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# NUCLEAR LEGISLATION IN OECD COUNTRIES

## Regulatory and Institutional Framework for Nuclear Activities

**Spain**

## ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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## NUCLEAR ENERGY AGENCY

The OECD Nuclear Energy Agency (NEA) was established on 1<sup>st</sup> February 1958 under the name of the OEEC European Nuclear Energy Agency. It received its present designation on 20<sup>th</sup> 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, the Republic of Korea, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities also takes part in the work of the Agency.

The mission of the NEA is:

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

Specific areas of competence of the NEA include safety and regulation of nuclear activities, radioactive waste management, radiological protection, nuclear science, economic and technical analyses of the nuclear fuel cycle, nuclear law and liability, and public information. The NEA Data Bank provides nuclear data and computer program services for participating countries.

In these and related tasks, the NEA works in close collaboration with the International Atomic Energy Agency in Vienna, with which it has a Co-operation Agreement, as well as with other international organisations in the nuclear field.

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## **SPAIN**

This chapter was last revised in 2001 and is correct as of that date.

The NEA Secretariat is currently revising this chapter in close consultation with the national authorities and plans to issue a new version in the near future.

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## I. GENERAL REGULATORY REGIME

### 1. Introduction

After the end of World War II, Spain was aware that nuclear electricity production would play an important role in meeting its energy needs, and therefore adopted legislation providing for State ownership of all radioactive ores on the national territory. A public body, entitled *Junta de Energía Nuclear* (Nuclear Energy Commission) was set up for this purpose by a Decree-Law of 22 October 1951, with full powers over nuclear matters. At the same time, Spain extended its legislation in the field of atomic energy and in particular, on 29 April 1964, adopted the Nuclear Energy Act [Act No. 25/1964]. This is a framework Act, allowing the introduction and development of a general programme of action in the nuclear field. Pursuant to this Act and until the governmental reorganisation of 2000, the Ministry of Industry, whose functions are now assumed by the Ministry of Economy, was responsible for granting licences and permits for nuclear and radioactive installations and activities. The provisions of the Act governing licensing and civil liability were then completed by Regulations in 1969 and 1972.

Since the early 1970s or so, the Spanish authorities have been amending the previous legal and institutional regime. The nuclear sector was reorganised by separating research from industrial and commercial activities of nuclear energy. The *Junta de Energía Nuclear*, which in 1986 became the Research Centre for Energy, the Environment and Technology (*Centro de Investigaciones Energeticas, Medioambientales y Tecnológicas* – CIEMAT), was given responsibility for research and development [Act No. 13 of 14 April 1986], whereas the Nuclear Safety Council (*Consejo de Seguridad Nuclear*) was entrusted with tasks relating to nuclear safety control and radiation protection [Act No. 15 of 22 April 1980, as last amended by Royal Decree No. 1339 of 31 July 1999]. The National Uranium Enterprise (*Empresa Nacional del Uranio S.A.* – ENUSA) was given responsibility for industrial activities in the nuclear fuel cycle, except for radioactive waste management, which was to be dealt with by the National Enterprise for Radioactive Waste Management (*Empresa Nacional de Residuos Radioactivos S.A.* – ENRESA) [Decree No. 2967 of 7 December 1979; Decrees of 1984, 1985 and 1996].

Act No. 40 of 30 December 1994 relating to the re-organisation of the country's electricity industry confirmed the suspension of certain nuclear power plant construction projects (Lemoniz, Valdecaballeros and Unit 2 at Trillo) and recognised the right of the owners of these projects to receive compensation for the losses that they sustained. Decree No. 2202 of 28 December 1995 implemented this Act and established a mechanism for indemnifying investors affected by the moratorium.

On 27 November 1997, Parliament adopted Act No. 54 governing the Electricity Sector in Spain. This Act, which replaces Act No. 40/1994, regulates all activities related to the distribution of electrical energy, in particular, its production, transport, distribution and commercialisation, and

international and community-wide trade in this field. The Act sets out the principle of free enterprise in respect of the production and distribution of electrical energy. These activities must, from now on, be pursued in a manner which guarantees access to electrical energy to all interested consumers on the national territory. Certain provisions of this Act amend the provisions of the 1964 Nuclear Energy Act.

## **2. Mining Regime**

Previously, Spain had had a system whereby the *Junta de Energía Nuclear* held exclusive mining rights [Decree-Law of 22 October 1951, Sections 3 and 4], whilst prospecting activities remained unrestricted.

Since the adoption of the Act of 17 July 1958, referred to as the Freedom of Mining Act, radioactive ore prospecting and mining activities may be carried out by any private person. This legislation is confirmed by Royal Decree No. 1464 of 17 September 1999 on Activities Comprising the Front End of the Nuclear Fuel Cycle, which liberalises the activities concerned.

Individuals and firms wishing to prospect for and mine radioactive ores must now apply to the Ministry of Economy for a prospection licence and a mining concession. The applications are accompanied by a report drawn up by ENUSA and are governed by the general law on mining. ENUSA is responsible for supervising these activities and may submit proposals for any suitable measures to the Ministry of Economy. The Ministry keeps a record of the quantities of radioactive ores mined.

These rules do not apply to ENUSA, which has taken over the mining activities formerly carried out by the *Junta de Energía Nuclear*. ENUSA may purchase from private individuals an annual quota of radioactive ores fixed by the Minister of Economy. Ores are classified under two categories, depending on whether or not the uranium is combined with another mineral.

## **3. Radioactive Substances, Nuclear Fuel and Equipment**

Under Section 22 of the Nuclear Energy Act of 29 April 1964, private companies are allowed to produce and market nuclear material and equipment.

Since, in theory, the *Junta de Energía Nuclear* was not empowered under its own rules to carry out nuclear industrial and marketing activities, a company was set up in 1971 [Decree No. 3322 of 23 December 1971] for this purpose: the National Uranium Enterprise (ENUSA). This is a public company which, among other things, is responsible for producing and constituting emergency stockpiles of nuclear substances.

In relation to the front end of the nuclear fuel cycle, the provisions of Royal Decree No. 2967 of 7 December 1979, as amended, were substantially amended by Royal Decree No. 1464 of 17 September 1999 which liberalised the sector in general.

Pursuant to this Royal Decree, ENUSA is an authorised company to carry out activities in the front end of the nuclear fuel cycle. The operators of nuclear installations shall ensure the enriched uranium supply for a period of five years and store the fresh nuclear fuel elements at their installations two months prior to refuelling. The operators shall also jointly constitute a stock of enriched uranium up to the amount prescribed in the Ministerial Order issued pursuant to Royal Decree No. 1464/1999 on 17 April 2000.

The Minister of Economy authorises the manufacture of nuclear or radioactive components after examining a report drawn up by the Nuclear Safety Council [Act No. 15 of 22 April 1980, as amended, Section 3].

#### **4. Nuclear Installations**

##### *a) Licensing and inspection, including nuclear safety*

In Spain, there is no state monopoly for the production of nuclear electricity, and private industrial concerns (notably electricity-producing companies) may also become nuclear operators. The first legal instrument governing the operation of nuclear facilities appeared in 1963 as a Decree regulating industry in general [Decree No. 157 of 26 January 1963]. However, it was not until 29 April 1964, when the Nuclear Energy Act was adopted, that special regulations concerning nuclear installations were issued. Decree No. 2072 of 27 July 1968 establishing a Licensing System for Industries Producing and Using Nuclear Power was superseded by Decree No. 2869 of 21 July 1972 concerning the approval of the Regulations on Nuclear and Radioactive Installations, which was in turn repealed by Decree No. 1836 of 3 December 1999.

The licensing procedure is now governed by Act No. 15 of 22 April 1980 setting up a Nuclear Safety Council, as amended by Act No. 14 of 4 May 1999, and Royal Decree No. 1836/1999.

“Nuclear installations” means nuclear power plants, nuclear reactors, facilities for manufacturing nuclear substances and for processing or reprocessing nuclear fuel, and storage facilities.

The licensing procedure for nuclear installations includes separate licences:

- a preliminary (site) licence;
- a construction licence;
- an operating licence;
- a dismantling licence; and
- a declaration of shutdown.

The application for a preliminary licence must provide the reasons justifying the purpose of the installation, list its general characteristics, provide a detailed description of the site selected and its environment and explain the financial aspects of the project. The application for a construction licence must include a series of documents, in particular: a general design of the installation; the procurement programme for components and materials; the analysis of the electricity market in the area affected, and the preliminary safety analysis report. The contents of this report are based on those reports which are developed in the country of origin of the main supplier and must include a reference plant against which the safety assessment is performed. Finally, the operating licence is divided into two parts. The applicant must first obtain a provisional operating licence, and then a final licence. The application must include a final safety study, the operating rules and the technical specifications of the nuclear testing programme. Operators of storage facilities may request and obtain preliminary and construction licences in one step.

As a general rule, the various types of licence required for nuclear installations are issued by the Minister of Economy. Prior to issuing the preliminary licence for site approval, public hearings are held in the province where the site is to be located. The Minister also consults the state and local authorities concerned, as well as the autonomous communities affected by the project, whose opinions are forwarded to the Nuclear Safety Council. The latter draws up a report for the Minister of Economy who makes the decision. Construction, operating and dismantling licences are granted by the Minister in the light of a favourable opinion and a technical report prepared by the Council.

Other licences and permits are granted by the Director-General for Energy Policy and Mines. Apart from such licences, nuclear installations have to obtain other licences and permits from governmental or local authorities. Such authorities may not however refuse to grant a licence on grounds of nuclear safety or radiation protection, as the Nuclear Safety Council alone is qualified to judge these criteria [Act No. 15/1980, as amended, Section 3].

Radioactive installations are divided into three categories, and only those in the Category I, *i.e.* installations related to the nuclear fuel cycle, are subject to the same procedure as for nuclear installations. The other two categories, which comprise in particular radioactive installations for scientific, medical, agricultural, commercial or industrial purposes, are governed by a simplified procedure, which contains nevertheless sufficiently stringent radiological protection provisions to ensure that safety conditions prevail. To this end, Decree No. 1836/1999 implements Council Directive 96/29/Euratom laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation, and other European Union standards.

The Minister of Economy is responsible for issuing licences for Category I radioactive installations; the second and third categories receive their licences from the Directorate-General for Energy Policy and Mines, or in certain cases, this task has been entrusted to the authorities of the autonomous communities.

The Nuclear Safety Council has taken over responsibility for the safety of nuclear installations from the *Junta de Energía Nuclear*. Together with the competent authorities, it contributes to the development of nuclear legislation on the subject and in particular, proposes criteria concerning emergency and physical protection plans for nuclear facilities. The inspectors of the Nuclear Safety Council monitor the safety and radiation protection of nuclear installations. The inspection work commences with the construction and assembling of the installation and continues throughout the normal operating period.

At the international level, Spain ratified the 1994 Convention on Nuclear Safety on 4 July 1995.

**b) *Protection of the environment against radiation effects***

Environmental impact studies are becoming increasingly widespread in the industrialised countries, and Spain has, for many years, included various provisions concerning environmental protection in its legislation. Examples include the Order of the Ministry of Industry of 18 October 1976 concerning projects for new activities capable of contaminating the atmosphere and the extension of existing activities, together with the Act of 2 August 1985.

The relevant administrative procedure was completed and strengthened by Royal Decree-Law No. 1302 of 28 June 1986 on Environmental Impact Studies and Royal Decree No. 1131 of 30 September 1988, based on Council Directive 85/337/EEC of 27 June 1985 on the Assessment of



the Effects of Certain Public and Private Projects on the Environment. This legislation was amended by Royal Decree-Law No. 9 of 6 October 2000 implementing Council Directive 97/11/EC of 3 March 1997.

The Royal Decree-Law provides for the preparation of studies assessing the environmental impact of certain planned installations and activities [Section 1]. The installations and activities for which studies are now required are listed in Annex I to the Decree-Law: this list includes nuclear power plants and reactors (except for nuclear reactors the thermal capacity of which does not exceed 1 kW) and installations for production or enrichment of nuclear fuel, treatment of spent fuel or high level radioactive waste, reprocessing of spent fuel, final disposal of spent fuel or radioactive waste, and storage of spent nuclear fuel or radioactive waste for a period of more than ten years at a site different from the production site.

The Authority responsible for issuing the environmental impact statement is the Ministry of the Environment, after consultation of the Nuclear Safety Council and the autonomous community on the territory where the installation will be sited.

Autonomous communities may provide for a compulsory environmental impact study for projects which are not envisaged by the national legislation. Under such circumstances, a simplified procedure applies to the study.

In the case of a project likely to affect the environment of another European Union Member State, the applicable procedure is set out in the 1991 Convention on Environmental Impact Assessment in a Transboundary Context, ratified by Spain on 1 September 1992.

Requirements governing environmental impact studies have not been substantially modified since Decree-Law No. 1302/1986 [Section 2]; a study must include the following information:

- a general description of the project and foreseeable requirements in relation to the use of the soil and other natural resources, an estimate of the type and quantities of waste and effluent produced in the course of operations or by the work concerned;
- an estimate of the foreseeable direct and indirect effects of the project on the population, fauna, flora, soil, air, water, climate, etc.;
- the measures envisaged for reducing or eliminating adverse effects on the environment;
- the environmental monitoring programme;
- a description of alternative options;
- justification of reasons which lead to the solution chosen.

Studies are submitted to the competent authority within the context of the licensing procedure for the project in question, namely, the Ministry of Economy. In parallel with the procedure for informing the public [Section 3] and before adopting the administrative resolution for the construction of the installation or licensing of the activity concerned, the Ministry forwards the file to the Ministry of the Environment so that it can draw up the Environmental Impact Statement [Section 4] which is a public document. If there is a difference of opinion between this Ministry and the Ministry of Economy, the decision lies with the Council of Ministers.

**c) *Emergency response***

An Order of 29 March 1989 approves the Basic Nuclear Emergency Plan (*Plan Básico de Emergencia Nuclear* – PLABEN) together with the text of the Plan itself. This Basic Emergency Plan contains the instructions to be complied with when nuclear emergency plans are established at province level in accordance with the radiological criteria laid down by the Nuclear Safety Council in the event that an area is affected by an accident originating in a nuclear power plant. A State Decree of 1992 set out the characteristics of the emergency plan, entitled Basic Intervention Plan.

On the basis of a prior report by the Nuclear Safety Council and the National Civil Protection Commission, the Minister of the Interior makes any amendments required to the Basic Nuclear Emergency Plan.

A governmental representative of a province where a nuclear power plant is located is designated as the Director of the Province Plan. He is responsible for declaring emergency situations, deciding on the appropriate measures to be taken, informing the public and determining the protection measures required [Section 2(1)]. At the same time, local groups are set up to deal with the emergency and co-ordinate operations.

The Basic Nuclear Emergency Plan is supplemented by Annexes which set out the different intervention levels, area limits, protection measures and transmission plans as well as a glossary of the terms contained in the Plan.

Spain ratified the 1986 Convention on Early Notification of a Nuclear Accident as well as the 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency on 13 September 1989.

## **5. Trade in Nuclear Materials and Equipment**

**a) *General provisions***

Restrictions on the export of nuclear materials and equipment which are sensitive from the viewpoint of the non-proliferation of nuclear weapons, are not integrated into Spain's nuclear legislation but are included in the general legislation on international trade. Furthermore, following Spain's membership of the European Union, the Community provisions concerning trade in nuclear items contained in both nuclear regulations and in general regulations are applicable.

Nuclear materials, installations and equipment constitute one of the categories of dual-use items subject to export restrictions pursuant to specific legislation.

This legislation includes Council Regulation (EC) No. 2889/2000 of 22 December 2000 amending Regulation (EC) No. 1334/2000 with regard to intra-Community transfers and exports of dual-use items and technology as far as EU legislation is concerned and Royal Decree No. 491 of 27 March 1998 containing Regulations on Foreign Trade of Defence and Dual Use Materials, and the Ministerial Order of 30 June 1998 which establishes the procedure to be followed.

Under this legislation, trade in nuclear materials, installations and equipment requires specific licences issued by the State Secretary of Trade within the Ministry of Economy, on the advice of an

Interministerial Committee on Defence and Dual Use Items Trade. The exporters of such items shall be recorded in a special register.

**b) Patents**

Provisions relating to patents, trademarks and inventions in the field of nuclear energy were included in the framework Nuclear Energy Act No. 25 of 29 April 1964, as amended by Act No. 25 of 20 June 1968.

Patent applications are filed in accordance with the normal procedure laid down by Spanish legislation on industrial property [Section 81]. This legislation is in line with the principles established in the European treaties and legislation, as well as in other international instruments ratified by Spain.

Patents are issued by the Industrial Property Registration Office, following examination of a report by CIEMAT.

On the basis of this report, the Ministry of Economy may grant exemption from the requirement to provide evidence of implementation and operation required by the law on industrial property, to any patent owner who has submitted a request to this effect to the Industrial Property Registration Office.

## **6. Radiation Protection**

Radiation protection was mentioned for the first time in Spanish legislation in 1959. The Order of 22 December 1959 contains standards for protection against ionising radiation. Legislation on radiation protection has since been considerably expanded and the original Order has been amended and supplemented [Orders of 10 January 1962 and 9 March 1971]. General provisions concerning protection against ionising radiation were similarly included in Act No. 25 on Nuclear Energy of 29 April 1964.

Royal Decree No. 2519 of 12 August 1982 approved the Regulations on Protection against Ionising Radiation, adopted in pursuance of Act No. 25/1964 on Nuclear Energy. This Decree was amended in part by Royal Decree No. 1753 of 25 November 1987 in order to introduce European legal provisions on radiological protection, in particular Council Directives 80/836/Euratom of 15 July 1980 and 84/467/Euratom of 3 September 1984 laying down the basic standards for the protection of the public and workers against the dangers of ionising radiation.

In 1992, a Regulation on Protection against Ionising Radiation [Royal Decree No. 53 of 24 January 1992] consolidated in a single instrument the regulations existing in this field, notably Decrees No. 2519/1982 and 1753/1987 mentioned above and now repealed.

These Regulations contain detailed administrative and technical provisions applicable to nuclear and radioactive installations and to the use of radiation-emitting equipment. These standards comply with the international radiation and nuclear safety regulations, in particular the recommendations of the International Atomic Energy Agency (IAEA), OECD Nuclear Energy Agency (NEA), International Labour Organisation (ILO) and World Health Organisation (WHO). They lay down the fundamental radiation protection measures applicable to persons exposed at work and to members of the public taken individually and collectively [Sections 5-14]; they contain provisions concerning medical supervision [Sections 40-46], radioactive waste [Sections 53-59], and the inspection of installations and activities representing a potential danger of exposure to radiation [Sections 60-63].

Various penalties are envisaged in the event of breach of the Regulations [Section 64]. The Regulations are supplemented by Annexes which contain definitions of radiological, biological and medical terms and by tables setting out radiation exposure limits.

The authorities responsible for ensuring implementation of the Regulations are the Minister of Economy, the Minister of Health and the Nuclear Safety Council, without prejudice to the special duties of other ministries or national agencies.

More recently, Royal Decree No. 413 of 21 March 1997 on the Operational Protection of Workers Employed by Outside Companies and Exposed to the Risk of Ionising Radiation during their Activities in Controlled Areas, was adopted. This Decree was established to implement Council Directive 90/641/Euratom, and to ensure that this protective regime would apply to all workers carrying out activities in controlled areas. A Resolution of 16 July 1997, published on 4 October 1997, was adopted by the Nuclear Safety Council in implementation of this Decree. This Resolution establishes a register of outside companies.

Radiation protection is a matter for the Nuclear Safety Council. In particular, the latter is responsible for radiation protection controls both within and around atomic facilities [Act No. 15 of 22 April 1980, as amended, Section 2]. In addition, the Directorate-General for Civil Protection, answerable to the Minister of the Interior, organises radioactivity warning networks which take the action required when any abnormal increase in radioactivity is recorded [Decree No. 53 of 10 January 1963].

The basic measures for the radiation protection of persons undergoing medical examination or treatment are contained in Royal Decree No. 1132 of 14 September 1990 which implements Council Directive 84/466/Euratom on this matter into Spanish legislation. The fundamental principle (the ALARA principle) is that all exposure to radiation for medical purposes must be kept as low as reasonably achievable [Section 1]. Furthermore, all radiodiagnostic, radiotherapy and nuclear medicine facilities must be recorded in the national inventory which is kept by the Ministry for Health and Consumers to avoid unnecessary proliferation of such equipment [Section 6], in accordance with the provisions of the above Directive.

Royal Decree No. 1891 of 30 December 1991 relates to the use of X-ray equipment for the purposes of medical diagnosis. The Decree lays down the rules enabling government authorities to monitor the proper functioning of such appliances. It also takes account of Council Directive 80/836/Euratom, amended by Council Directives 84/467/Euratom, and 84/466/Euratom, referred to above. The Decree provides for a register of firms authorised to sell and maintain X-ray equipment for medical use and for a register of the equipment installed. It also sets out requirements relating to third party liability insurance, and to the qualifications and training of personnel operating the equipment.

Decree No. 2071 of 22 December 1995 was enacted in order to establish procedures for implementing the two above-mentioned Decrees of 1990 and 1991, respectively. It sets out the criteria for quality control within the medical sector so as to avoid excessive exposures to both patients and workers. The verification of doses administered to patients is to be carried out according to the technical criteria set forth in Annex I to the Decree, while the levels of radiation at places of work and other places accessible to the public must comply with standards set out in Annex II.

## **7. Radioactive Waste Management**

Under the Nuclear Energy Act of 29 April 1964, operators of nuclear and radioactive installations are required to ensure that they possess the equipment necessary to store, handle and transport radioactive waste resulting from the operation of such installations [Section 38]. Sections 2 and 57 of this Act were amended by the fourth additional provision of Act No. 54 of 27 November 1997 in relation to the definition of radioactive waste. "Radioactive waste" means any material or product for which no future use is planned, and which contains or is contaminated by radionuclides whose concentration or level of activity exceeds the limits laid down by the Ministry of Economy.

Royal Decree No. 53 of 24 January 1992 on Protection against Ionising Radiation contains a number of provisions concerning radioactive waste.

In particular, it provides that installations whose activities are likely to produce significant quantities of radioactive waste must be equipped with adequate facilities for storage, treatment and disposal of such waste. In addition, radioactive waste disposal requires an administrative permit and any operation of this type must be undertaken in compliance with the terms of the permit.

Royal Decree No. 1899 of 1 August 1984 amends Royal Decree No. 2967 of 7 December 1979 on the Organisation of Activities Forming Part of the Nuclear Fuel Cycle, under which ENUSA was made responsible for the management of spent fuel, whereas the *Junta de Energía Nuclear* was entrusted with the permanent storage of radioactive waste. However, certain aspects, such as the storage of radioactive waste resulting from different fuel cycle processes and the dismantling of nuclear and radioactive installations, were not taken into account.

Decree No. 1899/1984 thus authorises the National Enterprise for Radioactive Waste (ENRESA, created by Royal Decree No. 1522 of 4 July 1984, modified on 1 March 1996) to carry out the whole range of radioactive waste management activities. Moreover, companies producing nuclear energy and the operators of nuclear and radioactive installations may now call on the services of ENRESA to ensure the permanent storage, handling and transport of their radioactive waste.

To finance the activities of ENRESA relating to the storage of spent fuel and radioactive waste produced by nuclear power plants and their decommissioning, a fund financed by a percentage of the price paid for electricity was created. Services provided by ENRESA to other installations are dealt with in contractual arrangements which also represent a source of funding. The Minister of Economy approves the economic and contractual conditions of such services.

Under Royal Decree No. 1522 of 4 July 1984, ENRESA is responsible in particular for selecting sites for the construction and operation of storage facilities for radioactive waste. But in as much as the resulting work inevitably affects the areas selected, an Order of 30 December 1988 adopted in pursuance of the above-mentioned Decree No. 1522/1984, and a supplementary Order of 1 December 1989 authorise ENRESA, within the context of its work, to provide financial assistance to the municipal councils of the communes on whose territory nuclear installations which store radioactive waste or spent fuel are located.

With respect to the financing of radioactive waste management operations, Decree No. 404 of 1 March 1996 establishes a Monitoring and Control Committee (*Comitato de Seguimiento y Control*) to take charge of the fund allocated to the management of such waste. The Committee, which reports to the Ministry of Economy, is composed of a Commissioner of Accounts for State Administration, a Director-General of the Treasury and Financial Policy and a Director-General for Energy Policy and Mines.

The management fund, which is constituted under the terms of the 1994 Law on the National Electricity System amended in 1997, will be utilised in the manner set forth in the General Plan on Radioactive Waste.

Spain ratified the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management on 11 May 1999. It is also a Party to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, ratified on 31 July 1974, and its 1996 Protocol, ratified on 24 March 1999.

## **8. Non-Proliferation and Physical Protection**

The provisions on nuclear security contained in Nuclear Energy Act No. 25 of 29 April 1964 and in Decree No. 1836 of 3 December 1999 are quite brief.

The Ministry of Economy is kept informed of operations involving nuclear material, and keeps a register in which to record the movements of such material [Act No. 25/1964, Section 23].

Any loss, abandonment or theft of nuclear substances must be notified to the competent authorities as soon as possible [Section 40]. Offences are punishable by criminal or administrative penalties, depending on the seriousness of the offence, either by the competent department of the Ministry of Economy, the Minister himself or by the Council of Ministers when secret information relating to nuclear energy has been divulged [Sections 87 and 91].

Royal Decree No. 58 of 3 February 1995 establishes a national system for the physical protection of nuclear installations and material. It covers the handling, use and transport of nuclear material and lays down a series of requirements for licensees. These activities are subject to licensing by the Ministry of Economy after consultation with the Ministry of the Interior and the Nuclear Safety Council.

At the international level, Spain has ratified the following international instruments:

- the 1968 Treaty on the Non-Proliferation of Nuclear Weapons, on 5 November 1987;
- the 1996 Comprehensive Nuclear Test Ban Treaty, on 31 July 1998;
- the 1979 Convention on Physical Protection, on 6 September 1991.

## **9. Transport**

The Act on Nuclear Energy of 29 April 1964, in particular in Chapter VI, contains specific provisions on the transport of radioactive materials in general. Subsequent Decrees have completed the provisions of this Act [as amended by Act No. 25 of 20 June 1968], in respect of certain modes of transport, *e.g.* road, rail or air, to bring Spanish legislation into line with the international agreements ratified by Spain. The other transport modes – inland waterways and sea – are still governed by the original provisions of the 1964 Act.

As far as the transport of radioactive materials by *road* is concerned, Spain acceded, on 22 November 1972, to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Following this accession, several pieces of legislation were passed, including

a 1973 Decree [Decree No. 2674 of 19 October 1973, as amended], implementing the ADR and determining the competent authorities. Ministerial orders have completed this legislation to bring the 1973 Decree up to date and to provide persons involved in international transport with the necessary information on the procedures and formalities to be observed.

In order to meet the special needs of Spanish road transport, two Decrees were promulgated in 1976 [Decrees No. 1754 of 6 February 1976 and No. 2101 of 10 August 1976], implementing the national regulations for the transport by road of dangerous goods which contain the provisions laid down by the ADR. Decree No. 1754/1976 was first amended by Decree No. 1999 of 29 June 1976 to take account of the amendments made in November 1977 to the ADR following the revised 1973 edition of the IAEA Regulations for the Safe Transport of Radioactive Materials, then by Decree No. 1723 of 20 June 1984.

A Regulation was adopted on 31 January 1997 in order to implement into national law the amendments made in 1993 to the Regulation on the International Transport of Dangerous Goods by Road, which is an Annex to the 1980 Convention on International Road Transport. Transport by road of dangerous goods is also governed by Royal Decree No. 2115 of 22 October 1998.

As regards *rail transport*, on 19 November 1974, Spain ratified the International Convention concerning the Carriage of Goods by Rail (CIM) and thus applies within its territory its Annex I: the International Regulations concerning the Carriage of Dangerous Goods by Rail (RID). Decree No. 2115/1998 also contains provisions related to the carriage of dangerous goods by rail.

As for *air transport*, Royal Decree No. 1749 of 1 August 1984 brought up to date by Ministerial Order of 28 December 1990, approved the national Regulations on the Safe Transport of Dangerous Goods by Air. These Regulations, together with the detailed technical instructions accompanying them, are based on the 1981 revised version of the Dangerous Goods Annex of the Chicago Convention on International Civil Aviation. Radioactive substances are contained in Class 7 of the classification of dangerous goods under the Regulations. Given that the provisions of the Chicago Convention are directly applicable in Spain, there are no national regulations in this field. A similar situation exists in relation to *maritime transport* which is governed by codes and regulations of the International Maritime Organisation.

Responsibility for the transport of radioactive materials is shared by the Ministry of Economy and the Ministry of Public Works. The Ministry of Economy is responsible for issuing licences for the transport of nuclear substances, in the light of a report submitted by the Nuclear Safety Council.

The Ministry of Economy is also responsible for issuing approval certificates and for licensing shipments of radioactive materials involving foreign undertakings [Act No. 25/1964, Section 22]. Further conditions may also be imposed by other government departments, including the Ministry of Trade. The carriers of radioactive substances or concentrates must report their activities to the Ministry of Economy, which keeps *ad hoc* records of all the information received [Section 23].

Regulations No. 2519/1982 on Protection against Ionising Radiation, as amended, provide in a supplementary section that any transport of radioactive material which is not governed by specific regulations shall be subject to the provisions of these Regulations, supplemented by the technical radiation protection standards contained in the latest edition of the IAEA Transport Regulations.

The Minister of Public Works has general responsibility for all transport [Decree No. 1558/1977, Section 11].

The Nuclear Safety Council is responsible for monitoring and enforcing safety and radiation protection requirements in the field of transport. To this effect, it helps the competent authorities to draw up criteria relating to emergency plans [Act No. 15 of 22 April 1980, as amended, Section 2].

## **10. Nuclear Third Party Liability**

The framework Act on Nuclear Energy laid the foundations for the rules governing nuclear third party liability [Act No. 25 of 29 April 1964, Chapters VII-X]. It was supplemented by an implementing Decree No. 2177 of 22 July 1967 approving the Regulations on Cover for Nuclear Damage Risks, which was itself amended by Decree No. 742 of 28 March 1968 and then by Decree No. 2864 of 7 November 1968. This Decree is now almost completely repealed by the general legislation on insurance and the 1999 Regulations on Nuclear and Radioactive Installations [Royal Decree No. 1836 of 3 December 1999], which eliminate the liability coverage obligation for second and third category nuclear installations.

The basic general principle of Act No. 25/1964 is that the operator of a nuclear or radioactive installation is objectively liable for all nuclear damage up to the maximum amount of his liability [Section 45]. However, persons using or storing radioactive materials or equipment which, according to the national standards in force, are incapable of emitting radiation representing a serious hazard, are excluded from the scope of the nuclear liability regime [Decree No. 2177/1967, Section 1].

As to the amount of liability, Section 57 of Act No. 25/1964 provides that the amount of the nuclear operator's liability should be reviewed if necessary to ensure that it is not lower than the amount established by the international conventions ratified by Spain and referred to below. Under this provision, the previous amount of 850 million Spanish pesetas (ESP) was raised to ESP 25 billion (which corresponds to approximately 150 million Special Drawing Rights) as from 1994 [Act No. 40 of 30 December 1994 on the Reorganisation of the National Electricity System]. Furthermore, a Regulation was adopted on 25 April 1997 to confirm that the two units of Almaraz NPP should be considered as one single nuclear installation. As a result of this, the two units are covered by the same insurance policy and the operator is liable for damage caused to third parties as if it were one single installation.

However, in respect of the transport of nuclear substances and low risk installations, for which the Nuclear Safety Council judges the risk to be lesser to that in respect of nuclear installations, the Ministry of Economy may set a lower ceiling of liability, which may not in any case be less than ESP 1 billion. The legislation also provides that these liability amounts may be raised by the government, upon the proposal of the above-mentioned Ministry, either to implement Spain's international obligations or to take account of inflation, thereby effectively ensuring the same amount of financial cover.

At international level, Spain ratified the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy on 31 October 1961 and the 1963 Brussels Supplementary Convention on 27 July 1966. It also ratified the 1971 Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material on 21 May 1974.



## II. INSTITUTIONAL FRAMEWORK

Nuclear activities are carried out in Spain under the control of various ministries, each being responsible for the area assigned to it under Spanish law. It should be noted, however, that the Ministry of Economy clearly plays a major role since it is generally responsible for enforcing existing nuclear legislation.

When the *Junta de Energía Nuclear* was set up in 1951 [Decree-Law of 22 October 1951], it was the first specialised body with full powers over nuclear matters [Section 7]. Since then, as already explained, the *Junta* has been replaced by the Research Centre for Energy, the Environment and Technology (CIEMAT) [Act No. 13 of 14 April 1986]. The Nuclear Safety Council, the National Uranium Enterprise (ENUSA) and the National Enterprise for Radioactive Waste (ENRESA) also play an important role in the nuclear field.

### 1. Regulatory and Supervisory Authorities

#### a) *Ministry of Economy*

The Ministry of Economy which has assumed the activities of the former Minister of Industry and Energy in the field of nuclear energy since May 2000, controls the application of nuclear legislation, except for those responsibilities which are expressly assigned to other ministries [Act No. 25 of 29 April 1964, Section 3].

The National Enterprise for Radioactive Waste (ENRESA) is also under the direct supervision of the Ministry of Economy, through CIEMAT which holds the majority of the capital of ENRESA, the remainder being held by the State Company of Industrial Participation (SEPI), a public undertaking.

As far as the Nuclear Safety Council is concerned, the Minister of Economy submits proposals to the government regarding the appointment of the Council's Secretary-General. Appointments are then submitted to Parliament for approval [Act No. 15 of 22 April 1980, as amended, Section 5].

As already stated, the Minister of Economy may intervene in ENUSA's activities; however, since the entry into force of Royal Decree No. 1464 of 17 September 1999, a major liberalisation of the activities comprising the front end of the nuclear fuel cycle has taken place.

It is also recalled that the Minister of Economy has the power to grant licences for constructing and operating nuclear installations and Category I radioactive installations and the Directorate-General for Energy Policy and Mines of this Ministry is the competent body for all other licences such as those for the transport of radioactive substances and the manufacture of nuclear components, after consultations with the competent authorities, including the Nuclear Safety Council [Act No. 25/1980, as amended, Section 3].

*Directorate-General for Energy Policy and Mines*

The Directorate-General for Energy Policy and Mines of the Ministry of Economy, which is composed of a number of Sub-directorates, including the Sub-directorate of Nuclear Energy, assumes the previous responsibilities of the former Directorate-General for Energy within the Ministry of Industry and Energy. It is responsible for planning, co-ordinating and implementing Spanish electro-nuclear development, with the help of the competent bodies. It is also responsible for official procedures relating to administrative licences and, after receiving an opinion from the Nuclear Safety Council, it issues the necessary licences other than those for nuclear installations and Category I radioactive installations, subject to those powers which are attributed to the autonomous communities [Section 3].

**b) *Ministry of the Interior***

The Ministry of the Interior is the supervisory authority for the Directorate-General for Civil Protection.

The Directorate-General for Civil Protection is responsible for setting up an emergency warning network in the event of an increase in radioactivity on Spanish territory, especially in areas where nuclear facilities are located [Decree No. 53 of 10 January 1963].

The Minister of the Interior is responsible for drawing up and amending the basic nuclear emergency plan in consultation with the Nuclear Safety Council and the National Civil Protection Commission [Order of 29 March 1989].

The Ministry of the Interior also plays an important role in relation to the physical protection of nuclear materials. In co-operation with the Ministry of Economy, it is responsible for monitoring the transport of nuclear materials, and it issues reports during the procedure for issuing licences required for international trade and for possession or transport of nuclear materials.

**c) *Ministry of Finance***

The Ministry of Finance takes decisions regarding the financing of expenditure to be met by the state under national nuclear legislation and international nuclear conventions [Act No. 25/1964, Section 68]. The Ministry, through its Directorate-General for Insurance, approves the financial security to cover nuclear risks [Section 56] and is responsible for supervising the insurance companies which are active in the nuclear sector.

*Directorate-General for Insurance*

The Directorate-General for Insurance is responsible for the Insurance Compensation Consortium (*Consortio de Compensación de Seguros*), whose task is to share in covering nuclear risks should insurance companies be unable to meet the entire cost [Decree No. 2177 of 22 July 1967]. It undertakes reinsurance in accordance with directives of the Minister of Finance. The Consortium is a member of the Executive Committee of the Nuclear Insurance Pools.

A special Nuclear Risks Department has been set up under the Consortium for the purpose of insurance compensation. It is financially independent and is managed by a government committee

chaired by the Director-General of Insurance. The committee meets either in plenary Session or in the form of a standing committee.

An appeal against the decisions of the Department may be made before the Insurance Compensation Consortium, with the possibility of a further appeal before the Insurance Arbitration Court.

The plenary committee is responsible for applying the measures adopted for covering nuclear risks. It authorises reinsurance and pays compensation in excess of ESP 1 million. The sale of assets of the Department and its expenditure must be approved by the Committee.

The Standing Committee is responsible for claims of less than ESP 1 million.

**d) *Ministry of Science and Technology***

CIEMAT and other research and training centres, which were previously under the supervision of the former Ministry of Industry and Energy, are now placed under the supervision of the Ministry of Science and Technology which was set up in May 2000.

**2. Public and Semi-Public Agencies**

**a) *Nuclear Safety Council***

In accordance with the guidelines of the National Energy Plan and the Resolution on Nuclear Energy adopted on 28 July 1979 by the Spanish Parliament, the Nuclear Safety Council was set up under Act No. 15 of 22 April 1980. Its tasks, as set out in this Act, were re-defined and broadened by Act No. 14 of 4 May 1999.

It is generally responsible for the regulation and supervision of nuclear installations. In this context, it therefore takes over the tasks previously carried out by the *Junta de Energía Nuclear* under the Nuclear Energy Act of 29 April 1964.

**i) *Legal status***

Act No. 15/1980, as amended, provides that the Nuclear Safety Council is independent of government administration [Section 1]. Royal Decree No. 1157 of 30 April 1982, adopted pursuant to the 1980 Act, defines the Statute of the Council. It provides that the Council is a body governed by public law and that it enjoys legal personality and administrative and financial autonomy [Section 1].

The Statute of the Council was partly amended by Royal Decree No. 643 of 2 June 1989. This Decree provides for a reorganisation of the Council's work and amends Article 41 of its Statute concerning the Technical Directorate. It sets up several Sub-Directorates under its responsibility: the Sub-Directorates for nuclear power plants, for radioactive and nuclear fuel cycle installations, for radiation protection, for analysis and evaluation and lastly, for siting and co-operation programmes at national and international level [Article 41(3)(a)-(e)]. Royal Decree No. 2209 of 28 December 1995 introduced a further amendment to the Statute of the Council. This Decree, which entered into force on 13 January 1996, in fact completely restructures the Technical Directorate into several general

sub-divisions, each relating to a specific subject such as nuclear reactor control, control of the nuclear fuel cycle, radiation protection, etc. Furthermore, several existing sub-divisions were disbanded.

*ii) Responsibilities*

The Nuclear Safety Council is intended to be an independent body with exclusive jurisdiction in the field of safety and radiation protection [Act No. 15/1980, as amended, 3rd supplementary provision]. Nevertheless, it may delegate powers to the autonomous communities in accordance with procedures laid down by the Council itself [Royal Decree No. 1157/1982, Section 1].

The Council maintains contacts with similar bodies abroad [Act No. 15/1980, as amended, Section 2(l)] and advises the Spanish Government on the commitments it has entered into with other states or international organisations in the field of nuclear safety and protection against ionising radiation [Section 2(n)].

The Council has very extensive powers in its field of jurisdiction:

- In regulatory matters, the Council co-operates with the government to draw up or review rules concerning nuclear safety and radiation protection [Section 2(a)]. In collaboration with the competent authorities, it draws up and approves the criteria relating to the siting of nuclear and radioactive installations, emergency plans, physical protection of nuclear and radioactive installations as well as those used in relation to the transport of nuclear substances and radioactive materials [Section 2(a) and (f)].
- Pursuant to its administrative powers, the Council submits reports on the issuing of licences required for nuclear and radioactive installations, the transport of nuclear substances or radioactive materials, the manufacture of nuclear or radioactive components, and uranium mining, to the Ministry of Economy before the latter takes any decisions in this respect [Section 2(b)]. In the case of site licences, the Nuclear Safety Council examines beforehand the reports prepared either by the autonomous communities or the pre-autonomous bodies, or failing this, by the provinces concerned [Section 3(3)]. The opinions given by the Nuclear Safety Council must be followed when they are against the applications being granted. Any conditions contained in favourable opinions must also be complied with.
- In the field of radiation protection, the Council has the power to supervise, by carrying out inspections, nuclear or radioactive installations and transport and component manufacturing plants, to ensure that the safety requirements are complied with [Section 2(c)]. Where it notes that there is a safety risk, it has the right either to suspend the activities of the enterprises concerned or to propose to the Ministry of Economy that it should revoke the licence already granted. These measures may be accompanied by penalties [Section 2(e)]. Courts and administrative bodies may consult the Council on matters concerning nuclear safety and radiation protection [Section 2(l)].
- The Council also controls the means to ensure radiation protection of workers, the public and the environment. It checks on irradiation levels in the area surrounding nuclear and radioactive installations and in the areas through which nuclear or radioactive materials are transported. It monitors the cumulative doses received by persons exposed to radiation in the course of their work, and grants or renews the necessary licences [Sections 2(g) and (h)]. The Council is kept informed of incidents caused by radiation and gives its opinion on the steps to be taken.

- The Council is also responsible for informing the public of its administrative activities and of matters relating to radiation protection and nuclear safety [Section 2(m)]. It reports annually to the Senate and the Chamber of Deputies on its activities [Section 11].
- The Council carries out studies, assessments and inspections in relation to radioactive waste management [Section 2(k)].

*iii) Structure*

The Nuclear Safety Council consists of a chairperson and a board composed of four members assisted by a General Secretariat.

The chairperson and the board members are appointed by the Government for a period of six years, which is renewable, after consultation with the Minister of Economy and following a favourable opinion of at least three-fifths of the members of the competent committee of the chamber of deputies [Section 5(2)].

The chairperson and members are selected in the light of their expertise in nuclear safety and radiation protection [Section 5(1)]. One of the four members is appointed vice-chairperson by the board on a proposal from the chairperson, and replaces the latter in his absence.

The Secretary-General of the Nuclear Safety Council is appointed by the government on a proposal from the Minister of Economy [Section 5(3)]. He takes part in the Council's meetings in an advisory capacity [Section 4(3)].

The Council meets at least once a fortnight in regular session. Extraordinary sessions may be convened by the chairperson or at the request of a member of the board [Royal Decree No. 1157/1982, Section 45].

The Nuclear Safety Council recruits the necessary qualified staff and may, for the performance of specific tasks or for a set period of not more than one year, call upon persons outside the Council, both Spanish and foreign [Act No. 15/1980, as amended, Section 8].

*iv) Financing*

The Council's funds come from appropriations from the general state budget and from the Council's own resources. Other resources may also be allocated in some cases [Act No. 15/1980, as amended, Section 9; Royal Decree No. 1157/1982, Section 3].

The Nuclear Safety Council obtains its own funds through the levy of a special charge for services rendered, which has been established especially for this purpose [Act No. 15/1980, as amended, Section 10]. This charge is based on studies carried out by the Council in respect of the issue of licences, and on inspections relating to nuclear and radioactive installations, the transport of nuclear or radioactive substances, the manufacture of nuclear or radioactive components and type-approval of radioactive equipment [Section 10(3)].

A charge is also levied on the issue or renewal of licences for operational staff in nuclear and radioactive facilities [Section 10(4)]. The charge, usually paid to the competent collecting centre, is

payable by persons who have applied for the said licences and permits. The entire proceeds are used to cover the cost of the services rendered by the Council on behalf of third parties.

***b) Research Centre for Energy, the Environment and Technology (CIEMAT)***

Under Act No. 13 of 14 April 1986 on the development and general co-ordination of scientific and technical research, the *Junta de Energía Nuclear* was replaced by the Research Centre for Energy, the Environment and Technology (CIEMAT).

The *Junta de Energía Nuclear* was set up in 1951 in the expectation of growing nuclear power applications in Spain. This body, which was to be given major technical, financial and staff resources, had been envisaged as an instrument for promoting nuclear industrial development and, to this end, had been given broad powers in this field.

Subsequently, because of the growth in nuclear activities connected with the need to meet energy requirements, and the corresponding increase in regulations to meet legitimate safety concerns, the government decided to split up the complex structures of the *Junta* into separate bodies in the nuclear field. As a result, the *Junta de Energía Nuclear* remained responsible for the tasks connected with promotion and research relating to the peaceful uses of nuclear energy, whilst those connected with the industrial aspects of the nuclear fuel cycle were entrusted to ENUSA [Decree No. 2967 of 7 December 1979] and those relating to radioactive waste management and storage to ENRESA. Similarly, regulatory and supervisory duties for nuclear installations were transferred to the Nuclear Safety Council [Act No. 15 of 22 April 1980, as amended].

At the moment, CIEMAT, which has many activities outside the nuclear field, has taken over some of the tasks formerly carried out by the *Junta de Energía Nuclear*. Its responsibilities mainly include the promotion and development of fundamental and applied research activities, as well as the development of technology in the energy field.

***i) Legal status***

CIEMAT is a public body directly answerable to the Ministry of Science and Technology.

***ii) Responsibilities***

CIEMAT is a research centre, an advisory agency and a representative body at national and international level in the industrial sphere. It also intervenes in nuclear emergencies in co-operation with the Nuclear Safety Council and ENRESA.

***Nuclear research and development***

CIEMAT has fundamental research laboratories and pilot plants in which – in agreement with the government departments concerned – it carries out fundamental and applied research. Possessing all the services required to perform its nuclear tasks, it gives technical assistance to ENUSA in the field of scientific research relating to the successive phases of the nuclear fuel cycle. It also gives advice and offers technical assistance in its sphere of competence to ENRESA, and to private industry. CIEMAT helps promote and develop nuclear energy by subsidising other Spanish research centres.

*An advisory role*

Broadly speaking, when matters within its jurisdiction are being studied and put into practice, CIEMAT is represented on joint advisory committees when these are not within the jurisdiction of other departments or public entities.

*A representative role*

Within its jurisdiction, CIEMAT alone maintains official relations with corresponding foreign nuclear bodies with which it collaborates on the implementation of technical and scientific nuclear programmes.

*Residual responsibilities in the industrial field*

Following the reorganisation of the nuclear sector, the tasks of the former *Junta de Energía Nuclear*, notably in the fields of the nuclear fuel cycle, radioactive waste, nuclear installations and radiation protection, were transferred to ENUSA, ENRESA and the Nuclear Safety Council. CIEMAT may, however, offer technical assistance in fields within its jurisdiction.

iii) *Structure*

CIEMAT is administered by its chairperson, who is a representative of the Ministry of Science and Technology. A governing board and a director-general are appointed by the government.

Pursuant to its statute and upon approval of the government, CIEMAT is empowered to set up all the services, divisions, sections or work centres required for its operation.

iv) *Financing*

Contributions to the CIEMAT budget are made from both external and internal sources.

External income is received through regular and one-off grants from the general state budget, and from moneys from autonomous bodies, received through the government. Legal and natural persons, both Spanish and foreign, may contribute funds through gifts or subsidies. Lastly, other financial resources may be allocated to CIEMAT under contract or by judicial decision.

CIEMAT generates its own income through sales, payment for services rendered on behalf of third parties, and income from CIEMAT's shares in national and international enterprises.

In carrying out its tasks, CIEMAT may conduct all the financial transactions required for its operation. It is a shareholder in the National Uranium Enterprise and in the National Enterprise for Radioactive Waste.

*c) National Uranium Enterprise (ENUSA)*

The National Uranium Enterprise (ENUSA) was set up by Decree No. 3322 of 23 December 1971 for the general purpose of assuming responsibility for the various stages of the nuclear fuel cycle, with the technical co-operation of CIEMAT.

Decree No. 2967 of 7 December 1979, amended by a Decree of 1 August 1984 implementing the guidelines of the national energy plan, widened ENUSA's scope in the nuclear fuel cycle by redefining its tasks to make them more independent of those of the former *Junta de Energía Nuclear* [Section 5(1)]. The growth in the nuclear industry had made it necessary to transfer responsibilities from the *Junta de Energía Nuclear* to a unit which would efficiently secure uranium supplies for nuclear facilities.

*i) Legal status*

ENUSA's statute was modified by Royal Decree No. 1464 of 17 September 1999. ENUSA is now a state enterprise in the form of a limited liability company.

*ii) Responsibilities*

ENUSA is responsible for the general supervision of the implementation of the national uranium exploration and prospecting plan [Decree No. 2967/1979, Section 5(1)]. It has direct responsibility for the following tasks [Section 2]:

- prospecting and mining radioactive deposits with a view to processing ore into uranium and thorium concentrates;
- converting uranium concentrates into uranium hexafluoride;
- uranium enrichment;
- manufacturing nuclear fuel and reprocessing irradiated fuel.

The research and development activities relating to the various stages in the nuclear fuel cycle are undertaken with the technical assistance of CIEMAT.

Uranium supplies to nuclear power plants and uranium enrichment and the conversion of uranium concentrates into uranium hexafluoride are guaranteed by ENUSA.

*iii) Financing*

The State Company of Industrial Participation (SEPI) has a majority shareholding in ENUSA, with CIEMAT holding the remainder of the shares.



**d) National Enterprise for Radioactive Waste (ENRESA)**

Given the development of nuclear energy applications and the growing use of radioactive materials and the waste arising therefrom, Spain needed a body responsible for the overall management of radioactive waste, a task previously carried out in part by the former *Junta* and by ENUSA, as described above.

The National Enterprise for Radioactive Waste (ENRESA) was thus created on 22 November 1984 in pursuance of Royal Decree No. 1522 of 4 July 1984, supplemented by an Order of 30 December 1988, and has been given overall responsibility for the management of radioactive waste [Decree No. 1522/1984, Section 1].

**i) Legal status**

ENRESA is a state enterprise in the form of a limited liability company.

**ii) Responsibilities**

ENRESA is directly responsible for the following [Decree No. 1522/1984, Section 2]:

- the treatment and conditioning of radioactive waste;
- the siting, construction and operation of storage facilities (both temporary and permanent) for low, medium and high-level radioactive waste;
- the carrying out of all activities associated with the final shutdown of nuclear and radioactive installations;
- establishing procedures for the collecting, transfer and transport of radioactive residues;
- the final treatment of wastes resulting from the extraction and manufacture of ore concentrates;
- the carrying out of the technical, economic and financial studies necessary to determine the various costs associated with the management of radioactive waste, to help formulate an appropriate economic policy.

Decree No. 1522/1984 was modified by Royal Decree No. 404 of 1 March 1996, revising the tasks to be carried out by ENRESA.

ENRESA is also responsible for drawing up a permanent inventory of all radioactive waste storage facilities. This inventory will be maintained even after closure of the installation concerned [Decree No. 1522/1984, Section 6].

In the event of a nuclear emergency, ENRESA may be required to support the civil protection services [Section 2(e)].

Each year, ENRESA is to report to the Minister of Economy on its activities and also to submit a general plan for radioactive waste management including a review and cost analysis of technical solutions [Section 4].

ENRESA receives technical assistance and technological support from CIEMAT within its fields of competence.

*iii) Financing*

ENRESA's capital is constituted by CIEMAT and SEPI, an industrial public undertaking. Its activities are financed by a fund composed of a percentage of electricity prices and remuneration received from its contractual arrangements.

*e) National Energy Commission*

The Commission on the National Electric System, established by Law No. 40 of 30 December 1994, was replaced by a National Energy Commission pursuant to Act No. 34 of 7 October 1998.

This new Commission exercises quite a wide range of powers, although its priority sectors remain the energy and fossil fuel markets. As an advisory body, the Commission is required to participate in the legislative procedure in the energy field, and in the licensing procedure for energy installations.

The Commission is a public body under the aegis of the Ministry for Economy. It is administered by a governing board made up of a chairperson and eight members. Its members are selected from amongst eminent figures, whose positions are confirmed by royal decree adopted on a proposal of the Minister of Economy.