



**Eurosafe Forum “Innovation in Nuclear Safety and Security”;**  
Cologne, November 2010  
“The Challenge of Introducing Innovation in processes and regulation”  
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Dear Eurosafe Forum participants,

First of all it is a great honor for me to be invited to give a plenary presentation at this year’s Eurosafe Forum on Innovation in Nuclear Safety and Security.

This is the more reason to apologize for not being able to be here in person today. The reason for this is that very recently a new government came into office introducing major changes in the governmental organizations. There has been a reshuffling of tasks of the ministries resulting in dissolving two ministries, among which my former ministry of Housing Spatial Planning and the Environment. This would not have been a concern for this Forum, if it were not the case that a major change was introduced in the governmental offices charged with nuclear affairs.

Until now both the policy tasks concerning legislation, regulation and licensing as well as the supervisory tasks regarding enforcement, inspection, assessment and technical advice were embedded in one ministry, being the Ministry of Housing Spatial Planning and the Environment. Last Friday the Government took a decision to assign the nuclear policy tasks to the new formed Ministry of Economy, Agriculture and Innovation and the nuclear supervision tasks to the Inspectorate of Housing Spatial Planning and the Environment. This Inspection body will execute tasks for three ministries: Infrastructure and Environment (spatial planning and environment), Internal Affairs (housing) and Economy Agriculture and Innovation.

It is stated that this organization of the governmental nuclear tasks meets Article 8 of the Convention of Nuclear Safety. Because of the liberalization of the energy market, promotion of nuclear energy is not a governmental task but it is assigned to the market. Furthermore the supervisory tasks are assigned to an independent supervisory body.

You can imagine that this change means a challenge for management officials to make the necessary arrangement to let things run smoothly. Reason for me to not being able to attend this forum.

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I was invited by the program committee to address the subject of “The Challenge of Introducing Innovation in processes and regulation”. I have interpreted the title as looking at the subject of innovation in nuclear safety and security from a regulators’, or to be more precise from a supervisors’ point of view.

This leads to the question whether or not regulators or supervisor do need to innovate. Of course the principle of continuous improvement is not only valid for nuclear safety and security as such.

It is also necessary to evaluate and improve the procedures and practices.

The Deming improvement cycle is valid for nuclear regulatory and supervisory organization as well as any production organization. I don’t see this as innovation.

With innovation I mean that the nuclear regulator or supervisor has to find new ways to fulfill his job. I believe there are two items which include innovation challenges.

1. Continuous improvement as stated as a principle in the Nuclear Safety Directive.
2. Synergy in regulation and supervision on nuclear safety and nuclear security.



## **1. Continuous improvement as stated as a principle in the Nuclear Safety Directive.**

On September 23<sup>rd</sup> this year, during the Senior Regulators' Meeting, Mr. Ristory of the European Commission presented "The Nuclear Safety Directive - a milestone EU legal instrument".

The main objective of this directive is to establish a solid and flexible legal framework for maintaining and promoting the continuous improvement of nuclear safety and its regulation, based on shared principles already agreed at international level.

The directive introduces into Community law the principles of the IAEA Safety Fundamentals and the obligations of the Convention on Nuclear Safety, which were both drawn up and endorsed by the Member States. While it is for each EU country to choose whether or not to rely on nuclear, the role of the EU is to develop in the interest of all its Member States the most advanced legal framework, meeting the highest standards of safety, security and non-proliferation.

The setting up of binding legal rules at EU level is meant to benefit Member States, as it will give them a reference for their national nuclear safety systems. In this context, it is important to stress that the directive creates a flexible approach for the continuous improvement of nuclear safety requirements, by leaving a needed appreciation margin to the Member States in the practical implementation.

The underlying principles upon which the directive is built are the national responsibility for nuclear safety and the continuous improvement of safety. Developing nuclear safety to the highest possible standard is a responsibility not only for Europe, but for the world; not only for us but for the next generations. The healthy competition and stimulation that may stem from such an ambition is not to be underestimated.

With this milestone directive regulators and supervisors of EU-countries will have to account publicly for how they are dealing with this principle of continuous improvement of nuclear safety. In doing so they have to require from licensees that they gather information worldwide to show that the best techniques, methods and practices will be applied. Furthermore regulators and supervisors have to inquire worldwide whether the licensees do meet this requirement.

The directive places great demands not only on licensees but even more on regulators or supervisors. Close cooperation with fellow organizations abroad, the IAEA and international bodies as well as Technical Support Organizations.

This will be even more important for regulators and supervisors who face the challenge of new nuclear installations. Once the political decision regarding nuclear energy or other nuclear applications is clearly announced, license applicants ask for proper licenses as soon as possible. Several the applicants are preparing their application documents very thoroughly by seeking international cooperation with operators abroad, who have information, knowledge and experience which is suitable for license application purposes.

In order to deal with this in the right pace but also in a proper and careful manner, which serves the principle of continuous improvement of nuclear safety, also regulators and supervisor have to seek actively cooperation with fellow organizations and TSO's, who also have the information, knowledge and experience needed. This cooperation necessarily has to go beyond the usual forms of cooperation. Cooperation based on partnerships will have to be sought with capacity transfers based on formal (financial) agreements.

In doing so regulators and supervisors seek "**innovation by internationalization**".



## **2. Synergy in regulation and supervision on nuclear safety and nuclear security.**

According to the information publicly available on the website this is the tenth Eurosafe Forum with nuclear security as one of the seminar items. This anniversary is a good reason for putting security at the same level as safety in this forums' title "Innovation in Nuclear Safety and Security".

Since then several activities on safety and security were executed. Two international conferences on "Effective Nuclear Regulatory Systems: Facing Safety and Security Challenges" were held. The first in February 2006 in Moscow. Main conclusion was that nuclear security deserves the same level of attention by regulators as nuclear safety. Since then several initiatives were developed. The second in December 2009 in Cape Town. Main conclusion with regard to both safety and security was: "Regulatory bodies should exercise their leadership to keep all stakeholders focused on meeting the safety and security objectives and to promote a strong safety and security culture, with particular emphasis on human factors."

In 2008 the World Institute on Nuclear Security (WINS) was founded. WINS wants to improve security of nuclear and high hazard radioactive materials so that they are secure from unauthorized access, theft, sabotage and diversion and cannot be utilized for terrorist or other nefarious purposes.

Last August the International Nuclear Safety Group issued their report "The Interface between Safety and Security at Nuclear Power Plants" (INSAG-24).

The main conclusion of INSAG is: "Safety and security serve a common objective - the protection of the public and the environment - and typically reflect a common philosophy of defense in depth. Indeed, many features of plant design or operation serve to enhance both safety and security. But at times actions undertaken to advance one purpose could adversely affect the other. This means that decisions at a nuclear power plant regarding safety or security require an integrated management approach that ensures the consultation of experts in each discipline on a continuous basis. The implementation of changes should be supported by effective procedures to ensure such consultation. Safety and security issues should be evaluated on mutually supporting and reinforcing terms."

The report also includes recommendations to all stakeholders including regulators and supervisors.

- Ensure that security regulations do not compromise safety and that safety regulations do not compromise security. This may be achieved by having a single regulatory agency responsible for both sets of requirements, or by careful consultation and coordination mechanisms.
- Develop ways to promote safety and security cultures, considering their similarities and differences.
- Exchange information and good practices with fellow organizations in other countries related to incidents or accidents, keeping in mind the need to protect certain types of information.
- Ensure adequate communication with the public on safety and security issues.

It is clear that nuclear safety and nuclear security must be approached in a more integrated manner than so far.

Therefore the work launched by both the Commission on Safety Standards (CSS) and the Advisory group on nuclear Security (AdSec) for developing safety and security synergies and interfaces and examining the feasibility of the establishment of a nuclear safety and security standards series is both necessary and timely. During his presentation "Views of the Commission on Safety Standards on effective and harmonized use of the IAEA safety standards" at the Senior Regulators' Meeting of September 23<sup>rd</sup> 2010 CSS chairman Mr. Lacoste announced this work as "a new step" indicating that nuclear safety and security needs "**innovation by integration**".



## Conclusion.

From the point of view of a nuclear regulator and supervisor facing the future needs innovation in two major fields of work at least.

- To cope with the principle of continuous improvement of safety as stated in the Nuclear Safety Directive and to meet the future challenges with regard to new build nuclear reactors “**innovation by internationalization**” is necessary.
- To improve the supervision on nuclear safety as well as nuclear security “**innovation by integration**” is needed.

Thank you for your attention.