

The European Atomic Energy Community (Euratom) Research and Training Programme

What is Euratom?

The European Atomic Energy Community (Euratom) treaty was initially established in 1957 to coordinate Member States' research programmes on the peaceful use of nuclear energy. Today, it supports the pooling of knowledge, infrastructure, and funding of nuclear energy, as well as providing a secure supply of atomic energy in a monitored framework. It aims to continually improve nuclear safety and radiation protection and support the long-term decarbonisation of the energy system in a safe, efficient and secure way.

In line with the Euratom treaty, the current Euratom research and training programme runs for five years from 2021 until 2025, in contrast to the Horizon Europe programming period of 2021-2027.

In March 2023, the European Commission published the Euratom Work Programme for 2023-2025. It has a total budget of €132 million and calls will focus on the safety of Small Modular Reactors (SMRs), the development of nuclear materials and the secure management and disposal of radioactive waste.

What will be funded?

The research and training programme focuses on improving nuclear safety and radiation protection and aims to contribute to a Europe run by a safe, low-carbon, sustainable, competitive energy system, both in the short and long term.

The Euratom research and training programme is focused on two areas: nuclear fission and radiation protection. Under these areas, the Work Programme is primarily structured around four separate 'strategic orientations':

Nuclear safety

Safe spent fuel and
radioactive waste
management,
decommissioning

Nuclear science
and ionising
radiation
applications,
radiation protection,
emergency
preparedness

Expertise and
competence in the
nuclear field within
the Community

Where appropriate, social science and humanities, access to transnational research infrastructures, international cooperation with Third Countries, and dissemination, Open Access and public outreach are encouraged.

Thanks to the programme's stakeholders, Euratom is a global leader in *fusion* research. Through its participation in the construction and exploitation of the [ITER megaproject](#), Euratom also aims to consolidate this position in the current decade.

Funding, eligibility and project details

Topics under the 2023-25 Euratom Work Programme primarily provide opportunities for Research and Innovation Actions and Coordination and Support Actions, but also for 'Other Actions' such as prizes and external expertise.

The objectives of the 2023-2025 programme represent an evolution compared to previous Euratom programmes. For example, the role of the programme in researching the non-power application of nuclear science **in the health and medical sectors**.

In particular, the Euratom Programme will seek synergies in medical applications of ionising radiation, including improvements in the quality and safety of such applications.

The updated Work Programme will also address other synergies such as the digitalisation and deployment of artificial intelligence, robotics, the Internet of Things, big data and novel manufacturing methods.

Most of the programme, particularly research and innovation in fusion energy, nuclear materials, radioactive waste management and radiation protection, will be carried out through co-funded European Partnerships; but where relevant, applicants are encouraged to take advantage of synergies with the Mission on Cancer and the relevant Horizon Europe clusters 1. 'Health' and 4. 'Digital, Industry and Space'.

In the area of Nuclear Safety, the Work Programme will address:

- Euratom-level peer reviews of the Nuclear Safety Directive ('Topical Peer Reviews'), safety of current technology (Generation II Long Term Operation) and Generation III and III+ new-build, including continuous advances in understanding plant ageing, integrity of materials and components and extended operation, e.g. enhanced designs, containments, innovative accident-tolerant fuels, passive systems, core and plant advanced surveillance, monitoring, diagnostics and prognostics and emerging technologies.
- Safety of advanced and innovative nuclear designs, fuel multi-recycling, Partitioning & Transmutation, including cogeneration and licensing of Small and Medium Reactors (SMRs and ASMRs).
- Cross-cutting actions on materials, modelling and simulation using High Performance Computing, artificial intelligence, nuclear data, digitalisation, harmonisation of licensing rules, certification, codes and standards.

Activities under the areas of 'Radioactive waste and spent fuel management' and 'Radiation protection and ionising radiation applications' will primarily be delivered by dedicated European Partnerships.

Finally, the Work Programme also includes details of the SOFT innovation prize for 2024 and 2025, which highlights and rewards excellence in innovation in fusion research as well as the quality of the researchers and industries involved. Following the success of the 2022 edition, the European Commission is holding the contest again in association with the next Symposium on Fusion Technology in 2024. The 2025 prize for Nuclear Innovation will also highlight and reward excellence in nuclear innovation in this field of research as well as the quality of the talented researchers and companies involved.

Unless otherwise stated, Euratom topics are subject to Horizon Europe rules for participation and conditions.

Call timings

The 2023 call 'Nuclear Research and Training' opens on 4 April 2023 and closes on 8 November 2023.

Relevant EU policy areas and developments

The programme strengthens the European Research Area in the nuclear field. It also supports the coordination of Member States' research efforts to avoid duplication, retain a critical mass of research capacities in fission and fusion and ensure that public funds provide EU-added value.

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The success of the European Partnerships requires strong financial and in-kind commitments from Member States. To achieve greater consolidation of research efforts, priority will be given to substantial

projects and more generic call topics, allowing potential beneficiaries to choose how they deliver the expected outcomes. Horizon Europe provides a framework for synergies with the Euratom Programme in education and training and for joint research actions. The latter will focus on ways in which non-power applications of ionising radiation can be used safely and securely in sectors such as medicine, industry, agriculture and space.

More information

- [Euratom European Commission web page](#)
- [Euratom 2023-2025 Work Programme](#)
- [Euratom Supply Agency](#)

Euratom's legal basis:

- [Regulation establishing Euratom](#)
- [Regulation establishing Horizon Europe, laying down its rules for participation and dissemination](#)

Other useful websites:

- [EU Energy Union](#)
- [ITER Project - ITER - the way to new energy](#)
- [Fusion Partnership \(EUROfusion\)](#)
- [JOPRAD: JOint Programming on RADioactive waste disposal - IGD-TP | Safe Solutions for Radioactive Waste](#)

UKRO Portal

- [UKRO Portal](#) (subscriber access required)