OECD Nuclear Energy Agency
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ISOE

European Technical Centre

Please send back this questionnaire to ETC – Caroline Schieber :
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Questionnaire for RP Regulatory Bodies (or Safety Authorities) on the use of monetary values of the unit of collective dose (so called "Alpha Value") and other decision-making criteria in the framework of optimisation of radiation protection

In order to balance the costs associated with radiological protection options and their benefits in terms of exposure reduction the International Commission on Radiation Protection has suggested the use of cost benefit or cost effectiveness analysis in which options' benefits or effectiveness are given a monetary value according to a monetary reference value of the avoided unit of exposure: the monetary value of a person-Sv, often referred as "alpha value". According to previous surveys[1], some Regulatory Bodies / Safety Authorities recommend or require the use of a single monetary value per unit of collective dose or a set of values (usually depending on the level of annual individual dose).

The purpose of this survey, performed among the ISOE members, is to check the actual use of such a tool by regulatory bodies/safety authorities. It will permit to complement and update the last survey performed in 2009 and to analyse the evolution of the practices at the international level.

RP Regulatory Body / Safety Authority Name : Authority for Nuclear Safety and Radiation Protection (ANVS) .....

Country: The Netherlands.....

Contact-Person (name and e-mail address): Patrick Arends – Patrick.arends@anvs.nl.....

1. Has one or several reference monetary value(s) of the unit of collective dose (so-called alpha value) been established by your RP Regulatory Body/Safety Authority?

↳ **Yes .....** ↳ **No X**

If **Yes**, please go to **question 2** and the following ones **(until 9)**
If **No**, please go **to question 10**

2. Please indicate the alpha value (or set of values) in your own currency, the corresponding unit of collective dose and the last year of update.

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3. Are there any documents explaining how the alpha value has been established?

↳ **Yes .....** ↳ **No .....**

Reference of the document(s): .....
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[1] Previous surveys were notably performed by ISOE ETC in 1997, 2002 and 2009. See ETC Information Sheets n°18, 34 and 55 - available on ISOE website : www.isoe-network.net

4. Are there any documents explaining how the alpha value should be used?

Yes ..... **No .....**

Reference of the document(s): .....
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5. <u>What is the status of this value (or set of values)?</u>

Recommendation ..... **Requirement .....**

Please explain how it is used (notably for which type of decisions, and the interactions with utilities):
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6. Could you please indicate some examples of decisions for which the alpha value has been used as a criterion for selecting or rejecting RP options or investments?

- *In what context/issue (large project, decontamination, installation of radiation shielding, comparison of different solutions of the radiation protection problem, etc) was the alpha value used?*
- *Who performed the cost-benefit calculation? Who makes the conclusive decision?*
- *When has the alpha value been conclusive for decisions about realization: examples of projects/jobs rejected because the "benefit" was too small in relation to the "cost". (Estimated dose saving?); examples of projects/jobs where using the alpha value has shown that the "benefit" exceeds the "cost" (expected dose saving?)*
- *When has a project/job been performed even though an analysis by using the alpha value has indicated that the "cost" exceeded the "benefit"? (other factors considered in the decision-making process?)*

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7. Do you agree that using an alpha value may contribute to increase objectivity and transparency in the radiation protection decision-making processes?

Yes ..... **No .....**

Please explain: .....
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8. Which other criteria than the alpha value are recommended / required to be used in the decision making process for selecting radiation protection actions?

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If there is <u>no</u> Alpha value defined by your Regulatory Body/Safety Authority:

9. Please explain why:

In the Dutch regulatory system, the licensee is responsible for the implementation of the optimization of radiation protection. How this is done is and will be checked in the licensing process and in the inspection process.
Some licensees use the alfa-factor for support of their decision making.
The regulatory body has established dose constraints to give an upper limit for the level of optimization. The lower limit is usually 10 microSv/year.