Research RTD, 7th Euratom Framework Programme 2007-2011: fusion energy, nuclear fission and radiation protection specific programme

2005/0190(CNS) - 19/12/2006 - Final act

PURPOSE: to adopt a Specific Programme for nuclear research and training activities in the fields of **Fusion Energy, Nuclear Fission and Radiation Protection** under the 7th Euratom Framework Programme

LEGISLATIVE ACT: Council Decision 2006/976/Euratom concerning the Specific Programme implementing the Seventh Framework Programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities (2007 – 2011).

CONTENT: the adoption of a Specific Programme on fusion energy, nuclear fission and radiation protection, stems from Council Decision 2006/970/Euratom concerning the Seventh Framework Programme (2007-2011). See: CNS/2005/0044.

Two Specific Programmes were approved by the 7th Framework Programme of the European Atomic Community (Euratom). The first, concerns the direct **nuclear** research and training activities of the Joint Research Centre. See CNS/2005/0189. The second, is the subject of this summary.

Nuclear Power is the principal carbon-free source of base load electricity in the EU. It plays a key role in limiting the EU's greenhouse gas emissions as well as contributing to the Union's independence, security and diversity of energy supply. In the longer term, nuclear fission offers the prospect of an almost limitless supply of clean energy.

ITER is considered the crucial next step in the progress towards this ultimate goal. It is the realisation of this goal that is the focus of present EU research strategies. Other areas of paramount importance and requiring on-going research relate to high levels of nuclear safety, sustainable waste management solutions and improving the efficiency and competitiveness of the nuclear sector.

In order to achieve all of these gaols and to maintain a critical momentum for European nuclear research, this Specific Programme has been divided into two thematic research fields: fusion energy and secondly nuclear fission and radiation protection. The Programme has been awarded a **EUR 2 234 million** budget to help realise these objectives.

1) Fusion Energy: The ITER facility in France and the "Broader Approach" projects have been designed to accelerate the development of fusion energy. The domestic agency for ITER will be established as a Joint Undertaking under the Euratom treaty. The overall objective of the "Fusion Energy" thematic research field is to realise ITER through the creation of prototype reactors for power stations that are safe, sustainable, environmentally responsible and economically viable. As such, the EU will play a leading role within the ITER organisation and will assume responsibility for site preparation, establishing the ITER organisation, management and staffing. In addition, a focused physics and technology programme will seek to consolidate ITER projects. It will be executed through co-ordinated experimental, theoretical

and modelling activities using the JET facilities. In addition, key technology activities will include the preparation of a DEMO power plant. The licensing, construction and operational phase thereof will be done in partnership with European industry.

2) Nuclear fission and radiation protection: Indirect actions will be undertaken in five principal areas of activity. They are the management of radioactive waste, the safe operation of existing installations under the heading Reactor Systems, radiation protection, supporting research infrastructures and providing for adequate human resources and training. Important cross-cutting links will exist throughout the programme.

Lastly, both at the implementation level and the research level, activities within indirect actions will respect fundamental ethical principles based, *inter alia*, on those reflected in the Charter of Fundamental EU Rights.

ENTRY INTO FORCE: 2 January 2007.