiving the application for the Decision-in-Principle, the MAEA must obtain a preliminary safety assessment on the proposed decision from STUK, a statement from the Ministry of the Environment, and a statement from the municipal council responsible for the area proposed as a site for the facility. Further statements must also be obtained from neighbouring municipal councils (Nuclear Energy Act, Sections 12 and 13). In addition, the applicant for the Decision-in-Principle must provide information to the public, in the form of a publication approved by the MEAE, concerning the safety and environmental aspects of the

13. IAEA (1995), "Guidelines for Nuclear Transfers", IAEA Doc. INFCIRC/254/Rev.2/Part 1.

proposed facility. The MEAE is responsible for organising public hearings to enable residents and local authorities to make their opinions known (Nuclear Energy Act, Section 13). The substance of any submissions made by the public or by local authorities during this process, whether orally or in writing, must be transmitted by the MAEA to the Government (Nuclear Energy Act, Section 13).

The Nuclear Energy Decree adds further requirements to the consultation process. The MEAE must consult the Ministry of the Interior; the Ministry of Defence; the concerned Regional State Administrative Agency; the Regional Centre for Economic Development, Transport and the Environment; and the Association of Finnish Local and Regional Authorities. STUK must include a statement from the Advisory Committee on Nuclear Energy in its preliminary safety assessment (Nuclear Energy Decree, Section 25). In addition, the MEAE must submit to the Government a review that specifically addresses nuclear waste management issues such as methods proposed, safety and environmental aspects, costs and suitability to the Finnish situation (Nuclear Energy Decree, Section 26).

Once all the information and comments required by the Nuclear Energy Act and the above-mentioned Decree have been collected and submitted to the Government, it may proceed to make its decision on the application. The Nuclear Energy Act provides that the Government must reject the proposal if the municipal council responsible for the proposed site opposes it. The Government itself can or may reject the application if, on the basis of STUK's preliminary safety assessment or otherwise, it deems that the installation cannot be established in a safe manner (Nuclear Energy Act, Section 14). If neither of these adverse conditions apply, the Government will then proceed to consider the issue from the perspective of the overall good of society, paying particular attention to the country's energy needs, the suitability of the intended site, the environmental impact of the facility and the methods proposed for managing the spent nuclear fuel and other nuclear waste (Nuclear Energy Act, Section 14). The Decision-in-Principle is subject to conditions to ensure that the general principles on which the Nuclear Energy Act is based (for example: safety, management of nuclear waste and implementation of Finland's international obligations) are reflected in practice (Nuclear Energy Act, Section 14(a)).

If the Government's decision is positive, it must then be submitted to the Parliament, which may either confirm or reject the decision (Nuclear Energy Act, Section 15). The applicant may not initiate any significant measures relating to the construction of the facility in anticipation of the Parliament's decision (Nuclear Energy Act, Section 15). Once Parliamentary approval is given, the grant of the construction licence is still contingent upon a number of detailed criteria relating to public safety, workforce protection, environmental protection, town planning and building requirements, nuclear waste management and final decommissioning plans, technical expertise and adequate financial resources (Nuclear Energy Act, Section 19). If an applicant satisfies all these requirements, a construction licence for the proposed facility may then be granted by the Government (Nuclear Energy Act, Sections 16, 18 and 19).

Once the construction of the facility is satisfactorily completed, a separate licence is needed for its operation. This licence is also granted by the Government (Nuclear Energy Act, Section 16) after further examination of the criteria mentioned above (such as safety, environmental protection and waste management) (Nuclear Energy Act, Section 20). Start-up of operation of the facility depends not only on this licence being granted by the Government, but also upon the approval of the MEAE and STUK. The MEAE must be satisfied that the financial security requirements of the Nuclear Energy Act relating to waste management have been met, and STUK must be satisfied that the facility meets prescribed safety, physical protection, emergency planning and non-proliferation requirements, and that the operator has the prescribed financial guarantees to cover the possibility of nuclear damage caused by the facility (Nuclear Energy Act, Section 20). For further information on waste management requirements and financial guarantees for nuclear damage, see *infra* Section 7 "Radioactive waste management" and Section 10 "Nuclear third party liability" respectively.

Operating licences are granted for a fixed term (Nuclear Energy Act, Section 24). The licence is subject to conditions to ensure that the general principles on which the Nuclear Energy Act is based (for example: safety, management of nuclear waste and implementation of Finland's international

obligations) are reflected in practice (Nuclear Energy Act, Section 25). The licence's conditions may be changed during its period of validity by the Government (Nuclear Energy Act, Section 25). A licence may also be revoked altogether if the licensee seriously undermines any of the Nuclear Energy Act's basic principles by, for example, failing to comply with licence conditions or contravening certain key provisions of the Nuclear Liability Act (Nuclear Energy Act, Section 26). The licence may also be revoked if the licensee dies, loses legal capacity, becomes bankrupt or ceases to operate the facility for any other reason (Nuclear Energy Act, Section 26).

The licence requirements of the Nuclear Energy Act are reinforced by provisions for criminal offences. The basic offence, namely the use of nuclear energy without the required licence, is punishable by fines and terms of imprisonment of up to the maximum term provided in the Criminal Code of Finland, with the exception of a life sentence (Nuclear Energy Act, Section 69). Other offences refer to the infringement of particular provisions of the Nuclear Energy Act, failure to observe licence conditions, failure to comply with safety, physical protection or emergency planning requirements, or interference with equipment installed by STUK to supervise and monitor nuclear power facilities as specified (Nuclear Energy Act, Section 69).

The Nuclear Energy Act makes STUK the authority responsible for the supervision of nuclear energy activities and the enforcement of licensees' obligations (Nuclear Energy Act, Section 63). STUK is given the power to:

- search and enter the facilities;
- access records;
- take samples and install monitoring devices;
- require the operator to submit reports; and
- give directions about the method of production of fuel or of the manufacture of equipment to be used in the nuclear activity in question.

These powers are also extended to any international inspector carrying out functions under Finland's international agreements if the inspector is approved by the Finnish Government and accompanied by a representative from STUK (Nuclear Energy Act, Section 63).

STUK can also direct the licensee to make changes to the physical structure of a nuclear facility and to operating practices and procedures (Nuclear Energy Act, Sections 64 and 65). Such instructions may be enforced by fines or by suspension or limitation of the operation in question (Nuclear Energy Act, Sections 66 and 67).

A police authority may provide assistance in supervising compliance with the Nuclear Energy Act. The police authority may also perform house searches and person inspections in order to find nuclear materials that have been handled in violation of the Nuclear Energy Act. They also have the authority to confiscate these materials if requested to do so by either the MEAE or STUK (Nuclear Energy Act, Section 68).

Finland is a party to the 1994 Convention on Nuclear Safety,¹⁴ which it ratified on 22 January 1996.

b) Emergency response

The Nuclear Energy Act states that a prerequisite for any use of nuclear energy is that there be sufficient emergency planning (Nuclear Energy Act, Section 7). "Emergency response arrangements"

14. Convention on Nuclear Safety (1994), IAEA Doc. INFCIRC/449, 1963 UNTS 293, entered into force 24 October 1996 (CNS).

is defined to mean, in relation to a nuclear facility, advance preparation for accidents or events impairing safety at the nuclear facility or in its site area or other places or vehicles where nuclear energy is used (Nuclear Energy Act, Section 3). Although emergency planning is an obligation imposed on the licensee by means of the application process and the licence conditions when granted, STUK is responsible for supervising and co-ordinating emergency planning measures (Nuclear Energy Act, Section 55). In order to enable it to carry out this and other functions, STUK is empowered to participate in the licensing process, impose and supervise licence conditions, issue and enforce regulations, provide expert advice and carry out research and development work (Nuclear Energy Act, Section 55). STUK is also empowered to issue general safety regulations about emergency planning (Nuclear Energy Act, Section 7(q)). The General Rules for Contingency Plans at Nuclear Power Plants set out in detail the measures to be taken by operators to contain nuclear damage in the event of an incident.

Finland is a party to both the 1986 Convention on Early Notification of a Nuclear Accident¹⁵ and the 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency,¹⁶ which were approved on 11 December 1986 and 27 November 1990 respectively.

5. Trade in nuclear materials and equipment

The import and export of nuclear materials and certain non-nuclear materials, as well as of certain devices or equipment, are regarded as “uses” of nuclear energy and are therefore subject to the relevant provisions of the Nuclear Energy Act. Finland’s import and export policies reflect the fact that Finland is a member state of the EU, a party to the Treaty on the Non-Proliferation of Nuclear Weapons and that it has adopted the criteria set out in the Guidelines of the Nuclear Suppliers Group (“London Club”). Finland is a member of the Zangger Committee.

A list of the non-nuclear materials, devices and equipment covered by the Nuclear Energy Act has been established by the Nuclear Energy Decree. This list is compatible with the Trigger List in the Annex to IAEA INFCIRC/254/Rev.2/Part 1. The import and export of these items are prohibited without a preliminary licence (Nuclear Energy Act, Section 8).

Entities and authorities subject to the jurisdiction of a non-EU member state may be granted a licence for special reasons (Nuclear Energy Act, Section 17(2)). In particular, a licence may be granted to a “non-EU entity” to import or export nuclear material or waste that will simply be passing through Finland in transit to another destination (Nuclear Energy Act, Section 17(2)). A licence may also be granted to an international organisation or foreign authority that has both a monitoring function and a supervisory role under an international treaty to which Finland is a party (Nuclear Energy Act, Section 17(3)). The Nuclear Energy Decree sets out the procedure for obtaining an import or export licence. In most cases, licences are granted by STUK (Nuclear Energy Act, Sections 53(a) and 54(a)); however, the licence for export of dual-use goods and technologies is granted by the Ministry of Foreign Affairs. The licence, when granted, must specify precisely what is to be imported or exported and, in the case of export, the country of destination and the recipient. In the case of dual-use items, the Act on the Control of Exports of Dual-Use Goods (562/1996) is applied while other exports, such as for nuclear waste for processing, are done according to Nuclear Energy Act (Nuclear Energy Act, Section 2). Any conditions considered necessary may be attached to the licence (Nuclear Energy Act, Section 25).

Following the accession of Finland into the EU, transfers of nuclear industry goods used for peaceful purposes have been made easier within that area. The existence of a common control system allows for the free movement of dual-use items within the EU Single Market: dual-use items

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15. Convention on Early Notification of a Nuclear Accident (1986), IAEA Doc. INFCIRC/335, 1439 UNTS 276, entered into force 27 October 1986 (Early Notification Convention).
 16. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986), IAEA Doc. INFCIRC/336, 1457 UNTS 134, entered into force 26 February 1987 (Assistance Convention).

may be traded freely within the EU, except for some particularly sensitive items, the transfer of which within the EU is subject to prior authorisation.

6. Radiation protection

As mentioned earlier, the Radiation Protection Act regulates all activities that cause or may cause exposure to radiation. The purpose of the Radiation Protection Act is to protect human health from the adverse effects of radiation. The Radiation Protection Act embodies the following principles as the basis for its regulatory control: justification of practices, the ALARA (as low as reasonably achievable) principle and individual dose limitation (Radiation Protection Act, Sections 5-7). The Radiation Protection Act has different levels of licensing requirements (administered by STUK) that apply to activities involving exposure to ionising, non-ionising and natural radiation. In order to obtain a licence under the Radiation Protection Act, the applicant must provide specific information to STUK about activities concerned. The licence can be granted if the general principles are followed, safety has been evaluated, radiation can be used in a safe manner and the applicant has a right to undertake business in Finland (Radiation Protection Act, Section 48). Some activities are exempted from licensing and they are listed in the Act (Radiation Protection Act, Section 49). The licence holder is responsible for the radioactive waste that arises during the use of radiation (Radiation Protection Act, Section 79). The Radiation Protection Act contains provisions for the protection of employees from radiation, both in nuclear and other uses of radiation (Radiation Protection Act, Chapter 12).

Any “use” of nuclear energy, as defined by the Nuclear Energy Act, is exempted from the provisions concerning licensing requirements of the Radiation Protection Act. But, as mentioned above, the general principles of radiation protection and provisions concerning exposed workers (Nuclear Energy Act, Section 2(a)) are applicable to the use of nuclear energy. The Nuclear Energy Act deals with radiation in a general way, stating in the Chapter entitled “General Principles” that the use of nuclear energy must be safe and must not cause injury to people or damage to the environment or property (Nuclear Energy Act, Section 6). The ALARA principle is incorporated into every aspect of the Nuclear Energy Act’s licensing process and its regulation of nuclear activities. A later section of the Nuclear Energy Act makes it clear that the licence holder is responsible for the occupational health and safety of those employed in the nuclear facility (Nuclear Energy Act, Section 59). The section refers to employers’ obligations under the Work Safety Act (No. 738/2002), the Radiation Protection Act, the Mining Act (No. 621/2011) and any subordinate legislation that may be issued under the Nuclear Energy Act.

STUK is empowered to issue general safety regulations for nuclear energy use (Nuclear Energy Act, Section 7(q)). Accordingly, it has issued general rules for, as an example, the safety of NPPs and final disposal facilities. These rules set radiation exposure limits for the general public and for workers in a variety of situations, specify design requirements to ensure safety and require certain monitoring and control equipment to be installed in every nuclear plant. STUK also has the right to give specific safety regulations concerning the radiation protection of employees and some other matters concerning the exposure to radiation, such as dose limitations (Radiation Protection Act, Section 88).

7. Radioactive waste management

Radioactive waste management is regulated by the Nuclear Energy Act. The Nuclear Energy Act allocates responsibility between waste producers and government authorities, incorporates waste management criteria into its licensing procedures and establishes the principles according to which the waste management system is to be financed. The provisions of the Nuclear Energy Act are supplemented by relevant parts of the Nuclear Energy Decree.

The Nuclear Energy Act establishes the principle that all nuclear waste that has been generated in Finland must be handled, stored and finally disposed of in Finland. Exceptions can be made for small amounts to be sent abroad for research purposes, nuclear waste containing minor quantities of radioactive material and which is delivered to another country for treatment in the appropriate manner, and for research reactor fuel (Nuclear Energy Act, Section 6(a)). The Act also provides that

foreign nuclear waste cannot be handled, stored or finally disposed of in Finland (Nuclear Energy Act, Section 6(b)). Furthermore, as far as the dumping of radioactive waste at sea is concerned, Finland is a party to both the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea¹⁷ (implemented in Finland by Act No. 11/1980 and Decree Nos. 12/1980, 68/1980, 31/1981, 17/1984, 39/1984, 65/1958 and 17/1987) and the 1972 Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter¹⁸ (ratified on 3 May 1979 and implemented by Act No. 33/1979 and Decrees Nos. 34/1979 and 44/1981).

The Nuclear Energy Act defines any facility that is used for the handling or storage of nuclear waste as a nuclear facility. Therefore, a nuclear waste repository is also a nuclear facility (Nuclear Energy Act, Section 3). However, a repository for very low-level waste is not considered as a nuclear facility if radiation limits in the facility are below those set in Nuclear Energy Decree. The construction and operation of such facilities are subject to the above-mentioned approval and licensing requirements. In addition, the waste management aspect of any proposed nuclear facility is an issue at every stage of the approval and licensing procedure for that facility.

The Nuclear Energy Act divides responsibility for state supervision of waste management planning and activity between the MEAE and STUK. In the first place, however, it is the licensee that is responsible for the management of nuclear waste generated by the licensee's activities (Nuclear Energy Act, Section 9). The MEAE and STUK must ensure that the licensee fulfils this obligation and, in order to do so, the MEAE and STUK may, after consulting the Ministry of the Environment, require the licensee to submit a nuclear waste management plan (Nuclear Energy Act, Section 28). The MEAE may order licensees to engage in joint waste management measures and make an order as to the distribution of costs of any such joint measures (Section 29). If MEAE considers the licensee's measures to be unsatisfactory (for example, if an agreed upon timetable is not met or because of failure to implement directions issued by the authorities), then the state may assume ownership and responsibility for the waste (Nuclear Energy Act, Section 31). However, assuming that the licensee implements the agreed-upon waste management measures and pays the required lump sum to the state (Nuclear Energy Act, Section 32) and that STUK certifies that all the licensee's obligations with respect to the waste have been fulfilled (Nuclear Energy Act, Section 33), then ownership and control of the waste and all further responsibility for it is transferred to the state (Nuclear Energy Act, Section 34).

The Nuclear Energy Act contains detailed financial provisions for the cost of nuclear waste management. For the purposes of implementing those provisions, the State Nuclear Waste Management Fund (*Valtion ydinjätehuoltorahasto*, "SNWM Fund") (administered by the MEAE) collects fees from the Finnish nuclear companies (licensees under waste management obligations) for future nuclear waste management purposes (Nuclear Energy Act, Section 38). Licensees under waste management obligations may receive a loan from the SNWM Fund. The amount borrowed from the fund cannot exceed 75% of the fund holding last confirmed for the licensee under waste management obligations in question (Nuclear Energy Act, Section 52); i.e. the licensees are not allowed to borrow more than 75% of their share in the SNWM Fund.

Pursuant to the 2004 Amendment to the Nuclear Energy Act (No. 1131/2003), two separate funds were established to be administered by the SNWM Fund. The two separate funds shall collect fees from the three Finnish nuclear companies and VTT Oy (the state research centre that operated the FiR 1 research reactor). With these assets, it shall finance nuclear research to ensure that certain nuclear expertise on safety and waste management is available to the state agencies controlling and supervising nuclear operations in Finland. Previously, such financing was taken care of by the relevant agencies in co-operation with the nuclear companies on a voluntary basis.

17. Convention on the Protection of the Marine Environment of the Baltic Sea Area (1974), 1507 UNTS 168, entered into force 3 May 1980 (Helsinki Convention).

18. London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972), 1046 UNTS 120, entered into force 30 August 1975 (London Convention).

The Nuclear Energy Decree contains provisions setting out in more detail the waste management obligations of licensees pursuant to the Nuclear Energy Act (Nuclear Energy Decree, Chapters 14 to 16). Changes to the Nuclear Energy Decree adopted when Finland joined the EU are reflected in Decree No. 473/1996 of 26 June 1996, which came into force on 1 July 1996. These changes were primarily required in order to take account of the Euratom Treaty and EU Council Directive 92/3/Euratom.¹⁹

In addition, the Nuclear Energy Act defines any possession, manufacture, production, transfer, handling, use and storage of nuclear waste as a “use” of nuclear energy (Nuclear Energy Act, Section 2). Consequently, these activities when pursued outside nuclear facilities require a licence.

Finland is a party to the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management,²⁰ which it ratified on 10 February 2000.

8. Nuclear security

Finland ratified the 1968 Treaty on the Non-Proliferation of Nuclear Weapons²¹ on 5 February 1969 and the 1979 Convention on the Physical Protection of Nuclear Material²² on 22 September 1989. It also ratified the 1996 Comprehensive Nuclear-Test-Ban Treaty²³ on 15 January 1999. As mentioned above, Finland also adheres to the NSG Guidelines for Nuclear Transfers.

As far as non-proliferation is concerned, the Nuclear Energy Act prohibits the import, manufacture and possession of nuclear explosive devices (Nuclear Energy Act, Section 4). Finland is also a party to the Non-proliferation Safeguards Agreement between the IAEA, Euratom and the non-nuclear weapon member states of Euratom.²⁴ The Nuclear Energy Decree of 1988 was modified in 1996 by Decree No. 473/1996 to take into account Finland’s entry into the EU. It was amended again with Decree Nos. 755/2013 and 1532/2015 as a result of changes in EU regulations. As a result, it contains provisions concerning dual-use goods used by the non-military nuclear industry, which are listed in Council Regulation (EC) No. 428/2009²⁵ (amended by the Commission delegated regulation (EC) No 1382/2014²⁶).

19. Council Directive 92/3/Euratom of 3 February 1992 on the supervision and control of shipments of radioactive waste between Member States and into and out of the Community, OJ L 35 (12 February 1992).

20. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (1997), IAEA Doc. INFCIRC/546, 2153 UNTS 357, entered into force 18 June 2001 (Joint Convention).

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

22. 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).

23. Comprehensive Nuclear-Test-Ban Treaty (1996) (not yet entered into force), available at: www.ctbto.org/fileadmin/content/treaty/treaty_text.pdf (Nuclear Test Ban Treaty).

24. Agreement between the Kingdom of Belgium, the Kingdom of Denmark, the Federal Republic of Germany, Ireland, the Italian Republic, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands, 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 (78/164/Euratom), OJ L 51 (22 February 1978).

25. 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).

26. Commission Delegated Regulation (EU) No 1382/2014 of 22 October 2014 amending Council Regulation (EC) No 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

In relation to physical protection, the Nuclear Energy Act states that “sufficient” physical protection arrangements are a prerequisite for the use of nuclear energy (Nuclear Energy Act, Section 7). At every stage of the licensing process, the applicant must demonstrate to STUK that these arrangements are in place (for example, Nuclear Energy Act, Section 19(3), which relates to the granting of a licence to build a nuclear facility). General responsibilities for physical protection in nuclear facilities are regulated by the Nuclear Energy Act (Chapter 2(a), which is currently being revised).

STUK is empowered to issue general safety regulations for nuclear energy use (Nuclear Energy Act, Section 7(q)). Under this authority, it has also issued general rules for physical protection. These outline the security measures to be taken by operators of nuclear facilities and the action to be taken when a threat to security arises.

STUK is the supervisory authority responsible for non-proliferation safeguards and physical protection (Nuclear Energy Act, Section 55). STUK is responsible for maintaining the state system of nuclear material control and accounting in Finland. It monitors and regulates the non-proliferation and physical protection aspects of international trade in and transport, storage and use of nuclear material.

9. Transport

The Act on Transportation of Dangerous Substances (No. 719/1994) regulates all modes of transportation of radioactive substances. It applies both to international and domestic transportation. Pursuant to the Act, the Ministry of Transport and Communications has issued separate regulations for each mode of transport of dangerous substances within national boundaries. For international transport, the regulations issued by the relevant international organisations pursuant to the following international agreements to which Finland is a party are applied:

- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);
- Convention concerning International Carriage by Rail (COTIF);
- International Maritime Dangerous Goods Code (IMDG); and
- Convention on International Civil Aviation.

The Nuclear Energy Act includes the transport of nuclear materials and nuclear waste as a “use” of nuclear energy (Nuclear Energy Act, Sections 2 and 3) and it is therefore subject to the Nuclear Energy Act’s licensing system. A licence for the transport of nuclear material or nuclear waste within Finland or in transit through Finland can also be granted to an entity or authority outside the EU (Nuclear Energy Act, Section 17(2)).

According to the Nuclear Energy Decree, the licence is issued by STUK (Nuclear Energy Decree, Section 56). The application must contain specified information as to the method of transport proposed, the physical protection measures to be taken and the emergency plans that have been made (Nuclear Energy Decree, Sections 57 and 58). The licence, if granted, must specify the type and quantity of material that is covered by the licence, any limitations to the route to be taken, the period of validity and any other conditions considered necessary (Nuclear Energy Decree, Section 60).

10. Nuclear third party liability

Finland is a party to the following instruments on nuclear third party liability:

- Paris Convention (to which it acceded on 16 June 1972) and the Brussels Supplementary Convention (to which it acceded on 14 January 1977); Finland has also signed the 2004

Protocols to Amend the Paris and Brussels Conventions and has also expressed its intention to ratify these instruments (which have not yet entered into force) in the near future;

- 1971 Convention on Civil Liability in the Field of Maritime Carriage of Nuclear Material²⁷ (accepted on 6 June 1991); and
- 1988 Joint Protocol relating to the Application of the Paris Convention and the Vienna Convention²⁸ (ratified on 3 October 1994).

The national legislation that implements Finland's obligations under these treaties is the Nuclear Liability Act (No. 484/1972, as amended by Acts Nos. 128/1977, 388/1986, 820/1989, 588/1994, 89/1999, 416/2002, 493/2005 and 581/2011). Act 493/2005 amending the Nuclear Liability Act was passed by the Parliament in June 2005 and was subsequently enacted by the President. The Amending Act, together with Acts 491/2005 and 492/2005, implements the 2004 Paris and Brussels Protocols; these Acts will enter into force at a later date as determined by Government decree (as regards Act No. 493/2005) and decree of the President of the Republic (as regards Act Nos. 491/2005 and 492/2005), upon the entry into force of the 2004 Paris and Brussels Protocols. However, an Act to temporarily amend the Nuclear Liability Act (No. 581/2011, the "Temporary Act") was adopted on 27 May 2011 to apply some provisions of the 2004 Paris and Brussels Protocols as from 1 January 2012 until Act 493/2005 enters into force.

The Nuclear Liability Act provides that in the event of nuclear damage, the Finnish operator's liability is strict, i.e. compensation is payable whether or not there is any fault on the part of the operator (Nuclear Liability Act, Section 12).

As a general rule, damage caused by a nuclear incident in Finland but suffered in a state that is not party to the Paris Convention ("a non-contracting state") is covered by the Nuclear Liability Act, but damage caused by an incident occurring outside Finland and suffered in a non-contracting state is not (Nuclear Liability Act, Section 4). The Government has the power to decide that, on the basis of reciprocity, a non-contracting state is to be treated as a contracting state to the Paris Convention (Nuclear Liability Act, Section 5). The operators of nuclear facilities located in Finland have unlimited liability for damage caused to third parties in Finland. For damage occurring outside Finland, a nuclear operator's maximum liability amounts to 600 million Special Drawing Rights²⁹ (Nuclear Liability Act, Section 18, as amended by the Temporary Act). The Government may, taking into account the size or character of a particular nuclear installation, fix a lower amount for that installation of not less than SDR 5 million (Nuclear Liability Act, Section 18). The operator of a nuclear facility (other than the state) must take out and maintain nuclear liability insurance for SDR 600 million (Nuclear Liability Act, Section 23). The Government has the power to exempt an operator from this requirement if the operator is able to provide alternative financial securities to cover his potential liability (Nuclear Liability Act, Section 28).

The principal amendments made to this legislation in 2005, which will apply as of the date enacted by Government decree upon entry into force of the 2004 Paris and Brussels Protocols, are as follows:

- Finnish nuclear operators will require insurance coverage for a minimum amount of EUR 700 million; the liability of Finnish operators shall be unlimited in instances where

27. Convention relating to civil liability in the field of maritime carriage of nuclear materials (1971), 974 UNTS 256, entered into force 15 July 1975.

28. 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).

29. SDR stands for "Special Drawing Right", a unit of account defined by the International Monetary Fund based upon a basket of key international currencies.

nuclear damage has occurred in Finland, the third tier of the Brussels Supplementary Convention (providing cover up to EUR 1.5 billion) has been exhausted and there remains damage to be compensated.

- The Government may decide on a lower amount of liability with regard to the transport of nuclear substances; however, this amount may not be less than EUR 80 million. No other reduced liability amounts shall be applicable.
- The Nuclear Liability Act will also apply to nuclear damage suffered in the territory of a non-contracting state that does not have any nuclear installation in its territory at the time of the nuclear incident.
- The definition of “nuclear damage” and the provisions on the heads of damages shall be amended according to the amended Article 1 of the revised Paris Convention.

The required minimum insurance coverage must be approved by the Insurance Supervision Authority.

The Nuclear Liability Act contains detailed rules as to liability arising from a nuclear incident that occurs in the course of transport of nuclear substances. The provisions cover numerous situations and specify in each case whether liability rests with the consignor, the consignee or the carrier. In some situations, liability may be substituted (Nuclear Liability Act, Sections 7 and 11). The amount of liability for nuclear damage arising in the course of transport of nuclear substances, other than damage to the means of transport, must be at least SDR 5 million (Nuclear Liability Act, Section 18). On 5 May 1994, the Council of State issued a Decision (No. 333/1994) on the maximum amount of liability for nuclear damage caused by a nuclear incident that has occurred during the transport of non-irradiated uranium that has been enriched to at most 20% in the isotope ²³⁵U. This amount is fixed at SDR 13 million. The 2005 Amendment to the Nuclear Liability Act amends the provisions relating to nuclear liability arising from a nuclear incident that occurs in the course of transport of nuclear substances (Nuclear Liability Act, Sections 7 and 11).

A victim of nuclear damage who wishes to claim compensation under the Nuclear Liability Act must do so within ten years of the nuclear incident and within three years from the date on which he or she knew, or ought reasonably to have known, that he or she was entitled to compensation.

A person who is entitled to compensation but is unable to recover it from the operator’s insurer may be compensated instead by the state (Nuclear Liability Act, Section 29). Similarly, a person who is no longer entitled to compensation due to the Nuclear Liability Act’s time limits on bringing an action may be compensated by the state under certain circumstances (Nuclear Liability Act, Section 33).

The Nuclear Liability Act also provides for supplementary payments to be made from public funds if the amount of the operator’s liability proves to be too low to meet the claims of those entitled to compensation. In such a case, the total amount of compensation available for any nuclear incident is not to exceed SDR 300 million (Nuclear Liability Act, Section 32).

Finnish courts have jurisdiction to hear a compensation claim under the Nuclear Liability Act if the nuclear incident occurred wholly or partly in Finland, or if the relevant installation is situated in Finland and either the nuclear incident has occurred wholly outside the territory of any contracting party to the Paris Convention or the location of the incident cannot be determined (Nuclear Liability Act, Section 37).

According to Section 37 of the 2005 Amendment to the Nuclear Liability Act, jurisdiction over actions brought under the Nuclear Liability Act shall lie with the courts of the state set out in Article 13 of the Paris Convention, as amended by the 2004 Protocol.

The Finnish Parliament has approved an amendment (No. 581/2011) to the Nuclear Liability Act that increases the amount of insured damages up to EUR 700 million and introduces unlimited

financial liability nationally. The amendment came into force on 1 January 2012 and will be repealed when the 2005 Amendment (No. 493/2005) enters into force.

II. Institutional framework

1. Regulatory and supervisory authorities

a) Ministry of Employment and the Economy (MEAE)³⁰

The Nuclear Energy Act provides that the Ministry of Economic Affairs and Employment (*Työ- ja elinkeinoministeriö*, MEAE) (formerly the Ministry of Trade and Industry) has the highest authority and supervision for the use of nuclear energy in Finland (Nuclear Energy Act, Section 54). It is also responsible for co-ordinating Finland's participation in the activities of international bodies and represents Finland in the International Atomic Energy Agency (IAEA), the OECD Nuclear Energy Agency (NEA) and the Nordic Nuclear Safety Research Programme (NKS).

The MEAE plays a central role in the licensing system established under the Nuclear Energy Act. Even where it is for the Government to make a decision on the construction of a new power reactor, MEAE is responsible for co-ordinating and supervising the lengthy and complex application procedure, which involves numerous other ministries, national and local authorities and public hearings.

The MEAE also supervises the implementation of Finland's statutory provisions on waste management, and in particular has responsibility for administering the State Nuclear Waste Management Fund and for assessing and receiving the financial securities required from nuclear operators under the Nuclear Energy Act.

When an offence is to be prosecuted under the Nuclear Energy Act, the Act provides that the prosecutor must ask for a statement on the matter from the MEAE before initiating prosecution.

b) Ministry of Social Affairs and Health³¹

The Ministry of Social Affairs and Health has administrative and financial responsibility for the Radiation and Nuclear Safety Authority (STUK).

The Ministry of Social Affairs and Health develops and guides policies relating to social protection, social welfare and health care. It defines the main lines of social and health policy, prepares legislation and key reforms, and monitors their implementation. It also handles the necessary links with the political decision-making process.

The Ministry of Social Affairs and Health is the supreme authority in charge of the supervision and guidance related to the protection of the population against harmful radiation. In practice, the Ministry of Social Affairs and Health drafts the legislation and other regulations on radiation protection, draws up official statements on radiation protection issues and monitors and guides the development and implementation of radiation issues. The actual actor and supervisor in both protection and other radiation legislation issues is STUK. It acts under the direction of the Ministry of Social Affairs and Health regarding issues governed by the Health Protection Act (No. 763/1994).

30. Ministry of Employment and the Economy: www.tem.fi.

31. Ministry of Social Affairs and Health: www.stm.fi.

c) Ministry of the Interior³²

The responsibilities of the Ministry of the Interior include that of protection of the general public in the event of an emergency, including a nuclear incident. The Nuclear Energy Act requires that the Ministry be consulted at various stages of the licensing process.

The Ministry comprises the following departments: Administration and Development Department, Migration Department, Police Department, Department for Rescue Services and Border Guard Department.

The Department for Rescue Services of the Ministry of the Interior is responsible for the prevention of fires and other accidents, operative rescue activities and civil defence. The Department of Rescue Services aims to ensure the safety of people in every possible situation, from day-to-day incidents to major disasters and the threat of war. The Department for Rescue Services organises and co-ordinates national rescue services and monitors the availability and standard of rescue services.

d) Ministry of the Environment³³

The Nuclear Energy Act provides that the Ministry of the Environment must be consulted on various aspects of the regulation of activities involving nuclear energy and radiation hazards. Prominent amongst these aspects are issues relating to emergency planning and nuclear waste management.

The Ministry of Environment is responsible for the general development of Environmental Impact Assessment legislation and procedure.

e) Ministry of Foreign Affairs³⁴

The Ministry of Foreign Affairs deals with issues such as arms control, defence materiel export control, defence materiel operation and international export control co-operation. Export licences for dual-use goods and technologies is also granted by the Ministry of Foreign Affairs.

2. Advisory bodies**a) Advisory Committee on Nuclear Safety**

The Nuclear Energy Act also provides for the creation of a permanent Advisory Committee on Nuclear Safety. The Committee is appointed by the Government and works in conjunction with STUK (Decree on Advisory Committee on Nuclear Safety No. 1015/2016).

b) Advisory Committee on Nuclear Security

The Nuclear Energy Act also provides for the creation of a permanent Advisory Committee on Nuclear Security. The Committee is appointed by the Government and works in conjunction with STUK (Decree on Advisory Committee on Nuclear Security No. 1016/2016).

32. Ministry of the Interior: www.intermin.fi.

33. Ministry of the Environment: www.ym.fi.

34. Ministry of Foreign Affairs: www.formin.fi.

3. Public and semi-public agencies

a) Finnish Radiation and Nuclear Safety Authority (STUK)³⁵

i) Legal status

The Finnish Radiation and Nuclear Safety Authority (Säteilyturvakeskus, STUK) was established by Act No. 1069/1983. The Act sets out the general functions of the authority, while more detailed provisions as to its structure and operations are contained in the Ordinance on the Finnish Radiation and Nuclear Safety Authority (No. 618/1997).

STUK is an independent body carrying out statutory functions; however, it is linked on an administrative level with the Ministry of Social Affairs and Health.

ii) Responsibilities

STUK's principal functions are to prevent harmful effects of radiation, to regulate the safe use of nuclear energy and radiation, to carry out research on radiation protection and to provide training and information. STUK's mission is implemented in the following areas: nuclear safety regulation, radiation protection regulation, research, environmental radiation monitoring, communication, emergency preparedness and contracted services (Act No. 1069/1983). Other legislation confers specific powers and duties on the authority. The Nuclear Energy Act, for example, gives STUK responsibility for the detailed regulation of nuclear safety, physical protection, safeguards and emergency planning in the nuclear context. To carry out these functions, STUK is required by various provisions of the Nuclear Energy Act to participate in the licensing process, impose licence conditions and enforce their compliance, establish and ensure compliance with rules and regulations, provide expert advice to other authorities and carry out research and development work. All other state authorities are obliged to consult STUK if a nuclear safety issue arises. Similarly, STUK is responsible for administering the licensing system established by the Radiation Protection Act and for monitoring and enforcing the other requirements of that Radiation Protection Act.

STUK also supervises Posiva Oy's research, development and planning work for the final disposal of spent nuclear fuel and the activities of the nuclear power companies on treatment, storage and final disposal of low and intermediate reactor waste. STUK also controls the safety of the transportation of nuclear waste and radioactive materials.

iii) Structure

The Board of Governors carries out the administrative supervision of STUK. STUK reports to the Ministry of Social Affairs and Health and the MEAE.

iv) Financing

STUK is funded from the annual state budget. The nuclear power companies bear the cost of nuclear regulation. STUK is entitled to set the amount of the fees, based on the principles laid down in Decision 1285/1993 by the then Ministry of Trade and Industry (now, MEAE).

b) State Nuclear Waste Management Fund

The State Nuclear Waste Management Fund (*Valtion ydinjätehuoltorahasto*) was established under the Nuclear Energy Act to guarantee the financing of the future costs of nuclear waste management operations (see *supra* Section 7 "Radioactive waste management").

35. Finnish Radiation and Nuclear Safety Authority: www.stuk.fi.

The State Nuclear Waste Management Fund is managed by a Board of Directors appointed by the Government for a term of three years. The SNWM Fund is linked administratively with the MEAE.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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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.

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