



2017/0312(NLE)

27.3.2018

DRAFT REPORT

on the proposal for a Council regulation on the Research and Training Programme of the European Atomic Energy Community (2019-2020) complementing the Horizon 2020 Framework Programme for Research and Innovation
(COM(2017)0698 – C8-0009/2018 – 2017/0312(NLE))

Committee on Industry, Research and Energy

Rapporteur: Rebecca Harms

Symbols for procedures

- * Consultation procedure
- *** Consent procedure
- ***I Ordinary legislative procedure (first reading)
- ***II Ordinary legislative procedure (second reading)
- ***III Ordinary legislative procedure (third reading)

(The type of procedure depends on the legal basis proposed by the draft act.)

Amendments to a draft act

Amendments by Parliament set out in two columns

Deletions are indicated in ***bold italics*** in the left-hand column. Replacements are indicated in ***bold italics*** in both columns. New text is indicated in ***bold italics*** in the right-hand column.

The first and second lines of the header of each amendment identify the relevant part of the draft act under consideration. If an amendment pertains to an existing act that the draft act is seeking to amend, the amendment heading includes a third line identifying the existing act and a fourth line identifying the provision in that act that Parliament wishes to amend.

Amendments by Parliament in the form of a consolidated text

New text is highlighted in ***bold italics***. Deletions are indicated using either the **■** symbol or strikeout. Replacements are indicated by highlighting the new text in ***bold italics*** and by deleting or striking out the text that has been replaced.

By way of exception, purely technical changes made by the drafting departments in preparing the final text are not highlighted.

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DRAFT EUROPEAN PARLIAMENT LEGISLATIVE RESOLUTION

on the proposal for a Council regulation on the Research and Training Programme of the European Atomic Energy Community (2019-2020) complementing the Horizon 2020 Framework Programme for Research and Innovation (COM(2017)0698 – C8-0009/2018 – 2017/0312(NLE))

(Consultation)

The European Parliament,

- having regard to the Commission proposal to the Council (COM(2017)0698),
 - having regard to Article 7 of the Treaty establishing the European Atomic Energy Community, pursuant to which the Council consulted Parliament (C8-0009/2018),
 - having regard to Rule 78c of its Rules of Procedure,
 - having regard to the report of the Committee on Industry, Research and Energy (A8-0000/2018),
1. Approves the Commission proposal as amended;
 2. Calls on the Commission to alter its proposal accordingly, in accordance with Article 293(2) of the Treaty on the Functioning of the European Union;
 3. Calls on the Council to notify Parliament if it intends to depart from the text approved by Parliament;
 4. Asks the Council to consult Parliament again if it intends to substantially amend the Commission proposal;
 5. Instructs its President to forward its position to the Council and the Commission.

Amendment 1

Proposal for a regulation

Recital 2

Text proposed by the Commission

(2) Nuclear research can contribute to ***social and economic prosperity and environmental sustainability by improving*** nuclear safety, security and radiation protection. ***Equally important is the potential contribution of nuclear research to the long term decarbonisation of the energy system in a safe, efficient and***

Amendment

(2) Nuclear research can contribute to nuclear safety, security and radiation protection.

secure way.

Or. en

Amendment 2

Proposal for a regulation

Recital 3

Text proposed by the Commission

(3) The interim evaluation of the Research and Training Programme of the Community 2014-2018 established by Council Regulation (Euratom) No 1314/2013¹³ (the '2014-2018 Programme') concluded that the action is relevant and continues to be instrumental in addressing challenges *in nuclear safety, security and safeguards, radioactive waste management, radiation protection and fusion energy.*

¹³ Council Regulation (Euratom) No 1314/2013 of 16 December 2013 on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing the Horizon 2020 Framework Programme for Research and Innovation (OJ L 347, 20.12.2013, p. 948).

Amendment

(3) ***The Commission's report on*** the interim evaluation of the Research and Training Programme of the Community 2014-2018 established by Council Regulation (Euratom) No 1314/2013¹³ (the '2014-2018 Programme') concluded that the action is relevant and continues to be instrumental in addressing challenges.

¹³ Council Regulation (Euratom) No 1314/2013 of 16 December 2013 on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing the Horizon 2020 Framework Programme for Research and Innovation (OJ L 347, 20.12.2013, p. 948).

Or. en

Amendment 3

Proposal for a regulation

Recital 4

Text proposed by the Commission

(4) In order to ensure continuity of nuclear research at Community level, it is necessary to establish the Research and

Amendment

(4) In order to ensure continuity of nuclear research at Community level, it is necessary to establish the Research and

Training Programme of the Community for the period from 1 January 2019 to 31 December 2020 (the 'Euratom Programme'). ***The Euratom Programme should have the same objectives as the 2014-2018 Programme, support the same activities and use the same mode of implementation which proved to be efficient and appropriate for the purpose of achieving the programme's objectives.***

Training Programme of the Community for the period from 1 January 2019 to 31 December 2020 (the 'Euratom Programme').

Or. en

Amendment 4

Proposal for a regulation Recital 5

Text proposed by the Commission

(5) By supporting nuclear research, the Euratom Programme ***will*** contribute to achieving the objectives of the Horizon 2020 Framework Programme for Research and Innovation (the 'Horizon 2020 Framework Programme') established by Regulation (EU) No 1291/2013 of the European Parliament and of the Council¹⁴ and will facilitate implementation of the Europe 2020 strategy and the creation and operation of the European Research Area.

¹⁴ Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC (OJ L 347, 20.12.2013, p. 104).

Amendment

(5) By supporting nuclear research, the Euratom Programme ***could*** contribute to achieving the objectives of the Horizon 2020 Framework Programme for Research and Innovation (the 'Horizon 2020 Framework Programme') established by Regulation (EU) No 1291/2013 of the European Parliament and of the Council¹⁴ and will facilitate implementation of the Europe 2020 strategy and the creation and operation of the European Research Area.

¹⁴ Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC (OJ L 347, 20.12.2013, p. 104).

Or. en

Amendment 5

Proposal for a regulation

Recital 6

Text proposed by the Commission

(6) ***Notwithstanding the potential impact of nuclear energy on energy supply and economic development***, severe nuclear accidents may endanger human health. Therefore, nuclear safety and, where appropriate, security aspects dealt with by the Joint Research Centre (the 'JRC') should be given the greatest possible attention in the Euratom Programme.

Amendment

(6) Severe nuclear accidents, ***nuclear proliferation and malevolent acts, including nuclear terrorism*** may endanger human health ***and the environment***. Therefore, nuclear safety and, where appropriate, security aspects dealt with by the Joint Research Centre (the 'JRC') should be given the greatest possible attention in the Euratom Programme.

Or. en

Amendment 6

Proposal for a regulation

Recital 8

Text proposed by the Commission

(8) ***As*** all Member States ***have nuclear installations or*** make use of radioactive materials particularly for medical purposes, the Council has recognised, in the conclusions of its meeting in Brussels on 1 and 2 December 2008, the continuing need for skills in the nuclear field, in particular through appropriate education and training linked with research and coordinated at Community level.

Amendment

(8) ***While it is for each Member State to choose whether to make use of nuclear power***, all Member States make use of radioactive materials particularly for medical purposes, ***and*** the Council has ***therefore*** recognised, in the conclusions of its meeting in Brussels on 1 and 2 December 2008, the continuing need for skills in the nuclear field, in particular through appropriate education and training linked with research and coordinated at Community level.

Or. en

Amendment 7

Proposal for a regulation

Recital 9

Text proposed by the Commission

Amendment

(9) While it is for each Member State to choose whether or not to make use of nuclear power, it is also acknowledged that nuclear energy plays different roles in different Member States. *deleted*

Or. en

Amendment 8

Proposal for a regulation

Recital 10

Text proposed by the Commission

Amendment

(10) By signing the Agreement on the Establishment of the ITER International Fusion Energy Organisation for the Joint Implementation of the ITER Project¹⁵, the Community has undertaken to participate in the construction of the ITER Project (ITER) and its future exploitation. The Community contribution is managed through the 'European Joint Undertaking for ITER and the Development of Fusion Energy (Fusion for Energy)', established by Council Decision 2007/198/Euratom¹⁶. *deleted*

¹⁵ OJ L 358, 16.12.2006, p. 62.

¹⁶ Council Decision 2007/198/Euratom of 27 March 2007 establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it (OJ L 90, 30.3.2007, p. 58).

Or. en

Amendment 9

Proposal for a regulation Recital 11

Text proposed by the Commission

Amendment

(11) For fusion to become a credible option for commercial energy production, it is, firstly, necessary to successfully complete, in a timely manner, the construction of ITER and start its operation. Secondly it is necessary to establish an ambitious, yet realistic roadmap towards the production of electricity by 2050. Reaching those goals requires the European fusion programme to be directed towards a joint programme of activities implementing this roadmap. In order to secure the achievements of on-going fusion research activities, as well as the long-term commitment of, and collaboration between, the fusion stakeholders, continuity of the Community's support should be ensured. A stronger focus should be placed primarily on the activities in support of ITER but also on the developments towards the demonstration reactor, including the stronger involvement, as appropriate, of the private sector. Such rationalisation and refocusing should be achieved without jeopardising the European leadership of the fusion scientific community.

deleted

Or. en

Amendment 10

Proposal for a regulation Recital 13

Text proposed by the Commission

Amendment

(13) The JRC should continue to generate additional resources through

deleted

competitive activities, including participation in indirect actions of the Euratom Programme, third party work and, to a lesser extent, the exploitation of intellectual property.

Or. en

Amendment 11

Proposal for a regulation

Recital 14

Text proposed by the Commission

(14) In the interest of all its Member States, the role of the Union is to develop a framework to support joint cutting-edge research, knowledge creation and knowledge preservation on nuclear *fission technologies, with special emphasis on safety, security, radiation protection and non-proliferation*. That requires independent scientific evidence, to which the JRC can make a key contribution. That has been recognised in the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, dated 6 October 2010, entitled 'Europe 2020 Flagship Initiative Innovation Union', in which the Commission stated its intention to strengthen scientific evidence for *policy making* through the JRC. The JRC proposes to respond to that challenge *by focusing its nuclear safety and security research on the Union's policy priorities*.

Amendment

(14) In the interest of all its Member States, the role of the Union is to develop a framework to support joint cutting-edge research, knowledge creation and knowledge preservation on nuclear safety, *in particular in the context of decommissioning and emergency preparedness, security, including nuclear safeguards and combatting illicit trafficking*, radiation protection and non-proliferation. That requires independent scientific evidence, to which the JRC can make a key contribution. That has been recognised in the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, dated 6 October 2010, entitled 'Europe 2020 Flagship Initiative Innovation Union', in which the Commission stated its intention to strengthen scientific evidence for *policy-making* through the JRC. The JRC proposes to respond to that challenge.

Or. en

Amendment 12

Proposal for a regulation

Recital 17

Text proposed by the Commission

Amendment

(17) The outcomes of the debates that took place at the Symposium on 'Benefits and Limitations of Nuclear Fission Research for a Low Carbon Economy' prepared by an interdisciplinary study involving, among others, experts from the fields of energy, economics and social sciences, co-organised by the Commission and the European Economic and Social Committee in Brussels on 26 and 27 February 2013, recognised the need to continue nuclear research at the European level.

deleted

Or. en

Amendment 13

Proposal for a regulation Recital 20

Text proposed by the Commission

Amendment

(20) Research and innovation activities supported by the Euratom Programme should respect fundamental ethical principles. The opinions on energy matters of the European Group on Ethics in Science and New Technologies should be taken into account as appropriate. Research activities should **also take into account Article 13 of the TFEU and reduce** the use of animals in research and testing, **with a view to ultimately replacing animal use**. All activities should be carried out ensuring **a high** level of human health protection.

(20) Research and innovation activities supported by the Euratom Programme should respect fundamental ethical principles. The opinions on energy matters of the European Group on Ethics in Science and New Technologies should be taken into account as appropriate. Research activities should **prohibit** the use of animals in research and testing. All activities should be carried out ensuring **the highest** level of human health protection.

Or. en

Amendment 14

Proposal for a regulation Recital 28

Text proposed by the Commission

Amendment

(28) *In order to allow the most effective use of the debt and equity financial instruments set up under the Horizon 2020 Framework Programme, while preserving the distinct nature of actions under the Euratom Programme and making full use of the available budget, repayments resulting from any of those financial instruments due to the non-utilisation of funds made available under the Euratom Programme or the 2014-2018 Programme should directly benefit the Euratom Programme or its successor programme.* *deleted*

Or. en

Amendment 15

Proposal for a regulation Recital 29

Text proposed by the Commission

Amendment

(29) *It is important to ensure the possibility to use the available external assigned revenue accumulated at the end of the 2014-2018 Programme in light, in particular, of the identical objectives and actions pursued by the Euratom Programme.* *deleted*

Or. en

Amendment 16

Proposal for a regulation Recital 33

Text proposed by the Commission

(33) Achieving the objectives of the Euratom Programme in relevant areas requires support for cross-cutting activities, **both** within the Euratom Programme **and jointly with the activities of the Horizon 2020 Framework Programme**.

Amendment

(33) Achieving the objectives of the Euratom Programme in relevant areas requires support for cross-cutting activities within the Euratom Programme.

Or. en

Amendment 17

Proposal for a regulation Article 3 – paragraph 1

Text proposed by the Commission

1. The general objective of the Euratom Programme is to pursue nuclear research and training activities **with an emphasis on continuous improvement of nuclear safety, security and radiation protection, notably to potentially contribute to the long-term decarbonisation of the energy system in a safe, efficient and secure way**. The general objective shall be implemented through the activities specified in Annex I in the form of direct and indirect actions which pursue the specific objectives set out in paragraphs 2 and 3 of this Article.

Amendment

1. The general objective of the Euratom Programme is to pursue nuclear research and training activities **to improve nuclear safety during decommissioning and nuclear** security and radiation protection. The general objective shall be implemented through the activities specified in Annex I in the form of direct and indirect actions which pursue the specific objectives set out in paragraphs 2 and 3 of this Article.

Or. en

Amendment 18

Proposal for a regulation Article 3 – paragraph 2 – point a

Text proposed by the Commission

(a) supporting **safety** of nuclear systems;

Amendment

(a) supporting **safe decommissioning** of nuclear systems;

Amendment 19

Proposal for a regulation

Article 3 – paragraph 2 – point b

Text proposed by the Commission

(b) 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***;

Amendment

(b) contributing to the ***research on*** safe, ***long*** term solutions for the management of ultimate nuclear waste, including final geological disposal;

Or. en

Amendment 20

Proposal for a regulation

Article 3 – paragraph 2 – point e

Text proposed by the Commission

(e) ***moving towards demonstration of feasibility of fusion as a power source by exploiting existing and future fusion facilities***;

Amendment

deleted

Or. en

Amendment 21

Proposal for a regulation

Article 3 – paragraph 2 – point f

Text proposed by the Commission

(f) ***laying the foundations for future fusion power plants by developing materials, technologies and conceptual design***;

Amendment

deleted

Amendment 22

Proposal for a regulation Article 3 – paragraph 2 – point g

Text proposed by the Commission

(g) promoting innovation **and industrial competitiveness**;

Amendment

(g) promoting innovation;

Or. en

Amendment 23

Proposal for a regulation Article 3 – paragraph 3 – subparagraph 1 – point a

Text proposed by the Commission

(a) improving nuclear safety including: **nuclear reactor and fuel safety**, waste management, including final geological disposal **as well as partitioning and transmutation**; decommissioning, and emergency preparedness;

Amendment

(a) improving nuclear safety including: waste management, including final geological disposal, decommissioning, and emergency preparedness;

Or. en

Amendment 24

Proposal for a regulation Article 3 – paragraph 4

Text proposed by the Commission

4. The Euratom Programme shall be implemented in such a way as to ensure that the priorities and activities supported are relevant to changing needs and take account of the evolving nature of science, technology, innovation, policy making, markets and society, with the aim of

Amendment

4. The Euratom Programme shall be implemented in such a way as to ensure that the priorities and activities supported are relevant to changing needs and take account of **the direct and indirect consequences of nuclear incidents and accidents as well as** the evolving nature of

optimizing human and financial resources, and to avoid duplication on nuclear research and development in the Union.

science, technology, innovation, policy making, markets and society, with the aim of optimizing human and financial resources, and to avoid duplication on nuclear research and development in the Union.

Or. en

Amendment 25

Proposal for a regulation

Article 4 – paragraph 1 – subparagraph 1 – introductory part

Text proposed by the Commission

Amendment

The financial envelope for the implementation of the Euratom Programme shall be EUR 770 220 000. That amount shall be distributed as follows:

The financial envelope for the implementation of the Euratom Programme shall be EUR ~~770 220 000~~. That amount shall be distributed as follows:

Or. en

Justification

The amount of the financial envelope will have to be determined on the basis of further and more detailed information to be given by the Commission.

Amendment 26

Proposal for a regulation

Article 4 – paragraph 1 – subparagraph 1 – point a

Text proposed by the Commission

Amendment

(a) indirect actions for the fusion research and development programme, EUR 349 834 000;

deleted

Or. en

Amendment 27

Proposal for a regulation

Article 4 – paragraph 1 – subparagraph 1 – point b

Text proposed by the Commission

(b) indirect actions for nuclear **fission, safety and** radiation protection, EUR 151 579 000;

Amendment

(b) indirect actions for nuclear **safe decommissioning, waste,** radiation protection **and medical applications**, EUR [151 579 000];

Or. en

Justification

The amount of the financial envelope for these indirect actions will have to be determined on the basis of further and more detailed information to be given by the Commission.

Amendment 28

Proposal for a regulation

Article 4 – paragraph 1 – subparagraph 1 – point c

Text proposed by the Commission

(c) direct actions, EUR 268 807 000.

Amendment

(c) direct actions, EUR [268 807 000].

Or. en

Justification

The amount of the financial envelope for direct actions will have to be determined on the basis of further and more detailed information to be given by the Commission.

Amendment 29

Proposal for a regulation

Article 8 – paragraph 2

Text proposed by the Commission

2. The financial contribution referred to in paragraph 1 of this Article **may be combined** from the financial contributions for indirect actions set out in Article 4 **of**

Amendment

2. The financial contribution referred to in paragraph 1 of this Article **shall come only** from the financial contributions for indirect actions set out in Article 4.

this Regulation and in Article 6 of Regulation (EU) No 1291/2013, and implemented through a single funding scheme.

Or. en

Amendment 30

Proposal for a regulation Article 21 – paragraph 1

Text proposed by the Commission

1. The Commission shall annually monitor the implementation, including progress and achievements, of the Euratom Programme. The Commission shall provide the Committee, referred to in Article 12, with information in this regard.

Amendment

1. The Commission shall annually monitor the implementation, including progress and achievements, of the Euratom Programme. The Commission shall provide the Committee referred to in Article 12 **and the European Parliament** with information in this regard.

Or. en

Amendment 31

Proposal for a regulation Article 23 – paragraph 4

Text proposed by the Commission

4. By way of derogation from Article 14(a) of the Financial Regulation, appropriations not used and available at 31 December 2018 arising from external assigned revenue relating to the Regulation (Euratom) 1314/2013 shall be carried over automatically and used for the Euratom Programme.

Amendment

deleted

Or. en

Amendment 32

Proposal for a regulation Article 23 – paragraph 5

Text proposed by the Commission

Amendment

5. By way of derogation from the third subparagraph of Article 140(6) of the Financial Regulation, annual repayments generated by a financial instrument established under Regulation (EU) No 1291/2013 and resulting from the non-utilisation of funds made available under this Regulation or Regulation (Euratom) 1314/2013 shall be assigned to the Euratom Programme or its successor programme.

deleted

Or. en

Amendment 33

Proposal for a regulation Annex I – heading 1 – paragraph 2

Text proposed by the Commission

Amendment

Nuclear power constitutes an element in the debate on combating climate change and reducing Europe's dependence on imported energy. In the broader context of finding a sustainable energy-mix for the future, the Euratom Programme will also contribute through its research activities to the debate on the benefits and the limitations of nuclear fission energy for a low-carbon economy. Through ensuring continuous improvement of nuclear safety, more advanced nuclear technologies could also offer the prospect of significant improvements in efficiency and use of resources and producing less waste than current designs. Nuclear safety aspects will receive the greatest possible attention.

deleted

Amendment 34**Proposal for a regulation
Annex I – heading 1 – paragraph 3***Text proposed by the Commission*

The Euratom Programme **will strengthen** the research and innovation framework in the nuclear field and coordinate Member States' research efforts, thereby **avoiding** duplication, retaining critical mass in key areas and ensuring that public funding is used in an optimal way. The coordination will, however, not prevent Member States from having programmes to fulfil national needs.

Amendment

The Euratom Programme **might help** the research and innovation framework in the nuclear field and coordinate Member States' research efforts, thereby **hoping to avoid** duplication, retaining critical mass in key areas and ensuring that public funding is used in an optimal way. The coordination will, however, not prevent Member States **or any present or future third countries** from having programmes to fulfil national needs.

Or. en

Amendment 35**Proposal for a regulation
Annex I – heading 1 – paragraph 4***Text proposed by the Commission*

The strategy to develop fusion as a credible option for commercial **carbon-free energy production will follow a roadmap with milestones towards the goal of electricity production by 2050. To implement that strategy, a restructuring of** fusion-related work in the Union, **including governance, funding and management, must be carried out to ensure a shift of emphasis from pure research to designing, building and operating future facilities such as ITER, DEMO and beyond. That will require a close cooperation between the entire Union fusion community, the Commission and the national funding**

Amendment

Since fusion **is not** a credible option for commercial electricity **in any 2050 scenario, no Union/Community funds shall be devoted towards** fusion-related work in the Union.

agencies.

Or. en

Amendment 36

Proposal for a regulation

Annex I – heading 2 – subheading 1 – paragraph 1

Text proposed by the Commission

In order to ensure that the indirect actions of the Euratom Programme mutually reinforce research efforts of the Member States and the private sector, the priorities of the work programmes are to be established on the basis of appropriate inputs from national public authorities and nuclear research stakeholders grouped in bodies or frameworks such as technology platforms and technical forums for nuclear systems *and safety*, management of ultimate waste *and* radiation protection/low-dose risk, *fusion research*, or any relevant organisation or forum of nuclear stakeholders.

Amendment

In order to ensure that the indirect actions of the Euratom Programme mutually reinforce research efforts of the Member States and the private sector, the priorities of the work programmes are to be established on the basis of appropriate inputs from national public authorities and nuclear research stakeholders grouped in bodies or frameworks such as technology platforms and technical forums for *the safe decommissioning of* nuclear systems, *the continuous research for the safest* management of *nuclear waste, including* ultimate waste, *and for* radiation protection/low-dose risk, or any relevant organisation or forum of nuclear stakeholders.

Or. en

Amendment 37

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point a – title

Text proposed by the Commission

Supporting safety of nuclear systems (Societal challenges, Excellent science, Industrial leadership)

Amendment

Supporting safety *of decommissioning* of nuclear systems (Societal challenges, Excellent science, Industrial leadership)

Or. en

Amendment 38

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point a – paragraph

Text proposed by the Commission

In line with the general objective, support to joint research activities concerning the safe **operation and** decommissioning of reactor systems (including fuel cycle facilities) in use in the Union **or, to the extent necessary in order to maintain broad nuclear safety expertise in the Union, those reactor types which may be used in the future, focusing exclusively on safety aspects, including all aspects of the fuel cycle such as partitioning and transmutation.**

Amendment

In line with the general objective, support to joint research activities concerning the safe decommissioning of reactor systems (including fuel cycle facilities) in use in the Union.

Or. en

Amendment 39

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point b – title

Text proposed by the Commission

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** (Excellent science, Societal challenges)

Amendment

Contributing to the **research** of safe **long-term** solutions for the management of (ultimate) nuclear waste, including final geological disposal (Excellent science, Societal challenges)

Or. en

Amendment 40

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point b – paragraph

Text proposed by the Commission

Joint and/or coordinated research activities

Amendment

Joint and/or coordinated research activities

on *remaining key aspects of* geological disposal of spent fuel and long- lived radioactive waste with, as appropriate, demonstration of technologies and safety. *Those activities are to promote the development of a common Union view on the main issues related to waste management from discharge of fuel to disposal.*

on geological disposal of spent fuel and long- lived radioactive waste with, as appropriate, demonstration of technologies and safety.

Or. en

Amendment 41

Proposal for a regulation Annex I – heading 2 – subheading 1 – point e

Text proposed by the Commission

Amendment

(e) Moving towards demonstration of feasibility of fusion as a power source by exploiting existing and future fusion facilities (Industrial leadership, Societal challenges)

deleted

Supporting common research activities undertaken by EUROfusion members and any of the entities referred to under paragraph (i) to ensure the swift start of high performance operation of ITER including the use of relevant facilities (including as appropriate JET, the Joint European Torus), of integrated modelling using, among others, high performance computers, and training activities to prepare the next generation of researchers and engineers.

Or. en

Amendment 42

Proposal for a regulation Annex I – heading 2 – subheading 1 – point f

Text proposed by the Commission

Amendment

(f) *Laying the foundations for future fusion power plants by developing materials, technologies and conceptual design (Industrial leadership, Societal challenges)* **deleted**

Supporting joint activities undertaken by EUROfusion members and any of the entities referred to under paragraph (i) to develop and qualify materials for a demonstration power plant requiring, inter alia, preparatory work for an appropriate material test facility and negotiations for the Union's participation in a suitable international framework for that facility. Such development and qualifications are to make use of all possible levels of the experimental, computational and theoretical capacities available.

Supporting joint research activities undertaken by members of the European Fusion Development Agreement and any of the entities referred to under paragraph (i) that will address reactor operation issues and will develop and demonstrate all relevant technologies for a fusion demonstration power plant. Those activities include the preparation of complete demonstration power plant conceptual designs and exploration of the potential of stellarators as a power plant technology.

Or. en

Amendment 43

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point g – title

Text proposed by the Commission

Amendment

Promoting innovation **and industry**

Promoting innovation (Industrial

competitiveness (Industrial leadership)

leadership)

Or. en

Amendment 44

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point g – paragraph 1

Text proposed by the Commission

Amendment

Implementing or supporting knowledge management and technology transfer from the research co-funded by the Euratom Programme to industry exploiting all innovative aspects of the research. ***deleted***

Or. en

Amendment 45

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point g – paragraph 3

Text proposed by the Commission

Amendment

In the long term, the Euratom Programme is to support the preparation and development of a competitive nuclear fusion industrial sector facilitating the involvement of the private sector as well as SMEs where appropriate, in particular through the implementation of a technology road map to a fusion power plant with active industrial involvement in the design and development projects. ***deleted***

Or. en

Amendment 46

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point h – paragraph

Text proposed by the Commission

Activities supporting the **construction, refurbishment**, use and continued availability of key research infrastructures under the Euratom Programme, as well as appropriate access to those infrastructures and cooperation between them.

Amendment

Activities supporting the use and continued availability of key research infrastructures under the Euratom Programme, as well as appropriate access to those infrastructures and cooperation between them.

Or. en

Amendment 47

Proposal for a regulation

Annex I – heading 2 – subheading 1 – point i

Text proposed by the Commission

(i) **European fusion programme**

The joint programme of activities implementing the roadmap towards the goal of electricity production by 2050 co-funded through the EUROfusion grant (Programme co-fund action) awarded under Regulation (Euratom) No 1314/2013 to the legal entities established or designated by Member States and any third country associated to the Euratom Programme. The EUROfusion grant may continue to be funded under the Euratom programme. The joint programme may include resources in kind from the Community, such as scientific and technical exploitation of the JET facility in accordance with Article 10 of the Treaty, or the secondment of Commission staff.

Amendment

deleted

Or. en

Amendment 48

Proposal for a regulation

Annex I – heading 2 – subheading 2 – paragraph 2

Text proposed by the Commission

The nuclear activities of the JRC must aim to support the implementation of Council Directives 2009/71/Euratom³¹ and 2011/70/Euratom³², as well as **Council Conclusions giving priority to** the highest standards for nuclear safety in the Union and internationally.

³¹ Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).

³² 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 (OJ L 199, 2.8.2011, p. 48).

Amendment

The nuclear activities of the JRC must aim to support the implementation of Council Directives 2009/71/Euratom³¹ and 2011/70/Euratom³², as well as **establishing** the highest **harmonised** standards for nuclear safety in the Union and, **when available, to spread them** internationally.

³¹ Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18).

³² 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 (OJ L 199, 2.8.2011, p. 48).

Or. en

Amendment 49

Proposal for a regulation

Annex I – heading 2 – subheading 2 – paragraph 3

Text proposed by the Commission

The JRC must notably contribute to the nuclear safety research needed for safe, secure and peaceful use of nuclear energy and other non-fission applications. The JRC will provide a scientific basis for the relevant Union policies and, where necessary, react within the limits of its mission and competence to nuclear events, incidents and accidents. To that effect, the JRC will carry out research and assessments, provide references and

Amendment

The JRC will provide a scientific basis for the relevant Union policies and, where necessary, react within the limits of its mission and competence to nuclear events, incidents and accidents. To that effect, the JRC will carry out research and assessments, provide references and standards and deliver dedicated training and education. Synergies with relevant cross-cutting initiatives will be sought as appropriate, with the aim of optimizing

standards and deliver dedicated training and education. Synergies with relevant cross-cutting initiatives will be sought as appropriate, with the aim of optimizing human and financial resources and to avoid duplication of nuclear research and development in the European Union. The JRC activities in these areas will be conducted taking into account relevant initiatives at the regional, Member State or at European Union level, within the perspective of shaping the European Research Area.

human and financial resources and to avoid duplication of nuclear research and development in the European Union. The JRC activities in these areas will be conducted taking into account relevant initiatives at the regional, Member State or at European Union level, within the perspective of shaping the European Research Area.

Or. en

Amendment 50

Proposal for a regulation

Annex I – heading 2 – subheading 2 – point a – title

Text proposed by the Commission

Improving nuclear safety including: ***nuclear reactor and fuel safety***, waste management including final geological disposal ***as well as partitioning and transmutation***; decommissioning, and emergency preparedness

Amendment

Improving nuclear safety including: waste management including final geological disposal, decommissioning and emergency preparedness

Or. en

Amendment 51

Proposal for a regulation

Annex I – heading 2 – subheading 2 – point a – point 3

Text proposed by the Commission

(3) exchange with relevant stakeholders for strengthening Union capacity to respond to nuclear accidents and incidents by research on alert systems and models for radiological dispersion in the ***air***, and by mobilising resources and

Amendment

(3) exchange with relevant stakeholders for strengthening Union capacity to respond to nuclear accidents and incidents by research on alert systems and models for radiological dispersion in the ***environment (air, water and soil)***, and

expertise for analysing and modelling nuclear accidents.

by mobilising resources and expertise for analysing and modelling nuclear accidents.

Or. en

Amendment 52

Proposal for a regulation

Annex I – heading 2 – subheading 2 – point e – paragraph 2

Text proposed by the Commission

Amendment

As the Euratom Implementing Agent for the Generation IV International Forum (GIF), the JRC will continue to coordinate the Community contribution to GIF. The JRC will pursue and further develop international research cooperation with key partner countries and international organizations (IAEA, OECD/NEA) in order to promote the Union's nuclear safety and security policies.

deleted

Or. en

Amendment 53

Proposal for a regulation

Annex I – heading 2 – subheading 4

Text proposed by the Commission

Amendment

Cross-cutting activities and interfaces with the Horizon 2020 Framework Programme

deleted

In order to achieve the objectives of the Euratom Programme, appropriate links and interfaces, such as joint calls, will be ensured with the Specific Programme of the Horizon 2020 Framework Programme.

The Euratom Programme may contribute to the Debt facility and Equity facility

developed under the Horizon 2020 Framework Programme that will be widened to cover the objectives referred to in Article 3.

Or. en

Amendment 54

Proposal for a regulation Annex I – heading 2 – subheading 5 – paragraph 2

Text proposed by the Commission

Amendment

International cooperation activities will be promoted through multilateral frameworks (such as IAEA, OECD, **ITER, GIF**), and by the existing or new bilateral cooperation with countries having strong R&D and industrial bases and research installations under operation, design or construction.

International cooperation activities will be promoted through multilateral frameworks (such as IAEA, OECD), and by the existing or new bilateral cooperation with countries having strong R&D and industrial bases and research installations under operation, design or construction.

Or. en

Amendment 55

Proposal for a regulation Annex II – part 1 – point a – title

Text proposed by the Commission

Amendment

(a) Supporting **safety** of nuclear systems

(a) Supporting **safe decommissioning** of nuclear systems

Or. en

Amendment 56

Proposal for a regulation Annex II – part 1 – point a – indent

Text proposed by the Commission

- The number of projects (joint research and/or coordinated actions) likely to lead to a demonstrable improvement in nuclear safety ***practice*** in Europe.

Amendment

- The number of projects (joint research and/or coordinated actions) likely to lead to a demonstrable improvement in nuclear safety ***when nuclear systems are decommissioned*** in Europe.

Or. en

Amendment 57

**Proposal for a regulation
Annex II – part 1 – point b – title**

Text proposed by the Commission

- (b) Contributing to the ***development*** of safe, ***longer-term*** solutions for the management of ultimate nuclear waste, including final geological disposal, ***partitioning and transmutation***

Amendment

- (b) Contributing to the ***research*** of safe, ***long-term*** solutions for the management of ultimate nuclear waste, including final geological disposal

Or. en

Amendment 58

**Proposal for a regulation
Annex II – part 1 – point e**

Text proposed by the Commission

- (e) ***Moving towards demonstration of the feasibility of fusion as a power source by exploiting existing and future fusion facilities***

Amendment

deleted

- ***The number of publications in peer-reviewed high-impact journals.***

Or. en

Amendment 59

Proposal for a regulation Annex II – part 1 – point f

Text proposed by the Commission

Amendment

(f) Laying the foundations for future fusion power plants by developing materials, technologies and conceptual design **deleted**

- **The percentage of the Fusion Roadmap's milestones, established for the period 2014-2020, reached by the Euratom programme.**

Or. en

Amendment 60

Proposal for a regulation Annex II – part 1 – point g – title

Text proposed by the Commission

Amendment

(g) Promoting innovation *and industry competitiveness*

(g) Promoting innovation

Or. en

Amendment 61

Proposal for a regulation Annex II – part 1 – point g – indent 1

Text proposed by the Commission

Amendment

- **The number of spin-offs from fusion research under the Euratom programme.** **deleted**

Or. en

Amendment 62

Proposal for a regulation

Annex II – part 2 – paragraph 2 – indent 1

Text proposed by the Commission

- Improving nuclear safety including: ***nuclear reactor and fuel safety***, waste management, including final geological disposal ***as well as partitioning and transmutation***; decommissioning; and emergency preparedness;

Amendment

- Improving nuclear safety including: waste management, including final geological disposal ***and*** decommissioning; and emergency preparedness;

Or. en

EXPLANATORY STATEMENT

Your draftswoman considers that the Euratom Research and Training Programme can contribute to improved nuclear safety, security and radiation protection. As the nuclear reactor fleet of the Union is aging, the need to ensure expertise for decommissioning activities and to improve safety for the decommissioning process is evident.

At the same time your draftswoman encourages research and training regarding nuclear waste management and disposal. Despite the commercial use of nuclear power for five decades in the Union, none of the member states is in possession of a disposal site for high level nuclear waste and spent fuel and progress in this area remains slow. Expertise on radioactive waste management and disposal will be indispensable for decades to come, which is why research and training is vital. Considering the risks involved for public health and safety, involvement of public funds is appropriate notwithstanding the polluter pays principle.

In absence of a disposal site most of the high level waste and spent fuel must be stored in interim storage facilities for many decades. In many cases, the safety-related requirements are doubtful. Also in that respect further research and training is encouraged.

Your draftswoman does not consider partitioning and transmutation promising solutions for the nuclear waste problem. Should these technologies ever be viable in the future, they demand considerable investments in questionable future reactor technologies and ultimately may reduce the volume of nuclear waste, but still won't eliminate it altogether. Hence the necessity to find a final nuclear waste disposal site remains.

As the majority of member states have either never operated nuclear reactors or have decided to phase out the use of nuclear power, it is necessary to rethink the priorities of the research programme.

Also given the need for a swift decarbonisation notably in the electricity sector in order to comply with the Paris agreement commitments, your draftswoman deems it necessary to question the use of public funds to support research into future reactor technologies. The electricity sector will have to be decarbonised long before the possible commercial use of fusion energy. Your draftswoman therefore recommends to divert public funds to those technologies that can play an important role in the energy transition. Irrespective of that ITER is not financed through this programme and therefore is out of the scope of this regulation.