

H2020 EURATOM WP 2016-17 - Fission Call 2016-2017

(Calls open May 2016 – Deadline for submission October 2016)

A. Support safe operation of nuclear systems (Indicative Budget EUR 55.45 million)

The actions under this section take into account the European collaborative research activities already supported by Euratom and the priorities of the Strategic Research and Innovation Agenda (SRIA) of SNETP (Sustainable Nuclear Energy Technology Platform) and its three pillars NUGENIA (Nuclear Generation II and III Association), ESNII (European Sustainable Nuclear Industrial Initiative) and NC2I (Nuclear Cogeneration Industrial Initiative)

NFRP 1: Continually improving safety and reliability of Generation- II and -III reactors. Safety and reliability improvements are to be sought in a number of areas, with due consideration to the NUGENIA roadmap. Funding scheme: Research and Innovation Actions, RIAs

NFRP 2: Research on safety of fast neutron Generation-IV reactors. Safety improvements of critical fast neutron Generation-IV systems and their supporting reactor islands, as identified by ESNII in the SET Plan Integrated Roadmap. Funding scheme: Research and Innovation Actions, RIAs

NFRP 3: Investigating the safety of closed nuclear fuel cycle options and fuel developments. Fuel cycle chemistry and physics for the optimization of fuel design and manufacture, reprocessing including MOX
Funding scheme: Research and Innovation Actions, RIAs

NFRP 4: Research on the safety of Small Modular Reactors. Safety features of SMRs, notably passive ones, and provide a set of essential technical specifications to comply with EU Safety Directive
Funding scheme: Research and Innovation Actions, RIAs

NFRP 5: Materials research for Generation-IV reactors. Materials behaviour under conditions typical for Generation-IV reactor concept, refinement of physical models and/or modelling-oriented experiments for compatibility between structural materials, the coolant and advanced fuels. Funding scheme: RIAs

B. Contribute to the development of solutions for the management of radioactive waste (Indicative Budget EUR 18.89 million)

The actions under this section take into account the European collaborative research activities already supported notably by Euratom and the priorities of the Strategic Research Agenda (SRA) of IGD - TP (Implementing Geological Disposal Technology Platform)

NFRP 6: Addressing key priority R&I issues for the first-of-the-kind geological repositories. Topics of high priority and European added value that were raised in safety reviews and identified in the SRA of IGD-TP
Funding scheme: Research and Innovation Actions, RIAs

NFRP 7: Research and innovation on the overall management of radioactive waste other than geological disposal. Management and disposal of other, especially non-standard, radioactive waste types and forms present specific challenges. Funding scheme: Research and Innovation Actions, RIAs

NFRP 8: Pan-European knowledge-sharing and development of competence in radioactive waste management. Further develop scientific, technical and managerial knowledge and competences in the area of radioactive waste management at pan-European level. Funding scheme: Coordination and Support Actions, CSAs

C. Foster radiation protection (Indicative Budget EUR 9 million)

The action under this section takes into account the European collaborative research activities already supported notably by Euratom and the priorities of the Strategic Research and Innovation Agendas (SRIA) of MELODI and partner associations in radio-ecology, dosimetry, Emergency management, complemented recently by the signature of Memoranda of Understanding with five medical associations. Effective cooperation between these various scientific communities and the coherent integration of their activities are a key objective of the recently established European Joint Programme (EJP) in this field.

NFRP 9: Impacts of low-dose radiation exposure. A better understanding of the effects of low-dose ionising radiation on human health is essential in helping to reduce uncertainty regarding the radiation risk resulting from a number of medical and other practices, including practices involving naturally occurring radioactive materials. Capitalise Memoranda of Understanding between MELODI and a number of relevant European medical associations. Funding scheme: RIAs

D. Management of research reactor availability in Europe (Indicative Budget EUR 7.7 milion)

NFRP 10: Support for the optimised use of European research reactors. allow the more efficient use of research reactors in Europe for the purpose of energy research and training and the production of medical radioisotopes. Funding scheme: Coordination and Support Actions, CSAs

NFRP 11: Support for the EU security of supply of nuclear fuel for research reactors. Research reactor materials research, isotope production, silicon doping, nuclear science and engineering and related E&T. Funding scheme: Research and Innovation Actions, RIAs

E. Support the development of nuclear competences at EU level (Indicative Budget EUR 6 million)

NFRP 12: Support for careers in the nuclear field. Further implementation in the nuclear and relevant industrial and medical sectors of “Euratom Fission Training Schemes” EFTS based on ECTS and ECVET Mechanisms. Funding scheme: Coordination and Support Actions, CSAs

F. Fission/fusion cross-cutting actions (Indicative Budget EUR 8 million)

The actions under this section take into account the research activities already supported by Euratom, including through the EUROfusion joint programme. Activities will not be funded if there is duplication of or significant overlap with work already supported in the fission or fusion programs.

NFRP 13: Fission/fusion cross-cutting research in the area of multiscale materials modelling. To encourage closer integration of research efforts between fission and fusion in the domain of multi-scale modelling in research on material properties and the development of new materials. Funding scheme: Research and Innovation Actions, RIAs

NFRP 14: Cross-cutting support to improved knowledge on tritium management in fission and fusion facilities. To contribute to the solution of a number of key issues in the management of tritium in fission and fusion facilities. Funding scheme: Research and Innovation Actions, RIAs

Research and innovation actions (RIA) Funding rate: 100%

Action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small - scale prototype in a laboratory or simulated environment. Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.

Coordination and support actions (CSA) Funding rate: 100%

Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of strategic planning, networking and coordination between programmes in different countries.

Relevant links:

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/euratom/h2020-wp1617-euratom_en.pdf

<http://ec.europa.eu/programmes/horizon2020/>

<https://ec.europa.eu/research/participants/portal/desktop/en/home.html>

<http://www.partnersearch.c-energy2020.eu/>

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