The proposal for the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities is based on article 7 of the Euratom Treaty and covers the period 2007-2011. It will comprise fusion energy research, nuclear fission and radiation protection and the nuclear activities of the Joint Research Centre (JRC). The actions implemented in this programme are complementary to those undertaken by the Member States in the field of nuclear energy. The maximum overall amount for the implementation of this Framework Programme for this five-year period will be EUR 2 751 million. This amount will be distributed as follows (in EUR million):
- Fusion energy research: 1 947
- Nuclear fission and radiation protection: 287
- Nuclear activities of the JRC: 517

In accordance with Article 7, second paragraph, of the Euratom Treaty, the research programmes are drawn up for a period of not more than five years. Hence, the Council Decision for the Euratom Framework Programme is not for the same duration as for the EC framework programme (seven years, 2007-2013).

As a matter of principle, all the provisions of the EC Framework Programme (for instance as regards funding schemes) are applicable in the Euratom Framework Programme, unless they depend on articles in the EC Treaty for which there is no equivalent in the Euratom Treaty.

Please visit the CORDIS site to check the latest calls for proposals and the official work programme under the FP7 'Euratom' specific programme http://cordis.europa.eu/fp7/dc/index.cfm

Please visit the CORDIS site (http://cordis.europa.eu/fp7/find-doc_en.htm) to download the following legal documents:


The objective of this framework programme is to support research and training activities in the field of nuclear energy under the Euratom Treaty and to provide scientific and technical support to the policy-making process in the nuclear field, while ensuring stability of support to the implementation of existing policies and adapting to changing policy demands. The Seventh Framework Programme will contribute towards, the creation of a knowledge-based society, building on a European Research Area.

The following information was based on the official information available at the time of writing. Priorities and activities may change.
This Euratom research framework programme is organised in two parts corresponding to the ‘indirect’ actions on fusion energy research and nuclear fission and radiation protection, and the ‘direct’ research activities of the Joint Research Centre (JRC).

1.) Indirect actions:

a) Fusion energy research
   - The realisation of International Thermonuclear Experimental Reactor (ITER): activities for site preparation, establishing the ITER organisation and the European joint undertaking for ITER, management and staffing, general technical and administrative support, construction of equipment and installations and support to the project during construction.
   - R&D in preparation of ITER operation: A focused physics and technology programme will exploit the facilities and resources in the fusion programme, including Joint European Torus (JET). It will assess specific key ITER technologies, consolidate ITER project choices, and prepare for ITER operation through experimental and theoretical activities.
   - Technology activities in preparation of DEMO (a ‘demonstration’ fusion power station): the vigorous development of fusion materials and key technologies for fusion, and the establishment of a dedicated project team to prepare for the construction of the International Fusion Materials Irradiation Facility (IFMIF) to qualify materials for DEMO. It will include irradiation testing and modelling of materials, studies of the DEMO conceptual design, and studies of the safety, environmental and socio-economic aspects of fusion energy.
   - R&D activities for the longer term: further development of improved concepts for magnetic confinement schemes with potential advantages for fusion power stations, theory and modelling aimed at a comprehensive understanding of the behaviour of fusion plasmas and coordination, of Member States’ civil research activities on inertial confinement.
   - Human resources, education and training: initiatives aimed at ensuring that adequate human resources will be available, in terms of numbers, range of skills and high level training and experience (in view of the immediate and medium term needs of ITER, and for the further development of fusion).
   - Infrastructures: the construction of the international fusion energy research project ITER will be an element of the new research infrastructures with a strong European dimension.
   - Technology transfer processes: ITER will require new and more flexible organisational structures to enable the process of innovation and technological progress which it creates to be swiftly transferred to industry, so that challenges can be met to enable European industry to become more competitive.
   - Responding to emerging and unforeseen policy needs: A “fast track” fusion development programme could bring fusion energy earlier to the market, as part of a wider policy of addressing the issues of security of Europe’s energy supply, climate change, and sustainable development. A major milestone would be an earlier realisation of DEMO, and this would involve activities and projects embedded in the international broader approach to fusion energy, undertaken by Euratom in collaboration with ITER partners.

b) Nuclear fission and radiation protection
   - Management of radioactive waste: Implementation oriented research and development activities on deep geological disposal of spent fuel and long-lived radioactive waste. Demonstration of the technologies and safety, and fostering the development of a common European view on the main issues related to the management and disposal of waste. Research on partitioning and transmutation and/or other concepts aimed at reducing the amount and/or hazard of the waste for disposal.
   - Reactor systems: Research to underpin the continued safe operation of existing reactor systems, taking into account new challenges such as life-time extension and development of new advanced safety assessment methodologies, and to assess the potential and safety aspects of future reactor systems in the short, medium and long term.
   - Radiation protection: Research, in particular on the risks from low doses, on medical uses and on the management of accidents, to provide the scientific basis for a robust, equitable and socially acceptable system of protection that will not unduly limit the beneficial and widespread uses of radiation in medicine and industry. Research to minimise the impact posed by nuclear and radiological terrorism and diversion of nuclear material.
   - Infrastructures: To support the availability of, and cooperation between, research infrastructures such as material test facilities, underground research laboratories and radiobiology facilities and tissue banks, necessary to maintain high standards of technical achievement, innovation and safety in the European nuclear sector.
   - Human resources, mobility and training: To support the retention and further development of scientific competence and human capacity in order to guarantee the availability of suitably qualified researchers and employees in the nuclear sector over the longer term.

2.) The direct actions:

Nuclear activities of the JRC

a) Nuclear waste management and environmental impact: aiming to understand the nuclear fuel processes from production of energy to waste disposal and to develop effective solutions for the management of high level nuclear waste following the two major options (direct disposal or partitioning and transmutation). Activities will be also developed to enhance knowledge and improve the processing or conditioning of long-lived waste and basic research into actinides.
b) Nuclear safety: implementing research on existing and new fuel cycles and on reactor safety of both Western and Russian reactor types as well as on new reactor design. The JRC will contribute and coordinate the European contribution to the Generation IV International Forum R&D Initiative, in which the best research organisations in the world are involved.

c) Nuclear security: supporting the control of the fuel cycle facilities emphasising the back-end of the fuel cycle, the monitoring of the radioactivity in the environment, or the implementation of the additional protocol and the integrated safeguards, and the prevention of the diversion of nuclear and radioactive material associated with illicit trafficking of such material.

The Seventh Euratom Framework Programme of the European Atomic Energy Community (Euratom), will initially cover the period 2007-2011, but the Commission proposes that, unless extenuating circumstances arise, this framework programme can be renewed for the period 2012-2013, in accordance with the foreseen legislative procedure.

Implementation of the activities carried out under this programme can be categorised according to different type of activities:

1. Implementation in the area of fusion energy
   In the field of fusion energy research, financial support will be given to activities carried out on the basis of procedures set out in:
   - the 'Contracts of Association', between the Commission and Member States or fully associated third countries or entities within Member States or fully associated third countries;
   - the European Fusion Development Agreement (EFDA);
   - the European joint undertaking for ITER;
   - international agreements between Euratom and third countries covering activities in the field of fusion energy research and development, in particular the ITER agreement;
   - any other multilateral agreement concluded between the Community and associated organisations, in particular the agreement on staff mobility;
   - cost-sharing actions.

   In addition, actions to promote and develop human resources, fellowships, integrated infrastructure initiatives and specific support actions may be undertaken (in particular to coordinate fusion energy research, to undertake studies in support of these activities, to support publications, information exchange and training in order to promote technology transfer).

2. Funding schemes in other fields than fusion energy
   These schemes will be used either alone or in combination to fund different categories of actions implemented throughout this framework programme. The decisions for specific programmes, work programmes and calls for proposals will mention, as when appropriate:
   - the type(s) of scheme(s) used to fund different categories of actions;
   - the categories of participants which can benefit from them;
   - the types of activities which can be funded through each of them.

   Where different funding schemes can be used, the work programmes may specify the funding scheme to be used for the topic on which proposals are invited.

   The funding schemes are the following:

   a) to support actions which are primarily implemented on the basis of proposals:
      - collaborative projects;
      - networks of excellence;
      - coordination and support actions;
      - actions to promote and develop human resources and mobility

   b) to support actions implemented on the basis of decisions by the Council, based on a proposal from the Commission, the Community will provide financial support to multi-financed large-scale initiatives by the means of the following contributions:
      - a financial contribution to the implementation of joint undertakings carried out on the basis of the procedures and provisions set out in the Treaty;
      - a financial contribution to the development of new infrastructures of European interest..

   Funding from other public sector sources is also possible, including other sources of Community financing such as the European Investment Bank (EIB). In the case of participants to an indirect action established in a region lagging in development (convergence regions and outermost regions) complementary funding from the 'Structural Funds' may be mobilised.
3. Direct actions - European commission's Joint Research Centre (JRC) The Community will undertake activities implemented by the Joint research centre, which are referred to as ‘direct actions’.

Context

From: 1 January 2007
To: 31 December 2011

Previous programme:
FP6-EURATOM

Successor programme:
H2020-Euratom

Programme funding:
€ 2751 million

Official Journal reference:
L 54/4 - 2006-12-30

See parent programme
See all projects funded under this programme or topic

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