Arrangements for education and training within the framework of the 2013/59/EURATOM Directive transposition in Greek legislation

K. Karfopoulos, S. Economides, E. Carinou, C. Hourdakis
Overview

• Introduction
  ✓ EEAE – Current Regulatory framework

• Methodology for the transposition

• RPE – RPO

• Challenges
  ✓ Stakeholders involvement
  ✓ Sustainability

• Summary
Overview

- Introduction
  - EEAE – Current Regulatory framework

- Methodology for the transposition

- RPE – RPO

- Challenges
  - Stakeholders involvement
  - Sustainability

- Summary
Regulatory authority

- competent authority for the control, regulation and supervision in the fields of nuclear energy, nuclear technology, radiological, nuclear safety and radiation protection.
- Public entity (Legal person of public law)
Our identity

Mission
The protection of the public, the workers and the environment from ionizing radiation and artificially produced non-ionizing radiation.

Vision
To be a modern regulatory authority, in the areas of radiation protection, radiological and nuclear safety, enjoying trustfulness and recognition nationally and internationally, and a model public service fulfilling its tasks responsibly.

Values
Integrity and Impartiality, Competence, Quality and Credibility, Transparency, Social Responsibility, Scientific Excellence, Openness
Timeline

26.2.1954
An organization named as “Greek Atomic Energy Commission” (EEAE) is established with main objective the promotion of the peaceful uses of nuclear energy and nuclear technology

8.2.1985
Establishment of EEAE as competent regulatory authority. Establishment of the NCSR Demokritos – Administrative and functional separation from EEAE

16.5.1997
Non ionizing radiation is included in EEAE responsibilities

6.3.2001
Issuing of Radiation Protection Regulations currently in force

12.10.2012
Recognition of EEAE as “Regional Centre for Education and Training in Radiation, Transport and Waste Safety” – long term agreement with IAEA ratified by Law

30.5.2012
International peer review (Integrated Regulatory Review Service, IRRS)

8.12.2014
New regulatory framework

20.6.1968
The Nuclear Research Center “Demokritos” starts to operate under EEAE

22.9.1987
Re-establishment of EEAE

6.3.2001

2012

2014

2015

Gives the mandate to the EEAE for the transposition of the new EC directive to the national legislation

Greek Atomic Energy Commission

www.eeaе.gr
Regulatory framework

EEAE establishment and organizational laws:
make provision for the Division of Research, Development and Education Among its responsibilities:
• Training and continuing training of occupationally exposed workers
• Training of scientists & experts on radiation protection and nuclear safety
• Recognition of curricula

The Greek Radiation Protection Regulations:
• All persons involved in radiological procedures must have knowledge on RP (theoretical and practical training)
• The competence of the personnel working in radiation facilities and activities must be checked before issuing (or renewing) the operation license of a facility
• Provisions for QE/RPE, RPO– recognition requirements
• EEAE issues certificates of competency on RP for occupationally exposed personnel (exams, CVs, personal interviews)

COUNCIL DIRECTIVE 2013/59/EURATOM
of 5 December 2013

laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 6 February 2018.

Gives particular emphasis on education and training aspects introducing:

✓ the **Radiation Protection Expert (RPE)** former “Qualified Expert”

✓ the **Radiation Protection Officer (RPO)**
**Council Directive - Definitions**

**Radiation Protection Expert (RPE):**
means an individual or, if provided for in the national legislation, a group of individuals having the knowledge, training and experience needed to give radiation protection advice in order to ensure the effective protection of individuals, and whose competence in this respect is recognized by the competent authority.

**Radiation Protection Officer (RPO):**
means an individual who is technically competent in radiation protection matters relevant for a given type of practice to supervise or perform the implementation of the radiation protection arrangements.

- recognition of RPOs, if such recognition is provided for in national legislation
- MS shall decide in which practices the designation of a RPO is necessary to supervise or to perform radiation protection tasks.
Overview

• Introduction
  ✓ EEAE – Current Regulatory framework

• Methodology for the transposition

• RPE – RPO

• Challenges
  ✓ Stakeholders involvement
  ✓ Sustainability

• Summary

Transpose the Directive articles to the national legislation

- mandate from the:
  - Presidential Decree
  - The EEAE establishment law

- Legislation Implementation
  Details on the implementation

National Radiation Protection Regulations

Greek Atomic Energy Commission
Methodology for the transposition

Basis for the transposition

• IAEA Basic Safety Standards
• The common approaches of the EU MS – HERCA WG
• The EEAE’s long (>15 yrs) operational experience of the existing Radiation Protection Regulations
• The recommendations of the 2012 IAEA IRRS Mission
  ✓ The recommendations of the 2015 EduTA Mission

Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of the role and functions of QE and RPO consistently for all the practices and facilities should be introduced</td>
</tr>
<tr>
<td>Clear criteria (including training) for recognition of QE and designation of RPO, particularly for the non-medical applications should be introduced</td>
</tr>
<tr>
<td>Requirements for a re-training programme for all workers should be introduced</td>
</tr>
</tbody>
</table>
Methodology for the transposition

Graded approach:

• High Risk Radiation practices

• Medium Risk Radiation practices

• Low Risk Radiation practices
Overview

• Introduction
  ✓ EEAE – Current Regulatory framework

• Methodology for the transposition

• RPE – RPO

• Challenges
  ✓ Stakeholders involvement
  ✓ Sustainability

• Summary
Radiation Protection Expert

- The role and responsibilities of the RPE
- The competency of an individual to act as RPE will be recognized by the EEAE

- Procedure of recognition

- Areas of recognition
- Criteria for the recognition

The RPE may be assigned the main task of ensuring the radiation protection of the workers and the members of the public.
Radiation Protection Expert

Procedure of recognition

• Recognition by the EEAE Board
• 3 members committee:
  ✓ 2 EEAE members
  ✓ 1 Academic or researcher

Areas of recognition

1. X-ray systems for medical applications
2. Open sources and radioactive waste management – medical Applications
3. Linacs and shielded sources for radiation therapy – brachytherapy
4. Industrial Radiography
5. Shielded sources for industrial, research and educational applications
6. Open sources for industrial, research and educational applications and radioactive waste management
7. Accelerators and X-ray systems for industrial, research and educational applications
8. Waste Management
9. NORM
10. Radon

Criteria for the recognition

• Education
  (university degree, postgraduate studies)
• Working Experience
• OJT as RPE
• Competence in providing advice and on performing safety assessments – Interview
• Ability to communicate and collaborate with other professionals

• Recognition valid for 7 years
  ✓ Re -Recognition based on the experience
• Recognition in more than one areas
  ✓ Recognition for each area

Greek Atomic Energy Commission

www.eea.gr
Radiation Protection Officer

RPOs → Graded Approach

• Medical Applications
  ✓ High Risk
  ✓ Medium Risk
  ✓ Low Risk

• Veterinary Applications
  ✓ High Risk
  ✓ Low Risk

• Industrial, Research and Educational Applications

Criteria for approval

• Education
• Training (10 – 60 hrs)
• Working experience (3 months – 1 year)
• OJT (3 months – 6 months)
• Re-training period (5 – 10 years)
Overview

• Introduction
  ✓ EEAE – Current Regulatory framework

• Methodology for the transposition

• RPE – RPO

• Challenges
  ✓ Stakeholders involvement
  ✓ Sustainability

• Summary
Stakeholder involvement

The approach towards stakeholders:
• reflects the top management decision to establish and maintain relations with stakeholders in the field of radiation protection, as an integral element of public policies formulation;
• establishes channels of communication with groups of professionals, aiming at the identification of potential conflict situations;
• emphasizes EEAE commitment to transparency
• ensures the acceptance of the suggested regulatory framework and facilitates the compliance with the new requirements

The involvement of the stakeholders will be ensured:
• A dialogue process
• Information events
• Thematic meetings
• Consultation on draft documents
National Programme

EC Directive
Overview

• Introduction
  ✓ EEAE – Current Regulatory framework

• Methodology for the transposition

• RPE – RPO

• Challenges
  ✓ Stakeholders involvement
  ✓ Sustainability

• Summary
The arrangements made by EEAE for the transposition of the E&T requirements of the 2013/59/EURATOM Directive in the Greek legislation were presented.

The introduction of the functions of RPEs and RPOs will bring significant changes in terms of E&T requirements and procedures at national level which should be faced appropriately.

The legislative documents under preparation will set specific E&T requirements as well as procedures and criteria for their recognition and designation respectively in accordance with the graded approach.

For the efficient and effective implementation of the new requirements, the re-evaluation of the national E&T needs and the establishment of a national strategy in accordance to these needs are considered necessary.
Thank you very much for your attention!

facebook.com/eeaegr

twitter.com/eeaegr