

# PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

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## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

On behalf of the state, the Nuclear Safety Authority (ASN, [www.asn.fr](http://www.asn.fr)) regulates nuclear safety and radiation protection, in order to protect workers, patients, the public and the environment from the risks related to nuclear activities. It also contributes towards informing the citizens.

The fundamental aim of nuclear safety is to protect individuals, society and the environment, by establishing and maintaining effective defences against radiological risks in nuclear installations (Safety Fundamentals”, International Atomic Energy Agency, Safety series N° 110, 1993, [www.iaea.org](http://www.iaea.org)).

This aim takes the form of a number of operational objectives:

- in operating conditions, exposure to ionising radiation as a result of nuclear activities must be kept below the specified limits and at a level that is as low as reasonably achievable;
- preventive measures must be taken against accidents in nuclear installations;
- should they occur, the consequences of any accidents must be attenuated.

### 1 FUNDAMENTAL PRINCIPLES

Nuclear activities must be carried out in compliance with fundamental principles, some of which are contained in constitutional, legislative or regulatory texts.

#### 1 | 1

### Responsibility

The responsibility principle states that the responsibility for activities entailing a risk lies with those who carry out these activities:

- licensees are responsible for the safety of basic nuclear installations (BNIs);
- consignors are responsible for the transport of radioactive materials;
- users of radioactive materials are responsible for the radiation protection of the public;
- suppliers are responsible for the recovery of radioactive sources;
- employers are responsible for the radiation protection of workers;
- the prescribing doctor and practitioner of the procedure are responsible for the radiation protection of patients;
- polluters are responsible for any harm they may cause to the environment;
- producers of radioactive materials are responsible for waste disposal.



Responsibility of the operators and responsibility of the Nuclear Safety Authority

The polluter-pays principle introduced into the Environment Code is an application of the responsibility principle in that it ensures that the polluter responsible for environmental damage resulting from its activity bears the cost of pollution prevention and mitigation measures. This in particular leads to taxing of BNIs and installations classified on environmental protection grounds (ICPEs).

The Charter for the Environment supplementing the preamble to the Constitution pursuant to constitutional act 2005-205 of 1 March 2005 stipulates (art. 4) that “Everyone shall be required, in the conditions provided for by law, to contribute to the making good of any damage he or she may have caused to the environment”.

## 1 | 2

### Justification

The justification principle is one of the three fundamental principles of radiation protection, enshrined in the Public Health Code. It states that a nuclear activity can only be undertaken if its health, social, economic or scientific benefits are justified, given the risks inherent in human exposure to ionising radiation which it is likely to entail.

Traditionally, this justification principle was first of all applied to radiation protection of patients - any unjustified examination being prohibited - before being extended to all radiation protection.

It thus applies to most areas supervised by ASN: the aim is to compare the advantages of a nuclear activity against its radiological risks, whether dealing with the risk of radiological accident or the risks induced by normal operation of the facilities, in particular through radiological exposure of the workers, effluent discharge and the production of radioactive waste.

## 1 | 3

### Optimisation

The optimisation principle, which is another fundamental radiation protection principle enshrined in the Public Health Code, states that human exposure to ionising radiation as a result of nuclear activities must be kept as low as reasonably achievable in the light of current technology, economic and social factors and, as applicable, the medical purpose of the exposure.

Traditionally, this optimisation principle was first of all applied to radiation protection of workers, before being extended to all radiation protection. It today has its counterparts in the other fields of activity regulated by ASN: nuclear safety, environmental protection, radioactive waste management.

The Environment Code thus introduces the principle of preventive action and correction of environmental damage, primarily at source, using the best available techniques at an economically acceptable cost (article L. 110-1).

Optimisation of the safety of nuclear installations to a large extent depends on use of the concept of defence in depth, in particular characterised by the installation of successive barriers preventing the dispersal of radioactive substances into the environment. This concept is employed to compensate for any potential human or technical failures. It is based on several levels of protection, whether technical or organisational, designed to maintain the effectiveness of the physical barriers placed between the radioactive materials and workers, the public and the environment, whether in normal operating conditions or incident situations and, for certain of the barriers, in the event of an accident. Operational implementation can be summarised thus: although the steps taken to prevent errors, incidents and accidents are in principle designed to prevent them happening, their occurrence is nonetheless postulated and the means of dealing with them must be examined and set up, in order to reduce their consequences to levels considered to be acceptable.

## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

The concept of defence in depth is organised into 5 levels:

1. prevention of operating anomalies or deviations and system failures (design, definition of operating range and organisation);
2. maintaining the installation or transport package within the authorised operating range, through surveillance and detection of deviations (operation);
3. keeping accidents within the design scenarios (means of action for responding to envisaged situations);
4. prevention of deterioration of accident conditions and limitation of the consequences of serious accidents;
5. limitation of the consequences for the populations in the event of a major accident (emergency preparedness).

### 1 | 4

#### Limitation

The limitation principle, also one of the fundamental principles of radiation protection enshrined in the Public Health Code, states that the exposure of a person to ionising radiation resulting from a nuclear activity cannot raise the total doses received above the limits set by the regulations, except when this person is exposed for medical or biomedical research purposes.

The notion of limit clearly does not apply only to radiological exposure of the general public and workers, but also to other sorts of hazards and detrimental effects: for example the non-radiological parameters of discharges from installations subject to licensing must remain below the values defined in the specific licenses.

### 1 | 5

#### Precaution

The precaution principle is laid down in constitutional texts, particularly in article 5 of the Charter for the Environment introduced into the preamble to the Constitution, and in the Environment Code. According to this principle, the absence of certainty, in the light of current scientific knowledge, should not delay the adoption of effective, proportionate measures to prevent a risk of serious and irreversible damage to the environment at an economically acceptable cost.

With regard to the biological effects of ionising radiation at low doses and low dose rates, the precaution principle adopts a linear dose-effect relationship without threshold. This point is clarified in chapter 1 of this report.

### 1 | 6

#### Participation

The Charter for the Environment introduces the participation principle whereby on the one hand everyone has access to information about the environment, including hazardous activities and materials and on the other, the public is involved in drafting projects with an important impact on the environment.

In the nuclear field, public inquiries - which are in particular held as part of the decision-making process for licensing or decommissioning nuclear installations, or licensing water intake and effluent discharge by nuclear installations - enable local residents to participate in the decisions made by the public authorities. Articles L.121-1 and following of the Environment Code also created a National Public Debates Commission (CNDP), responsible for ensuring that the public is indeed involved in

the drafting of national-interest planning and construction projects of the State, local authorities, public institutions and private individuals, in those categories of operations specified by decree, if their socio-economic stakes are high or they have significant impacts on the environment or regional planning. In 2006, two public debates organised by CNDP in particular concerned ASN: the end of the public debate dealing with the project to site an EPR type reactor in Flamanville (Manche) and the public debate on the plan to site an ITER fusion reactor in Cadarache.

This right to information concerns all fields of ASN activity, and in particular:

- informing the public about events occurring in BNIs or during the transport of radioactive materials, about discharges or releases from BNIs;
- informing workers about their individual radiological exposure;
- informing patients about the medical procedure, in particular its radiological aspect.

In accordance with the duties entrusted to it, ASN contributes to public information about nuclear safety and radiation protection.

Chapter 6 of this report details ASN's information activities.

## 2 REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

The Convention on Nuclear Safety signed in Vienna (Austria) on 20 September 1994, to which France is a party, establishes the framework for regulating nuclear safety and radiation protection.

First of all, it stipulates that “Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of nuclear installations” (article 7).

The principle of the responsibility of the licensees of activities involving a risk is recalled in these terms: “Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence and shall take the appropriate steps to ensure that each such licence holder meets its responsibility” (article 9).

Finally, each State that is a party to the Convention on Nuclear Safety shall “establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework referred to in Article 7, and provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities” (article 8).

In France, the regulation of nuclear safety and radiation is primarily the responsibility of three parties: Parliament, the Government and ASN. Article 4 of Act 2006-686 of 13 June 2006 concerning transparency and security in the nuclear field (TSN Act) lists the respective duties of the Government and ASN:

**Article 4 of the TSN act**

*The Nuclear Safety Authority, an independent administrative authority, participates in the regulation of nuclear safety and radiation protection and in informing the public in these fields.*

*In this respect:*

*1°) The Nuclear Safety Authority is consulted on draft decrees and draft ministerial orders of a regulatory nature relating to nuclear safety;*

*It can take regulatory decisions of a technical nature to complete the implementing procedures for decrees and orders adopted in the nuclear safety or radiation protection field, except for those relating to occupational medicine. Decisions relative to nuclear safety are subject to the approval of the ministers tasked with nuclear safety and decisions relative to radiation protection are subject to the approval of the ministers tasked with radiation protection. Approval orders and approved decisions are published in the Official Gazette (Journal officiel).*

*Decisions by the Nuclear Safety Authority taken on the basis of Article 29 are communicated to the ministers tasked with nuclear safety.*

*2°) The Nuclear Safety Authority monitors compliance with the general rules and special prescriptions as regards nuclear safety and radiation protection to which are subject: the basic nuclear installations defined in Article 28, the manufacture and use of pressurised equipment specially designed for these installations, the transport of radioactive substances, and the activities mentioned in Article L. 1333-10 of the Public Health Code and the persons mentioned in Article L.1333-10 of said Code.*

*The authority organises a permanent watch in the radiation protection sphere in the national territory.*

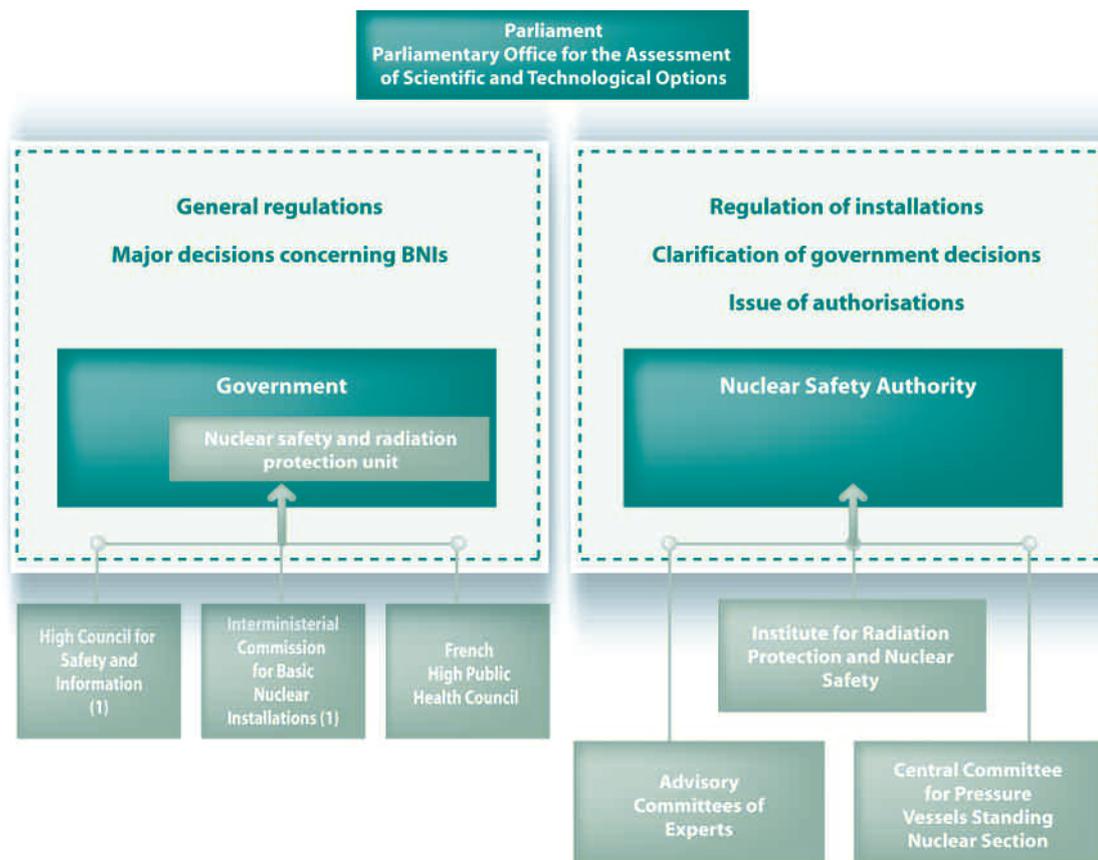
*It appoints among its agents the nuclear safety inspectors mentioned in Title IV of this Act, the radiation protection inspectors mentioned in 1° of article L. 1333-17 of the Public Health Code, and the agents tasked with monitoring compliance with the provisions on the pressurised equipment mentioned in this 2°. It issues the required approvals to the bodies participating in the controls and in the watch over nuclear safety or radiation protection.*

*3°) The Nuclear Safety Authority participates in informing the public in its spheres of competence.*

*4°) The Nuclear Safety Authority takes part in the management of radiological emergency situations resulting from events likely to endanger personal health and the environment by exposure to ionising radiations and occurring in France or likely to affect the French territory. It contributes its technical assistance to the competent authorities in elaborating, as part of the emergency response plans, arrangements taking account of the risks resulting from nuclear activities set forth in articles 14 and 15 of Act N° 2004-811 of 13 August 2004 on the Modernisation of Civil Security.*

*When such an emergency situation occurs, it assists the Government for all matters within its competence. It sends the competent authorities its recommendations on the measures to be taken at the medical and health levels or regarding civil security. It informs the public of the safety state of the installation that caused the emergency situation, when the latter is subject to its surveillance, and of the possible releases into the environment and their risks for personal health and the environment.*

*5°) In the event of an incident or accident concerning a nuclear activity, the Nuclear Safety Authority can carry out a technical investigation according to the procedures laid down by Act N° 2002-3 of 3 January 2002 on the Security of Transport Infrastructures and Systems, Technical Investigations and the Underground Storage of Natural Gas, Hydrocarbons and Chemicals.*



(1) The CSSIN will be replaced by the High Committee for transparency and Information on Nuclear Safety, the CINB by the Consultative Committee for BNIs, the CSHPF by the High Public Health Council.

## Supervision of nuclear safety and radiation protection in France

### 2 | 1

#### Parliament

Parliament's role in the field of nuclear safety and radiation protection is in particular to pass Acts. Two major Acts were therefore voted in by Parliament in 2006 in the field of nuclear safety and radiation protection: the above-mentioned TSN Act and Programme Act 2006-739 of 28 June 2006 relative to the sustainable management of radioactive materials and waste. This latter act is in part codified in the Environment Code.

The TSN Act gives a legislative foundation for the BNIs licensing and regulation system, as well as the rules concerning transparency in the field of nuclear safety and radiation protection. It creates ASN, an independent administrative authority in charge of regulating these sectors. ASN is required to present its annual report to Parliament. At the latter's request, ASN reports on its activities and submits opinions or carries out studies on subjects within its field of competence.

The provisions of the programme Act of 28 June 2006 are detailed in chapter 16 of this report dealing with radioactive waste (chapter 16).

## 2 | 1 | 1

**Parliamentary Office for the assessment of scientific and technological options**

Created by Act 83-609 of 8 July 1983, the Parliamentary office for the assessment of scientific and technological options (OPECST) is a parliamentary delegation consisting of 18 Deputies and 18 Senators, the composition of which is proportional to the political groups in each parliamentary house.

The role of the Parliamentary Office is to inform Parliament of the consequences of the scientific or technological options chosen, in particular so that it can make its decision in full possession of the facts. The Parliamentary Office is assisted by a Scientific Council comprising 24 members, with the composition of the Council reflecting the diversity of scientific and technical disciplines.

Since it was first set up, the Parliamentary Office has issued 23 reports on nuclear issues, including 11 dealing with regulation of the security and safety of nuclear installations.

In 1990, the highest instances of the National Assembly and the Senate, that is their respective Bureaux, commissioned a study from the Parliamentary Office into regulation of the security and safety of nuclear installations. Since then, Mr. Claude Birraux, member of the National Assembly for the Haute-Savoie *département*<sup>1</sup>, has been confirmed in this role, year after year, and has prepared 11 reports on the regulation of safety and security in nuclear installations, adopted by the Parliamentary Office between 1990 and 2001.

Mr. Henri Revol, Senator for the Côte-d'Or *département* and Chairman of the Office, published a report jointly with the Mr. Christian Bataille, member of the National Assembly for the Nord *département*, concerning the environmental and health impacts of the nuclear tests carried out by France between 1960 and 1996.

In the field of nuclear safety, the Parliamentary Office focuses on the administrative organisation of safety and radiation protection, the arrangements made by the licensees in this field, the structures adopted in other countries, the adequacy of the resources given to ASN for the performance of its duties, and the main nuclear safety and radiation protection issues. The Office's studies thus covered the working of nuclear safety regulations, technical matters such as the management of radioactive waste and the lifetime of nuclear reactors and even socio-political areas such as the conditions for dissemination and perception of information about nuclear activities.

The Office's reports are produced ahead of an Act being voted, in order to prepare the legislative decision, or subsequently, to monitor implementation of a particular text.

The work done by the Office was extensively used for legislative purposes in the nuclear field in 2006.

The Office's first report on radioactive waste, prepared by Mr. Christian Bataille and adopted in December 1990, was drawn on extensively by the 30 December 1991 Act on research into radioactive waste management.

The report by Mr. Christian Bataille and Mr. Claude Birraux entitled "Looking after the long term, an act in 2006 on the sustainable management of radioactive waste", adopted by the Parliamentary Office on 15 March 2005, was also a significant source of inspiration for the 28 June 2006 programme Act on the sustainable management of radioactive materials and waste.

The bill tabled by the Government on 22 March 2006 concerning the management of radioactive materials and waste did in fact include most of the recommendations made by the Office one year earlier.

1. *département*: administrative region.

The discussions held on this bill, in which the members of the Office played an important role in each House, led to a broader consensus between Government and Parliament on the key points. These key points include the need to carry out the three areas of research in parallel and with equal weight given to each one (separation-transmutation, geological disposal, long-term storage), the reversibility of geological disposal, the intervention by Parliament in the construction of a geological repository, the financing of research and industrial applications, and the economic development of the areas concerned by the management of radioactive materials and waste.

Mr. Claude Birraux, first Vice-Chairman of the Office was, on behalf of the commission for economic affairs, the environment and regional planning, appointed rapporteur for the bill in the National Assembly. At his initiative, 75 amendments from the commission were adopted at the first reading before the National Assembly in April 2006. Mr. Henri Revol assumed the role of rapporteur for the same text in the Senate, on behalf of the Commission for economic affairs, having a further 34 amendments adopted at the end of May 2006. Thanks to the common stance adopted by the two assemblies, as a result of the work done by the Parliamentary Office, the text adopted by the Senate on the first reading was then definitively adopted by the National Assembly on 15 June 2006.

The members of the Parliamentary Office for the assessment of scientific and technological options also played a major role in drafting the 13 June 2006 Act on transparency and security in the nuclear field, on the basis of eleven reports published on this subject and the work done in the first half of 1998 for the Government by Mr. Jean-Yves Le Déaut, deputy for the Meurthe-et-Moselle *département*, then Chairman of the Office and acting as the parliamentary delegate.

In the Senate, which reviewed the corresponding bill during its first reading in early March 2006, the rapporteurs Messrs. Henri Revol and Bruno Sido, also members of the Parliamentary Office for the assessment of scientific and technological options, initiated eighty-eight amendments to the original text. At the first reading before the National Assembly at the end of March 2006, Messrs. Bataille, Birraux, Dionis du Séjour, Gatignol and Le Déaut in particular played an important part in the discussions, with several of their amendments being adopted. The Senate then adopted the text voted by the National Assembly, which enabled the bill to be definitively adopted on 1 June 2006.

2006 was thus characterised by active participation by the members of the Parliamentary Office in the legislative transcription of their recommendations, themselves the result of several years of studies and consultations.

Having duly performed its duties, the Parliamentary Office was given greater future responsibility by the Act, in particular for monitoring the implementation of two 2006 Acts on sustainable management of radioactive materials and waste and on transparency and security in the nuclear field.

## 2 | 2

### The Government

The Government, headed by the Prime Minister, exercises regulatory powers. The Government is therefore in charge of laying down the general technical regulations concerning nuclear safety and radiation protection. The 13 June 2006 Act also gives it responsibility for taking major decisions concerning BNIs. In so doing, it may rely on proposals or opinions from ASN. It also has access to consultative bodies such as the High Committee for Transparency and Information on Nuclear Security, and the High Council for Public Health.

The Government is responsible for civil protection in the event of an emergency situation.

## 2 | 2 | 1

**The Ministers in charge of nuclear safety and radiation protection**

The ministers in charge of nuclear safety, as specified by the TSN Act of 13 June 2006, are the Minister for the Economy, Finance and Industry and the Minister for Ecology and Sustainable Development. They define the general regulations applicable to nuclear activities, if necessary on the basis of a proposal from ASN. They take the few major individual decisions required concerning:

- the design, construction, operation, final shutdown and decommissioning of BNIs;
- the final shutdown, maintenance and surveillance of radioactive waste disposal facilities;
- the construction and operation of pressure vessels specifically designed for these installations.

On the advice of ASN, if an installation presents a serious risk, the above-mentioned ministers may pronounce suspension of its operation.

In addition, the Minister for Health is responsible for radiation protection. He or she determines the general regulations, based on proposals from ASN when applicable, concerning radiation protection. The radiation protection regulations for workers are the responsibility of the Minister for Labour (Ministry for Employment, Social Cohesion and Housing).

Finally, the ministers responsible for nuclear safety and the minister responsible for radiation protection jointly approve the ASN internal regulations. They also each approve ASN regulatory decisions of a technical nature within their respective spheres of competence.

## 2 | 2 | 2

**The nuclear safety and radiation protection unit**

To assist the Ministers responsible for nuclear safety and for radiation protection, a unit must be created under their joint authority within the directorate for regional action, quality and industrial security at the General Business Directorate in the Ministry for the Economy, Finance and Industry. This mission will in particular be responsible for monitoring public inquiry procedures, approving ASN technical decisions and taking decisions specifying the general regulations passed by decree.

## 2 | 2 | 3

**The *préfets***

The *préfets*<sup>2</sup> are the guarantors of public order in the *département* under their responsibility. They in particular have a major role to play in the event of an emergency, as they are responsible for preventive measures to be taken with respect to the population. These measures are proposed by ASN. For the procedures described in chapter 3, and after obtaining the opinions of his departments and that of one or more inquiry commissioners, following a public inquiry, the *préfet* also submits his standpoint to the authority in charge of reviewing the licensing request. He asks the departmental council for the environment and for health and technological risks for its opinion concerning BNI water intake and discharges and the addition of equipment requiring licensing in accordance with the regulations applicable to Installations Classified on Environmental Protection Grounds.

ASN regional delegates, who are also regional directors of industry, research and the environment, under the authority of the region *préfets*, are independent of the latter with regard to nuclear safety and radiation protection.

2. *préfet* regional government representative.

## Consultative bodies

### a) The Interministerial Commission for Basic Nuclear Installations (CIINB)

The Interministerial Commission for Basic Nuclear Installations (CIINB), set up by decree 63-1228 of 11 December 1963, as modified, concerning nuclear installations, must be consulted by the ministers responsible for nuclear safety on the applications for BNI authorisation, modification or final shut-down decrees and on the individual requirements applicable to each of these installations. It is also required to give its opinion on the drafting and application of general BNI regulations. An internal Standing Section has full competence in the name of the Commission to issue the opinions specified in article 3 bis of above-mentioned decree 63-1228 and opinions on the authorisation applications required under article 6 of the same decree, in the event of a change in licensee, modifications likely to lead to non-compliance with the requirements, or a modification of the boundary of the installation.

Its composition was renewed by an order of the Prime Minister on 6 September 2006. Mr. Yves Galmot was in particular replaced as Chairman of the Commission by Mrs Marie-Eve Aubin, Chair of the public works section at the Council of State.

The Commission is required by law to meet at least once a year and held two sessions in 2006, with Mrs Marie-Eve Aubin as chair, during which six draft texts were reviewed.

#### Meetings of the CIINB in 2006

17 November	<ul style="list-style-type: none"> <li>• Draft decree authorising the <i>Société d'Enrichissement du Tricastin</i> (SET) to create a BNI called Georges Besse II on the Tricastin site.</li> </ul> Session of the standing section: <ul style="list-style-type: none"> <li>• Draft decree modifying the decree of 8 September 1977 as amended, authorising creation by the <i>Société Eurodif-Production</i> of a uranium isotope separation plant using gaseous diffusion, on the Tricastin site.</li> <li>• Draft decree modifying the decree of 21 May 1990 as amended, and authorising the <i>compagnie générale des matières nucléaires</i> (COGEMA) to raise to 195 tons of uranium and plutonium the annual production capacity of the Mélox BNI located in Chusclan.</li> </ul>
8 December	<ul style="list-style-type: none"> <li>• Draft decree authorising <i>Électricité de France</i> to create a BNI on the Flamanville site.</li> <li>• Draft decree authorising <i>Électricité de France</i> to carry out final shutdown and complete decommissioning of BNI 163, known as the Ardennes nuclear power plant, located in Chooz (<i>Ardennes département</i>).</li> </ul> Session of the standing section: <ul style="list-style-type: none"> <li>• Draft decree authorising the CIS bio international company to operate BNI 29, called UPRA, in Saclay (<i>Essonne département</i>). It had previously been operated by the <i>Commissariat à l'énergie atomique</i> (CEA).</li> </ul>

Secretarial services are provided by ASN.

The TSN Act having overhauled the system applying to BNIs, an implementing decree should clarify the changes to the CIINB.

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### b) The High Council for Public Health

The French High Public Health Council (CSHPF), a scientific and technical consultative body, under the authority of the Minister for Health, should be replaced in the first quarter of 2007, by the High Council for Public Health (HCSP), created by Act 2004-806 of 9 August 2004 concerning public health policy. The ASN Chairman will be represented on the board of experts (10 qualified persons and de jure members including the ASN Chairman) which governs this new assembly, consisting of four specialised commissions:

- the “health safety” specialised commission (30 qualified persons);
- the “chronic diseases and incapacity” specialised commission (20 qualified persons);
- the “prevention and determining factors in health” specialised commission (30 qualified persons);
- the “assessment, strategy and outlook” specialised commission (15 qualified persons);

Whenever necessary, ASN may take part in the work of the sections of the “health safety” specialised commission and more particularly, of the section dealing with environmental risks and health care system, health products and individual health care practice risks. As applicable, some of the opinions and recommendations issued by the new advisory committees for radiation protection (section 2|3|4 of this chapter) could be presented to the HCSP.

### c) The High Committee for Transparency and Information on Nuclear Security

The TSN act of 13 June 2006 created a High Committee for Transparency and Information on Nuclear Security, an information, discussion and debating body dealing with the risks inherent in nuclear activities and the impact of these activities on human health, the environment and nuclear safety.

The High Committee can issue an opinion on any question in these fields, as well as on controls and the relevant information. It can also deal with any issue concerning the accessibility of nuclear safety information and propose any measures such as to guarantee or improve nuclear transparency.

The High Committee can be called on by the Ministers in charge of nuclear safety, by the chairmen of the competent commissions of the National Assembly and the Senate, by the Chairman of the Parliamentary Office for the assessment of scientific and technological options, by the chairmen of the local information committees or by the licensees of BNIs, on all questions concerning information about nuclear safety and its regulation.

The High Committee comprises thirty-four members appointed by decree for six years. They include:

- two deputies appointed by the National Assembly and two senators appointed by the Senate;
- representatives of the local information committees;
- representatives of environmental protection associations and approved health system users associations;
- representatives of persons in charge of nuclear activities;
- representatives of representative employee labour organisations;
- personalities chosen for their scientific, technical, economic or social competence, or information and communication skills, including three appointed by the Parliamentary Office for the assessment of scientific and technological options, one by the Academy of Sciences and one by the Academy of Moral and Political Sciences;
- a representative of the ASN, a representative of the Minister for Labour, a representative of the Minister responsible for civil security and a representative of the Institute for radiation protection and nuclear safety.

The Chairman of the High Committee is appointed by decree from among members of Parliament, representatives of the local information committees and personalities chosen for their competence.

The High Committee should be set up in the first months of 2007. It will then replace the High Council for Nuclear Safety and Information (CSSIN) which had been created in 1973 with similar duties. The CSSIN's activities in 2006 are described in chapter 6.

#### ***Other stakeholders***

High Health Authority (HAS)

*www.has.fr*

Health Monitoring Institute (InVS)

*www.invs.sante.fr*

French Health Products Safety Agency (AFSSAPS)

*www.afssaps.sante.fr*

French Food Products Safety Agency (AFSSA)

*www.afssa.fr*

French Environmental Health Safety and Working Conditions Agency (AFSSET)

*www.afsset.fr*

## 2 | 3

### **The Nuclear Safety Authority (ASN)**

The TSN Act created an independent administrative authority, the ASN, responsible for regulating nuclear safety and radiation protection. ASN prepares draft regulatory texts on behalf of the Government and clarifies the regulations through technical decisions. It issues certain individual authorisations and proposes others to the Government. The nuclear safety and radiation protection inspectors at ASN carry out regulation and monitoring of nuclear activities. Finally, ASN contributes to informing the citizens. From a technical viewpoint, ASN relies on the expertise provided by the Institute for Radiation Protection and Nuclear Safety (IRSN) and Advisory Committees of experts.

In more detail:

1. ASN is consulted on draft decrees and ministerial orders of a regulatory nature and dealing with nuclear safety.

It can take regulatory decisions of a technical nature in order to complete the implementation procedures for nuclear safety or radiation protection decrees and orders, except for those dealing with occupational medicine. These decisions are subject to approval by the Ministers responsible for nuclear safety when they concern nuclear safety or the Ministers responsible for radiation protection when they concern radiation protection. The approval orders and approved decisions are published in the Official Gazette.

2. ASN reviews BNI authorisation or decommissioning decree applications and makes proposals to the Government concerning the decrees to be issued in these fields. It defines the requirements applicable to these installations with regard to the prevention of risks, pollution and detrimental effects. It authorises commissioning of these installations and pronounces delicensing following decommissioning.

Some of these ASN decisions require approval by the Ministers responsible for nuclear safety.

ASN also issues the licenses for small-scale nuclear facilities, provided for by the Public Health Code.

3. ASN checks compliance with the nuclear safety and radiation protection general rules and special requirements applicable to BNIs, the construction and use of pressure vessels specifically designed

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for these installations, transports of radioactive materials and the activities mentioned in article L. 1333-1 of the Public Health Code and the persons mentioned in article L. 1333-10 of the same code.

ASN organises a permanent radiation protection watch throughout the national territory.

From among its own staff, it appoints nuclear safety inspectors, radiation protection inspectors and officers in charge of verifying compliance with pressure vessel requirements. It issues the required approvals to the organisations participating in the verifications and nuclear safety or radiation protection watch.

4. ASN participates in informing the public in its areas of competence.

5. ASN is associated with the management of radiological emergencies resulting from events liable to compromise human health and the environment by exposure to ionising radiation and occurring in France or liable to affect the French territory. It provides the competent authorities with its technical assistance in drawing up measures within the emergency response plans, which take account of the risks arising from nuclear activities.

When such an emergency occurs, it assists the Government on all issues within its field of competence. It sends the relevant authorities its recommendations concerning the medical and health or civil security steps to be taken. It informs the public of the safety of the installation in which the emergency situation originated, when subject to its regulation, or of any releases into the environment and their risks for human health and for the environment.

6. In the event of an incident or accident involving a nuclear activity, ASN may conduct a technical inquiry along similar lines to those applicable to “accident and investigation” boards called on to deal with transport accidents.

### 2 | 3 | 1

## Organisation

ASN is run by a Commission of five commissioners. It comprises the headquarters, regional delegates and regional departments, placed under the authority of the Director General, assisted by three deputies and an adviser.

### a) ASN Commission

#### Composition

ASN is run by a Commission consisting of five commissioners appointed by decree for their competence in the fields of nuclear safety and radiation protection. Three of the commissioners, including the Chairman, are appointed by the President of the Republic. The other two commissioners are appointed by the President of the National Assembly and by the President of the Senate respectively.

The ASN commissioners exercise their functions on a full-time basis.

#### Impartiality and discretion

Once they are appointed, the commissioners draw up a declaration mentioning the interests they hold or which they held during the previous five years in the areas within the competence of the authority. This declaration, deposited at the ASN head office, is kept at the disposal of the commissioners and updated at the initiative of the commissioner concerned as soon as any change takes place. During the course of his or her mandate, no member may hold any interest such as to affect his or her independence or impartiality.

For the duration of their functions, the commissioners will express no personal views in public on subjects within the competence of the authority. For the duration of their functions and after the

end of their mandate, they are bound by professional secrecy concerning the events, actions and information of which they gained knowledge as a result of their functions, in particular the deliberations and votes of the authority.

### Security of office and impediment procedure

The mandate of the members is for a non-renewable period of six years.

The member's duties may only be terminated in the event of impediment or resignation duly noted by a majority of the commissioners. The President of the Republic may also terminate the duties of a member of the Commission in the event of a serious failure to meet his or her obligations.

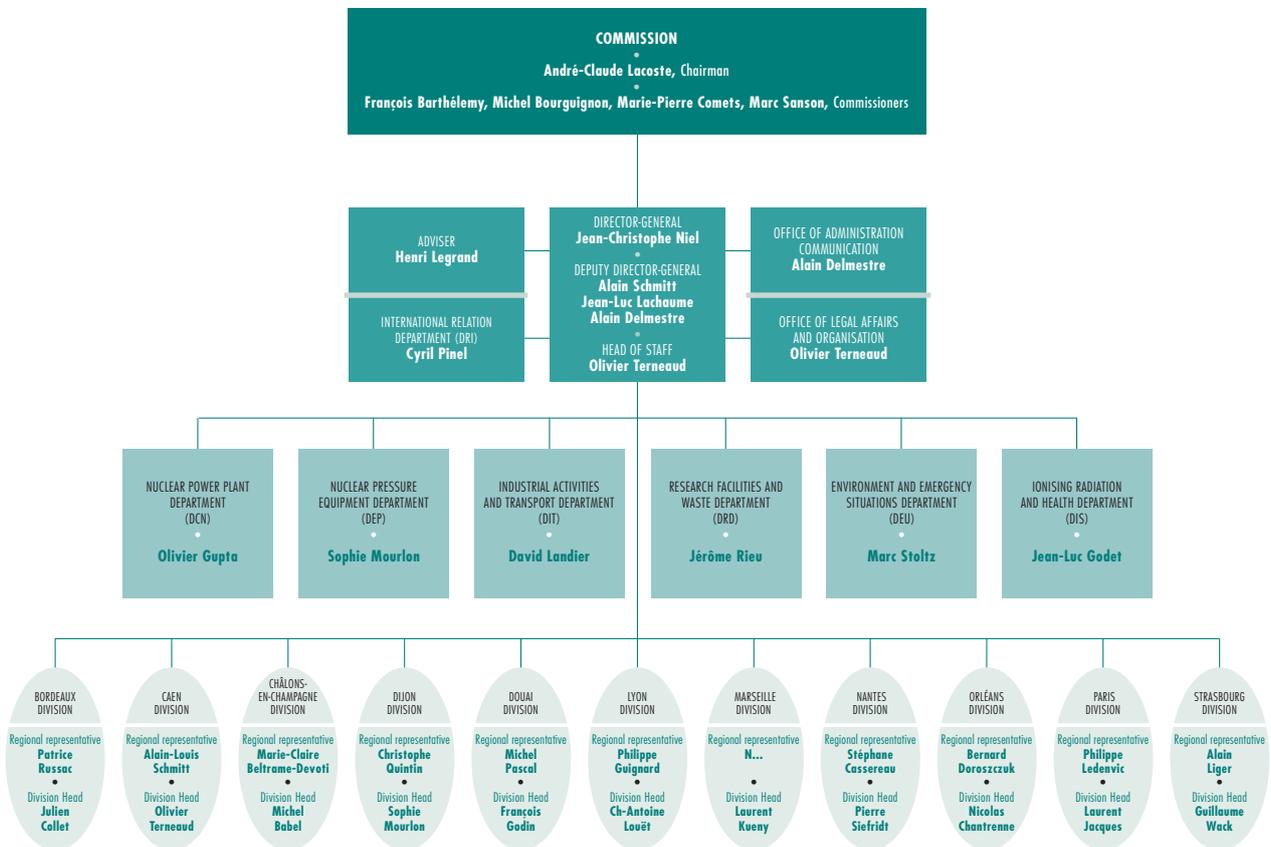
### Internal regulations and delegation

ASN drafts its internal regulations which set the rules concerning how it is organised and how it works. The internal regulations lay down the conditions in which the Commission of commissioners can delegate powers to its Chairman or, in his absence, to another commissioner, as well as the conditions in which the Chairman can delegate his power of signature to ASN personnel. Some decisions can be neither delegated nor sub-delegated.

ASN Commission meetings are only valid if at least three commissioners are present. They rule on a majority of those present. If the vote is tied, the Chairman will have a casting vote.

The ASN internal regulations are available from its website, [www.asn.fr](http://www.asn.fr).

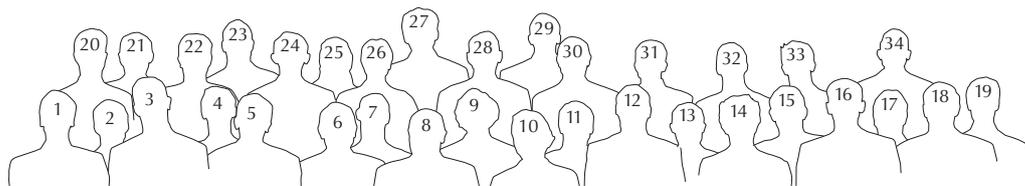
## ASN organisation chart as of January 1st, 2007



PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION



Photo of the CODIR



- |  |   |   |
|--|---|---|
| 1. Jean-Luc Lachaume (Deputy director general) | 13. Julien Collet (DSNR Bordeaux)             | 25. Sophie Murlon (DEP / DSNR Dijon)                            |
| 2. Laurent Jacques (DSNR Paris)                | 14. Alain Delmestre (Deputy director general) | 26. Marie-Claire Beltrame-Devoti (Châlons-en-Champagne deputy)  |
| 3. Jean-Christophe Niel (Director general)     | 15. François Godin (DSNR Douai)               | 27. Bernard Doroszczuk (Orléans deputy)                         |
| 4. Laurent Kueny (DSNR Marseille)              | 16. Alain Schmitt (Deputy director general)   | 28. Alain-Louis Schmitt (Caen deputy)                           |
| 5. François Barthélemy (Commissioner)          | 17. Jean-Luc Godet (DIS)                      | 29. Olivier Terneaud (Office of legal affairs and organisation) |
| 6. Michel Bourguignon (Commissioner)           | 18. Pierre Siefert (DSNR Nantes)              | 30. Michel Babel (Châlons-en-Champagne deputy)                  |
| 7. Marc Stoltz (DEU)                           | 19. Charles-Antoine Louët (DSNR Lyon)         | 31. Guillaume Wack (DSNR Strasbourg)                            |
| 8. André-Claude Lacoste (Chairman)             | 20. Philippe Guignard (Lyon deputy)           | 32. Jérôme Rieu (DRD)   |
| 9. Nicolas Chantrenne (DSNR Orléans)           | 21. Henri Legrand (Adviser)                   | 33. David Landier (DIT)   |
| 10. Marie-Pierre Comets (Commissioner)         | 22. Philippe Ledenvic (Paris deputy)          | 34. Olivier Gupta (DCN)   |
| 11. Christophe Quintin (DSNR Dijon)            | 23. Cyril Pinel (DRI)                         |   |
| 12. Marc Sanson (Commissioner)                 | 24. Stéphane Cassereau (Nantes deputy)        |   |

**b) ASN headquarters**

ASN headquarters consists of a general secretariat also responsible for communication, an office for legal and organisational affairs and seven departments, each of which deals with a particular topic:

- two functional departments: the department of international relations (DRI), and the department of the environment and emergency situations (DEU);
- five operational departments: the department of nuclear power plants (DCN), the department of industrial activities and transports (DIT), the department of research installations, decommissioning and waste (DRD), the department of nuclear pressure vessels (DEP) and the department of ionising radiation and health (DIS).

The role of the departments is the national management of the activities for which they are responsible. They take part in drafting the general regulations and coordinate the actions of the ASN divisions.

### c) The regional delegates and ASN divisions

The ASN regional divisions operate under the authority of the regional delegates, appointed by the ASN Chairman. The Chairman delegates powers of signature to them, giving them the authority for local decisions.

The divisions carry out most of the direct regulation of the BNIs, radioactive material transports and small-scale nuclear activities, through:

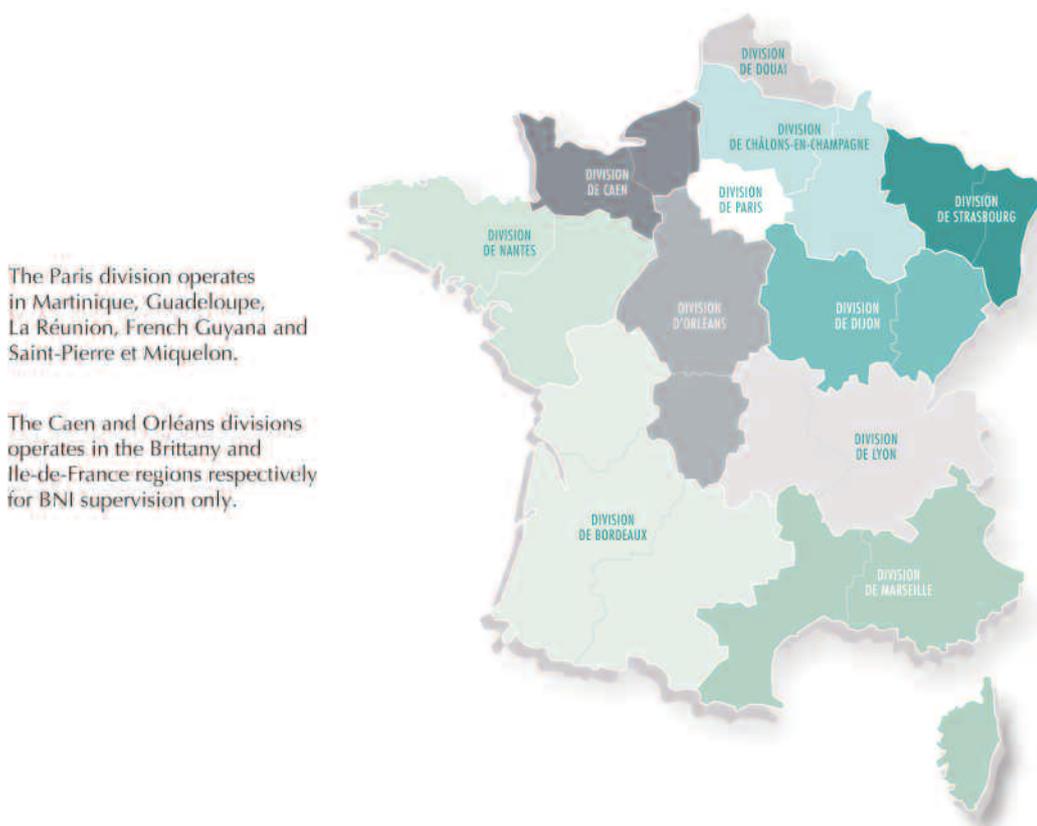
- field inspections and checks on nuclear safety, radiation protection, environmental protection around the nuclear installations, pressure vessels and the Labour Code as applicable to nuclear power plants;
- review of incidents and accidents which occur in their regions;
- regulation of nuclear power plant unit outages in their regions.

The divisions review most authorisation applications submitted to ASN by those responsible for the nuclear activities located in their regions (BNI licensees, industrial users of ionising radiation, researchers, physicians, etc.):

- creation, operation, major or minor modification, or final shutdown of BNIs;
- licensing of activities using ionising radiation.

Certain major decisions are reviewed by ASN headquarters with the support of the divisions.

In emergency situations, the divisions assist the *préfet* of the *département*, who is in charge of protecting the population, and supervises the operations carried out to safeguard the installation on the site, if it is accessible or does not entail a hazard. To ensure preparedness for these situations, they take part in drawing up the emergency plans drafted by the *préfets* and in periodic emergency exercises.



Map of France showing the Divisions

PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

Finally, the regional delegates are the representatives of the ASN Chairman in the regions. With the support of the divisions, they contribute to the ASN's public information duty. They also take part in meetings of the local information committees and maintain regular contacts with local media, elected officials, environmental protection associations and licensees.

2 | 3 | 2

ASN support activities

a) Human resources

Workforce

As at 31 December 2006, ASN total workforce stood at 412 people.

The first meeting of the ASN Commission took place on 13 November 2006. On this date, as stipulated in articles 63 and 64 of the TSN Act, ASN was legally created and all personnel at the General Directorate for Nuclear Safety and Radiation Protection and the nuclear safety and radiation protection divisions of the DRIREs were assigned to the new ASN.

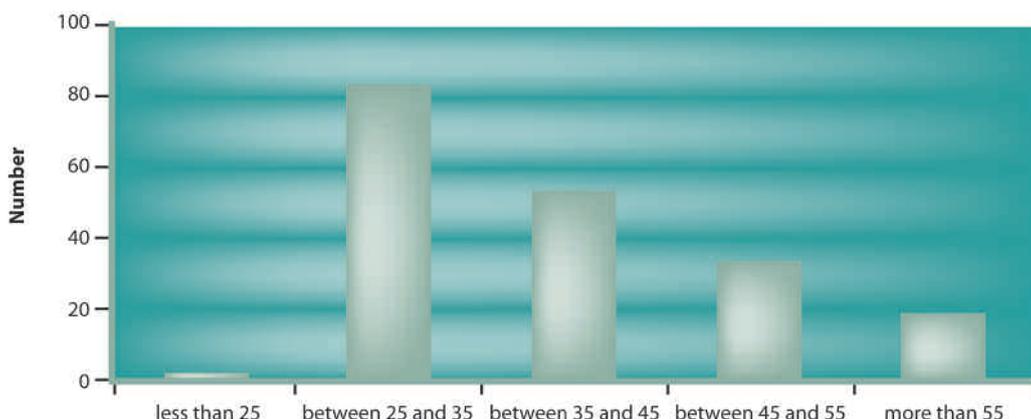
This workforce can be broken down as follows:

- 308 civil servants or contractual agents;
- 104 agents on assignment from public establishments (*Assistance publique - Hôpitaux de Paris*, CEA, IRSN, ANDRA).

Workforce as at 31 December 2006

Headquarters	Regional divisions	TOTAL
199	213	412

On 31 December 2006, the average age of the ASN staff was 40 years and 3 months, with 64% (264) of these agents being younger than 45. This well-balanced age pyramid enables ASN to carry out active regulation of nuclear safety and radiation protection, avoiding the pitfalls of habits and routine, while stimulating use of the tutor system with the younger members and the transmission of know-how.



Breakdown of the ASN inspector's ages

## b) Financial resources

Since 2000, all the personnel and operating resources involved in the performance of the duties entrusted to ASN have been covered by the State's general budget.

The ASN budget is contained in action 3 "Regulation of nuclear safety and radiation protection" of programme 127 "Regulation and prevention of technological risks and industrial developments" of the "Economic development and regulation" mission.

The ASN budget amounts in 2007 to 373 million, including 324 million for personnel costs. ASN also receives services from the Ministry of the Economy, Finance and Industry (MINEFI) and from the DRIRE network under the terms of special agreements. The ASN regional divisions are located in the premises of the DRIREs. For 2007, the ASN complete expenditure budget is about 54 million.

As stipulated in the TSN Act, ASN also relies on the IRSN for technical expertise, backed up whenever necessary by research. In its article 16, the Act states that ASN is consulted by the Government on the corresponding share of the State subsidy to the IRSN. This share of the IRSN subsidy, which amounts to 71 million in 2007, is included in programme 189 "Research in the field of risks and pollution" of the "Research and higher education" mission. Credits of 6 million are intended for funding research benefiting ASN and 65 million for expert services are assigned to the "Technical support for ASN" sub-action.

### Basic Nuclear Installation tax

Article 16 of the TSN Act also states that the ASN Chairman is responsible, on behalf of the State, for issuing payment authorisation for and settling the tax on BNIs created by article 43 of the 2000 Finance act (act 99-1172 of 30 December 1999). The revenue from this tax amounts to 358.7 million in 2006. It is paid into the general budget.

In order to encourage rapid decommissioning of nuclear installations, article 77 of the supplementary budget act for 2005, set this tax at a lower rate of 50% for installations shut down and undergoing decommissioning. The tax ceases to be due once installation delicensing has been pronounced.

Revenue from the tax amounted to 213 million in 2003, 346 million in 2004 and 347 million in 2005. The breakdown of contributions is shown in the following table:

### Additional tax on radioactive waste

Programme Act 2006-739 of 28 June 2006 concerning the sustainable management of radioactive materials and waste, in addition to the BNI tax, created three additional taxes for nuclear reactors and spent nuclear fuel reprocessing plants, known as the "research", "support" and "technological dissemination" taxes respectively. They are allocated to financing economic growth, on the one hand, and to financing ANDRA research into underground disposal and interim storage, on the other.

LICENSEE	BNI TAX for 2006 in thousands of euros
EDF	320,748
AREVA	18,862
CEA	8,082
ANDRA	6,498
OTHERS	4,490
<b>TOTAL</b>	<b>358,680</b>

## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

For 2007, the expected revenue from these new taxes amounts to 150 million.

### c) Skills management

Competence is one of the four key values of ASN. The tutor system, along with initial and continuous training, whether general, linked to nuclear techniques or communication, are key elements in professionalism.

Management of ASN personnel skills is in particular based on a formalised curriculum of technical training. For each member of staff, this curriculum is a means of implementing a detailed and regularly updated training reference system. For example, an inspector must follow a series of predetermined training modules before being qualified to carry out inspections. This involves technical training, but also training in legal aspects and communication. In 2006, 3,861 days of technical training were given to ASN staff during 68 different training courses. The financial cost of the courses, provided by organisations other than ASN, amounted to 523,000.

Since 1997, ASN has followed a program of qualification of its inspectors, based on recognition of their technical competence. An accreditation committee was set up in 1997 to advise the Director General on the entire qualification system. It in particular reviews the training curriculum and the qualification reference systems applicable to the various ASN departments, and carries out hearings of inspectors as part of the confirmation process.

Chaired by Mr. Yves Lecointe, the Accreditation Committee is made up half of senior inspectors belonging to ASN and half of persons with competence in the field of nuclear safety regulation, assessment and teaching, and regulation of classified installations. Its scope of competence will be extended to radiation protection.

The Accreditation Committee met three times in 2006 and proposed that ten BNI inspectors become senior inspectors.

On 31 December 2006, 37 ASN nuclear safety inspectors were senior inspectors, or about 25% of all the nuclear safety inspectors. 2006 also saw 62 radiation protection inspectors nominated.

### d) Internal communication and information systems

The ASN Intranet, Oasis, is the main source of ASN internal information, carrying all the documents and information needed by the staff on a day to day basis, plus news and the daily press review. The action taken in recent years for internal communication also continued in 2006:

- presentation of each Contrôle magazine topic to the staff in the ASN departments and exchanges with the executive committee, prior to presentation of the magazine to the media;
- organisation of introductory sessions for new ASN recruits in January, May and October;
- regular visits by the management committee to each of the entities making up ASN (general secretariat, departments, divisions).

Oasis is also the interface for the ASN information system: about ten professional sector applications accessible to all ASN staff organise, harmonise and capitalise on information concerning the main processes within ASN.

### e) Quality management system

To guarantee and improve the quality and effectiveness of its actions, ASN defined and implemented a quality management system inspired by the ISO and IAEA international standards and based on:

- action plans setting ASN targets and annual priorities, adjusted during the course of the year by exchanges between entities (discussions, periodic meetings, internal memos, etc.);

- organisation notes and procedures, gradually structured and compiled to form an organisation manual, defining the ASN internal rules for the correct performance of each of its duties and roles;
- internal audits and inspections by the General Mining Council and context, activity and performance indicators, for monitoring and improving the quality and effectiveness of the actions taken by ASN;
- listening to the needs of all parties involved (the public, elected representatives, associations, media, trade unions, industry) within the context of procedures stipulated by the regulations (public enquiry) or less formal frameworks (opinion polls, hearings, internal consultations, etc.).

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### The ASN technical support organisations

ASN relies on the expertise of technical support organisations when preparing its decisions. The Institute for Radiation Protection and Nuclear Safety (IRSN, [www.irsln.fr](http://www.irsln.fr)) is the main one. For a number of years now, ASN has also been following a policy of technical support diversification, both nationally and internationally.

#### a) Institute For Radiation Protection And Nuclear Safety

IRSN, created by Act 2001-398 instituting a French Environmental Health Safety Agency on 9 May 2001 and decree 2002-254 concerning the Institute for Radiation Protection and Nuclear Safety of 22 February 2002, was set up as an independent public establishment as part of a national reorganisation of the regulation of nuclear safety and radiation protection, in order to consolidate public expertise and research resources in these fields. IRSN reports to the Ministers for the Environment, Health, Research, Industry and Defence.

The Institute conducts and implements research programmes designed to buttress the national public expertise concerning the latest international scientific advances in these fields, and to contribute to developing scientific knowledge of nuclear and radiological risks. It is tasked with provision of technical support for the public authorities with competence for safety, radiation protection and security, in both the civil and defence (secret BNIs, weapons systems and nuclear-powered ships) sectors. Finally, the decree that created it gives it certain duties outside the scope of research, in particular in monitoring of the environment and of populations exposed to ionising radiation. These missions in particular include radiation protection training, management of national databases (national nuclear materials inventory, national radioactive sources file, SISERI file containing worker exposure to ionising radiation, etc.) as well as helping to inform the public of the risks linked to ionising radiation.

#### IRSN budget

The State's general budget subsidy granted to the IRSN is consolidated in action No. 3, "Evaluation and prevention of nuclear risks" of programme No. 189 "Research in the field of risks and pollution" of the "Research and higher education" interministerial mission. To this is added 10 million taken from BNI tax revenue.

The IRSN's state subsidy amounted in 2007 to € 247 million. The share of this budget corresponding to action taken on behalf of ASN amounts to € 71 million. According to article 16 of the 13 June 2006 Act on transparency and security in the nuclear field, ASN is consulted by the Government on the share of the State subsidy to IRSN corresponding to the technical support provided to ASN by the Institute.

In application of the framework agreement signed in 2004, which defines the procedures for dialogue between IRSN and ASN, as well as the principles governing the technical support the Institute provides to ASN, an annual protocol identifying the actions to be performed by IRSN on behalf of ASN was signed in 2006.

## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

### b) The ASN's other technical support organisations

In 2006, ASN signed three agreements for external expertise: one with APAVE for maintaining skills as installations age, the two others with English and Belgian experts on interim storage of MOX and MELOX waste, for comparison with IRSN's own opinion.

To diversify its sources of expertise and take advantage of other specific skills, ASN also has its own credit allocation, amounting to 888,000 in 2007. In the light of recent incidents and accidents observed in industrial or medical nuclear activities, ASN in particular intends in 2007 to develop a study programme into human and organisational factors.

## 2 | 3 | 4

### Advisory Committees of experts

When preparing its decisions, ASN relies on opinions and recommendations from Advisory Committees of experts and the standing nuclear section of the Central Committee for Pressure Vessels.

Four Advisory Committees of experts (GPEs) comprising experts and representatives of the French administration were created to assist the Director General for Nuclear Safety and Radiation Protection by ministerial decision of 27 March 1973, amended in particular by a decision of 1 December 1998. Creation of ASN as an independent administrative authority led to a new status for the GPEs, which will be clarified by a decision during the course of 2007. They analyse the safety-related technical problems raised by the construction, commissioning, operation and shutdown of nuclear facilities and their auxiliaries and the transport of radioactive materials.

The GPEs are consulted by the ASN Director General concerning the safety and radiation protection of installations and activities within their particular field of competence. They in particular review the preliminary, provisional and final safety cases for each of the BNIs. They are in possession of reports presenting the results of the analyses conducted by IRSN and issue an opinion plus recommendations.

Each GPE may call on any person recognised for his or her particular competence. It may hold a hearing of licensee representatives. Participation by foreign experts can help diversify the approach to problems and take greater advantage of experience acquired internationally.

Finally, together with IRSN, ASN is examining how it could effectively and efficiently distribute the opinions issued by the Advisory Committees of experts.

### a) The Advisory Committee for reactors

In 2006, the Advisory Committee for reactors held 14 meetings.

Chaired by Mr. Pierre Govaerts, the Advisory Committee for nuclear reactors comprises representatives of the French administration, experts nominated on proposals from the IRSN, EDF and Framatome, and experts chosen for their particular competence.

### Meetings of the “Advisory Committee for Nuclear Reactors” in 2006

Topic	Date
EPR – Continued safety review of the EPR reactor project	26 January
Review of the draft guidelines for seismic calculations concerning civil engineering works (concerns all BNIs)	2 February
Radioactive materials containment awareness day	8 February
Preparatory meeting for the quadripartite meeting (review of summaries) and information concerning revision of the regulatory texts	16 February
Periodic safety review of the MASURCA experimental reactor (BNI no. 39) and review of the orientations adopted by the licensee for the renovation work	9 March
Review of PWR operating personnel skills management	14 March
Review of equipment ability to withstand accident conditions	23 March
Review of management of PWR ageing	11 May
Preparatory meeting for the quadripartite meeting (review of complete texts)	22 June
EPR – Assessment of radiological consequences of accidents	29 June
EPR – Review of preliminary safety case	6 July
Review of “ALCADE” project	28 September
Information meeting concerning “serious accidents” R&D	12 October
Quadripartite meeting in Washington	18 October

### b) Advisory Committee for laboratories and plants

In 2006, the Advisory Committee for laboratories and plants held 6 meetings.

#### Meetings of the “Advisory Committee for laboratories and plants” in 2006

Topic	Date
Review of the draft guidelines for seismic calculations concerning civil engineering works (concerns all BNIs)	2 February
Radioactive materials containment awareness days	8 February
Increased production capacity of the MELOX plant	5 July
Visit to BNI 63 (FBFC Romans) ahead of the meeting of the Advisory Committee for plants on 29 November 2006	22 November
Romans-FBFC (BNI 63) – Periodic safety review of BNI 63	29 November
Review of the clean-out and decommissioning strategies for CEA civil installations	6 December

Chaired by Mr. Pierre Chevalier, the Advisory Committee for laboratories and plants comprises representatives of the French administration, experts appointed on proposals from IRSN, EDF, CEA, AREVA and ANDRA, and experts chosen for their particular competence.

## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

### c) The Advisory Committee for waste

In 2006, the Advisory Committee for waste held one meeting.

#### Advisory Committee for waste meeting in 2006

Topic	Date
Review of the revised safety case for the Aube repository	20 June

Chaired by Mr. Pierre Bérest, the Advisory Committee for waste comprises representatives of the French administration, experts nominated on proposals from the IRSN, CEA and ANDRA, experts representing the producers of radioactive waste and experts chosen for their particular competence in the nuclear, geological and mining fields.

### d) The Advisory Committee for transport

The Advisory Committee for transport did not meet in 2006.

Chaired by Mr. Jacques Aguilar, the Advisory Committee for transport comprises representatives of the French administration and the French committee for certification of contractors for the training and monitoring of personnel working with ionising radiation, experts appointed on proposals from IRSN, CEA, EDF and AREVA, as well as experts chosen for their particular competence.

### e) The Standing Nuclear Section of the CCAP

The Central Committee for Pressure Vessels (CCAP), created by article 26 of decree 99-1046 of 13 December 1999 concerning pressure vessels, is a consultative organisation reporting to the Minister for Industry.

It comprises members of the various administrations concerned, persons chosen for their particular competence and representatives of the manufacturers and users of pressure vessels and of the technical and professional organisations concerned. It is chaired by Mr. Rémi Guillet.

It may be called on by the Director for Regional Action, Quality and Industrial Safety (DARQSI) and the ASN Director General for all questions concerning application of laws and regulations to pressure vessels. Accident reports are also forwarded to it.

#### Meetings of the CCAP Standing Nuclear Section in 2006

Topics	Dates
Modification of the order of 26 February 1974 concerning deformation measurements during hydrostatic testing. Design choices for the vessel and vessel closure head for the EPR reactor project.	5 January
Waiver to article 19 of the order of 10 November 1999 concerning qualification of non-destructive test methods.	3 March (consultation by letter)
Tube extraction and fitting of a welded plug in steam generator N° 2 in the Cruas 4 reactor. Creation of specialised working groups to review the ASN draft guides.	26 September

For particular regulation of the more important pressure vessels in nuclear installations, it has a Standing Nuclear Section (SPN), the role of which is to issue recommendations on application of pressure vessel regulations to the main nuclear pressure vessels. This Standing Nuclear Section works as an Advisory Committee of experts in dealing with nuclear pressure vessel issues.

In 2006, it held two meetings and sent out a letter to consult its members.

The CCAP also met on 11 April in a plenary session to review a summary of the work by its two standing sections in 2005 and the accidents that occurred over this period, and to receive a briefing about the main regulatory texts adopted since 13 January 2005, the date of its previous plenary session.

## f) The Advisory Committee for radiation protection

The closure of the French High Council for Public Health, scheduled for early 2007 and the consequent shutdown of the radiation protection section and its committee for the use of ionising radiation sources, will lead ASN to create two new Advisory Committees of experts focusing on radiation protection issues. The role of these new Advisory Committees of experts will be to issue opinions and recommendations:

- on the state of radiation protection in the various places where sources of ionising radiation are used, both in BNIs and in small-scale nuclear installations, as well as transports;
- on protection of persons against Naturally Occurring Radioactive Materials (NORM);
- on policy concerning radiological emergencies;
- on enforcement of the justification principle for new uses of sources of ionising radiation and, as necessary, for existing activities when the technical context so requires;
- on new materials emitting ionising radiation, before they are released to the market.

The Advisory Committees for radiation protection could also be called on for changes to regulations, in particular when preparing new international, European Community and national guidelines. More generally, they can issue recommendations on desirable changes to the organisation and rules governing radiation protection in France.

They will review all questions concerning radiation protection of the population, workers and patients.

## 3 OUTLOOK

The regulation of nuclear safety and radiation protection concerns all State structures:

- Parliament, in particular the OPECST, for definition of the main long-term options;
- the Government, in particular the Ministers responsible for nuclear safety and radiation protection, who are given general regulatory powers and deal with individual questions concerning the creation of a BNI;
- ASN, which contributes to establishing the technical regulations and regulating activities;
- the consultative bodies, which provide an outside view of the important decisions concerning nuclear safety and radiation protection;
- the *préfets*, who are in charge of protecting the population.

The 13 June 2006 Act on transparency and security in the nuclear field changed the status of ASN. This change is a major one in that it extensively modifies the foundations of ASN legitimacy and its relations with the stakeholders. This does not however constitute a change in direction, but follows on from the work done in recent years by ASN to organise coherent and integrated regulation of the various areas of nuclear safety and radiation protection.

## PRINCIPLES AND RESPONSIBILITIES FOR THE REGULATION OF NUCLEAR SAFETY AND RADIATION PROTECTION

The range of installations and activities regulated by ASN is without doubt one of the largest and most diverse handled by any nuclear safety authority. It in particular covers a standardised population of nuclear power plants producing most of the electricity consumed in France, all the fuel cycle installations, research installations and plants that are virtually unique anywhere in the world, along with all installations and activities using ionising radiation in the medical, industrial and research sector.

The ASN's actions are part of a process of continuous progress. ASN bears responsibility for major issues facing the population and the environment. At a national level, it is responsible for protecting and informing the citizens. At an international level, it has to act as one of the world's leading safety authorities, sharing its experience with its peers and ensuring that the principles of nuclear safety and radiation protection are adopted worldwide.

In 2007, ASN will continue the constant improvement of its organisation and the way it works, within the context of its new status and in particular backed by the conclusions of the IRRS international audit mission and the directives of its new strategic plan. This improvement will be driven by its ambition to guarantee efficient, impartial, legitimate and credible regulation, recognised by the citizens and regarded internationally as a benchmark for good practice.