Council of the European Union

Brussels, 26 November 2026
(OR. en)

16475/26

Interinstitutional File:
2025/0594 (NLE)

RECH 506
ATO 55
COMPET 1452
CADREFIN 471

COVER NOTE

From:	General Secretariat of the Council
To:	Delegations
Subject:	OPINION if the European Parliament - Proposal for a Council regulation on establishing the research and training programme of the European Atomic Energy Community for the period 2028-2032, complementing Horizon Europe, the Framework Programme for Research and Innovation, and providing for the Community's contribution to the ITER project, and repealing Regulation (Euratom) 2025/1304 [COM(2025)0594 - C10-0217/2025 - 2025/0594(NLE)]

Delegations will find attached the above-mentioned opinion. This opinion is available in all language versions via the following link: https://www.europarl.europa.eu/doceo/document/TA-10-2026-0400_EN.html

European Parliament
2024-2029

TEXTS ADOPTED

P10_TA(2026)0400

Euratom research and training programme 2028-2032

European Parliament legislative resolution of 25 November 2026 on the proposal for a Council regulation on establishing the research and training programme of the European Atomic Energy Community for the period 2028-2032, complementing Horizon Europe, the Framework Programme for Research and Innovation, and providing for the Community's contribution to the ITER project, and repealing Regulation (Euratom) 2025/1304 (COM(2025)0594 – C10-0217/2025 – 2025/0594(NLE))

(Consultation)

The European Parliament,

– having regard to the Commission proposal to the Council (COM(2025)0594),

– having regard to Article 7 of the Treaty establishing the European Atomic Energy Community, pursuant to which the Council consulted Parliament (C10-0217/2025),

– having regard to the budgetary assessment by the Committee on Budgets,

– having regard to Rules 84 and 58 of its Rules of Procedure,

– having regard to the report of the Committee on Industry, Research and Energy (A10-0293/2026),

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 and Article 106a of the Treaty establishing the European Atomic Energy Community;

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

AMENDMENTS BY THE EUROPEAN PARLIAMENT*

to the Commission proposal

2025/0594 (NLE)

Proposal for a

COUNCIL REGULATION

establishing the research and training programme of the European Atomic Energy Community for the period 2028-2032, complementing Horizon Europe, the Framework Programme for Research and Innovation, and providing for the Community's contribution to the ITER project, and repealing Regulation (Euratom) 2025/1304

THE COUNCIL OF THE EUROPEAN UNION,
Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7, first paragraph, thereof,
Having regard to the proposal from the European Commission,
Having regard to the opinion of the Scientific and Technical Committee[1],
Whereas:

(1) The European Atomic Energy Community (the 'Community') aims to raise the living standards in the Member States by promoting and facilitating nuclear research, complementing it with Community research and training programmes ***and by facilitating investment in the development of nuclear energy***.

(1a) The European Parliament should be consulted at all relevant steps during the implementation and evaluation of the Programme. The Council asked the European Parliament for its opinion on the research and training programme of the European Atomic Energy Community for the period 2028-2032. However, since the ordinary

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* Amendments: new or amended text is highlighted in bold italics; deletions are indicated by the symbol ▌.

1 OJ C , , p. .

legislative procedure does not apply under the Treaty establishing the European Atomic Energy Community (the 'Euratom Treaty'), the European Parliament is not considered to be on an equal footing with the Council when adopting legislation relating to atomic energy. Given the European Parliament's role as a co-legislator regarding budgetary matters and in order to ensure the coherent design and implementation of the Union´s Framework Programme for Research and Innovation, the Euratom research and training programme should also be adopted by means of the ordinary legislative procedure.

(2) Research***, innovation, and development*** in the nuclear field ***contribute*** to social well-being, economic prosperity, security***, high levels of health protection*** and environmental sustainability. Research on the applications of ionising radiation has led to improvements in medical, industrial, agricultural, environmental and security technologies from which many benefit. ***Such research, innovation, and development should be pursued in a manner that upholds the public interest, ensures a high level of protection for workers, the public and the environment, promotes a strong radiation protection culture, and supports quality employment and skills development across the research and innovation chain.***

(2a) Nuclear energy is a low-carbon, reliable and dispatchable source of electricity that provides a significant share of the Union's clean energy supply and contributes to grid stability. It plays a key role in enhancing the Union's competitiveness, security of energy supply and resilience, particularly in an increasingly volatile geopolitical environment. As a strategic asset, nuclear energy – including emerging technologies such as small modular reactors and Generation IV systems – supports the Union's decarbonisation objectives and complements renewable energy sources in achieving climate neutrality. Strengthening the European nuclear value chain further contributes to reducing dependencies on external energy suppliers and to enhancing the Union's strategic autonomy.

(3) In order to ensure the continuity of research ***and innovation*** in the nuclear field at the Community level ***and accelerate technological development***, it is necessary to establish a Community research and training programme (the 'Programme') and, as the Euratom Treaty limits the length of its research and training programmes to 5 years, the Programme should cover the period from 1 January 2028 to 31 December 2032. The

Commission would present a new proposal to implement the remaining budget of the last 2 years of the 2028-2034 Multiannual Financial Framework[2].

(4) The Programme should be tightly connected with the European Competitiveness Fund (the 'ECF') established by Regulation [*establishing the ECF*][3] and Horizon Europe, the Framework Programme for Research and Innovation for the period 2028-2034 ('Horizon Europe') established by Regulation [*establishing the Horizon Europe Framework Programme*][4] by placing research and innovation at the heart of the Union's economy and investment strategy. ***Such coordination should support the Union's open strategic autonomy, resilient industrial base, high social and environmental standards and long-term public investment capacity.***

(5) The Union should, furthermore, aim to eliminate inequalities and to promote ***gender*** equality between men and women, as well as to combat discrimination in accordance with Article 8 and Article 10 of the Treaty on the Functioning of the European Union (TFEU) and the Charter of Fundamental Rights of the European Union ***(the 'Charter')***.

(6) ***To maximise the benefits for Union citizens,*** the Programme should ***pursue broad*** synergies with Horizon Europe and other Union programmes***, such as the ECF through joint and coordinated actions, while supporting skills, industrial capacity, regional development, cohesion, innovation ecosystems and strategic technologies, as well as ensuring legal clarity and coherence in implementation. Co-funding and cross-eligible calls between the Programme and Horizon Europe or the ECF should enable appropriate financing for innovative nuclear fission research projects.***

(7) In a rapidly changing economic, social and geopolitical environment, recent experience has shown the need for more flexible multiannual financial framework and spending programmes. To that effect, and in line with the objectives of the Programme, the funding should duly consider the evolving policy needs***, as well as the potential impact of extraordinary or unforeseeable events,*** and the Union's priorities as identified in relevant documents published by the Commission, European Parliament resolutions and

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2 Council Regulation (EU, Euratom) 2025/NNN of DD MMMM 2025 laying down the multiannual financial framework for the years 2028 to 2034 (OJ L NNN, DD.MM.YYYY, p. N, ELI:).

3 Regulation [*establishing the ECF*]

4 Regulation [*establishing the Horizon Europe Framework Programme*]

in Council conclusions, while ensuring sufficient predictability for the budget's implementation.

(8) The Programme applies Horizon Europe's rules for participation and dissemination and is part of the ECF's digital framework and makes use of its corporate information and communication tools to further simplify access, enhance openness and maximise the impact of Union funding.

(9) The Programme should contribute to increasing public and private investment in research and innovation (R&I) in Member States, thereby helping to reach an overall investment target of at least 3% of the Union's gross domestic product (GDP) in research and development. Member States' investment in R&I should be assessed with the help of the framework for the coordination of economic, budgetary, employment and social policies within the Union – the European Semester process. Achieving that target would require Member States and the private sector to complement the Programme with their own reinforced investment actions in research, development and innovation. The Union has made steady progress in increasing research and development investments but is lagging behind other global leaders. The 3% target mentioned earlier, set over two decades ago, acknowledged the importance of research and development as a foundation for a knowledge-based society. While the target encouraged various Member States to set their own research and development intensity goals, significant disparities remain as only a few Member States have reached or exceeded their investment ambition.

(9a) The insufficient Union funding for fission-related R&I activities, significant decreases in the budget of the Euratom research and training programme allocated to fission energy research over the last decades, as well as early power plant closures in certain Member States alongside reduced investment in nuclear technologies more broadly in the Union, have led to a loss of competencies in the nuclear field and a decrease in nuclear energy capabilities. Despite this, Europe remains one of the major global players in nuclear energy. However, this disinvestment stands in clear contrast with the scale of support provided in competing economies and has led other parts of the world to progressively take the lead in new constructions and cutting-edge innovations. In 2023, 410 nuclear reactors were in service in more than 30 countries. By the end of 2024, 101 reactors were still active in the Union, while 63 new reactors were under construction world-wide, representing a total capacity of 71 GWe.

Amongst those reactors, a capacity of 33 GWe or 29 reactors were under construction in China, mostly of Chinese design. Russia has become the leading exporter of nuclear technology, building 23 GWe of nuclear reactors in six countries[1a]. The United States and the United Kingdom are investing billions into new nuclear technologies and have launched ambitious programmes dedicating substantial resources to new reactor deployment, such as small modular reactors (SMRs) and advanced modular reactors (AMRs). This level of investment significantly surpasses the resources currently allocated to fission innovation in the Union. China is expected to host the first operational SMR in 2026 and Canada will be home to the first SMR in the OECD.

(9b) According to the 8th Nuclear Illustrative Programme adopted in June 2025 by the Commission and updated in March 2026, assuming lifespan extensions, nuclear production of current plants in the Union could decrease to 50 GWe by 2050. However, new nuclear plants could increase installed nuclear capacity in the Union in 2050 by to up to 144 GWe, with a base capacity of 109 GWe. Moreover, the same document estimates total investment needs at EUR 241 billion (in current prices), split between new large-scale reactors (EUR 205 billion) and lifetime extensions (EUR 36 billion), excluding additional investment required for the development of European SMRs.

(9c) Recent geopolitical developments have led to a reassessment of the role of nuclear technologies and nuclear energy in the Union. In this context, there is renewed interest among Member States and at Union level in strengthening investment in nuclear research and innovation. This is reflected, inter alia, in the creation of the European Industrial Alliance on Small Modular Reactors and the adoption, on 10 March 2026, of the Commission Communication on a Strategy for the development and deployment of Small Modular Reactors (SMRs) in Europe. Building on these initiatives, the Programme should prioritise research and innovation supporting the industrialisation, standardisation, and deployment of European SMR and AMR designs, with a view to strengthening energy security and Union competitiveness.

(9d) The proposed overall budget increase constitutes a positive signal to the nuclear sector. However, a further increase in the allocation is necessary, in particular for research in nuclear fission, in order to support the development of cutting-edge European fission technologies, accelerate the transition from science and theory to

engineering and construction, foster a competitive and innovative nuclear fission industry and supply chain within the Union, and support the emergence and scale-up of start-ups and innovative concepts enabling the deployment of first-of-a-kind small and advanced fission power plants in the Union.

(9e) Initiatives already undertaken at Union level demonstrate commitment, but insufficient and uneven investment as well as a lack of coordination risk undermining Europe's leadership in nuclear technologies. Strengthening nuclear research and innovation through appropriate funding, a better alignment of national and Union efforts and faster deployment of innovative technologies is essential for energy security, decarbonisation, and industrial competitiveness. In this context, the launch of "moonshot" projects at Union level, in particular under Horizon Europe and in close connection with the Competitiveness Fund, is likely to accelerate the transition from research to demonstration and deployment by mobilising funding from Union, national, public and private sources. Such an approach should cover both fusion energy and innovative nuclear fission technologies, including SMRs, AMRs and advanced fuel cycles.

(9f) Euratom advanced nuclear fuel projects contribute to strengthening the security of nuclear fuel supply in the Union by supporting the development, qualification and deployment of safe, reliable and European fuel solutions. This is particularly important in view of the Union's continued dependence on Russian nuclear fuel for a significant number of reactors, in particular the 19 VVER reactors currently in operation, for which fully European alternatives are not yet widely available. By fostering cooperation between industry, research organisations and nuclear operators, these projects play a key role in enhancing technological sovereignty, diversifying supply chains and reducing strategic dependencies.

(10) As in Horizon Europe, the OECD definitions regarding technological readiness levels (TRLs) should continue to be taken into account in the classification of technological research, product development and demonstration activities and in the definition of types of action available in calls for proposals. Grants should not be awarded for actions where activities go above TRL 8.

(11) It should be possible to implement parts of the budget through European Partnerships together with other public and private entities, where this is the most effective implementation form to achieve the policy objectives. European Partnerships should be established where a close involvement of the Union is required and should ensure appropriate voting rights for the Union as well as sufficient co-investment by other partners to leverage Union funding. In view of fostering synergies and efficiencies, it is necessary to ensure harmonised rules. Therefore, a strategic and coherent portfolio of a limited number of European Partnerships should be established.

(12) European Partnerships, as an essential tool to deliver on industrial involvement and investment in collaborative research and innovation, should contribute to the specific policy objectives of the policy windows of the ECF and be supported through it, where necessary, to complete these objectives.

(13) The Joint Research Centre ('JRC') should continue to provide independent scientific evidence and technical support for Union policies throughout the whole policy cycle. The direct actions of the JRC should be implemented in a flexible, efficient, and transparent manner, taking into account the needs of Union policies and the relevant needs of the users of the JRC and ensuring the protection of the Union's financial interests. The JRC should continue to generate additional resources, which it may use to support its scientific and technical activities.

(14) The Programme ***should encourage the involvement of young researchers in the fields covered by the Programme. It*** should ensure the effective promotion and protection of values and principles of the European Research Area and the Pact for Research and Innovation[5], notably ethics and integrity in research and innovation, freedom of scientific research, science for policy, gender equality and equal opportunities, non-discrimination, open science and the promotion of attractive***, stable and high-quality*** research careers and mobility. In particular, the Programme should ensure the effective promotion of equal opportunities for all and the implementation of gender mainstreaming, including the integration of the gender dimension in R&I content. It should aim to address the causes of gender imbalance. ***The Programme should also encourage inclusive working and training environments, including for persons with***

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5 Council Recommendation (EU) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe, OJ L 431, 2.12.2021, p. 1, ELI: http://data.europa.eu/eli/reco/2021/2122/oj

disabilities and underrepresented groups. Particular attention should be paid to ensuring, to the extent possible, gender balance in evaluation panels and in other relevant advisory bodies such as boards and expert groups.

(14a) Recognising the need for a highly skilled workforce in nuclear science and technology, the Euratom research and training programme 2028–2032 should prioritise the development and retention of nuclear skills and competences across the Union. In response to growing workforce shortages, the Programme should support students, researchers and professionals through specialised training, mobility opportunities and improved access to research infrastructures, in synergy with the Marie Skłodowska-Curie Actions and other Union programmes. It should also contribute to maintaining and upgrading key nuclear research infrastructures and promote cross-border cooperation, strengthening knowledge exchange and sustaining Europe's nuclear expertise.

(15) Nuclear research infrastructures are pivotal assets for the Union, providing essential tools and equipment to advance research in science and technology. ***In view of geopolitical uncertainty and developments, the security of such infrastructures is a priority.*** The development, integration and financial sustainability of such research infrastructures of Union interest should ensure operational excellence and continuous accessibility to European researchers, enabling collaborative and cross-border research while complementing Member States' capabilities.

(16) Acknowledging the benefit derived from international cooperation towards addressing, among others, shared technological, economic, environmental and societal concerns, the Programme, should promote cooperation with third countries. International cooperation should aim to strengthen the Union's competitiveness and excellence in R&I, including its capacity to attract and retain the best talents worldwide. Geopolitical considerations, including economic security, should be at the centre of the approach and varying degrees of cooperation should be considered based on an overall assessment of the benefit that could be derived by the Union towards addressing its priorities and global challenges while safeguarding the Union's values and interests. ***Appropriate safeguards should be provided for sensitive knowledge, infrastructure and results.*** Association to all or parts of the Programme should remain the most comprehensive form of cooperation.

(17) To reinforce the Union's strategic autonomy and ensure long-term sustainable economic growth, it is essential to bolster its global competitiveness while safeguarding its

strategic assets and interests as outlined in the European Economic Security Strategy[6]. Article 136 of Regulation (EU, Euratom) 2024/2509 of the European Parliament and of the Council[7], as complemented by Article 10 of Regulation (EU) [*establishing the ECF*], promotes the competitiveness of the Union (as defined in Regulation [*establishing the ECF*]) and protects its economic security. The application of these provisions for the purpose of the Programme should provide an appropriate legal framework to allow, where necessary, for the establishment of specific conditions regarding award procedures that promote research-driven competitiveness and protect the interests and strategic autonomy of the Union, including measures aimed at restricting participation or protecting results and ensuring coherence and consistency with specific rules under the ECF windows. Where necessary, a risk-based approach should be applied to ensure that risks related to research and innovation are identified, assessed, and addressed through proportionate and effective measures[8].

(18) In light of increasing risks linked to natural hazards, health emergencies, technological accidents, water scarcity, evolving security and energy supply threats***, hybrid attacks*** and other disruptions, it is essential to enhance the Union's and Member States' capability to anticipate, prepare for and respond to crises and disasters. The Programme should support research that strengthens disaster risk and crisis management, invest in climate and water resilience***, contribute to reducing critical dependencies,*** and enhance the resilience of vital societal functions ***exposed to security risks*** and build a more resilient, secure and prepared Union, in line with the objectives of the European Preparedness Union Strategy[9] and the Roadmap towards ending Russian energy imports[10]. The Programme acknowledges climate change as one of the biggest global and societal challenge and climate action as a driver for industrial competitiveness.

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6 Joint Communication to the European Parliament, the European Council and the Council on "European Economic Security Strategy, JOIN(2023) 20 final, Brussels, 20.06.2023.

7 Regulation (EU, Euratom) 2024/2509 of the European Parliament and of the Council of 23 September 2024 on the financial rules applicable to the general budget of the Union (OJ L, 2024/2509, 26.9.2024, ELI: http://data.europa.eu/eli/reg/2024/2509/oj)

8 Council Recommendation of 23 May 2024 on enhancing research security (OJ C, C/2024/3510, 30.5.2024, ELI: http://data.europa.eu/eli/C/2024/3510/oj).

9 Joint Communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Preparedness Union Strategy, JOIN(2025) 130 final.

10 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Roadmap towards ending Russian energy imports (COM(2025) 440, 12.5.2025).

Activities should reflect the importance of tackling climate change in line with the Union's commitments to implement the Paris Agreement[11]. ***Activities under the Programme should also contribute to environmental sustainability, efficient resource use, pollution prevention, waste minimisation and consistency with the Union's climate and environmental objectives, while respecting its specific nature.***

(19) Simplification in the Programme's implementation is essential to ensure its accessibility and efficiency, particularly by reducing the administrative burden on beneficiaries and minimising the risk of errors. To this end, the Programme should primarily rely on lump sums as the default form of Union funding. Advancing efforts over the previous Framework Programmes to streamline funding rules and minimise errors, the reimbursement of personnel costs should also be further simplified by using personnel unit costs, which reduces complexity for participants and facilitates reporting. ***Moreover, the Programme should be implemented taking into account the need for simplification and reduced administrative burden, wherever possible and duly justified.***

(20) In view of strengthening the Union's competitiveness and maximising the uptake and deployment of the results in general, beneficiaries owning results should manage their results in accordance with their obligations established under this Regulation regarding valorisation and dissemination. Those obligations may be adjusted in the work programme, call conditions or grant agreement where appropriate based on policy considerations, including related to economic security, but should encompass requirements to protect, give access, valorise results and make them public as appropriate and justified, including through open science practices. ***Publicly funded knowledge should, where appropriate, also be disseminated as widely as possible, including to public authorities, education and training bodies, workers and social partners, in order to support uptake, skills development, safety culture and evidence-based policymaking.*** To facilitate and accelerate the valorisation process, support instruments and tools should be put in place in line with the Commission's valorisation strategy as developed under Regulation [*establishing the ECF*] and any such support and services provided for in its Chapter III.

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11 OJ L 282, 19.10.2016, p. 4.

(21) In full respect of the Member States' right to determine their choice between different energy sources, ***recognising that many Member States will rely significantly on nuclear energy as a strategic contribution to their respective decarbonisation pathways,*** the Programme's results should contribute towards a climate-neutral energy system with co-benefits for air quality.

(22) Regulation (EU) 2024/1735 of the European Parliament and of the Council[12] lists nuclear amongst net-zero technologies and acknowledges that innovation will be a crucial factor in ensuring the Union's competitiveness. ***Therefore, the Programme should stimulate innovation in the nuclear fission field, including advanced nuclear fission and innovative fuel technologies, which will contribute directly to the objectives of carbon neutrality, competitiveness and strategic autonomy in the short, medium and long term. It should foster the development of new European nuclear technologies and related supply chains, such as SMRs and AMRs, in line with the Strategy for the development and deployment of Small Modular Reactors (SMRs) in Europe, and contribute to the competitiveness of European technologies with regards to non-European technologies.***

(22 a) To maximise synergies and encourage long-term investment in nuclear energy research and production, it is essential that the Union address all barriers to public and private funding and support in the Union, be it at national or Union level, for nuclear energy. Such barriers persist in many Union legal acts, despite a clear political commitment to support the technology. Union legal acts should allow funding for nuclear energy research and production in Union funding instruments under conditions equivalent to those applicable to net-zero technologies as defined in Article 3, point (1) of Regulation (EU) 2024/1735.

(23) As all Member States make use of radioactive materials, it is important to ensure the responsible and safe management of spent fuel and radioactive waste, as required by the Council Directive 2011/70/Euratom[13], to avoid undue burdens on future generations.

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12 Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem and amending Regulation (EU) 2018/1724 (OJ L, 2024/1735, 28.6.2024), ELI: http://data.europa.eu/eli/reg/2024/1735/oj

13 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, ELI: http://data.europa.eu/eli/dir/2011/70/oj).

The Programme should continue to improve and support research and development relating to technologies and competencies in spent fuel and radioactive waste management.

(24) The Community should continue to play a key role in the development of fusion energy, recognising its potential significant benefits in ensuring long-term security and diversity of energy supply. Fusion energy research under the Programme should be implemented in accordance with [the Union's Fusion Strategy][14] which outlines the actions, notably on research and development, required to advance towards a Union fusion pilot power plant. The strategy seeks a stronger involvement of industry and start-ups and encompasses alternative fusion concepts. ***Its implementation should also support scientific excellence, industrial learning, quality working conditions, skills formation and the timely transfer of knowledge to the European research and industrial base, including start-ups and public research organisations, where appropriate.***

(25) In the short- to medium-term, a key step in fusion energy development in the Community is the timely completion of ITER construction and the start of research operations. While this is the responsibility of the ITER International Fusion Energy Organization (the 'ITER Organization'), Euratom bears the largest contribution among international partners, according to the Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project (the 'ITER Agreement')[15]. To ensure a more coherent and streamlined approach to the goals of [the Union's Fusion Strategy] and the Programme's objectives, that contribution to the ITER project should come from the Programme's indicative financial envelope. ***Given the scale of the Union's financial contribution and the strategic importance of the project, implementation should be accompanied by strong transparency, regular reporting to the European Parliament and to the Council, and robust public accountability concerning progress, costs, risks and lessons learnt, without prejudice to applicable security and confidentiality requirements.***

(25 a) While the timely completion of ITER is a specific objective of the Programme, Russia's unprovoked and unjustified war of aggression against Ukraine renders its

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14 European Strategy to harness Fusion Energy (COM(YYYY) NNN, DD.MM.YYYY).

15 Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project (OJ L 358, 16.12.2006, p. 62, ELI: http://data.europa.eu/eli/agree_internation/2006/943(1)/oj).

continued participation in strategic Union research projects fundamentally incompatible with the Union's values, interests, and security.

(26) The Community should also continue the privileged partnership between Euratom and Japan, embedded in the Agreement for the Joint Implementation of the Broader Approach Activities (the 'Broader Approach Agreement')[16] setting out complementary joint fusion research activities.

(27) Article 12(1)(a) of the Statutes of Fusion for Energy contained in Council Decision 2007/198/Euratom[17] provides that the Euratom contribution shall be made available through the Community research and training programmes adopted pursuant to Article 7 of the ***Euratom*** Treaty or through any other decision adopted by the Council.

(28) Council Decision 2007/198/Euratom is not amended by this Regulation and remains to form part, together with the ITER Agreement and the Broader Approach Agreement, of the existing applicable legal framework for ITER.

(29) It should also be possible to address the Programme's objectives through financial instruments, budgetary guarantees and blending operations under Union programmes provided that actions comply with the objectives and rules of such programmes.

(30) Indirect actions under this Programme should be covered by the Mutual Insurance Mechanism established pursuant to Regulation [*establishing the Horizon Europe Framework Programme*].

(31) The actions supported under this Regulation should be proportionate, avoiding duplication or crowding out, incentivise private funding and have Union added-value. This should also ensure consistency between the Programme's actions and State aid rules, thereby avoiding undue distortions of competition in the internal market.

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16 Agreement between the European Atomic Energy Community and the Government of Japan for the Joint Implementation of the Broader Approach Activities in the Field of Fusion Energy Research (OJ EU L 246, 21.9.2007, p. 34, ELI: http://data.europa.eu/eli/agree_internation/2007/614/oj).

17 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, ELI: http://data.europa.eu/eli/dec/2007/198/oj).

(32) This Regulation lays down an indicative financial envelope for the Programme for the period 2028-2032. For the purpose of this Regulation, current prices are calculated by applying a fixed 2% deflator.

(33) Regulation (EU, Euratom) 2024/2509 applies to the Programme. It lays down the rules on the establishment and the implementation of the general budget of the European Union, including the rules on grants, prizes, non-financial donations, procurement, indirect implementation, financial assistance, financial instruments and budgetary guarantees.

(34) Fusion for Energy uses a distinct financial regulation in line with Article 5 of Council Decision 2007/198/Euratom.

(34a) This Regulation as well as its governance arrangements should be conducive to proper decision-making by the budgetary authority and to appropriate parliamentary oversight. In particular, any specification of the programme's internal architecture should be duly reflected in the budget nomenclature through the introduction of corresponding budget lines.

(34b) The implications of this Regulation for the Union budget have been assessed pursuant to Article 310(4) TFEU. Sufficient financial and human resources should be provided for its implementation, while considering the impact of the financing on other Union programmes or policies and ensuring its compatibility with the multiannual financial framework, the system of own resources and the corresponding interinstitutional agreement, as well as with the budgetary principles laid down in Regulation (EU, Euratom) 2024/2509.

(35) In view of ensuring consistency, a budgetary guarantee and financial instruments, including when combined with non-repayable support in blending operations, under this Programme should be implemented in accordance with Title X of the Financial Regulation and with technical arrangements, terms and conditions established by the Commission for the purposes of its application.

(36) Where Union support under the Programme is to be provided in the form of a budgetary guarantee or a financial instrument, including where combined with non-repayable support in a blending operation, with the exception of financial instruments under the EIC, such support should be provided exclusively through the ECF InvestEU Instrument in accordance with the applicable rules of the ECF InvestEU Instrument.

(37) In accordance with Regulation (EU, Euratom) 2024/2509, Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council[18], Council Regulation (Euratom, EC) No 2988/95[19],Council Regulation (Euratom, EC) No 2185/96[20] and Council Regulation (EU) 2017/1939[21], the financial interests of the Union are to be protected through proportionate measures, including the prevention, detection, correction and investigation of irregularities and fraud, the recovery of funds lost, wrongly paid or incorrectly used and, where appropriate, the imposition of administrative sanctions. In particular, in accordance with Regulation (EU, Euratom) No 883/2013 and Regulation (Euratom, EC) No 2185/96 the European Anti-Fraud Office (OLAF) may carry out investigations, including on-the-spot checks and inspections, with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the Union. In accordance with Regulation (EU) 2017/1939, the European Public Prosecutor's Office (EPPO) is competent to investigate and prosecute fraud and other criminal offences affecting the financial interests of the Union as provided for in Directive (EU) 2017/1371 of the European Parliament and of the Council[22]. In accordance with Regulation (EU, Euratom) 2024/2509, any person or entity receiving Union funds is to fully cooperate in the protection of the Union's financial interests, to grant the necessary rights and access to the Commission, OLAF, the European Court of Auditors and, as appropriate, to the EPPO, and to ensure that any third parties involved in the implementation of Union funds grant equivalent rights.

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18 Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.9.2013, p. 1, ELI: http://data.europa.eu/eli/reg/2013/883/oj).

19 Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.95, p. 1, ELI: http://data.europa.eu/eli/reg/1995/2988/oj).

20 Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15.11.96, p. 2, ELI: http://data.europa.eu/eli/reg/1996/2185/oj).

21 Council Regulation (EU) 2017/1939 of 12 October 2017 implementing enhanced cooperation on the establishment of the European Public Prosecutor's Office ('the EPPO') (OJ L 283, 31.10.2017, p. 1, ELI: http://data.europa.eu/eli/reg/2017/1939/oj).

22 Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law (OJ L 198, 28.7.2017, p. 29, ELI: http://data.europa.eu/eli/dir/2017/1371/oj).

(38) The Programme is to be implemented in accordance with Regulation (EU, Euratom) XXX of the European Parliament and of the Council [Performance Regulation][23] which establishes the rules for the expenditure tracking and the performance framework for the budget, including rules for ensuring a uniform application of the principles of 'do no significant harm' and gender equality referred to in Article 33(2), points (d) and (f), rules for monitoring and reporting on the performance of Union programmes and activities, rules for establishing a Union funding portal, rules for the evaluation of the programmes, as well as other horizontal provisions applicable to all Union programmes such as those on information, communication and visibility.

(39) The Programme should be implemented in compliance with the principle of the rule of law and the rights and principles set out in the Charter of Fundamental Rights of the European Union and be in line with the international obligations of the Union and the Member States arising from the international instruments to which they are party, including Human rights instruments such as the UN Convention on the Rights of Persons with disabilities.

(40) In order to ensure uniform conditions for the Programme's implementation through work programmes, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council[24].

(41) The advisory procedure set out in Regulation (EU) No 182/2011 of the European Parliament and of the Council should be used for the adoption of the work programmes given the important financial implications of the Programme.

(42) The JRC Board of Governors set up by Commission Decision 96/282/Euratom[25] has been consulted on the scientific and technological content of the Programme on the nuclear direct actions of the JRC.

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23 Regulation [*Performance Regulation*].

24 Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13) ELI: http://data.europa.eu/eli/reg/2011/182/oj

25 Commission Decision 96/282/Euratom of 10 April 1996 on the reorganization of the Joint Research Centre (OJ L 107, 30.4.1996, p. 12) ELI: http://data.europa.eu/eli/dec/1996/282/oj

(43) The European Parliament and the European Economic and Social Committee have been consulted on a voluntary basis and have delivered opinions[26].

(44) The Programme replaces the programme established by Regulation (Euratom) 2025/1304[27]. Regulation (Euratom) 2025/1304 should therefore be repealed,

HAVE ADOPTED THIS REGULATION:

Article 1

Subject matter

This Regulation establishes the Research and Training Programme of the European Atomic Energy Community (the 'Programme') for the period 2028-2032. It also lays down the objectives of the Programme and its budget for that period including the Community's contribution to the ITER project, the forms of Union funding and the rules for providing such funding.

Article 2

Definitions

For the purposes of this Regulation, and subject to the second paragraph of this Article, the definitions in Article 2 of Regulation [*establishing the Horizon Europe Framework Programme*] apply.

For the purposes of this Regulation:

(1) 'Union' means the European Union, the European Atomic Energy Community, or both, as the context may require;

(2) 'coordination and support action' means an action contributing to the Programme's objectives, excluding R&I activities, except when undertaken in the case of Euratom co-funded partnerships.

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26 OJ … and OJ …

27 Council Regulation (Euratom) 2025/1304 of 23 June 2025 establishing the Research and Training Programme of the European Atomic Energy Community for the period 2026-2027 complementing Horizon Europe – the Framework Programme for Research and Innovation and repealing Regulation (Euratom) 2021/765 (OJ L, 2025/1304, 3.7.2025) ELI: http://data.europa.eu/eli/reg/2025/1304/oj

Article 3

Programme objectives

1. ***T***he Programme shall strengthen the Union's competitiveness***, strategic autonomy, energy security*** and decarbonisation***, promote the public value of Union-supported knowledge and innovation,*** while protecting people and the environment by advancing research and training in nuclear science and technology in synergy with Union programmes ***and in line with the general and specific objectives of Horizon Europe and the European Competitiveness Fund***.

2. The Programme's specific objectives are:

   (a) support the construction and operation of ITER, ensuring performance-based funding for the delivery of European components by Fusion for Energy, the integration work by the ITER Organization and that technical and scientific lessons learnt from ITER benefit the Union;

   (b) advance fusion research, supporting the transition from basic science to technology, engineering and innovation, foster the development of the Union's fusion***-related scientific and technological capacities***, support the emergence of start-ups and innovative concepts for enabling future fusion power plants, ***promote skills development and workforce renewal***;

   (ba) advance fission research, bridging the gap between fundamental fission research and applied technology, engineering, and innovation, foster the development of cutting-edge European fission technologies, support the emergence of start-ups and innovative concepts for enabling first-of-a-kind small and advanced fission power plants in Europe and promote skills development and workforce renewal;

   (c) advance research on nuclear safety, ***reprocessing, recycling and advanced closed fuel cycles,*** security and safeguards, non-proliferation, radiation protection, nuclear data, ***security of supply, with a view to achieving total independence from Russian nuclear fuel and technologies, through the development of alternative solutions,*** the management of radioactive waste and spent fuel and the innovative use of ionising radiation including in the medical sector;

(d) develop, retain and utilise expertise and competencies in the nuclear field through education and training and support access to state-of-the-art research infrastructures, ensuring their long-term sustainability and operational excellence; and

(e) provide independent and science-based policy support to Union policies and develop the knowledge base for standardisation and modelling***;***

(ea) enhance international cooperation in the field of nuclear science and technology in line with the Union's strategic interests and policies.

3. The objectives referred to in paragraphs 1 and 2 shall be achieved through the activities listed in the Annex.

Article 4

Horizontal principles

The horizontal principles set out in Article 5 of Regulation [*establishing the Horizon Europe Framework Programme*] shall apply to the Programme.

Article 5

Budget

1. The ***Programme*** envelope ***for the implementation of this Regulation*** for the period 2028 - 2032 shall be EUR 6 682 000 000[28] in current prices ***(EUR 6 074 000 000 in 2025 prices)***.

1a. The indicative distribution of the amount referred to in paragraph 1 of this Article shall be:

(a) 59,2% as a contribution to the European Joint Undertaking for ITER;

(b) 14,7% for indirect actions in fusion;

(c) 14,7% for indirect actions in fission;

(d) 11,4% for direct actions by the JRC.

[28] That indicative financial envelope includes the Programme's contribution to Fusion for Energy

In accordance with Article 15(3) of Regulation (EU, Euratom) 2024/2509, all decommitments stemming from the Programme or its predecessors shall be re-used in the financial year following the year of decommitment. Those funds shall be recommitted to the same budget line or another budget line of the Programme than the budget line under which the commitments were originally made. Such appropriations shall be made available to those budget lines in addition to the usual budgetary allocations provided for in the annual budgetary procedure.

The indicative distribution shall be implemented in a manner that ensures adequate and predictable funding for each component of the Programme. The allocation of appropriations shall aim to secure a minimum level of resources for all activities, taking into account their specific objectives, long-term planning requirements and, where relevant, the Union's international commitments. In particular, the Union contribution to the European Joint Undertaking for ITER shall be ensured in line with those commitments and with the need to guarantee continuity of the project. The specific amount allocated to ITER under the Programme shall be guaranteed and shall remain earmarked in the general budget.

2. The amount referred to in paragraph 1 of this Article and the amounts of additional resources referred to in Article 6 may also be used for technical and administrative assistance for the implementation of the Programme, such as preparatory, monitoring, control, audit and evaluation activities, information technology systems and platforms, information and communication activities, including corporate communication on the political priorities of the Union, and all other technical and administrative assistance or staff-related expenses incurred by the Commission for the management of the Programme***, including for the collection of data necessary for monitoring the outcomes of supported actions***.

3. If necessary to enable the management of actions not completed by 31 December 2032, appropriations may be entered in the Union budget beyond 2032 to cover the expenses necessary and to enable the management of actions not completed by the end of the Programme.

4. Budgetary commitments for activities extending over more than one financial year may be broken down over several years into annual instalments.

Article 6

Additional resources

1. Member States, Union institutions, bodies and agencies, third countries, international organisations, international financial institutions, ***philanthropic organisations*** or other third parties, may make additional financial or non-financial contributions to the Programme. Additional financial contributions shall constitute external assigned revenue within the meaning of Article 21(2), points (a), (d), or (e) or Article 21(5) of Regulation (EU, Euratom) 2024/2509.

2. Resources allocated to Member States under shared management***, as well as voluntary direct financial contributions made by Member States pursuant to paragraph 1 of this Article,*** may, at their request, be made available to the Programme. The Commission shall implement those resources directly or indirectly in accordance with Article 62(1), point (a) or (c) of Regulation (EU, Euratom) 2024/2509. They shall be additional to the amount referred to in Article 5(1) of this Regulation. Those resources shall be used for the benefit of the Member State concerned. Where the Commission has not entered into a legal commitment under direct or indirect management for additional amounts thus made available to the Programme, the corresponding uncommitted amounts may, at the request of the Member State concerned, be transferred back to one or more respective source programmes or their successors.

Article 7

Alternative, combined and cumulative funding

1. The Programme shall be implemented in synergy with other Union programmes. An action that has received a Union contribution from another programme may also receive a contribution under this Programme. The rules of the relevant Union programme shall apply to the corresponding contribution or a single set of rules may be applied to all contributions and a single legal commitment may be concluded. If the Union contribution is based on eligible cost, the cumulative support from the Union budget shall not exceed the total eligible costs of the action and may be calculated on a pro-rata basis in accordance with the documents setting out the conditions for support.

2. Award procedures under the Programme may be jointly conducted under direct or indirect management with Member States, Union institutions, bodies and agencies,

third countries, international organisations, international financial institutions, or other third parties, provided the protection of the financial interests of the Union is ensured. Such procedures shall be subject to a single set of rules and lead to the conclusion of single legal commitments. For that purpose, the partners to the joint award procedure may make resources available to the Programme in accordance with Article 6 of this Regulation, or the partners may be entrusted with the implementation of the award procedure, where applicable in accordance with Article 62(1), point (c), of Regulation (EU, Euratom) 2024/2509. In joint award procedures, representatives of the partners to the joint award procedure may also be members of the evaluation committee referred to in Article 153(3) of Regulation (EU, Euratom) 2024/2509.

3. Under this Programme, ***a Seal of Excellence*** shall be awarded only to high-quality actions ***that have been assessed in a call for proposals under the Programme, that comply with the minimum quality requirements of that call for proposals and*** that ***have*** not been financed under the Programme due to budgetary constraints.

4. Member States may finance actions ***for*** which a ▌Seal ***of Excellence*** was awarded.

Article 8

Third countries associated to the Programme

Rules for third countries associated to the Programme set out in Article 9 of Regulation [establishing the Horizon Europe Framework Programme] shall apply to the Programme.

Article 9

Implementation and forms of Union funding

1. The Programme shall be implemented in accordance with Regulation (EU, Euratom) 2024/2509, under direct management or under indirect management with bodies referred to in Article 62(1), point (c) of that Regulation.

2. Union funding may be provided in any form in accordance with Regulation (EU, Euratom) 2024/2509, in particular grants, prizes, procurement, non-financial donations and financial instruments.

3. With the exception of ***support provided*** under the EIC ▌, where Union support is provided in the form of a budgetary guarantee or a financial instrument, including where combined with non-repayable support in a blending operation, it ***may*** be

▌provided through the ECF's InvestEU Instrument and implemented in accordance with the applicable rules of the ECF's InvestEU Instrument through the contribution or guarantee agreements concluded for that purpose.

4. Union support in the form of a budgetary guarantee shall be provided within the maximum amount of the budgetary guarantee established by the ECF Regulation.

5. Where the Programme makes use of the ECF Investment Instrument, it shall provide the provisioning for the budgetary guarantee and the financing to financial instruments, including when combined with non-repayable support in the form of a blending operation ***within the maximum amount of the budgetary guarantee established by [the ECF Regulation]***.

6. Where Union funding is provided in the form of a grant, funding shall be provided ***in a manner that is most suitable for the relevant action and beneficiary involved, including through*** simplified cost options in particular through lump sums as well as unit costs for personnel, in accordance with Regulation (EU, Euratom) 2024/2509 ***as well as through*** actual eligible cost reimbursement only where the objectives of an action cannot be achieved otherwise. Where it is necessary to enable other sources of funding including co-investments with national resources subject to State aid rules, funding shall be provided in the form of actual eligible cost reimbursement or simplified cost options.

7. ***By way of derogation from*** Article 153(3) of Regulation (EU, Euratom) 2024/2509, the evaluation committee ***shall*** be composed ▌ of independent external experts. ***The evaluation committee may be composed partially or, in the case of coordination and support actions, partially or fully of representatives of Union institutions or bodies as referred to in Articles 68 to 71 of the Regulation (EU, Euratom) 2024/2509.***

Article 10

Partnerships

1. ***Rules for European Partnerships set out in Article 11 of Regulation [establishing the Horizon Europe Framework Programme] shall apply to the Programme.***

2. Euratom co-funded partnerships may be funded through grants awarded to consortia comprising a core of legal entities established or designated by Member States and by any third country associated to the Euratom Programme that will develop a joint

programme of R&I and coordination and support activities, including potentially the organisation of joint open calls. The work programmes referred to in Article 13 shall define the scope of Euratom co-funded partnerships, the funding rate enabling appropriate co-financing by the partners and the potential participation of entities other than those established or designated by Member States and by any third country associated to the Euratom Programme. Euratom co-funded partnerships may also support the objectives of European Partnerships established under paragraph 2 as well as international cooperation in their respective field.

Article 11

Joint Research Centre

The JRC shall provide independent, evidence-based knowledge and science, supporting EU policies ***and policy development*** to positively impact society. This shall be undertaken through JRC direct actions and through participation of the JRC in indirect actions. Chapter II of Title II of Regulation [*establishing the Horizon Europe Framework Programme*] shall not apply to direct actions.

Article 12

Eligibility and rules of participation and dissemination

1. Eligibility criteria shall be set to support achievement of the general and specific objectives laid down in Article 3, in accordance with Regulation (EU, Euratom) 2024/2509 and apply to all award procedures under the Programme.

2. Subject to paragraph 3 of this Article, Chapters I and II of Title II on rules for participation and dissemination of Regulation [*establishing the Horizon Europe Framework Programme*] shall apply to actions supported under the Programme. References in Regulation [*establishing the Horizon Europe Framework Programme*] to 'Horizon Europe' shall be construed as references to the Programme where appropriate. References in Regulation [*establishing Horizon Europe Framework Programme*] to 'security rules' shall be construed to include the defence interests of the Member States within the meaning of Article 24 of the Euratom Treaty.

3. By way of derogation from Article 32(g) of Regulation [*establishing the Horizon Europe Framework Programme*], a beneficiary that has received Community funding shall grant access to its results on a royalty-free basis to the Union institutions, bodies,

offices, agencies or Fusion for Energy, for the purpose of developing, implementing and monitoring Community policies and programmes or obligations under international cooperation with third countries and international organisations. Such access rights shall include the right to authorise third parties to use the results in public procurement and the right to sub-license. Access rights shall be limited to non-commercial and non-competitive use.

Article 13

Work programme

1. The Programme shall be implemented by work programmes referred to in paragraph 2 of this Article in accordance with Article 110 of Regulation (EU, Euratom) 2024/2509 and, for the Programme's contribution to the ITER project, in the financial regulation of Fusion for Energy.

   Without prejudice to the first subparagraph, the work programmes may in particular set out:

   (a) actions and associated budget;

   (b) eligibility and award criteria;

   (c) a single ***funding*** rate per action;

   (d) rules applicable to actions concerning more than one specific objective;

   (e) actions to which specific rules apply, in particular on ownership of results, valorisation and dissemination, transfer and licensing as well as access rights to results.

   The second subparagraph shall not apply to the work programmes referred to in Council Decision 2007/198/Euratom.

2. The Commission shall, by means of implementing acts, adopt the work programmes implementing the specific objectives referred to in Article 3(2) and the activities set out in the Annex. ***In preparing those work programmes, the Commission shall ensure coherence with relevant Union policy objectives and may, where appropriate, consult relevant stakeholders.*** Those implementing acts shall be adopted in accordance with the advisory procedure referred to in Article 14(3).

3. The Commission shall adopt separate, multi-annual work programmes, by means of implementing acts, for the implementation of actions under the JRC. Those implementing acts shall be adopted in accordance with the advisory procedure referred to in Article 14(3). The multi-annual work programmes shall take into account the opinion provided by the Board of Governors of the JRC referred to in Decision 96/282/Euratom.

Article 14

Committee procedure

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. The committee may convene in the following configurations, having regard to the subject matter to be discussed:

   (a) Fission: Strategic overview of the implementation of Fission actions

   (b) Fusion: Strategic overview of the implementation of Fusion actions

3. Where reference is made to this paragraph, Article 4 of Regulation (EU) No 182/2011 shall apply.

4. Where the opinion of the committee is to be obtained by written procedure, that procedure shall be terminated without result when, within the time-limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so request.

5. In accordance with international agreements concluded by the Union, representatives of third countries or international organisations may be invited as observers in the meetings of the committee under the conditions laid down in its rules of procedure, taking into account security and public order of the Union or its Member States.

Article 15

Repeal

Regulation (Euratom) 2025/1304 is repealed with effect from 1 January 2028.

Article 16

Transitional provisions

1. This Regulation shall not affect the continuation or modification of the actions concerned, until their closure, under Regulation (Euratom) 2025/1304, which shall continue to apply to the actions concerned until their closure.

2. The financial envelope for the programme may also cover technical and administrative assistance expenses necessary to ensure the transition between the Programme and the measures adopted under its predecessor, Regulation (Euratom) 2025/1304.

Article 17

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2028.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at ,

For the Council The President

ANNEX I

The general and specific objectives referred to in paragraphs 1 and 2 of Article 3 shall be pursued across the 2028-2032 Euratom programme, according to the broad lines of activity described in this Annex.

Specific objectives 2(a) and 2(b)

In relation to fusion, the scope of the Programme is the implementation of the EU Fusion Strategy, including ITER construction and operation, the Broader Approach and IFMIF/DONES. The Programme will be implemented through a combination of complementary fusion research activities and relevant EU instruments, effective involvement of industry and other stakeholders and support to the emergence and development of startups. The following actions will be supported under these specific objectives:

(i) maintain EU leadership in the ITER project by active participation in its governance and supervising Fusion for Energy, in particular for timely delivery of EU components as in-kind contributions;

(ii) continue collaboration with the ITER Organization and partners to ITER related activities;

(iii) support research and innovation to close the key technology gaps standing in the way of the realisation of fusion pilot power plants;

(iv) exploit existing fusion facilities and contribute to the design and development of future facilities in the EU, relying on lessons learned from ITER;

(v) support an effective involvement of industry, aiming to develop fusion technologies, to advance mature technologies towards market readiness, to create business opportunities and to consolidate a European fusion supply chain;

(vi) widen support to include inertial confinement fusion, while keeping focus on magnetic confinement as the most mature approach;

(vii) support European fusion startups to scale up and attract private investments in the EU;

(viii) build competence and skills on fusion energy in the EU and implement a focussed and coordinated education and training programme in addition to activities mentioned under specific objective 2(d);

(ix) support scientific and technological collaboration in the framework of Euratom's international bilateral agreements and other relevant international cooperation schemes.

Specific objective 2(ba)

(i) restore, foster and consolidate Union cutting-edge scientific and technological leadership in nuclear fission by advancing research and innovation;

(ii) continue collaboration with international organisations such as the International Atomic Energy Agency and the OECD's Nuclear Energy Agency;

(iii) support research and innovation to close the key technology gaps standing in the way of the realisation of innovative Union fission power plants such as first-of-a-kind small and advanced modular nuclear reactors;

(iv) exploit existing fission facilities and contribute to the design and development of future facilities in the Union by supporting research and development, of key components, materials and manufacturing processes required for advanced fission power plants;

(v) support an effective involvement of industry and collaboration within Europe's nuclear research and industrial communities, aiming to develop cutting-edge fission technologies, to advance mature innovative technologies towards market readiness, and to contribute to the consolidation of an innovative European nuclear fission supply chain;

(vi) support European fission startups and innovative industrial actors to scale up and attract private investments in the Union;

(vii) support research and development of advanced fuels, in close coordination with activities under specific objective 2(c);

(viii) build competence and skills on innovative fission power technologies in the Union and implement a focussed and coordinated education and training programme in addition to activities mentioned under specific objective 2(d), with particular emphasis on attracting young talent and reversing the loss of expertise;

(ix) strengthen the Union's position in global fission research through cooperation with allied and like-minded partners in the framework of Euratom's international bilateral agreements and other relevant international cooperation schemes.

Specific objective 2(c)

(i) Safety and security of supply

Safety of reactor systems and fuel cycles in use in the Community and for reactor types and their fuel cycles which may be used in the future, ***such as reprocessing, recycling, and advanced closed fuel cycles***, ***as well as small modular reactors (SMRs) and advanced modular reactors (AMRs),*** while ensuring R&I in a resilient nuclear supply chain and security of nuclear supplies, including the development of alternative fuels and spare parts;

(ia) Security of nuclear fuel supply

Research and innovation to strengthen the Union's independence in nuclear fuel supply, including the qualification of European fuel solutions aimed at replacing Russian-supplied nuclear fuel and associated technologies, as well as cooperation to facilitate diversification;

(ii) Nuclear safeguards, non-proliferation and nuclear security (to be implemented by JRC)

Research, innovation, analytical and in-field support to Euratom safeguards implementation, including training of safeguards inspectors. R&D and support on strategic trade control and technical contributions to strengthen the international non-proliferation regime. Capacity building for frontline officers and other security agents to respond to illicit traffic of nuclear material and to other unconventional Chemical, Biological, Radiological and Nuclear (CBRN) threats. Research and analytical methods to enhance detection of nuclear and radioactive material out of regulatory control, nuclear forensics

(iii) Radiation protection

Research and innovation in radiation protection to improve understanding and mitigating the health risks from the ionising radiation, and to enhance emergency preparedness ***and response***:

Effects and risks of ionising radiation from industrial, medical or environmental exposure;

Emergency preparedness and response for radiological emergencies, environmental radioactivity monitoring and research on radioecology;

(iv) Innovative use of ionising radiation, including in the ***health*** sector

Research and innovation in non-power applications, with a focus on enhancing public health, safety, sustainability and European competitiveness:

Innovative applications of ionising radiation, including medical radionuclides, for diagnostics and treatments of cancer and other diseases;

Security of supply and safe use of radionuclides

Other innovative applications of ionising radiation and nuclear materials

(v) Nuclear data

Development and use of modelling techniques, including simulation codes, tools and data to validate the safety, security and safeguards of nuclear systems.

(vi) Safe spent fuel and radioactive waste management

Research into innovative and sustainable solutions for the safe management of radioactive waste and spent fuel and in particular pre-disposal activities and disposal of intermediate- and high-level radioactive waste and spent nuclear fuel, and of other radioactive waste streams and types for which industrially mature processes currently do not exist or could be improved; radioactive waste minimisation and reducing the radiotoxicity of this waste; the management and transfer of knowledge and competences between generations and across Member States' programmes in radioactive waste and spent fuel management;

(vii) Decommissioning

Research for the evaluation, development and deployment of technologies for decommissioning and environmental remediation of nuclear facilities; support for sharing best practices and knowledge and preserving the competences in the field of decommissioning;

Specific objective 2(d)

(i) education, training and mobility, including schemes implemented in synergy with ***Union Programmes, especially*** Horizon Europe Framework Programme;

(ii) promotion of innovation, knowledge management, dissemination and exploitation of nuclear science and technology;

(iii) support for technology transfer from the research to industry, strengthening the European industrial capacity and competitiveness;

(iv) support to Member States in developing their nuclear skills and workforce strategy;

(v) support for the long-term sustainability, availability, access and optimal use of nuclear research infrastructures, including those operated by the European Commission, complementing Member States capacities.

Specific objective 2(e)

(i) support to the Union's policy on nuclear safety, radioactive waste and spent fuel management, radiation protection, nuclear security and safeguards, as well as other relevant legislation with independent scientific and technical evidence and expertise;

(ii) harmonisation of radioactivity measurements with certified reference materials and methods, as well as contribution to international nuclear data libraries;

Annex II

Budget Nomenclature

The nomenclature for the Euratom Research and Training programme, including ITER, will include the following budget lines:

12				***ITER and Euratom Research and Training Programme***
12	***01***			***Support administrative expenditure for ITER and Euratom Research and Training Programme***
12	***01***	***01***		***Support expenditure for EURATOM***
12	***01***	***02***		***Support expenditure for ITER***
12	***02***			***Euratom Research and Training Programme***
12	***02***	***01***		***Fusion Research and development***
12	***02***	***02***		***Nuclear Fission, safety and radiation protection***
12	***02***	***03***		***Nuclear direct actions of the Joint Research Centre***
12	***03***			***ITER***
12	***03***	***01***		***Construction, operation and exploitation of the ITER facility - Fusion4Energy JU contribution***