

| ROADMAP | | | |
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| TITLE OF THE INITIATIVE | Euratom Research and Training Programme 2019-2020 (extension of Euratom Research and Training Programme 2014-2018) | | |
| LEAD DG – RESPONSIBLE UNIT | RTD G.1, CO-CHEF JRC A.7 | DATE OF ROADMAP | 22/12/2016 |
| LIKELY TYPE OF INITIATIVE | Council Regulation (Euratom) | | |
| INDICATIVE PLANNING | 3rd quarter 2017 | | |
| ADDITIONAL INFORMATION | - | | |
| <p>This indicative roadmap is provided for information purposes only and can be subject to change. It does not prejudice the final decision of the Commission on whether this initiative will be pursued or on its final content and structure.</p> | | | |

A. Context, Subsidiarity Check and Objectives

| Context |
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| <p>One of the key objectives of the European Commission is to implement the Energy Union to ensure that Europe has secure, affordable and climate-friendly energy. The Energy Union strategy is made up of 5 closely related and mutually reinforcing dimensions, one of them being research, innovation and competitiveness. One of the research priorities of the Energy Union is nuclear energy which presently produces nearly 30% of the EU's electricity. The Energy Union Communication (COM(2015) 80) refers that the EU must ensure that Member States use the highest standards of nuclear safety, security, waste management and non-proliferation. Outside the Energy Union objectives the EU has also to ensure the health protection of all citizens from ionising radiation. The main instrument to support nuclear research at European level is the Euratom Research and Training Programme (hereinafter the Euratom Programme).</p> <p>The Euratom Programme complements Horizon 2020, the EU framework programme for research and innovation. The Euratom Programme is funding research and training in nuclear fission and fusion. Euratom fission research falling under both direct and indirect actions and respectively managed by the Joint Research Centre and the Commission's Directorate General for Research is contributing to the development of safer technologies and publicly acceptable solutions for the management of radioactive waste and furthering the understanding of the effects of low doses of ionising radiation on humans and the environment, as well as the development of techniques, methods and trainings in the field of nuclear security, safeguards, and non-proliferation.</p> <p>Euratom fusion research falling under indirect actions and managed by the Commission's Directorate General for Research & Innovation is aimed at developing magnetic confinement fusion as a new energy source. Following the expiry, at the end of 2013, of the European Fusion Development Agreement (EFDA) and the Contracts of Association between the Commission and national fusion laboratories, and in line with the provisions of the Euratom Programme, a new framework was set up consisting of multiannual support to (i) a consortium of national fusion laboratories and institutes (EUROfusion¹) implementing a joint programme in line with the fusion roadmap ('Fusion Electricity – A roadmap to the realisation of fusion energy'²), and (ii) for the operation of JET, the Joint European Torus³, as the principal research device exploited under this joint programme. This new approach to fusion research in Europe promotes an enhanced integration in order to ensure the success of the exploitation of ITER and the development of electricity generation from a 'DEMO' device around the middle of the century.</p> <p>Unlike Horizon 2020, the current Euratom Programme has been adopted for only 5 years, 2014-18, owing to the limit set by the Euratom Treaty in article 7, but the funding for nuclear research is already in the budgetary planning for 2019-2020 under heading 1(a) of the Multiannual Financial Framework (373 million euro in 2019 and 397 million euro in 2020 for direct and indirect actions together). In order to continue supporting nuclear research it is necessary for the Commission to adopt a proposal for a Council regulation for the Euratom Research and Training Programme for 2019-2020.</p> <p>Proposal for the extension of the Euratom Programme for 2019-2020 is closely interlinked with the interim</p> |

¹ <https://www.euro-fusion.org/>

² <https://www.euro-fusion.org/eurofusion/the-road-to-fusion-electricity/>

³ <https://www.euro-fusion.org/jet/>

evaluation of the Euratom Programme 2014-2018 (initiative 2016/RTD+/014). The Commission report for this evaluation will be adopted and published together with the Commission proposal for the extension.

Relation with other EU initiatives

The Euratom Programme supports EU policies concerning nuclear safety, radiation protection and waste management. In this respect Euratom research contributes to the implementation of European law in these areas, such as Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations, the Council Directive (2011/70/Euratom) of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, and the Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation. The Euratom research initiatives are mentioned in the recent Communication from the Commission on a Nuclear Illustrative Programme (PINIC, COM(2016)177) as part of continuous investment in research and development activities necessary for keeping leadership and excellence in safety areas.

Issue

The issue at stake is the continuation of nuclear research at European level in 2019-2020 after expiry of the current Euratom Programme, in order to address important concerns of nuclear safety, waste management and radiation protection and to maintain nuclear competencies through training as well as research in fusion energy. The main challenges as regards European nuclear is to further contribute to the Energy Union priorities whilst ensuring a continuous improvement in safety, develop solutions for management of ultimate waste and maintain nuclear skills. Equally important is the need to ensure a robust system of radiation protection, taking into consideration the benefits of the use of radiation in medicine and industry. In view of the increasing concerns about the risk of non-proliferation and the threat of nuclear terrorism it is also necessary to develop appropriate safeguards in order to continue ensuring high levels of nuclear security in Europe and worldwide. Finally, advanced nuclear technologies such as fusion have the potential to make a major contribution to the realisation of a sustainable and secure base-load energy supply for the EU in a few decades from now.

To address these challenges and to bring benefits to all European citizens, irrespective of the fact whether their Member States use or not nuclear power, a substantial research effort of public and private stakeholders in Member States is needed. EU action complementing these research efforts is necessary because of the cross-border nature of nuclear safety, security and radiation protection.

Subsidiarity check

The right of the Euratom Community to act in the field of nuclear research is set out in the Euratom Treaty. The Euratom Community should contribute to the raising of the standards of living in Member States (Article 1) by, inter alia, promoting research (Article 2(a)). In this respect the Commission shall be responsible for promoting and facilitating nuclear research in the Member States, and for complementing it by carrying out a Community research and training programme (Article 4). Such programmes are adopted by the Council acting unanimously on a proposal from the Commission (Article 7). Because the research competence is not exclusive to Euratom, the principle of subsidiarity applies. In order for Community action to be justified, the principle of subsidiarity must be respected. This involves assessing two aspects. Firstly, it is important to ensure that the objectives of the proposed action could not be achieved by Member States in the framework of their national systems (necessity test). This relates to the scope and size of the required nuclear research activities. Clear economies of scale may exist when R&D efforts are pooled on a European scale. European research funding allows Europe to benefit from transnational research teams, bringing together the best expertise in Europe to meet ambitious goals. The second aspect to consider is whether the research serves Community aims and whether the benefits will be widely spread across the Member States. In the case of nuclear energy and radiation protection, with potential cross-border impacts, the need for Member States to work collectively together is clear, especially in areas that will lead to improved practices and/or regulation applicable in all Member States, and in areas where the rewards will only appear in the long term.

Main policy objectives

The aim for the extension of the Euratom Research and Training Programme is to continue the general objective of the current Euratom programme, namely pursuing nuclear research and training activities with an emphasis on a continuous improvement of nuclear safety, security and radiation protection, and to contribute to the long-term decarbonisation of the energy system in a safe, efficient and secure way by supporting research in nuclear fission and fusion. As in the current Euratom Programme, this general objective will be further defined in the following specific objectives:

- supporting safe operation and decommissioning of nuclear systems;
- contributing to the development of safe, longer term solutions for the management of ultimate nuclear

- waste, including final geological disposal as well as partitioning and transmutation;
- supporting the development and sustainability of nuclear expertise and excellence in the Union;
- supporting radiation protection and development of medical applications of radiation, including, inter alia, the secure and safe supply and use of radioisotopes;
- moving towards demonstration of feasibility of fusion as a power source by exploiting existing and future fusion facilities; and laying the foundations for future fusion power plants by developing materials, technologies and conceptual design;
- ensuring availability and use of research infrastructures of pan-European relevance.
- Support nuclear safeguards and security.
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B. Option Mapping

The interim evaluation of the on-going Euratom Programme 2014-2018 will provide an analysis of progress made towards objectives and of continued relevance of all the measures, the efficiency and European added value. On this basis the Commission's services will prepare a proposal for the extension of the Programme.

Proportionality check

The proposed extension of the Euratom Programme for 2019-2020 does not replace Member States' research actions and instead supplements and supports them in specific areas where the EU added value is clearly identified and which Member States and research stakeholders consider as important and requiring coordinated action. These areas of cooperation are further defined and specified in the work programmes which provide the basis for launching calls for proposals.

C. Data collection and Better Regulation instruments

Data collection

When preparing the proposal, the Commission services will use the following evidence base:

- Annual monitoring reports (included in the Horizon 2020 monitoring reports) prepared by the Commission in line with Article 21 of the Council Regulation No. 1314/2013;
- Reports and scientific publications from the Euratom projects launched during 2014-2016;
- Report from the ex-post evaluation of the Euratom Seventh Framework Programme (2007-2013);
- Report from the interim evaluation of the Euratom Research and Training Programme (2014-2018);
- Ex-ante impact assessment of Horizon 2020;
- Report on the EUROfusion mid-term review

Consultation approach

In line with the Better Regulation Guidelines, a 12 weeks online public stakeholder consultation will be launched in October 2016. The public consultation for the interim evaluation will be combined with the public consultation concerning the Commission proposal for the extension of Euratom Research and Training Programme for 2019-2020. In this context, the public consultation will seek views of the concerned stakeholders and wider public with regard to interim evaluation and impact assessment of any changes to be introduced in the Programme's extension. The public consultation will be available in English but answers may be provided in any of the official EU languages. The consultation will be published on 'Your Voice in Europe' website (http://ec.europa.eu/yourvoice/consultations/index_en.htm). The synopsis report summarising the results of consultation will be published on the consultation web page. The consultation will be carried out on the basis of a questionnaire. All citizens and concerned stakeholders can contribute to the consultation. Contributions are particularly sought from following categories of stakeholders:

- Research stakeholders participating in the Euratom Research and Training Programme;
- End-users stakeholders directly affected by Euratom Programme;
- Stakeholders involved in the implementation of Euratom Programme;
- Stakeholders interested in some topics of the Euratom Research and Training Programme.

Will an Implementation plan be established?

Yes No

No need to establish an implementation plan. The Euratom programme is established on the basis of a regulation and its implementation requirements are not similar to directives.

Will an impact assessment be carried out for this initiative and/or possible follow-up initiatives?

An impact assessment was carried out for the ongoing Euratom Programme 2014-2018 (see SEC(2011)1427, Annex 6)⁴. For the extension of the Euratom Programme, an impact assessment will be carried out only if major changes are introduced. The results of the interim evaluation of the on-going Euratom programme will inform about possible changes. A full-fledged IA is foreseen for the next Euratom programme under the new MFF (post-2020).

⁴ http://ec.europa.eu/research/horizon2020/pdf/proposals/horizon_2020_impact_assessment_annexes.pdf