

Nuclear Safety and Regulation

ISBN 92-64-01060-2

Joint CSNI/CNRA Strategic Plan and Mandates

2005-2009

© OECD 2005
NEA No. 6034

NUCLEAR ENERGY AGENCY
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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

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

* * *

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

NUCLEAR ENERGY AGENCY

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

© OECD 2005

No reproduction, copy, transmission or translation of this publication may be made without written permission. Applications should be sent to OECD Publishing: rights@oecd.org or by fax (+33-1) 45 24 13 91. Permission to photocopy a portion of this work should be addressed to the Centre Français d'exploitation du droit de Copie, 20 rue des Grands Augustins, 75006 Paris, France (contact@cfcopies.com).

COMMITTEE ON THE SAFETY OF NUCLEAR INSTALLATIONS

The Committee on the Safety of Nuclear Installations (CSNI) of the OECD Nuclear Energy Agency (NEA) is an international committee made up of senior scientists and engineers with broad responsibilities for safety technology and research programmes, and representatives from regulatory authorities. It was set up in 1973 to develop and co-ordinate the activities of the NEA concerning the technical aspects of the design, construction and operation of nuclear installations insofar as they affect the safety of such installations.

The Committee's purpose is to foster international co-operation in nuclear safety amongst OECD member countries. The CSNI's main tasks are to exchange technical information and to promote collaboration between research, development, engineering and regulatory organisations; to review operating experience and the state of knowledge on selected topics of nuclear safety technology and safety assessment; to initiate and conduct programmes to overcome discrepancies, develop improvements and research consensus on technical issues; and to promote the co-ordination of work that serves to maintain competence in nuclear safety matters, including the establishment of joint undertakings.

The Committee focuses primarily on existing power reactors and other nuclear installations; it also considers the safety implications of scientific and technical developments of new reactor designs.

In implementing its programme, the CSNI establishes co-operative mechanisms with the NEA Committee on Nuclear Regulatory Activities (CNRA) responsible for the programme of the Agency concerning the regulation, licensing and inspection of nuclear installations with regard to safety. It also co-operates with the NEA Committee on Radiation Protection and Public Health (CRPPH), the NEA Radioactive Waste Management Committee (RWMC) and the NEA Nuclear Science Committee (NSC) on matters of common interest.

COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES

The Committee on Nuclear Regulatory Activities (CNRA) of the OECD Nuclear Energy Agency (NEA) is an international committee made up primarily of senior nuclear regulators. It was set up in 1989 as a forum for the exchange of information and experience among regulatory organisations.

The Committee is responsible for the programme of the NEA concerning the regulation, licensing and inspection of nuclear installations with regard to safety. The Committee's purpose is to promote co-operation among member countries to use the feedback from experience to develop measures to improve safety, to enhance efficiency and effectiveness in the regulatory process and to maintain adequate infrastructure and competence in the nuclear safety field. The CNRA's main tasks are to review developments which could affect regulatory requirements with the objective of providing members with an understanding of the motivation for new regulatory requirements under consideration and an opportunity to offer suggestions that might improve them or avoid disparities among member countries. In particular, the Committee reviews current management strategies and safety management practices and operating experiences at nuclear facilities with a view to disseminating lessons learnt.

The Committee focuses primarily on existing power reactors and other nuclear installations; it may also consider the regulatory implications of new designs of power reactors and other types of nuclear installations.

In implementing its programme, the CNRA establishes co-operative mechanisms with the Committee on the Safety of Nuclear Installations (CSNI) responsible for the programme of the Agency concerning the technical aspects of the design, construction and operation of nuclear installations. The Committee also co-operates with the NEA Committee on Radiation Protection and Public Health (CRPPH) and the NEA Radioactive Waste Management Committee (RWMC) on matters of common interest.

TABLE OF CONTENTS

1. Introduction	9
2. Mission	10
3. Main challenges	10
4. Focus areas	12
5. Roles and responsibilities	13
6. Ways of working together	14
7. Implementation of work	14
Appendix: The CNRA and CSNI mandates	17
Mandate of the Committee on Nuclear Regulatory Activities	18
Mandate of the Committee on the Safety of Nuclear Installations	19

1. Introduction

In 2004 the NEA issued its Strategic Plan covering the period 2005-2009. The plan identifies six sectorial arenas of work for the NEA, including as the first arena “Nuclear Safety and Regulation”. In this arena, the NEA operates through two standing technical committees, the Committee on Nuclear Regulatory Activities (CNRA) and the Committee on the Safety of Nuclear Installations (CSNI). These committees also maintain close interest in the work of the other sectorial arenas.

In 2000 the CNRA and the CSNI each issued strategic plans describing their mission, strategic areas of work, objectives and structure of their committees. These strategic plans covered the time period 2000-2004. In late 2003 and during 2004, the task of revising the strategic plans to cover the time period 2005-2009 was begun. Recognising that there are many common areas of interest, the close interrelationship between the work of the CNRA and the CSNI and the need for close co-ordination and co-operation between the two committees, it was decided to develop a joint CSNI/CNRA strategic plan. The purpose of the joint strategic plan is to:

- ensure appropriate alignment of the committees’ missions and objectives with the NEA Strategic Plan;
- identify the main challenges for nuclear safety in the next five years and outline the focus areas to properly respond to those challenges;
- ensure appropriate consistency of the objectives, roles and responsibilities of the two committees so as to optimise the use of committee resources in achieving strategic goals;
- promote good communication and co-operation between the two committees; and
- establish guidelines and working methods that facilitate effective and efficient interaction between the committees, and with other external bodies.

In developing the joint strategic plan, it was also necessary to ensure that the objectives and guidance contained in the revised NEA Strategic Plan were implemented. Accordingly, the objectives for nuclear safety and regulation from the NEA Strategic Plan have been incorporated into the joint CSNI/CNRA Strategic Plan as common objectives. Other guidance in the NEA Strategic Plan pertaining to cross-cutting issues, interactions with other committees and

organisations, prioritising activities and monitoring and evaluating implementation of the strategic plan has also been considered and incorporated.

2. Mission

The fundamental interest of both the CNRA and the CSNI is nuclear safety. This includes safety related to nuclear power plant (NPP) and fuel cycle facility design, construction and operation throughout their life cycle (i.e. initial start-up, full power, shutdown, refuelling and decommissioning). Safety of the public and facility operating staff are both of concern. The CNRA and the CSNI assist member country safety regulators by conducting non-promotional activities that strive to ensure high standards of safety in the use of nuclear energy.

Within the nuclear safety arena, the focus of CNRA activities is related to the effective and efficient regulation of NPPs and fuel cycle facilities. The focus of CSNI activities is to provide the technical basis to support nuclear safety developments and regulatory activities by identification of safety issues and by addressing them with research programmes if deemed necessary.

The mandates of both the CNRA and the CSNI are presented in the Appendix. Given their common interest in nuclear safety, the following mission statement applies to both the CNRA and the CSNI:

The mission of the CNRA and the CSNI is to assist member countries in maintaining and further developing the knowledge, competence and infrastructure needed to support the safe operation of NPPs and fuel cycle facilities throughout their life cycle, as well as their efficient and effective regulation based upon sound technical information, shared experience and up-to-date methods.

3. Main challenges

In developing the joint CSNI/CNRA Strategic Plan it was important to recognise the current status of the nuclear power industry and, in particular, the main challenges that regulators and safety researchers will face in the next five years. These will likely determine the focus of CNRA and CSNI activities and include:

- Shrinking nuclear infrastructure:
 - fewer suppliers of nuclear facilities and nuclear-specific equipment and services;

- fewer experts with high-level experience and knowledge in nuclear safety;
- less education in the nuclear field;
- less financing for nuclear safety research.
- Increased public expectations regarding safety in the use of nuclear energy:
 - desire for more effective and efficient regulations;
 - need for transparency and public communication;
 - need to increase efforts on security and emergency preparedness.
- Industry initiatives to improve economics and safety performance in the production of nuclear power:
 - reduction of safety margins (power uprates, increase of fuel burn-up);
 - new management strategies (staff reduction, use of contractors);
 - risk-informed approaches;
 - new approaches to safety management (including safety culture).
- Necessity to ensure safety over the plant life cycle:
 - ageing of equipment, technologies, documentation;
 - learning from experience and knowledge transfer;
 - low-power and shutdown risks;
 - decommissioning.
- New reactors and new technology:
 - licensing of new facilities and major plant modifications;
 - identification of safety issues specific to new designs and new technologies;
 - new regulatory standards;
 - new analytical methods/tools.

4. Focus areas

To accomplish the mission, the strategic areas of work listed in the NEA Strategic Plan for nuclear safety and regulation provide high-level guidance for the committees' activities. The CNRA and the CSNI develop and implement specific activities under each strategic area of work that respond to the main challenges that regulators and safety researchers will be facing over the next five years.

Listed below are the strategic areas of work from the NEA Strategic Plan, and the related challenges described in section 3, which should be the focus of CNRA and CSNI activities.

- Ensure an effective exchange of safety-relevant information among member countries and develop common understandings and approaches on current safety issues (CNRA and CSNI response). Associated challenges:
 - industry initiatives to improve economics and safety performance in the production of nuclear power; and
 - the necessity to ensure safety over the plant life cycle.
- Identify generic issues and trends that may affect the safety of nuclear installations and anticipate problems of potential safety significance (CNRA and CSNI response). Associated challenges:
 - shrinking nuclear infrastructure;
 - industry initiatives to improve economics and safety performance in the production of nuclear power;
 - the necessity to ensure safety over the plant life cycle;
 - new reactors and new technologies.
- Assist member countries in the resolution of safety issues and strengthen confidence in the solutions and their implementation (CSNI response). Associated challenges:
 - industry initiatives to improve economics and safety performance in the production of nuclear power;
 - the necessity to ensure safety over the plant life cycle.
- Address safety issues associated with new technologies and reactor designs (CNRA and CSNI response). Associated challenge:
 - new reactors and new technology.

- Help maintain an adequate level of capability and competence necessary to ensure the safety of existing and future nuclear facilities (CNRA and CSNI response). Associated challenge:
 - shrinking nuclear infrastructure.
- Help obtain better understanding of national regulatory requirements, encourage harmonisation of regulatory standards where appropriate, and enhance the efficiency and effectiveness of the regulatory process (CNRA response). Associated challenges:
 - increased public expectations regarding safety in the use of nuclear energy;
 - the necessity to ensure safety over the plant life cycle;
 - new reactors and new technologies.

5. Roles and responsibilities

The Committee on Nuclear Regulatory Activities (CNRA):

- reviews developments which could affect regulatory requirements;
- reviews management strategies and safety management practices at nuclear facilities;
- reviews operating experience with the objective to promote safety improvements based on lessons learnt from experience and related research activities;
- promotes efficiency and effectiveness in the regulatory process;
- promotes measures to maintain adequate infrastructure and competence in the nuclear safety field; and
- promotes transparency of nuclear regulatory activities and open public communication.

The Committee on the Safety of Nuclear Installations (CSNI):

- keeps all member countries involved in and abreast of developments in safety technology;
- reviews operating experience with the objective to identify safety issues that need to be addressed by new research, including risk analysis methods and data development;

- reviews the state of knowledge on selected topics of nuclear safety technology and safety assessment;
- promotes training and research projects that serve to maintain competence in nuclear safety matters;
- promotes research as needed to reach consensus on nuclear safety issues of common interest; and
- considers the safety implications of scientific and technical developments.

6. Ways of working together

The CNRA and the CSNI work closely together to ensure co-ordination and co-operation in areas of mutual interest. This is accomplished by:

- mutual briefings to each committee on their respective activities;
- formal and informal requests for assistance between committees;
- conducting periodic joint Bureau meetings to review priorities and programmes of work;
- conducting joint workshops, meetings, etc., on topics of mutual interest;
- issuing joint statements on selected issues;
- reviewing each others Operating Plan.

Co-ordination with other NEA committees, in particular with the Nuclear Science Committee (NSC); the Committee on Radiation Protection and Public Health (CRPPH) and the Radioactive Waste Management Committee (RWMC); as well as outside organisations including industry and non-member countries (e.g. IAEA, WANO, Russia and China) has to be ensured. They will be invited to delegate observers to the CNRA and CSNI committee meetings and selected working group meetings, and to participate in individual activities of the committees.

7. Implementation of work

The CNRA and the CSNI develop their programmes through working groups and expert groups which are given specific mandates. The structure of

these subsidiary bodies is periodically reviewed in accordance with the NEA Strategic Plan.

The CNRA and the CSNI develop communication and publication procedures to ensure that their work and products are useful, visible and provided to appropriate organisations in a timely fashion. Activities addressing challenges of communication will be specifically described.

The CNRA and the CSNI assess their level of achievement in conducting activities in accordance with this strategic plan. Every second year the results of this assessment shall be reported to the NEA Steering Committee in accordance with the NEA Strategic Plan.

The CNRA and the CSNI each prepare an operating plan, which describes in more detail their committee's organisation, planned activities, priorities and operating procedures to be used in fulfilling their mandates in accordance with this strategic plan. Specific attention will be given to ensure that cross-cutting issues are dealt with satisfactorily.

Appendix

The CNRA and CSNI mandates

MANDATE OF THE COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES

The Committee on Nuclear Regulatory Activities (CNRA) shall be responsible for the programme of the Agency concerning the regulation, licensing and inspection of nuclear installations with regard to safety. The Committee shall constitute a forum for the exchange of information and experience among regulatory organisations. To the extent appropriate, the Committee shall review developments which could affect regulatory requirements with the objective of providing members with an understanding of the motivation for new regulatory requirements under consideration and an opportunity to offer suggestions that might improve them or avoid unwarranted disparities among member countries. In particular, it shall review current management strategies and safety management practices and operating experiences at nuclear facilities with a view to disseminating lessons learnt. The Committee shall promote co-operation among member countries to use the feedback from experience to develop measures to improve safety, to enhance efficiency and effectiveness in the regulatory process and to maintain adequate infrastructure and competence in the nuclear safety field.

The Committee shall promote transparency of nuclear safety work and open public communication. The Committee shall maintain an oversight of all NEA work that may impinge on the development of effective and efficient regulation.

The Committee shall focus primarily on existing power reactors and other nuclear installations; it may also consider the regulatory implications of new designs of power reactors and other types of nuclear installations. Furthermore, it shall examine any other matters referred to it by the Steering Committee. The Committee shall collaborate with, and assist, as appropriate, other international organisations for co-operation among regulators and consider, upon request, issues raised by these organisations. The Committee shall organise its own activities. It may sponsor specialist meetings and working groups to further its objectives.

In implementing its programme the Committee shall establish co-operative mechanisms with the Committee on the Safety of Nuclear Installations to work with that Committee on matters of common interest, avoiding unnecessary duplications. The Committee shall also co-operate with the Committee on Radiation Protection and Public Health and the Radioactive Waste Management Committee on matters of common interest.

MANDATE OF THE COMMITTEE ON THE SAFETY OF NUCLEAR INSTALLATIONS

The Committee on the Safety of Nuclear Installations (CSNI) shall be responsible for the activities of the Agency that support maintaining and advancing the scientific and technological knowledge base of the safety of nuclear installations. The Committee shall constitute a forum for the exchange of technical information and for collaboration between organisations, which can contribute, from their respective backgrounds in research, development and engineering, to its activities. It shall have regard to the exchange of information between member countries and safety R&D programmes of various sizes in order to keep all member countries involved in and abreast of developments in safety technology.

The Committee shall review operating experience and the state of knowledge on selected topics of nuclear safety technology and safety assessment. It shall initiate and conduct programmes identified by these reviews and assessments in order to overcome discrepancies, develop improvements and research consensus on technical issues of common interest. It shall promote the co-ordination of work in different member countries that serve to maintain competence in nuclear safety matters, including the establishment of joint undertakings, and shall assist in the feedback of the results to participating organisations.

The Committee shall focus primarily on existing power reactors and other nuclear installations; it shall also consider the safety implications of scientific and technical developments of new reactor designs. Furthermore, it shall examine any other matters referred to it by the Steering Committee.

The Committee shall organise its own activities. It may sponsor specialist meetings and technical working groups to further its objectives. In implementing its programme, the Committee shall establish co-operative mechanisms with the Committee on Nuclear Regulatory Activities to work with that Committee on matters of common interest, avoiding unnecessary duplications. The Committee shall also co-operate with the Committee on Radiation Protection and Public Health, the Radioactive Waste Management Committee and the Nuclear Science Committee on matters of common interest.

OECD PUBLICATIONS, 2 rue André-Pascal, 75775 PARIS CEDEX 16
Printed in France.