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Nuclear Legislation in OECD Countries

Regulatory and
Institutional Framework
for Nuclear Activities

Italy



Italy

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I. General regulatory regime

1. Introduction

In Italy, the regulatory regime for nuclear activities is based largely on the following legislative instruments:

- Framework Act on the Peaceful Uses of Nuclear Energy (No. 1860 of 31 December 1962) introduces a general regime based on a series of procedural requirements such as notifications and licences. Amendments were subsequently made under which small quantities of special fissile materials, raw materials and other radioactive materials were no longer subject to such formalities (Act No. 1008 of 9 December 1969; Ministerial Decree of 15 December 1970).
- Legislative Decree No. 230 of 17 March 1995 related to the safety of nuclear installations and the protection of workers and the general public against the hazards of ionising radiation arising from the peaceful uses of nuclear energy. This decree provided, *inter alia*, for the implementation of existing Euratom Directives on radiation protection.
- Legislative Decree No. 241 of 26 May 2000 which amends and completes the previous decree, taking into account the provisions of 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 ionising radiation, in particular with regard to natural sources of ionising radiation, interventions and possible exposure.
- Legislative Decree No. 187 of 26 May 2000, which implements Council Directive 97/43/Euratom of 30 June 1997 on health protection of individuals against the dangers of ionising radiation in relation to medical exposure, and repealing Directive 84/466/Euratom.
- Articles 25, 26 and 29 of Law No. 99 of 23 July 2009 include enabling provisions empowering the Government to issue one or more implementing decrees providing rules for the siting of new nuclear power plants, the licensing process for the construction, operation and dismantling of those plants, as well as rules for interim storage and the final disposal of nuclear waste.

These instruments, in addition to other acts, decrees and regulations which do not concern nuclear activities exclusively, constitute the framework for nuclear legislation in Italy.

In respect of the institutional framework, it is worth noting Act No. 933 of 1 August 1960 which establishes the National Nuclear Energy Commission (*Comitato Nazionale per l'Energia Nucleare - CNEN*). Act No. 282 of 25 August 1991 redefined ENEA's goals and responsibilities and renamed it as the National Agency for Nuclear Technologies, Energy and the Environment (*Ente per le Nuove Tecnologie, l'Energia e l'Ambiente*). In addition to its previous responsibilities in relation to nuclear safety and radiation protection, it now also deals with environmental issues and new technologies. In January 1999 and in September 2003, the ENEA was further re-structured (see *infra*, Part II "Institutional Framework").

Finally also of note are the three referenda organised in 1987, when the anti-nuclear coalition won a resounding majority, obliging Parliament to announce a five-year moratorium on the construction of new power plants. Although the moratorium came to an end in 1992, the first law announcing a new National Energy Plan with the goal of construction of new nuclear power

plants in Italy was passed only in June 2008 (Act No. 133 of 6 August 2008) and more precisely in July 2009 (Act No. 99 of 23 July 2009). At present, Italy's nuclear energy output is at zero since its reactors in operation have been closed down (*Caorso*) or are in the process of being decommissioned (*Trino, Latina* and *Garigliano*) since 1990. The unfinished power plant of *Montalto di Castro* has been reconverted into a multi-fuel plant equipped with gas turbines.

In 2008, a new law on urgent provisions for economic development etc. (Law No. 133 of 6 August 2008) promoted the resurgence of nuclear energy in Italy. It is the first piece of nuclear legislation to come into effect since the 1987 moratorium on Italy's nuclear programme and it announces a new national energy plan with the aim of constructing new nuclear power plants.

On 23 July 2009, the Italian Government issued Law No. 99 including provisions on the resurgence of nuclear energy which entered into force on 15 August 2009 (published in the Official Journal No. 176 of 31 July 2009). Regarding nuclear energy, this law is of major relevance as some of its provisions deal with the rules for the siting of new facilities and the establishment of a Nuclear Safety Agency.

2. Mining regime

Concessions for the mining of radioactive ores listed in Article 197(4) of the Euratom Treaty are granted in accordance with the provisions of a Royal Decree of 1927 on Mines, as amended by Presidential Decree No. 620 of 28 June 1955 (Section 2 of Act No. 1860/62). This decree lays down rules for the granting of permits for prospecting and mining concessions for ores in general. Concessions are granted following consultations with the Higher Council for Mines.

Furthermore, the protection of workers in mines against ionising radiation is regulated by the abovementioned Decree on the safety of nuclear installations and the protection of workers and the general public against the hazards of ionising radiation (No. 230/95) and, in greater detail, by a Ministerial Decree of 13 May 1978 (see *infra*, Section 6 "Radiation Protection").

3. Radioactive substances, nuclear fuel and equipment

Regulations governing activities connected with radioactive substances, nuclear fuels and nuclear equipment are set out in the Act on the Peaceful Uses of Nuclear Energy, in the decrees implementing Presidential Decree No. 185/64, as well as in Legislative Decrees Nos. 230/95 and 241/00.

The Minister for Economic Development (previously the Minister for Industry, Commerce and Crafts) is the competent authority for such activities. Pursuant to Act No. 1008 of 19 December 1969, amending Act on the Peaceful Uses of Nuclear Energy, persons in possession of small quantities of special fissile materials, raw materials or other radioactive materials are exonerated, by Ministerial Decree of 15 December 1970, from the general requirement to declare. This provides for more flexibility than the procedure established under the 1962 Act on the Peaceful Uses of Nuclear Energy which required persons in possession of the above-mentioned materials to report them to the Minister within five days, irrespective of the quantity of materials held (Section 3). However, in relation to radioactive materials, this same section of the Act on the Peaceful Uses of Nuclear Energy, as amended by Decree No. 1704/65, requires a declaration from persons in possession of radioactive materials such that the total radioactivity or mass exceeds the levels laid down in one of the decrees implementing Presidential Decree No. 185/64.

Under the terms of Decree No. 241, an advance declaration of practices involving materials and equipment that emit ionising radiation must also be made to the local authorities of the National Health Service and to other relevant local authorities. An implementing decree will establish the technical details in relation to the obligation to declare materials and equipment. Decree No. 241 also sets up the conditions governing exemptions from the obligation to declare.

Section 13 of the Act on the Peaceful Uses of Nuclear Energy, as amended, lays down the procedure regulating the use of radioisotopes. All such use requires a licence from the Minister for Economic Development. In addition, other ministers are involved depending on the use to which the substances are to be put. This provision has been supplemented by a Ministerial Decree of 1 March 1974 which contains detailed instructions on the information to be included in licensing applications: information relating to the applicant, the intended use of the radioisotopes (industrial, agricultural, medical or scientific), the location of the premises involved, the professional qualifications of personnel etc.

Moreover, according to Decrees Nos. 230/95 and 241/00, the use of radioactive materials and radiation-emitting devices is divided into two categories (A and B) requiring a licence from the Minister for Economic Development (Category A) and clearance certificates from the Prefect of the province (Category B) with the agreement of other competent authorities. The criteria and procedure applicable to this division into categories shall be laid down in a decree of the Prime Minister, made in agreement with the ministries concerned. However, authorities responsible for medical uses of such materials and devices shall be set up under regional legislation. Use includes trade in materials as well as activities related to their use, such as handling, treatment and the eventual disposal of waste into the environment (Sections 27 to 29 of Decree No. 230/95).

4. Nuclear installations

Italy's nuclear power programme has been suspended since 1987. Following governmental decisions, it was decided that the National Electricity Company (*Ente Nazionale per l'Energia Elettrica* - ENEL) and construction firms working in the nuclear sector had to be compensated for the costs and losses incurred following the moratorium on the Italian nuclear programme (Section 33 of Act No. 9 of 9 January 1991).

In 1999, within the framework of the reform of the national electricity system, ENEL created SOGIN which is responsible for the dismantling of nuclear power plants and the handling of their radioactive waste (Section 13 of Legislative Decree No. 79 of 16 March 1999).

In 2000, and in accordance with the aforementioned legislative decree, SOGIN's shares were transferred by ENEL to the Ministry of Treasury (now called Ministry of the Economy and Finance). SOGIN operates on the basis of the strategic guidelines set by the Ministry of Economic Development.

The four Italian nuclear power plants at Trino, Caorso, Latina and Garigliano were transferred to SOGIN. In 2003, SOGIN was charged with operating ENEA's fuel cycle research reactors and the Bosco Marengo plant, acquired in 2005.

Article 25 of Law No. 99, which entered into force in August 2009, provides that implementing decrees shall be issued within six months from the date of entry into force of this law (i.e. by February 2010). The legislative decrees shall provide, *inter alia*, detailed rules for the siting of nuclear power plants, nuclear fuel fabrication plants, temporary storage of spent fuel and radioactive waste facilities and of a final repository of radioactive waste; rules on the related licensing process; qualification criteria for investors.

Secondary legislation shall also implement several general principles:

- the principle that Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) are compulsory before the site selection;
- the principle providing that the licence for nuclear power plants shall be a combined construction and operation licence which shall incorporate every permit necessary in order to construct and operate the nuclear facility. The licence shall be issued at the end of a single, integrated process;

- the principle on strengthening international co-operation of regulators in design assessment and licensing. According to this principle, approvals of the nuclear power plants' technical requirements which have been issued within the past 10 years by nuclear safety agencies of countries that are OECD/NEA member countries – or which have signed bilateral agreements with Italy – can be considered to be valid in Italy after the approval by the Nuclear Safety Agency.

In implementing the legislation, the Government has to guarantee high level standards in the areas of safety and security, public health and environmental protection.

The Government has also the obligation to carry out a national information campaign on nuclear matters and to implement appropriate information procedures for the population likely to be involved in the construction of new nuclear power plants.

Following these enabling provisions in Law No. 99 of 2009, on 15 February 2010, upon the proposal of the Ministry of Economic Development, the Italian Council of Ministers issued Legislative Decree No. 31/2010 implementing the enabling provisions.

a) Licensing and inspection, including nuclear safety

The legislative and regulatory provisions applying to the protection of workers and the general public against the hazards of ionising radiation (No. 230/95) containing technical and administrative procedures as regards nuclear safety and radiation protection.

Decree No. 31/2010 sets out detailed rules and timeframes for the siting.

It is relevant to note that, at the international level, Italy ratified the 1994 Convention on Nuclear Safety on 15 April 1998.

b) Protection of the environment against radiation effects

Although the Act setting up the Ministry for the Environment contains no express provisions on nuclear activities and radiation protection, the role of this Ministry in the nuclear field is defined implicitly in some of the general provisions of the act.

Pending incorporation into national law of the provisions of Council Directive 85/337/EC on the assessment of the effects of certain public and private projects on the environment, Section 6 of the act describes, in a provisional manner, the impact assessment procedure to which installations capable of producing significant changes to the natural environment are subject. Pursuant to Section 6(2), an implementing decree sets out the categories of installations subject to such impact studies (Decree No. 377 of 10 August 1988). The list includes nuclear power plants and other nuclear reactors (except for research reactors with a capacity less than 1 kw of constant thermal heat) as well as facilities for the long-term storage or final disposal of radioactive waste (Section 1).

A Decree of April 1999, which introduced technical standards concerning the impact assessment, fully implemented the 1985 Directive into national law.

A Presidential Decree of February 1998, supplementary to Decree No. 377/88, implemented most of the provisions of Council Directive 97/11/EC of 3 March 1997 which had amended Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. In particular, this decree extended the list of installations subject to the impact study procedure to, *inter alia*, installations for the storage of nuclear fuel or the treatment of nuclear materials.

Decree No. 377/88 also specifies that environmental impact studies should be carried out prior to applications for licences and clearance certificates and, in any event, before invitation to tender.

Such studies must include information relating to (Sections 2 *et seq.*):

- the possible siting of the installation, having due regard to the effects on the surrounding environment;
- the disposal sites to be used for liquid waste, and to the characteristics and quantities of solid, liquid and gaseous waste generated by the installation;
- prevention and emergency plans in the event of damage to the environment caused during the construction or operation of the installation.

After receiving the support of the Minister for the Environment, the project must be published in two newspapers, one local and the other national.

The entire regime as described above is to be incorporated into a framework act on the environment, a draft of which is currently under examination by the Parliament.

At international level, Italy ratified the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) and the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention).

c) Emergency response

Regarding the general protection of the public, a Presidential Decree of 1981 provides for measures to ensure assistance for the public in the event of a disaster. The provisions of this decree are of general application and therefore cover nuclear accidents. The decree aims to set up a framework for assistance at regional level, given the process of decentralisation which followed the creation of autonomous regional authorities in 1972.

In 1983, the Minister for Health sent a Circular on Emergency Situations to the regional health authorities on whose territory nuclear installations were located (Circular No. 53 of 2 June 1983). The circular specifies that the health authorities are responsible for organising plans to deal with emergency situations involving radiation. This task is performed in conjunction with the provincial committees set up under Presidential Decree No. 185 of 13 February 1964. The circular describes different possible situations, the location of emergency centres and the health measures to be taken to treat victims and to protect the public.

A commission to study problems arising from emergency situations has been established (Decree of 2 July 1986). Its primary role is to advise the Minister for Civil Protection in the event of an emergency situation. The risks covered by the decree include nuclear risks as well as those arising from the transport of hazardous materials. The regime applicable to emergency situations has been substantially modified since specific new provisions concerning nuclear emergencies came into force.

Similar to Presidential Decree No. 185 of 13 February 1964, Chapter X of the Decree on the safety of nuclear installations and the protection of workers and the general public against the hazards of ionising radiation (No. 230/95) deals with nuclear emergencies (Sections 115 to 135). These sections describe the procedure to be applied in preparing "external emergency plans" to be put into action when an accident occurs in a nuclear installation and involves a risk for the local population. The provisions deal essentially with information required as to the content of the plan and its approval, and with the obligation to declare a state of emergency and to inform neighbouring regions of the danger. Chapter X differs from the previous regime, in that it incorporates the nuclear emergency plans into the national planning of protective measures in the event of a radiation emergency covering the entire country. This form of planning is the responsibility of the Department for Civil Protection assisted by the ANPA. Decree No. 241/00 repeals and replaces Section 115 of Decree No. 230/95 and introduces supplementary provisions (Sections 115 *bis* to 115 *quinquies*) which take into account the new Euratom Basic Standards in

the fields of intervention, possible exposure and prolonged exposure. Decrees of the Prime Minister, upon the proposal of the Minister for Health and in consultation with the other ministries and organisations concerned, as well as decrees adopted by the Minister for the Environment under a similar procedure, lay down the applicable intervention levels in the event of an emergency and also the corresponding levels applicable to foodstuffs and beverages.

The decree furthermore introduces provisions implementing Council Directive 618/89/Euratom concerning public information. A standing committee of the Ministry for Health is responsible for preparing, updating and disseminating this information. Finally, a centre for preparing and evaluating data concerning radiation emergencies has been set up within the ANPA.

At international level, Italy ratified the 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency on 25 October 1990 (Act No. 92 of 9 April 1990) and the 1986 Convention on Early Notification of a Nuclear Accident on 8 February 1990.

5. Trade in nuclear materials and equipment

a) General provisions

Framework Act No. 1860 of 1962 on the Peaceful Uses of Nuclear Energy (Section 4) and the Ministerial Decree of 30 October 1990 listing goods subject to an import licence establish the regime governing the import of goods. Radioisotopes and ionising radiation-emitting equipment are amongst those goods which require an import licence. Legislative Decree No. 89, adopted on 24 February 1997, sets out the list of dual-use goods subject to licensing in accordance with Council Regulation (EC) No. 3381/94 of 19 December 1994 setting up a Community regime for the control of exports of dual-use goods.

Trade of radioactive ores, source materials and substances is subject to a licence from the Minister for Industry. Import and export licences, where required under applicable trade regulations, are granted by the Minister for Foreign Trade after consultation with the Minister for Industry. The state has a right of pre-emption as regards source materials, a right which must be exercised within 30 days of the licence application (Section 4 of Act No. 1860/62). Certain exemptions from the requirement to obtain a licence from the Ministry for Industry are set out in a Decree of 15 December 1970 implementing Act No. 1008/69.

Under the terms of the Decree on the safety of nuclear installations and the protection of workers and the general public against the hazards of ionising radiation (No. 230/95), the import and production for commercial purposes of radioactive materials, products and equipment containing such materials, are subject to prior notification to the Ministries for the Environment and Industry, other ministries concerned and the APAT. In cases of certain exemptions the matter will be determined by the Minister for Industry based on the advice of ministries and of the agency (Section 18). Pursuant to Decree No. 241/00, Section 18 of Decree No. 230/95 was completed by further provisions setting out a compulsory licensing procedure, subject to exemptions and according to procedures similar to those mentioned above, for the use of radioactive materials during the manufacture, import and export of consumer goods.

All persons engaging in trade of ores, source materials or other radioactive materials must keep a special register containing records of their commercial operations (Section 20).

With regard to radiation protection, commercial operations are governed by the regime established in the Decree No. 230/95. Also, decrees made by the Minister for Health, in agreement with the Minister for Industry, in implementation of Section 98 of Decree No. 230/95, specify those activities which are exempted from the prohibitions laid down in this section, and those for which a licence can be granted. The main criterion used is that of the level of radioactivity of the products or equipment involved. The prohibitions apply to certain products and articles that contain radioactive materials (such as cosmetics, toys, lightning conductors etc.), the manufacture, import, sale, use or possession of which are prohibited in principle.

Circular No. 228 of the Minister for Industry of 20 October 1993 incorporates Council Regulation (Euratom) No. 1493/93 of 8 June 1993 on shipments of radioactive substances between member states into Italian law. These Community provisions were adopted to allow the national authorities responsible for controlling radioactive substances to maintain a level of information identical to that existing before the abolition of border controls within the Community.

Following the adoption of Decree No. 230/95, which also implements 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, Circular No. 228 remains in force only in respect of sealed sources to which it applies subject to the amendments adopted to the regime established in Decree No. 230/95. In this context, the circular sets out the procedures relating to the type of commercial operation to be undertaken and to the prior licences required (for radioactive wastes, see *infra*, Section 7 "radioactive waste management").

b) Patents

Patents and industrial designs and models are subject to the rules laid down in Royal Decree No. 1127 of 29 June 1939, those contained in international conventions and incorporated into Italian legislation on the protection of industrial property rights and, since 1958, those in the Act ratifying and implementing the Euratom Treaty.

The Central Patents Office of the Ministry for Economic Development is responsible for carrying out the formalities required under Article 16 of the Euratom Treaty (Act No. 933 of 1 August 1960).

The Central Patents Office must forward to the ENEA all applications for patents for inventions or industrial models acknowledged as being specifically nuclear in nature or directly related and essential to the development of nuclear energy (Section 26 of Act No. 1860/62).

6. Radiation protection

Legislative Decree on the safety of nuclear installations and the protection of workers and the general public against the hazards of ionising radiation (No. 230/95), as completed by Decree No. 241/00, is the basic text in Italy governing radiation protection. In furtherance of the general framework established by Act on the Peaceful Uses of Nuclear Energy, the decree also introduces a regime for supervising the safe conduct of nuclear activities and, in general, all activities involving the use of ionising radiation. This regime will be supplemented by the adoption of a number of implementing decrees, in the same manner as those made in implementation of Presidential Decree No. 185/64.

Some examples shall be mentioned. A Decree of the Prime Minister is to prescribe the numerical values and other conditions which determine the scope of application of Decree No. 230/95. This implementing decree will be made on the proposal of the Ministries for the Environment and Health, in conjunction with the other ministries and following consultations with the APAT and the other organisations concerned. Provisionally, these values and conditions are established in Annex 1 to Decree No. 230/95, as amended by Annex 1 to Decree No. 241/00.

Another Prime Ministerial Decree (made under a similar procedure) is to establish the maximum dose limits for workers and the public. These dose limits are established, in the meantime, by Annexes III and IV to Decree No. 230/95, as amended by Annex 1 to Decree No. 241/00.

a) Protection of workers

As provided by Decree No. 230/95, the responsibility for the radiation protection of workers lies with the Ministry for Labour and Social Security (acting through the Labour Inspectorate) according to Section 59, the local authorities of the National Health Service and the APAT (see *infra*, Part II "Institutional Framework").

Those entities, including the state, the regions, the provinces, the communes, public bodies, educational establishments and research laboratories, which expose workers to the hazards arising from ionising radiation in the course of their work, must comply with the provisions of Decree No. 230/95.

The general rules for the radiation protection of workers, like Presidential Decree No. 185/64, are based upon the Euratom basic standards. This source is expressly cited in particular in the provisions for the adoption of dose limits (Section 96) mentioned above.

Decree No. 230/95 also regulates work in mines where radioactive substances are present and, in particular, defines the obligations of employers in relation to the radiation protection of workers in the mining industry. The conditions governing the application of these provisions are set out in a Decree of the Minister for Industry, who is also responsible for inspection activities to ensure protection against ionising radiation risks.

In particular, specific provisions have been introduced as regards the protection of outside workers covered by Council Directive 90/641/Euratom of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionising radiation during their activities in controlled areas. This involves, *inter alia*, the establishment for each worker of a personal radiation logbook with which he must be provided in compliance with the above Directive.

Finally, another very important innovation is the inclusion of provisions allowing the ALARA principle to be applied to the employer's activities.

Besides incorporating the latest Euratom Basic Standards, Decree No. 241/00 also regulates the protection of workers exposed to natural sources of ionising radiation (Sections 10 *bis* et *seq*) as well as crew members of high altitude flights.

b) Protection of the public

Decree No. 230/95 also contains provisions on the protection of the public against ionising radiation. The Ministry for Health is responsible for such protection and must, in particular, through its National Health Service, control all sources of ionising radiation to avoid any contamination of the public and of the general environment (Section 97). Regional and provincial commissions have been set up to give advice on radiation protection and related problems.

Dose limits and maximum permissible concentrations for the public are established in accordance with Section 96 of Decree No. 230/95, in compliance with applicable Community Directives.

Provisions of Decree No. 187/00 concern the protection of persons during medical exposure in compliance with Council Directive 43/97/Euratom of 3 June 1997 on health protection of individuals against the dangers of ionising radiation in relation to medical exposure and repealing Directive 84/466/Euratom. These provisions repeal those provisions in Decree No. 230/95 (Sections 109 to 114) which implemented Directive 84/466/Euratom. The Ministry for Health must adopt the necessary measures to give full effect to Decree No. 187/00. Such measures will cover the conditions governing training of staff, the criteria for approval of radiological equipment, justification of certain exposures etc.

c) Protection of the environment

The most important provisions of Decree No. 230/95 relating expressly to the environment are Sections 100 and 104. Decree No. 241/00 also requires that an optimum level of environmental protection be maintained thereby ensuring that the exposure limits set out in the Euratom Basic Standards are observed.

In the event of an accident during an operation which involves radioactive substances, if the environment is effected, the operator must intervene to prevent the risk of subsequent

contamination or injury to persons (Section 100 of Decree No. 230/95). The Prefect of the Province and the local authorities of the National Health Service must be informed immediately.

Whereas Section 104 provides that the Ministry for the Environment is responsible for monitoring ambient radioactivity, the monitoring of foodstuffs and beverages is entrusted to the Ministry for Health with overall technical co-ordination being ensured by the APAT (see *infra*, Part II "Institutional Framework"). All monitoring is carried out by national and regional networks, the latter acting under directives issued by the above-mentioned ministries.

The activities of the APAT are also governed by relevant directives from these ministries, and by Section 35 of the Euratom Treaty. Its functions include the co-ordination and standardisation of measurements, the introduction of new measuring stations etc.

The situation described above is one result of the referendum held on 18 April 1993 which abolished the powers of Local Health Units as regards the environment, entrusting these powers to the APAT and to other relevant regional and provincial departments and organisations concerned.

7. Radioactive waste management

Decree No. 230/95 implemented Council Directive 92/3/Euratom concerning transfers of radioactive waste. Circular No. 236 of the Ministry for Economic Development of 28 October 1994, adopted in order to implement this directive into Italian legislation pending Decree No. 230/95, was basically transcribed into this decree. Pursuant to that directive, a prior licence is required for transfer, import, export and transit of radioactive waste (Section 32). The procedure governing such licences is laid down in a decree of the Minister for Economic Development.

At the international level, Italy ratified the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter on 30 April 1984.

8. Non-proliferation and physical protection

The Act on the Peaceful Uses of Nuclear Energy provides that holders of special fissile materials must report them to the Ministry for Economic Development. Responsibility for controlling such materials, previously vested in the ENEA, now lies with the APAT [Act No. 61/94] (see *infra*, Part II "Institutional Framework"). The agency is required to verify compliance with the physical protection measures applicable to nuclear installations and substances.

In addition, a Ministerial Decree of 19 April 1979 sets up an Inter-ministerial Committee for the Physical Protection of Nuclear Installations and Substances. This committee is responsible for laying down standards in relation to protective measures designed to prevent criminal acts against nuclear installations or substances. The committee is also required to provide its opinion on the security plan each operator prepares in respect of his installation and, if necessary, to suggest changes.

At the international level, Italy ratified the 1979 Convention on the Physical Protection of Nuclear Material on 6 September 1991. As regards non-proliferation, it may be noted that Italy is a party to the Treaty on the Non-Proliferation of Nuclear Weapons, ratified on 2 May 1975 (Act No. 131 of 24 April 1975) and has agreed to act in accordance with the Guidelines for Nuclear Transfers issued in 1978 by the International Atomic Energy Agency (IAEA). It also ratified the 1996 Comprehensive Nuclear Test Ban Treaty on 1 February 1999.

9. Transport

As regards safety and radiation protection, the transport of radioactive materials is governed by rules adopted by the competent authorities for the different types of transport which take into

account the Regulations for the Safe Transport of Radioactive Materials issued by the International Atomic Energy Agency (IAEA).

The transport of radioactive materials by rail is carried out in accordance with Legislative Decree No. 41 of 13 January 1999. It aims to implement Council Directive 96/49/EC and Commission Directive 96/87/EC on the transport of dangerous goods, including radioactive materials, by rail (Class VII). These provisions are based on the International Regulations concerning the Carriage of Dangerous Goods by Rail (RID).

Transport by road is regulated by a Decree of 4 September 1996 adopted by the Minister for Transport and Navigation, amended by a Decree of 15 May 1997. These provisions were adopted with a view to implementing Council Directive 94/55/EC and Commission Directive 96/86/EC, and are based on the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). Furthermore, Circular No. 162 of 16 December 1996, as amended on 4 April 1997, establishes the technical requirements which apply. Finally, Circular No. 244/F of 26 May 1997 updates licence procedures for transport by road of radioactive and fissile materials.

The maritime transport of radioactive materials is regulated by a Decree of 6 April 1995 of the Ministry for Transport and Navigation which allowed for the adoption of some of the standards laid down by the International Maritime Organisation (IMO). This decree was adopted pursuant to Regulation No. 1008 of 9 May 1968.

The air transport of radioactive materials, originally regulated by a Ministry for Transport Circular of 1982, is now subject to the provisions of Circular No. 334096/30 of 3 December 1992. These provisions are based on the requirements set out in the International Civil Aviation Organisation Regulations. After defining its scope (Sections 1 to 5), the circular describes the procedure to be followed for the transport of radioactive materials, the obligations of consignors and consignees, and it designates the competent authorities (the Ministry for Industry, Commerce and Crafts, the Ministry for Transport and Navigation and the APAT).

With regard to licences, the regulatory basis can be found in the Act on the Peaceful Uses of Nuclear Energy, as modified by Presidential Decree No. 1704 of 30 December 1965, which requires a licence from the Minister for Economic Development in conjunction with the Minister concerned, depending on the mode of transport. There is provision for certain exemptions in the Decree of 15 December 1970 (adopted in implementation of Act No. 1008/69 modifying Act No. 1860/62).

Presidential Decree No. 1704/65 provides for the adoption of a regulation concerning safety and radiation protection in the transport of radioactive materials. This regulation is adopted by decrees of the Minister for Transport and Navigation (following consultations with the APAT) for the different modes of transport, in compliance with the Directives and Recommendations of the European Union and international agreements on the transport of dangerous goods (Section 21 of Decree No. 230/95).

10. Nuclear third party liability

Act No. 1860/62 on the Peaceful Uses of Nuclear Energy regulates nuclear third party liability in Italy, and implements the provisions of the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy, ratified by Italy on 17 September 1975, and of the 1963 Brussels Supplementary Convention, ratified on 3 February 1976.

Act No. 109 of 12 February 1974 authorised ratification of both conventions and vested the government with the powers required to implement them by decree at the national level. Consequently, a Presidential Decree of 1975 amended Section 1 (definitions) and Sections 15 to 24 (third party liability) of Act No. 1860/62 to bring them into line with the above-mentioned conventions (Presidential Decree No. 519 of 10 May 1975). Furthermore, on 14 and 28 June 1985, Italy ratified the 1982 Protocols amending the two above-mentioned conventions (Act No. 131 of 5 March 1985). The most recent development was the ratification on 31 July 1991 and

implementation by Italy of the Joint Protocol of 1988 relating to the application of the Vienna Convention and the Paris Convention (Act No. 147 of 23 April 1991). It is also relevant to note that Italy ratified the 1971 Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material on 21 July 1980.

Act No. 1860/62, as amended, provides for a system of absolute and exclusive liability for the operator of a nuclear installation in the event of any nuclear damage occurring in this installation or in connection with it (Sections 15 and 18). When the operators of several installations are held liable for the same damage, they are jointly and severally liable for compensation (Section 17). Nuclear operators are also liable in respect of damage caused by a combination of a nuclear incident and an incident other than a nuclear one, where the nuclear damage cannot be separated with certainty from the other damage.

In Italy, the maximum amount of liability of the operator of a nuclear installation for damage caused by a nuclear incident is fixed at SDR 5 million and at SDR 15 million with respect to transport activities. If the amount of damage exceeds the limit of the operator's liability, thereby necessitating intervention by the state, the total amount of compensation available will not exceed the equivalent of 300 million SDRs. This corresponds to the maximum limit of the Brussels Supplementary Convention to which Italy is a party.

A Ministerial Decree of 16 February 1976 approved a model certificate of financial security for the transport of nuclear materials. This decree was based on the model certificate recommended by the Steering Committee of the OECD Nuclear Energy Agency (NEA) in accordance with the Paris Convention. Another Ministerial Decree of 1978 approved the general conditions of third party liability insurance policies for nuclear operators and for the transport of nuclear materials (Ministerial Decree of 3 March 1978). In a later decree, the Ministerial Decree of 20 March 1979, the Steering Committee Decision of 27 October 1977 was implemented at national level. Certain categories of nuclear substances were excluded from the scope of the above conventions. These three decrees were adopted in implementation of the above-mentioned Presidential Decree of 1975.

II. Institutional framework

Responsibility for the control of nuclear activities in Italy is shared amongst several ministries assisted by other bodies, such as the Interdepartmental Committee for Economic Planning (CIPE) and the National Environmental Protection Agency (APAT). The framework is to be modified following the implementation of Law No. 99 of 2009 in particular with the establishment of a Nuclear Safety Agency. With regard to the National Agency for New Technologies, Energy and the Environment (ENEA) and SOGIN, see the more recent developments under item 3(a) and (d) *infra*.

1. Regulatory and supervisory authorities

a) Interdepartmental Committee for Economic Planning

Act No. 933 of 11 August 1960 which originally created the National Committee for Nuclear Energy (*Comitato Nazionale per l'Energia Nucleare* - CNEN), now the ENEA, sets up an Interdepartmental Committee for Economic Planning (CIPE) responsible for defining the general policy of the CNEN. A Presidential Decree of 1968 transferred its powers to the CIPE (Presidential Decree No. 626 of 30 March 1968). The CIPE is responsible in particular for establishing the national nuclear power programme.

Act No. 282 of 25 August 1991, which established the ENEA, expressly provides that the ENEA shall follow the guidelines laid down by the Committee (Section 1). In addition, after being submitted to the Ministry for Industry, Commerce and Crafts and examined by an Interdepartmental Committee, the ENEA's three-year programme of work has to be approved

formally by the CIPE. Finally, the ENEA Board of Governors may be asked to resign in the event of repeated non-compliance with CIPE directives (Section 16).

The committee also has decisive powers concerning the effective implementation of the National Energy Plan. Act No. 10 of 9 January 1991. This plan establishes the standards for the rational use of energy and for the development of renewable energy sources and provides that the CIPE shall adopt, at least once every three years, a series of guidelines on various subjects. The purpose is to co-ordinate the activities of the different public bodies involved, to promote the research and development of technology in the fields of production, recycling and use of renewable energy sources and to promote programmes to reduce energy consumption.

Article 26 of Law No. 99 which entered into force on 15 August 2009 provides that the committee shall issue, within six months from the entry into force of the law, a resolution defining which kind of nuclear power plants may be constructed and operated in Italy. The CIPE shall also issue the criteria and the measures to be adopted in order to promote the creation of consortia for the construction and operation of nuclear power plants formed by electricity producers and industries.

The CIPE meets under the chairmanship of the Prime Minister and it includes the Minister for the Budget and Economic Planning as Vice-Chairman, and the Ministers for Economic Development, Commerce and Crafts, Foreign Affairs, the Treasury, Finance, Public Works, Labour and Social Security and Transport and Navigation. Other ministers may be called upon to take part in meetings of the committee.

b) Nuclear Safety Agency

Article 29 of Law No. 99 of 23 July 2009 establishes the Nuclear Safety Agency (*Agenzia per la sicurezza nucleare*). It consists in a collegial board composed of a President, nominated by the Prime Minister, and four members (two nominated by the Minister for the Environment and two by the Minister for Economic Development). They will serve for a term of seven years.

The agency is in charge of ensuring, in general, the safety of all activities related to the peaceful uses of nuclear energy. It is specifically in charge of radiation protection, technical regulations as well as of control over the management of radioactive waste and nuclear materials and over construction, operation and safeguards of nuclear power plants and nuclear materials. Each authorisation concerning nuclear energy matters will be subject to the agency's prior binding opinion.

The agency has inspecting, assessing and specific enforcement powers including the power to levy monetary fines and to suspend and revoke authorisations.

c) Prime Minister

Pursuant to Decrees Nos. 230/95 and 241/00, the Prime Minister is empowered to adopt basic decrees such as those laying down the application thresholds of Decree No. 230/95, dose limits for workers and the public and the reference dose levels for nuclear emergencies.

Under the authority of the Prime Minister, the Department of Civil Protection is entrusted with a number of regulatory and administrative tasks in the fields of public protection and radiation emergencies in conjunction with other competent ministries.

d) Minister for Economic Development

Act No. 1860/62 on the Peaceful Uses of Nuclear Energy vests the Minister for Economic Development with the necessary powers to make regulations and issue the licences required in the nuclear field. The Minister is therefore the competent authority for matters relating to nuclear power plants (Chapter II of Act No. 1860/92). In addition, he authorises by decree the operation of installations for the production and use of nuclear energy for industrial purposes, as well as of plants for the processing and use of ores, source materials, special fissile materials, enriched

uranium and radioactive materials (Section 6 of Act No. 1860/62; Act No. 1240/71, as amended by Act No. 84/82 and Act No. 282 of 25 August 1991).

In implementation of Legislative Decree No. 230/95 (Sections 15, 32, 34 to 36 and 55), the Minister for Economic Development, in agreement with the Minister for the Interior and Ministers for Labour, Health and the Environment, issues decrees laying down the levels of radioactivity and other conditions for different activities involving ionising radiation pursuant to which a licence is required. Such activities include the mining industry, commercial operations and utilisation for industrial and research purposes. The Minister also issues the procedure for applying for a licence. In addition to authorising the activities mentioned the Minister also authorises the transfer of radioactive substances within the European Union, the operation of radioactive waste disposal sites etc. Decree No. 241/00 extended the licensing powers of the Minister for Economic Development to other activities such as the addition of radioactive materials to consumer goods, export and import of such goods and transfer of materials subject to Directive 92/3/Euratom.

The Minister for Economic Development may also determine the amount and terms of the financial security covering the third party liability of the operator of a nuclear installation. He approves the general conditions of the insurance policy or other form of financial security by decree, in agreement with the Treasury Minister and after consultations with the Attorney General (Sections 19, 21 and 22 of Act No. 1860/62, as amended by Presidential Decree No. 519 of 10 May 1975).

The Minister for Economic Development sets out the strategic guidelines for the decommissioning activities of SOGIN.

e) Minister for Labour and Social Security

The Minister for Labour and Social Security is generally responsible for the radiation protection of workers engaged in nuclear activities (Section 59 of Decree No. 230/95). In agreement with the other ministers concerned, he establishes rules governing radiation protection and monitors their application through the controls of health and safety inspectors and through the competent bodies of the National Health Service in each region. He also sets out rules governing the qualifications of experts and of authorised doctors.

f) Minister for Health

Responsibility for protecting public health against the hazards of ionising radiation lies with the Ministry for Health, the National Health Service and the APAT. The aim of APAT is to prevent, by inspections or otherwise, the possibility of radiation contamination of the population or of any part of the natural environment, foodstuffs and beverages (Section 97 of Decree No. 230/95). Furthermore, the Minister submits proposals to the Prime Minister concerning dose limits for workers and for the public (Section 96).

The Minister for Health is also empowered to establish thresholds beneath which certain electrical equipments emitting radiation may be circulated (Section 98). Furthermore, the Minister may carry out controls on foodstuffs and beverages (Section 104).

The Higher Institute of Health and the Higher Institute for Labour Protection and Safety, as support organisations of the Ministry for Health, are consulted with regard to a number of decrees implementing Decrees Nos. 230/95 and 241/00 (dose limits, reference dose levels for emergencies, official approval of certain sources etc.).

A standing commission has been created in the Ministry for Health and the essential task of this commission is to prepare information for the public in the event of a nuclear emergency.

With regard to radiation protection during medical exposure, Decree No. 187/00 entrusts the Minister for Health with quasi exclusive powers in relation to the training of personnel, criteria governing the authorisation of radiological equipment, justification of certain exposure etc. Control over the implementation of Decree No. 187/00 is vested exclusively in the National Health Service.

g) Minister for the Environment

Act No. 349 of 8 July 1986 set up the Ministry for the Environment which has since been involved in decision-making in collaboration with other competent ministries. Although the Minister is not expressly given any functions in the nuclear field in Act No. 349/86, Section 2 provides, in general, the Minister for the Environment will perform his functions with a view to ensuring protection of the soil, air and water. Moreover, the Minister, in agreement with the Minister for Health, proposes to the President of the Council the maximum concentration limits and maximum exposure doses with respect to chemical, physical or biological contamination [Section 2(14)]. With regard to the establishment of limits governing the exposure of workers, the Minister for Labour and Social Security must be consulted before the proposal is submitted to the Prime Minister. In addition, whenever construction of an installation capable of having an impact on the surrounding environment is being planned, the Minister for the Environment reports on the compatibility of the project with environmental protection requirements.

The Ministry for the Environment has assumed some of the responsibilities from the Minister for Health, in particular, the monitoring of environmental radioactivity (Section 104 of Decree No. 230/95). The Minister for the Environment is also competent to establish, in co-operation with other ministries concerned, the derived reference dose levels which correspond to the dose levels established by the Prime Minister in relation to the planning of emergency interventions (Section 26 of Decree No. 241/00 which replaces Section 115 of Decree No. 230/95). The Minister must be consulted during the drafting of certain implementing decrees for Decree No. 230/95, including those related to scope of application, declaration of practices and dose limits.

h) Minister for the Interior

In accordance with Decree No. 230/95, the Minister for the Interior, who is generally responsible for public security, assists in the drafting of regulations by other ministers in connection with the classification and licensing of commercial activities using nuclear and radioactive materials.

The same decree provides that each nuclear installation must have an off-site emergency plan to ensure protection of the public against the harmful effects of a nuclear accident. Such plans consist of a series of co-ordinated measures to be taken by those responsible in the event of an incident at a nuclear installation which might put public safety at risk. The Minister for the Interior contributes to the establishment of the national radiological emergency plan (Section 121 of Decree No. 230/95), in conjunction with the Department of Civil Protection.

In addition, in accordance with Act No. 996 of 8 December 1970, the Ministry for the Interior and its services are responsible for taking the measures required to protect the public in the event of catastrophes.

As the authority associated with the Minister for the Interior in each region, the Prefect is competent to grant a clearance certificate for category B use of radioactive substances, and for the appliances that contain them, in industry and research. The Prefect is also responsible for preparing and updating the emergency plan in province over which he has authority (except the medical aspects) and for its application as part of the national emergency plan.

i) Minister for Transport and Navigation

This Ministry, established by Act No. 537 of 24 December 1993, results from the merger of two former ministries: the Ministry for Transport and the Ministry for the Merchant Navy. The duties carried out by these two ministries have been transferred to the Ministry for Transport and Navigation. Thus, the latter Minister is, at present, the competent authority, in conjunction with the Minister for Industry, Commerce and Crafts, for granting licences for the transport of nuclear and radioactive materials by road, rail, air and sea (Section 5 of Act No. 1860/62, as amended by Presidential Decree No. 1704/65). The Minister is also responsible for the adoption of regulations governing these different modes of transport (Section 21 of Decree No. 230/95).

j) Minister for Foreign Trade (now incorporated in Ministry for Economic Development)

The import of ores, source materials and radioactive materials is subject to authorisation by the Minister for Foreign Trade when such authorisations are required by financial and currency regulations. The Minister for Foreign Trade, together with the Finance Minister, has laid down the rules for importing goods. These rules establish which goods in particular require an import licence including radioisotopes and ionising radiation-emitting equipment (Section 4 of Act No. 1860/62 and Ministerial Decree of 30 October 1990 promulgating the list of goods requiring an import licence). Legislative Decree No. 89 of 24 February 1997 established the list of dual use goods which are subject to licensing.

k) Minister for Education

Public institutions possessing radioactive materials for teaching or scientific research are required to report them to the Minister where the quantity of materials involved exceeds the prescribed levels (Section 3 of Act No. 1860/62, as amended by Section 1 of Presidential Decree No. 1704/65). Pursuant to the amendments introduced following the adoption of Decree No. 241/00, practices involving the possession of such materials are also subject to prior notification.

The Minister is also involved in licensing the use of radioisotopes above certain quantities (Section 13, as amended by Section 3 of Presidential Decree No. 1704/65).

l) Treasury Minister

The Treasury Minister is required to approve the general conditions of the financial security for the third party liability of nuclear operators when such security is not in the form of an insurance policy. Furthermore, notice of summons in respect of actions for compensation of nuclear damage is submitted to the Minister who may, in all cases, intervene in the proceedings (Sections 22 and 25 of Act No. 1860/62, as amended by Section 2 of the Presidential Decree of 10 May 1975).

The Treasury Minister has the ownership of SOGIN.

m) Minister for Universities and for Scientific and Technical Research

The Minister for Universities is responsible for the co-ordination at the national and international level of all measures to promote the development of scientific and technical research. He is consulted by the Minister for Industry, Commerce and Crafts in connection with ENEA research and development programmes and its scientific, technical and industrial co-operation with international or foreign organisations (Section 1 of Legislative Decree No. 36 of 30 January 1999). The Minister for Universities is also involved in determining the radiation protection qualifications of personnel in radiology and nuclear medicine (Section 7 of Decree No. 241/00).

n) Minister for Foreign Affairs

The Minister for Foreign Affairs is consulted by the Minister for Economic Development in connection with the activities of the ENEA in the field of international co-operation (Section 1 of Legislative Decree No. 36 of 30 January 1999).

o) State Advocate General

Presidential Decree No. 519 of 10 May 1975 provides that the opinion of the State Advocate General must be obtained before final approval may be given to the general conditions for insurance or other form of financial security decided on by the Minister for Economic Development in agreement with the Treasury Minister.

2. Advisory bodies

a) *Inter-ministerial Council for Consultation and Co-ordination*

This Inter-ministerial Council was set up under the Ministry for Economic Development pursuant to Presidential Decree No. 185 of 1964 on Radiation Protection and was confirmed by Decree No. 230/95 (Section 8). It meets under the chairmanship of the Director-General for Energy and Mining Resources and is composed of nine representatives of the ministries concerned and one representative of the APAT. All members are appointed for four years by Decree of the Prime Minister, on the proposal of the Minister for Industry. The Council is responsible for co-ordinating, from an administrative point of view, the activities of the different government departments responsible for the application of Decree No. 230/95, by reviewing all the provisions concerning the peaceful uses of nuclear energy.

b) *Co-ordinating Committee for Radiation Protection of Workers and the Public*

This committee was set up by Act No. 619/80, and includes representatives of the organisations mentioned in Section 1(e) above, as well as the National Research Council and the APAT. The committee is consulted by the Ministers for Health and the Environment on topics that fall within their competence.

c) *Regional and Provincial Commissions for Public Health Protection Against the Hazards of Ionising Radiation*

By Presidential Decree No. 185/64, a commission was set up in each region under the chairmanship of the Regional Director of Public Health to give its advice on questions relating to public health protection against the hazards of ionising radiation. The commissions are involved in the licensing procedures for the possession and use of radioactive sources and for radioactive waste disposal in connection with scientific, industrial and medical activities.

Decree No. 230/95 now provides for such technical advisory bodies to be established at regional and provincial levels under legislation adopted at those levels.

d) *Technical Commission for Nuclear Safety and Health Protection*

This commission, set up by Decree No. 185/64, was confirmed by Decree No. 230/95 (Section 9). It consists of 16 experts appointed by the ministries concerned, by the ENEA and by the APAT. The chairperson is appointed from amongst these experts by decree of the Prime Minister. The commission gives its advice on questions relating to the licensing of nuclear installations and radiation emergencies as provided for in Decree No. 230/95, as well as at the request of the government.

Decree No. 241 of 2000 (Section 10 *septies*) established a special section within this commission to establish criteria and formulate proposals concerning the control of activities involving exposure to natural radioactivity.

3. Public and semi-public agencies

a) *National Agency for New Technologies, Energy and the Environment (ENEA)*

Four important changes have been made within this body between 1960, the year in which the National Committee for Nuclear Energy (*Comitato Nazionale per l'Energia Nucleare* – CNEN) was set up (Act No. 933 of 1 August 1960) and 1999 the most recent period of re-structuring.

The first change in 1971 gave the CNEN new powers, in particular the task of undertaking, in collaboration with specialised companies the construction of experimental facilities and the development of prototype reactors (Act No. 1240 of 15 December 1971).

The second change dates from Act No. 84 of 5 March 1982, which renamed and re-structured the CNEN. The acronym ENEA, which stands for National Committee for Research

and Development of Nuclear and Alternative Energies (*Comitato Nazionale per la Ricerca e per lo Sviluppo dell'Energia Nucleare e delle Energie Alternative*), replaced the CNEN whose former duties were extended to include research and development of alternative energies. The ENEA, however, continues to perform the CNEN's statutory tasks ensuring in particular that nuclear energy and ionising radiation are used without causing any hazard.

Under the third reorganisation, dating from 1991, significant changes were made to the ENEA's duties (Act No. 282 of 25 August 1991). While retaining its acronym, the ENEA is now called the National Agency for New Technologies, Energy and the Environment (*Ente per le nuove tecnologie, l'energia e l'ambiente*). The ENEA retains its technical and scientific responsibilities (special studies, research, experimental work etc.) regarding nuclear activities, notably in the field of nuclear safety and radiation protection, while broadening its jurisdiction to include questions relating to the environment and to new technologies.

Finally, Legislative Decree No. 36 of 30 January 1999, which repeals and replaces Act No. 282/91, further widens and modifies the scope of the agency's activities. The new tasks assigned to the ENEA essentially involve research in the field of sustainable development, innovation in terms of the production of small and medium-sized businesses and in relation to transfer of technology to such businesses, in particular in the energy field. As a civil service body, the ENEA provides advanced technical support in the fields of energy, the environment and technological innovation.

i) Legal status

The ENEA is a body governed by public law which carries on its activities in accordance with the directives of the Interministerial Committee for Economic Planning (CIPE). It is placed under the authority of the Minister for Economic Development, and consults the Minister for Universities and for Scientific and Technological Research regarding research and development programmes, the Minister for the Environment in relation to projects which could affect the natural environment and the Minister for Foreign Affairs with regard to international activities (Decree No. 36/99, Section 1).

ii) Responsibilities

As regards new technologies, energy and the environment, the ENEA's duties are (Section 2):

- To carry out and promote studies, research and development with respect to technological aspects.
- To carry out, promote and co-ordinate studies, research and experiments on the effects of the development and use of technologies including the economic and social consequences, and on the safety of nuclear installations and protection against ionising radiation.
- To co-operate in the scientific, technical and industrial fields, with the international bodies involved in the same sectors.
- To formulate and implement plans for the dissemination of know-how and research results to government departments.
- To train staff in technological subjects and disseminate the knowledge acquired.
- To give opinions and carry out technical controls on behalf of government, regional and local authorities.

To this end, the ENEA may conclude agreements with the competent ministries, the regions, the autonomous provinces of Trento and Bolzano, local authorities and certain local firms, as provided for by Act No. 142 of 8 June 1990. In addition, the ENEA was responsible, within three months of the entry into force of the act, for setting up a consortium for the

promotion of the rational use of energy and of renewable sources, and of businesses engaged in developing such technologies.

The control of nuclear safety, radiation protection, physical protection etc. are the responsibility of the APAT according to the Act No. 61/94 establishing that agency.

b) National Institute of Nuclear Physics (INFN)

This institute was set up under Act No. 1240 of 15 December 1971 as a public body with an autonomous budget and is run in accordance with a Ministerial Decree of 1967. The CIPE supervises the programmes of the INFN which are communicated to it by the Minister for Education (Act No. 1240/71, Sections 25 and 26; Ministerial Decree of 26 July 1967).

c) National Health Service

Act No. 833 of 23 December 1978 set up a National Health Service with responsibilities in the field of radiation protection. The act determines and allocates between the state, the regions and local authorities, the various duties, structures and services aimed at promoting, maintaining and restoring the health of workers and the population.

The state maintains its powers concerning the health control of the production and use of nuclear energy and radioactive materials while certain administrative functions are delegated to the regions concerning control, trade in and storage of radioactive materials as well as environmental monitoring [Section 6(K) of Act No. 833/78].

Under Act No. 833/78, the Provincial Director of Public Health is no longer answerable to the Ministry for Health but to the regional authorities.

Decrees Nos. 230/95 and 241/00 entrusted various functions to the National Health Service, as well as to its regional structures.

d) Electricity Company (ENEL, s.p.a.)

Act No. 1643 of 6 December 1962 nationalises the electricity industry in Italy and it sets up a body governed by public law and possessing legal personality: the National Electricity Company (*Ente Nazionale per l'Energia Elettrica* – ENEL) which is responsible for all activities relating to the production, import, export, conversion, distribution and sale of electrical power. The ENEL accordingly managed and operated nuclear power plants in Italy and was also responsible for the power plant building programme. The ENEL therefore held a monopoly of national electricity (Act No. 1643/62).

Important changes occurred in Italy in the energy field during the 1990s. First, Acts Nos. 9 and 10 of 9 January 1991 significantly reduced the ENEL's monopoly to leave more room for independent producers and local businesses. Secondly, the ENEL was transformed into a limited company (ENEL s.p.a.) which made it possible for private individuals to take out shares in the company (Act No. 359 of 8 August 1992).

d-bis) Company for the Management of Nuclear Installations (Società per la Gestione degli Impianti Nucleari – SOGIN)

Legislative Decree No. 79 of 16 March 1999, adopted in implementation of Directive 96/92/EC of the Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, provided that ENEL be re-structured, through the establishment of several companies, one of which – the Company for the Management of Nuclear Installations (*Società per la Gestione degli Impianti Nucleari* – SOGIN) – would monitor the decommissioning of nuclear power plants. Following this, SOGIN set up a consortium with the company *Fabbricazioni Nucleari* and the ENEA in order to ensure the planning and co-ordination of the dismantling of research installations belonging to the ENEA and which are associated with the nuclear fuel cycle.

Following this, the consortium was terminated and in 2003 SOGIN was charged with operating ENEA's fuel cycle research reactors and the Bosco Marengo plant, acquired in 2005 from the company *Fabbricazioni Nucleari*.

e) National Environmental Protection and Technical services Agency (APAT)

In January 1994, the Italian Parliament implemented Decree No. 496 of 4 December 1993 providing for the creation of the National Environmental Protection Agency (*Agenzia Nazionale per la Protezione dell'Ambiente* – ANPA). This decree became Act No. 61 of 21 January 1994.

The decision to create this agency was a result of the referendum of 18 April 1993 which repealed the provisions giving local health units responsibility for monitoring the environment. Since this issue was particularly sensitive, it was important to make a distinction as soon as possible between health questions and those relating to the environment as well as the corresponding roles of the different bodies in respect of these two questions.

The ANPA comes directly under the Minister for the Environment and is subject to controls by the Board of Auditors. Its powers relate to a series of technical and scientific activities of national interest. Its main role is to carry out public duties, such as providing technical and scientific back-up to the Ministry for the Environment and associated bodies with a view to protecting the environment. It is also responsible for the collection and periodic dissemination of data on the state of the environment, the formulation of proposals and opinions for both central government and local authorities concerning quality standards for air, water, soil etc. [Section 1(1) of Act No. 61/94]. In the nuclear field, the agency is responsible for exercising control over activities relating to the peaceful uses of nuclear energy and over the effects of ionising radiation on the environment [Section 1(L)]. The agency's functions are essentially radiation protection inspection as well as formulating advice as to the legal, regulatory and administrative provisions affecting radiation protection of workers, the public and the environment (Decrees Nos. 230/95 and 241/00).

The ANPA also replaces the Nuclear Safety and Health Protection Directorate of the ENEA (ENEA-DISP) in respect of its powers of inspection and control described in Act No. 282 of 25 August 1991. The functions of the directorate, staff, technical structures and equipment and financial resources are transferred to the ANPA [Section 1(5) of Act No. 61/94].

According to Legislative Decree No. 300 of 30 July 1999, ANPA became APAT (National Environmental Protection and Technical services Agency) incorporating the Department for National Technical Services of the Presidency of the Council of Ministers.

Finally, Article 28 of Law 6 August 2008, No. 133 establishes a new agency called ISPRA (the National Institute for the Protection and Environmental Research). This new body replaces three different public entities: APAT (National Environmental Protection Agency), ICRAM (Central Institute for Scientific Research and Technology Applied at Sea) and INFS (National Institute for Wildlife).

The new agency ISPRA operates under the supervision of Minister of the Environment and Sea and it has no more competence in the nuclear field.

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NUCLEAR ENERGY AGENCY

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

The mission of the NEA is:

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

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

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

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