

ENISS CONTRIBUTION TO THE HARMONISATION OF THE REGULATORY FRAMEWORK

ABSTRACT

Nuclear energy is today an important source of low carbon base-load electricity in the European Union. Thus, preserving this source will constitute an asset to help reaching the European goals of reduction in greenhouse gases emission. To achieve that, nuclear industry needs to preserve its competitiveness but also ensure a very high level of safety. The Fukushima accident led to reinforce the European safety goals. Harmonization of safety standards constitutes an essential contribution to the fulfilment of these goals both for new units to be built and for long term operation of existing ones. Since many years, several initiatives were undertaken in this field, to develop harmonized requirements and practices.

The international Atomic Energy Agency (IAEA) is a very important actor, since it provides rules, recommendations and good practices as a worldwide organization. At worldwide level it is worth to mention also the Multinational Design Evaluation Program (MDEP) that groups the countries where new plants are under a licensing process.

In Europe the Western European Nuclear Regulators Association (WENRA) plays an important role in harmonizing safety requirements by issuing several well-known documents such as the Safety Reference levels and the safety Objectives for new builds.

Taking into account these works, the European Union has also established in 2009 a Directive establishing a Community Framework for Nuclear Safety that has been revised in 2014.

From the industry side, the European Utility Requirement (EUR) organization provides an extended set of requirements to help building standardized plants in Europe. Other important actors are the World Association of Nuclear Operators (WANO) the World Nuclear Association (WNA) and the European Committee for Standardization (CEN), together with AFCEN.

The European nuclear operators support the harmonization initiatives. To pool their resources, they decided in 2005 to launch, the European Nuclear Installations Safety Standards (ENISS) Initiative which represents the nuclear utilities and operating companies from 16 European countries with nuclear plants. ENISS provides a technical forum to its members to develop common views on the evolutions of the nuclear safety standards, to coordinate their position on matters related to nuclear safety and its regulation, and to interact appropriately with the key stakeholders to ensure the licensee position is effectively represented.

Since its creation, ENISS provided constructive contributions to the texts proposed by WENRA, ENSREG, the EU & the IAEA to strengthen the harmonisation and is recognized as a major stakeholder providing valuable inputs through the expertise of its members. It also made proposals for harmonization, contributing to the stress test specification, and to the debates in the frame of the European Nuclear Energy Forum (ENEF).

1. Introduction

Nuclear Energy constitutes a significant part of the electricity production in the European Union with the advantage of being a low carbon technology. To reach the European challenging goals of reduction in greenhouse gases emission, it is necessary to maintain the nuclear production at a high level. To achieve that, nuclear industry needs to preserve its competitiveness but also ensure a very high level of safety. This condition was reinforced after the Fukushima accident.

Harmonization of safety standards constitutes an essential contribution to the fulfilment of these goals. Since a long time, a series of initiatives was undertaken in this field, coming

from both the industry side and the regulatory and public authorities' side, and a dialogue is necessary between the relevant stakeholders.

ENISS (*European Nuclear Installations Safety Standards Initiative*) currently represents the nuclear utilities and operating companies from 16 European countries with nuclear power programme and enables a constructive debate with WENRA, ENSREG, the EU and the IAEA to strengthen the harmonisation of safety requirements in Europe.

This paper recalls the current and past initiatives in the field of harmonization, and addresses in particular the contribution of ENISS to this process. It describes the interfaces between the nuclear industry and European and international organisations such as WENRA, the IAEA and the European Commission.

2. Importance of Nuclear Energy in the EU

Today, nuclear energy generates electricity in 14 of the 28 Member States, producing almost 30% of the EU's electricity. During operation, nuclear power plants do not release any significant carbon dioxide (CO₂) or other greenhouse gases (GHG) and their life-cycle emissions are also low. They constitute a reliable source of continuous supply of electricity because they operate at very high capacity levels. The cost of the electricity produced has shown itself to be stable and competitive and not heavily influenced by external factors such as the fuel cost. Uranium is a naturally occurring and abundant global resource available from a range of politically stable countries. Furthermore, the European industry is a world leader in reactor and fuel cycle activities. Consequently, nuclear energy helps reduce the quantity of carbon emitted by the electricity sector, contributes significantly to security of supply and stable, long-term and highly qualified employment, and stimulates economic competitiveness, thanks both to its stable costs and to the substantial economic benefits that result from investment in this high technology industry.

The last Nuclear Illustrative Programme (PIN) published by the European Commission in April 2016 concludes that nuclear energy is expected to remain an important component of the EU's energy mix in the 2050 horizon "as a low carbon technology and a significant contributor to security of supply and diversification". It also recognises the significant investments required for the lifetime extension of reactors as well as for the construction of new nuclear reactors across Europe. Such investments are all the more important since, according to the International Energy Agency (IEA) and the OECD Nuclear Energy Agency (NEA)'s Technology Roadmap 2015, the global nuclear capacity will need to more than double by 2050 to meet the objectives decided at the 21st conference on climate (COP 21), that are to limit the global warming to well below 2 degrees Celsius. The industry is expecting the EU to take up a leadership position and propose concrete solutions to facilitate investments in nuclear alongside other low-carbon technologies.

The contribution of nuclear energy to the overall electricity supply will however substantially decrease, unless new plants are built on time and NPPs in service are operated longer (so called "long-term operation" or LTO). Insufficient base load capacity may jeopardise the stability of the EU's electricity network unless countermeasures on a large scale are introduced. If this loss of base load capacity is not replaced by nuclear, a significant part of it will be generated by CO₂-emitting gas or coal-fired plants. Renewable energy sources will increase their share but other energy sources will be needed, since possibilities to store electricity are limited and demand has to be met at all times. Therefore long term investment in nuclear energy is essential to maintain or expand nuclear share in total electricity generation and capacity so as to help the EU to achieve its low carbon and competitive goals. Another essential condition to nuclear energy is to ensure a high safety level, making extremely improbable an accident with consequences similar to Fukushima.

In order to contribute to these targets in a sustainable manner, the European nuclear power plant operators support the harmonisation of safety requirements for the operation of existing reactors and the standardisation efforts for design and construction of new built.

3. Nuclear Safety and Harmonisation standards

3.1 Benefits of harmonisation

For the licensees, harmonisation will reduce the overall engineering and construction time and cost of new plants. Economies of scale will be achieved by building plants in series. Moreover, fleets of standardised nuclear power plants offer the potential for increased operational excellence, availability and capacity factors and improved maintenance efficiency because of operational experience feedback. Suppliers of high-quality nuclear components will also realise benefits (supply of standard components should be at lower costs and higher quality than supply of custom-made components). Harmonisation will also offer the possibility for an owner to choose a standard design and to order that design without major changes.

A greater convergence and harmonisation of national standards would also allow for increased international cooperation among regulators. The process of harmonisation can lead to a mutual understanding in safety issues and helps to find and define best practice and common solution which can have a positive impact on public confidence in regulatory decisions.

This international cooperation will also benefit the harmonisation of technical safety requirements for existing reactors thereby achieving a high level of safety of LTO and a stable operational regulatory framework in the EU.

3.2 Current initiatives

To achieve a harmonised level of nuclear safety various organisations and initiatives have developed sets of requirements and instruments for supervision over the last 25 years or so.

3.2.1 Regulatory

WENRA

The Western European Nuclear Regulators Association (WENRA) aims harmonising nuclear regulatory systems in the EU countries and associated members outside the EU.

WENRA was established in 1999 as an informal association to develop a common approach to nuclear safety and to provide an independent capability to examine nuclear safety in the (at that time) applicant countries. Its objectives were extended to become “a network of chief nuclear safety officers in Europe, exchanging information and discussing significant safety issues”. It comprises top regulators from different European (mainly) countries where NPPs are in operation.

In fulfilment of its goals WENRA established two working groups to consider harmonisation of safety approaches in Europe, one on reactor safety (RHWG) and another on decommissioning and radioactive waste/spent fuel storage (WDWG).

The first report “Harmonisation of Reactor Safety in WENRA Countries” was issued on the WENRA website in January 2006, with two additional reports “Waste and Spent Fuel Storage Safety Reference Levels Report for Nuclear Facilities” and “Decommissioning Safety Reference Level Report for Nuclear Facilities”.¹

In 2010, WENRA adopted a statement on the safety objectives (SO) for new nuclear power plants. WENRA issued in November 2012 a report on *Safety of new NPP designs* illustrating the safety objectives for future nuclear power plants and the lessons to be learned from the Fukushima accident. Stakeholders were invited to provide comments on the report. The final booklet report was officially published on 30 April 2013.

WENRA released on 19 November 2011 a draft report on SRLs for waste disposal, covering all waste types – from low-level waste (LLW) to high-level waste (HLW) – as well as repository types from surface to deep geological. A WENRA/stakeholder workshop to discuss the fundamental issues took place on 4 July 2014. The report was published on 22 December 2014.

In March 2012, WENRA mandated its Reactor Harmonisation WG (RHWG) to conduct an in-depth review of the existing Safety Reference Levels in light of the lessons learned from the Fukushima accident and to develop guidance documents on assessment of natural hazards and the evaluation of margins for cliff edge effects. A new chapter dedicated to natural hazards was created, and the number of SRLs increased to 342.

After a public consultation, WENRA's approved revised Safety Reference Levels were presented on 24 September 2014 at a side event of the IAEA General Conference to celebrate WENRA 15 years of activities in the field of improving nuclear safety. The updated SRLs were then published.

WENRA RHWG's work was also devoted to the preparation of guidance documents aiming at providing insights and explanations as to the purpose and intent of some of the revised SRLs. The guidance document on *Design Extension Conditions* was published on 3 November 2014. The main guidance document on *Natural hazards* was published on 27 April 2015. WENRA has also been developing three hazard specific guidance documents (seism, flooding and extreme weather conditions). The three documents should be ready for adoption by WENRA by November 2016.

WENRA has also decided to update its SRLs revised in 2014. The update consists of a review of all the issues which have not been modified as a result of Fukushima accident. Two new issues will be developed and will relate to internal hazards other than fire and human-induced external hazards.

ENSREG

The EU has also setup a specific EU Advisory Body, ENSREG that stands for European Nuclear Safety Regulators Group. While the WENRA members are regulators from countries with nuclear installation, the members of the ENSREG are representatives from the 28 EU countries. ENSREG is an authoritative expert body which helps the European Commission to 'establish the conditions for continuous improvement and to reach a common understanding in the areas of nuclear safety and radioactive waste management'.

IAEA

The Convention of Nuclear Safety (CNS) and the IAEA Safety Standards, divided in Fundamentals, Requirements and Guides are highly recognised in the nuclear community as the leading sets of requirements, due to the holistic approach, the hierarchy applied and the detailing. The IAEA Safety Standards are developed with the help of expert committees and often used as the base of Member States national regulations. IAEA also develops a safety glossary of the terms used in its standard. This glossary is also used by WENRA.

Recently the IAEA has revised its safety requirements to take into account lessons learned from the Fukushima accident. The existing guides will be revised accordingly.

MDEP

The Multinational Design Evaluation Programme (MDEP) is a multinational initiative to develop innovative approaches to leverage the resources and knowledge of the national regulatory authorities who will be tasked with the review of new reactor power plant designs. Today, MDEP comprises the safety authorities of 15 countries (United States, Canada, China, Finland, France, India, Japan, South Korea, Russian Federation, South Africa, United Kingdom, Sweden, United Arab Emirates, Turkey and Hungary). The IAEA also takes part in the programme's activities.

The OECD Nuclear Energy Agency (NEA) is ensuring the Technical Secretariat of this programme.

European Community legislation

None of these above mentioned approaches has reached the status of a legal binding European Safety Requirements until now. To achieve a harmonised high level of nuclear safety in Europe these approaches have to be considered. The EU community initiative to legalise common nuclear standards for nuclear installations can only be developed in context with these sets of requirements and instruments of supervisions.

The Euratom Treaty does not explicitly address the particular aspects of nuclear installation safety. While the European legislation provides for a binding framework as far as authorisation, inspection and enforcement are concerned, the responsibility for implementing and enforcing such a European legislation lies with the Member States. The Council Directive 2009/71/EURATOM establishing a Community Framework for Nuclear Safety was adopted in June 2009 and revised in July 2014 to take into account the results of the stress tests which were performed in European countries following the Fukushima accident.

This Directive reinforces a national legislative, regulatory and organisational framework for nuclear safety in Europe. It strengthens in particular the role and independence of Europe's national regulators, and endorses agreed safety objectives for nuclear power plants, in accordance with the recommendations of WENRA.

At least every six years, peer reviews of national assessments of the safety of relevant nuclear installations will be performed. Each one will be based on a specific topic. The first one is based on ageing management. Complementary peer reviews of national safety frameworks will also be performed at least every ten years. All these reviews will highlight the responsibility of operators and regulators to ensure safety at all nuclear facilities.

Regarding radiation protection, the European Commission decided in 2006 to revise its basic safety standards (BSS) on radiation protection to reflect the new recommendation of the International Commission on radiological protection (ICRP) and to strengthen the Community legislation. The EC's Proposal for a revised Council Directive *laying down BSS for protection against the dangers arising from exposure to ionising radiation* was formally adopted in May 2012.

On 15 July 2011, the European Council adopted its Directive establishing an EU framework for the safe management of radioactive waste and spent fuel from nuclear power plants, research, medicine and industry.

The EU's Radioactive Waste and Spent Fuel Management Directive requires that all EU Member States should have a national policy for the management of the materials

concerned. To achieve this, all EU countries should draw up national programmes for the disposal of nuclear waste, including plans for the construction of nuclear waste disposal facilities.

3.2.2. Industry

WANO

WANO is a platform created after the Chernobyl accident for the exchange of operating experience, professional and technical development amongst the NPPs as well as technical support and exchange of information. After the Fukushima accident, WANO has decided to extend its role and approved a series of recommendations. These include expanding the scope of WANO's activities, developing a world-wide integrated event response strategy, improving WANO's credibility and visibility and improving the quality of all WANO products and services

EUR

One of the first initiative in Europe to standardise nuclear reactors and harmonise safety requirements was launched in 1991 when the main European Nuclear Utilities, that was considering to build new reactors in the XXI century, got together to establish common design targets directed to potential reactor vendors interested by the nuclear European market. They constituted the EUR (European Utility Requirements) organisation. These design targets covered a large scope: economic performance, availability, siting, impact on the environment, operability and last but not least safety. The first version of EUR was published in 1996.

Then interested vendors submitted application for their products to be assessed by the EUR organisation through a comprehensive process taking around 2 years to analyse the degree of compliance with the requirements. Eight models have been so assessed such as the EPR and SWR from AREVA, the AP1000 from Westinghouse, the ABWR from GE, the VVER AES 92 from AEP Moscow, the most recently being the APWR from Mitsubishi. Two designs are under evaluation; they are the EU-APR and the VVER TOI.

The EUR document has been used by some utilities to write technical specification associated with call for bid of nuclear projects. It is regularly updated to integrate new knowledge, the feedback from the assessments and the evolution of regulatory requirements. The last version (revision D) that comprises more than 4500 requirements was published in 2012. Revision E, which fully integrates the lessons learnt from the Fukushima accident, is intended to be published at the beginning of 2017².

WNA

The World Nuclear Association (WNA), international organisation that supports the global nuclear industry, established the WNA Working Group on "Cooperation in Reactor Design Evaluation and Licensing" (CORDEL) with the aim of stimulating a dialogue with nuclear regulators on the benefits of globally standardised designs for new reactors. Achieving reactor design standardisation will require the combined efforts of industry, regulators, policy makers, governments and international institutions.

CEN/AFCEN

Design and Construction codes provide a set of essential engineering tools for the design, construction, and integration of nuclear high safety class components and systems. These Codes are the common reference between all actors involved in the design and construction of power plants. Their harmonisation is important to reduce the costs and facilitate licensing, as recognised by MDEP and WNA. The European Committee for Standardization (CEN), together with AFCEN initiated a process (CEN WS64) to federate stakeholders in a common code elaboration process derived from the current AFCEN process. A first experiment was set up in 2011 in the perspective of the implementation of Generation IV systems. In April 2013, the European Commission in the framework of ENEF (European Nuclear Energy Forum) decided to support a CEN/WS 64 phase 2 with the target to enlarge the scope to the codes for mechanical equipment and civil engineering of GEN II to GEN IV nuclear installations.

4. Activities of Nuclear Licensees – ENISS: The European Nuclear Installation Safety Standard Initiative

4.1 Activities with WENRA, the IAEA and the European Commission

Safety is and will always remain the nuclear industry's overriding priority. Nuclear installations in the EU have an exemplary safety record which plant operators are committed to maintaining and improving. Nuclear power plants are operated under the strict control of national regulatory authorities. These government agencies enforce state regulations that are based on requirements, guidelines and conventions established by international organisations, such as the IAEA. National safety requirements in EU Member States are implementing or will implement the Safety Reference Levels proposed by WENRA for existing nuclear plants, as well as those for waste and decommissioning.

The European nuclear industry recognises that with the deregulation and internationalisation of the electricity market, diversity of national regulations could seriously distort competition. Therefore harmonising regulatory practices is one of the best ways of ensuring that the industry can evolve within a stable legal framework. In order to pool resources, European licensees launched mid 2005 ENISS (European Nuclear Installation Safety Standard Initiative) hosted by FORATOM. The principal mission of ENISS is to provide a technical forum for European nuclear license holders to develop common views as far as possible on the evolutions of the nuclear safety principles and standards, to promote high standards, to coordinate their position on matters related to nuclear safety and its regulation, to interact appropriately with the regulators and other key stakeholders to ensure the licensee position is effectively represented. The ultimate aim of the initiative is to bring together specialists from the industry and regulators in an effort to establish high level and practicable safety targets, and safety rules.

ENISS currently represents European nuclear power plants and nuclear facilities licensees and operators from 16 European countries with nuclear power programme, including Switzerland and Ukraine.

The ENISS Objectives can be summarised as follows:

- To create an information platform for the different national and international activities with respect to nuclear safety matters.
- To interact with the WENRA organisation, as the major stakeholder, and to comment significant documents issued by WENRA.
- To establish a common technical view with respect to the WENRA Reference Levels, Safety objectives and Safety Guidance and among the different countries.

- To interact with the European Commission, IAEA, ENSREG and other organisations as appropriate on key topics of nuclear safety and regulation, including security, radiation protection, waste management and decommissioning
- To identify any future nuclear safety issues and define the strategy how to address them for the benefit of nuclear safety.
- To support an exchange of information on the interaction of licensees with their national regulators, in order to achieve a harmonized implementation of new regulations.

ENISS first task was to establish a common industry position with regards to the safety reference levels that WENRA proposed in 2006 for existing nuclear plants, as well as for waste and decommissioning. ENISS sees WENRA's action as an important step towards finalising, in close collaboration with the nuclear industry, a blueprint for delivering and implementing improved safety standards. It is also consistent with the industry's improved safety culture. ENISS together with EUR and nuclear steam supply vendors has been actively involved in the review of WENRA high level qualitative safety objectives for new nuclear power plants. Common industry comments were put forward in response to the consultation launched by WENRA in November 2012 on the draft report *Safety of New NPP Designs*.

Following the release by WENRA in 2011 of a draft report on SRLs for waste disposal, ENISS set up a special expert group made up of waste disposal experts including licensees and representatives of national waste management agencies to address WENRA's report. The ENISS Expert Group organised several meetings to discuss the report, review the comments and observations made by the members and establish a common position.

ENISS also carried out an in-depth analysis of the draft revised SRLs issued by WENRA in December 2013 and developed Position Papers that presented the views of its members, highlighted the problems and challenges encountered and assessed the potential impact that the SRLs might have on nuclear industry. WENRA received a total of 142 comments, one third of which were provided by ENISS.

ENISS has been consulted and was given the opportunity to provide comments on WENRA guidance documents on *Design Extension Conditions* and *Natural Hazards* as well as the three hazard specific guidance documents.

Following on from the Fukushima accident, EU Energy Ministers, regulators, experts and industry representatives have agreed on the introduction of risk and safety assessments (so-called "stress tests") at nuclear power plants in Europe. The Energy Council decided on 21 March 2011 that European Nuclear Safety Regulators Group (ENSREG) would define these tests in the light of lessons learned from the accident in Japan. ENISS has been playing a key role in the definition of the assessments. ENISS has set up a special working group on Safety Terms Of Reference (STORE) to propose the terms of the risk and safety assessments of plants in operation and under construction and re-evaluate their ability to withstand extreme natural hazards.

Another task of ENISS is to strengthen the industry inputs in the revision work of the IAEA Safety Standards. In February 2007, the IAEA and ENISS launched their cooperation agreement. ENISS as an NGO is actively involved in the IAEA safety standards revision process in providing comments on draft safety standards and feedback on the experience gained from applying the IAEA safety standards, in particular as regards those where the industry has particular competence or interest. Those areas are NPP design and operation, management systems, safety assessment, waste management, decommissioning and radiation protection. Some relevant IAEA Nuclear Security Series are likewise reviewed. ENISS also supplied comments on a number of IAEA TECDOCs. ENISS also contributes to

the work of a number of the IAEA's technical and consultancy groups and participates, as an observer, in the Agency's Safety Standards Committees (SSCs) and the Nuclear Security Guidance Committee (NSGC).

In September 2011, the IAEA adopted an action plan to strengthen global nuclear safety in the wake of the Fukushima accident. The plan sets out a series of measures aimed at enhancing standards. The plan asks the IAEA CSS and the Secretariat to review and revise as necessary the IAEA safety standards in a prioritised sequence in the light of lessons learned from the accident.

In March 2012, the IAEA initiated the revision process, through addenda, of several safety requirements (DS462). The revision process was guided by the principle that the modifications should only be based on the lessons learned from the Fukushima accident. ENISS participated in consultancy and comment process on the revised texts and in the working group set up by the IAEA NUSSC to address comments received.

At the European level, ENISS is also monitoring the work of the European Commission on regulatory issues in the area of nuclear safety, waste management, decommissioning and radiation protection.

The European Union's revised Nuclear Safety Directive requires the Member States to undertake topical peer reviews (TPR) every 6 years with the first starting in 2017. WENRA has been invited by ENSREG to draw up the technical specifications (TS) for the first European topical peer review on "ageing management". ENISS has been consulted on WENRA draft specification for the first TPR review.

4.2 Activities within the European Nuclear Energy Forum (ENEF)

Along with the establishment of ENSREG in 2007, the European Council endorsed the Commission's proposal to organise a broad discussion among all relevant stakeholders on the opportunities and risks of nuclear energy.

The European Nuclear Energy Forum (ENEF) was set up to provide a new platform for such a debate with a wide range of stakeholders in the field of nuclear energy. A number of working groups and sub-working groups were created within the Forum in charge of analysing three main issues: the opportunities of nuclear, the risks of nuclear and transparency.

ENISS has been a keen supporter and participant of the ENEF process and in particular has been actively involved in the issue of nuclear safety. ENISS has contributed a great deal to the preparatory work and output of ENEF. By way of examples, mention may be made to the following ENEF documents:

- Proposal for an EC Recommendation on conditions for long-term operation. This proposal considers possible criteria and safety objectives for long-term operation of NPPs, including the risk-informed approach. It was updated in 2014 to take into account the lessons learned from Fukushima and the evolution of the economic and social situation.
- Position paper and suggestions for specific amendments to the 2009 Nuclear Safety Directive and the 2014 revised Safety Directive
- The report entitled *Road Map Towards European Reactor Design Acceptance (ERDA)*, aimed at allowing deployment of standardised reactors in Europe through harmonisation of licensing processes and avoiding different regulators to analyse in parallel the same product and requiring different design modifications. The report suggests European regulators to closely work together in reviewing a design proposed by vendors and eventually to conduct joined assessment. The report calls also to the European nuclear industry to harmonise industrial nuclear codes and standards.

- Proposed methodology to assess the cost of severe accidents that could be covered by a third party nuclear liability regime. The paper discusses issues related to the source term releases and economic consequences
- Proposal for a Multi Criteria Analysis (MCA) on the energy mix for the electric supply system in Europe. The MCA applied to the electricity sector consists of looking at the various elements of the electricity system (full energy chain) through economic, environmental and societal aspects.

5. Conclusion

To reach the European goals in greenhouse gases reduction, a significant share of nuclear power in electricity generation is necessary. Maintaining this share at its current value in the long term will need to build new plants. For that purpose, industry needs to preserve its competitiveness and standardization of the plants is a tool which may provide significant cost reductions.

Long term operation of an important part of the existing plants is also an economical way to preserve this low carbon capacity of electricity production in the European Union. In order to achieve this goal a high level of safety of these plants needs to be ensured throughout their period of extended or long term operation. Ageing management of components is essential, but harmonization of safety requirements has also an important contribution to make to achieve this goal and enables to increase the safety level. For all these reasons industry supports harmonization initiatives.

In this context, ENISS plays the key role as the main industry counterpart to WENRA. It enables the exchange of information about safety practices between its members and the establishment of a common technical point of view with respect to the WENRA RLs, Safety Objectives and Safety Guidance. ENISS also interacts with the European Commission, IAEA, ENSREG and other organisations as appropriate.

Since more than 10 years, ENISS provided constructive deliverables contributing to the harmonisation in Europe. Its achievements are the result of the strong commitment and dedication of all the members and its light and flexible structure has proved to be efficient.

ENISS will continue to interact with all stakeholders and contribute to the harmonisation of the safety rules in Europe. Significant part of the upcoming efforts are directed towards the implementation of Safety Directive, with the first EU topical peer review on ageing management, which will start in 2017, and the contribution to the definition of “reasonably practicable” concerning improvements at existing NPPs.

¹ Harmonization of Reactor Safety in WENRA Countries, Report, WENRA RHWG, January 2006; Decommissioning safety reference levels report, WENRA WGWD; Waste and spent fuel storage safety reference levels report, WENRA WGWD

² European Utility Requirements, EUR website <http://www.europeanutilityrequirements.org>