

ARRANGEMENTS FOR EDUCATION AND TRAINING WITHIN THE FRAMEWORK OF THE 2013/59/EURATOM DIRECTIVE TRANSPOSITION IN GREEK LEGISLATION.

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ABSTRACT

Greek Atomic Energy Commission (EEAE), as the competent authority in aspects related to radiation protection, nuclear safety and security, has the main responsibility for the transposition of the Council Directive 2013/59/EURATOM in the national legislation. Based on the Directive's provisions concerning education and training, its main goal is to further strengthen their role within the national radiation protection system, ensuring that all the personnel dealing with ionizing radiation or having functions related to radiation safety are adequately qualified and competent.

This work emphasizes on education and training as well as refreshment training requirements for the Radiation Protection Experts (RPEs) and Radiation Protection Officers (RPOs), in order to fulfill their role and duties. Moreover, it presents challenges faced during the transposition of the Directive, such as the establishment of an appropriate recognition procedure with the consensus of the relevant stakeholders. To deal with these challenges, the policy, the strategy and the goals of EEAE, the related recommendations of the IRRS and EduTA missions in Greece, the operational experience from the implementation of the current regulatory framework as well as the common approaches among the EU member states were taken into account.

As concluded, a strategic plan at national level, based on the graded approach, is considered to be an efficient and effective way to deal with the educational and training needs of RPEs and RPOs. The implementation of this plan is also presented in this work.

Keywords: Education and Training, RPE, RPO

Introduction

The Greek Atomic Energy Commission (EEAE) is the national regulatory authority, competent for the control, regulation and supervision in the fields of nuclear energy, nuclear technology, radiological and nuclear safety, and radiation protection. In this respect, EEAE attaches great importance to its educational and training activities, showing a strong commitment to building competence on radiation protection which is acknowledged internationally. Additionally, it places a great effort to the provision of regular education, training and retraining courses and knowledge dissemination to occupationally exposed workers, in order to ensuring their competence in radiation protection. This effort is further strengthened by the established national education and training (E&T) strategy which is based on the IAEA suggested methodology and the implemented quality management system for E&T in accordance to ISO 29990:2010 (Learning Services for Non-Formal Education and Training [1, 2].

The current national regulatory framework for E&T is based on the following legislative documents:

- a) The radiation protection regulations [3] according to which EEAE is authorized, among others, to provide education and training on radiation protection and to issue certificates of competency on radiation protection or to recognize the corresponding diplomas or certificates awarded on the basis of approved curricula
- b) The EEAE establishment and organizational laws [4,5] according to which EEAE is authorized, among others, to provide education, expertise and training on radiation protection to scientists and technicians and to the personnel of special groups dealing with emergencies. Additionally, EEAE has the responsibility to issue certificates of competence and skills for those providing E&T on radiation protection and to recognize relevant educational courses.

Council Directive 2013/59/Euratom [6], which must be transposed to the MS legislations by February 2018, gives particular emphasis on education and training aspects. Additionally, it introduces the Radiation Protection Expert (RPE) which could be considered the evolvement of the former “Qualified Expert” [7] and the role of the Radiation Protection Officer (RPO) which is not mandatory.

The RPE is defined as 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. In the light of the above definition, the Council Directive 2013/59/Euratom provides also a detailed description of RPE role and responsibilities. MS shall include appropriate provisions within their national legislative framework to establish and define a recognition system for the RPEs. However, the Directive does not define minimum requirements for the design and implementation of this recognition system.

Additionally, the Directive defines the RPO as the 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. According to the described tasks the RPO seems to be generally involved in supervising or performing the day-to-day radiation safety arrangements in an ionizing radiation facility.

This work emphasizes on E&T as well as refreshment training requirements for the RPEs and RPOs, in order to fulfill their role and duties. Moreover, it presents challenges faced during the transposition of the Directive, such as the establishment of an appropriate recognition procedure with the consensus of the relevant stakeholders.

Methodology for the transposition of the Council Directive 2013/59/Euratom

The transposition of the Council Directive 2013/59/Euratom to the Greek legislation, is based on the IAEA's Basic Safety Standards [8-13], the recommendations of the 2012 IAEA IRRS Mission, the EEAE's long (more than 15 years) operational experience and goals as well as on the common approaches of the EU MS, as expressed in various fora (e.g. HERCA working groups). For the transposition of articles related to E&T issues the recommendations and suggestions received during the 2015 IAEA EduTA mission are also considered. Furthermore, in order the transposition procedure to be efficient and effective, the involvement of the relevant stakeholders will be ensured through a number of activities, such as setting up a dialogue process, information events, thematic meetings and consultation on draft documents.

The Council Directive 2013/59/Euratom provisions will be transferred to the Greek legislation through a set of legislative documents, the scope and correlation of which is described here below:

- A Presidential Decree to transpose the Directive articles to the national legislation. The Decree will establish the functions of RPEs and RPOs and define their main responsibilities and tasks.
- A Common Ministerial Decision getting the mandate from the above mentioned Presidential Decree and the EEAE establishment law [4]. This document will include the main provisions for the legislation implementation.
- For flexibility purposes, the details regarding the implementation of both the Presidential Decree and the Ministerial Decision will be described in individual EEAE decisions.

The set of the above documents will constitute the national radiation protection regulations.

The role and recognition of the RPEs

The role and the responsibilities of the RPE will be described within the Presidential Decree and in accordance with the respective provisions of the BSS Directive. The RPE may be assigned, if approved by EEAE, the main task of ensuring the radiation protection of the workers and the members of the public. The assignment of the RPE will be mandatory for high and medium risk radiation practices (radiotherapy, brachytherapy, use of open sources for diagnostic or therapeutic purposes, etc.) as they are categorized in the new legislation.

The competency of an individual to act as RPE will be recognized by the EEAE Board after the suggestion of a 3-members committee which will include 2 EEAE "scientists" and 1 academic or researcher, whose scientific profile and experience will lie upon the corresponding field of recognition. Additionally, an individual could be recognized as RPE in more than one radiation practice; however for each practice an individual recognition will be required.

The arrangements for the recognition of the RPEs will be explicitly described within the Common Ministerial Decision and the corresponding EEAE decisions. The criteria for the recognition include among others: education and training on radiation protection, postgraduate training, working experience on the specific field of recognition; on-the-job-training as RPE under the supervision of an RPE, competency to provide advice on aspects related to radiation protection, etc. The recognition will be valid for 7 years and then a similar re-recognition procedure should be followed based on the experience gained by the individual and his/her continuous education and retraining.

The role and designation of the RPO

The role and responsibilities of the RPO will be described within the Presidential Decree and they will be directly transposed from the Council Directive 2013/59/Euratom. According to the Common Ministerial Decision, the RPO will be designated by the undertaking and his/her designation will be approved by the EEAE. The procedure and the criteria for the approval of the designation will be described in detail in a corresponding EEAE decision.

For the approval of an individual as RPO, several parameters will be considered among which education and training on radiation protection, working experience on the specific radiation practice, and on-the-job-training as RPO under the supervision of an RPO or RPE. The approval criteria and the frequency of the required retraining will differ according to the nature of the practice and the associated risk thereby applying the graded approach.

The national programme for E&T

In 2013 EEAE developed a 3-year national E&T programme on radiation protection. The programme was successfully completed in 2016. Its establishment was based on the IAEA suggested methodology and the results of the assessment of national E&T needs.

For the assessment of national E&T needs data from the National Radiation Protection Database (NRPD) was used regarding the types and the number of occupationally exposed workers as well as estimations of their number in next five years. The design and the implementation of the programme were based on the requirements of the quality management system of EEAE according to ISO 29990:2010 (Learning Services for Non-Formal Education and Training), while the sustainability of the program is ensured by its continuous evaluation and the interaction with the involved third parties during the phases of design and implementation.

The transposition of the Council Directive 2013/59/Euratom into the national legislation will bring significant changes in E&T requirements, especially with the introduction of the functions of the RPE and RPO. These changes should be considered appropriately for the revision of the national E&T programme within the next years. The challenges which are expected to be faced include among others the assessment of the new E&T needs, the design of specialized training courses to address these needs, the effective involvement of the stakeholders and the optimized distribution of resources.

Conclusions

In this work 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 and discussed. The introduction of the functions of RPEs and RPOs will bring significant changes in terms of E&T requirements at national level which should be faced appropriately. The legislative documents under preparation will describe in detail RPEs and RPOs roles and responsibilities. Moreover, they will set specific E&T requirements as well as procedures and criteria for their recognition and designation respectively in accordance with the graded approach. However, for the efficient and effective implementation of these 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.

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