



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 28.6.2007
COM(2007) 365 final

Proposal for a

COUNCIL DECISION

**on a one year extension of the supplementary research programme
to be implemented by the Joint Research Centre for the European Atomic Energy
Community**

(presented by the Commission)

EXPLANATORY MEMORANDUM

1. On 19 February 2004, the Council adopted a three-year supplementary research programme to be implemented by the Joint Research Centre for the European Atomic Energy Community (2004-2006) concerning the operation of the High Flux Reactor (HFR) of Petten. This programme has expired on 31 December 2006. The intention of the Commission and the main Stakeholders in the operation of the HFR was to explore longer term options for the future exploitation of the HFR. With this end in view, the period 2004-2006 was actively exploited to finalise this process and to design a new legal framework for HFR operation beyond 2006. At present, a draft proposal for a Joint Undertaking is under finalisation. However, this proposal is not yet ready and therefore an extension of the current Supplementary Programme is required.
2. The present communication presents a one year extension (2007) of the current three-year programme (2004 - 2006)
3. The High Flux Reactor (HFR) of Petten is used by the Commission in accordance with the Euratom / Netherlands agreement of 25 July 1961. Under this agreement, on behalf of the Community, the Commission has committed itself to build the necessary facilities and to provide additional equipment in order to make “optimum use” of these facilities (including the HFR). This agreement was signed for a period of 99 years. In order to execute it, the two parties concluded a long lease for 99 years conferring a right *in rem* (bail emphytéotique) on 31 October 1962.
4. HFR plays an important role, in the European Union, in support to safe nuclear technologies, in materials research for thermonuclear fusion, in fundamental research and in medical research and applications.
 - Despite the decrease in R&D resources in the nuclear field, HFR remains very active in the safety of the existing reactors. HFR contributes to the following programmes: reactors’ ageing and life management, transmutation of nuclear waste in view of a better safety of waste storage, improvement of the fuel safety. Fuel containing plutonium (Mixed oxides of U and Pu and high temperature reactor fuel) are studied in view of the elimination of military grade plutonium.
 - HFR is also used by an association of European centres working on a new treatment for encephalic cancers by using the BNCT (Boron Neutron Capture Therapy) techniques. This disease causes about 15,000 deaths a year in Europe. Only Japan and the United States have developed BNCT installations comparable to the one of HFR. The HFR reactor also supports other medical research, like production of new type of isotopes and development of other technical BNCT-applications like for melanoma and other pathologies.
 - Fundamental research makes use of neutron beams for the study of the material's-structure. This activity is under permanent development and contributes to the understanding of degradation mechanisms and their mitigation relevant to the safety of existing plants. Methods under study are non-destructive evaluation techniques using neutron beams and neutron properties. The co-ordination of efforts, dissemination of results and support to harmonisation are carried out through a European network.

- The reactor produces isotopes necessary for more than 60% of the 10 million of medical diagnoses executed each year in Europe. Its qualities and reliability make it an indispensable device for all the European pharmaceutical companies in this field. Moreover, through its location in Europe, the reactor's production is rapidly directed to the European medical centres. This is essential for the most currently used short-life isotopes and is crucial for Europe's strategic independence and autonomy of supply.
5. In its financial statement, the appended proposal for an extension the new supplementary programme mentions only the contribution to come from two participating Member States, namely The Netherlands and France. The establishment of formal contracts, to be drawn up with external partners, cannot take place until a legal basis exists. The Council's decision will constitute this legal basis. The contribution from the two participating Member States for the new programme is of about 8.5 Mio€. Once the Joint Undertaking for the HFR will be approved, the extension of the Supplementary Programme will be terminated and the remaining financial contributions transferred to the Joint Undertaking.
 6. The Commission confirms the declaration recorded in the minutes of the Council meeting of 27 June 1996, by which it confirms that the expression "participation in Community programmes" means that the HFR can contribute, on the basis of adequate financing, to the execution of Community programmes, whether or not in the context of the Framework Programmes. This participation will take place either on a competitive basis or by means of irradiation services to JRC Institutes during the implementation of their respective activities.

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THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission, submitted after consultation of the Scientific and Technical Committee set up under Article 134 of the Treaty,

Having regard to the opinion of the Board of Governors of the Joint Research Center,

Whereas:

- (1) The development of nuclear medicine within the European Union contributes to the target of ensuring human health protection which the Union sets itself and which necessitates an increased use of Testing Reactors for medical purposes;
- (2) Within the framework of the European Research Area, the supplementary research programme involving the high flux reactor (HFR) is one of the principal means available to in the Union to contribute to the support and testing of medical diagnostic and, therapeutic methodologies, to the development of materials sciences and to problems solving in the field of nuclear energy.
- (3) The HFR is in technical condition to operate at least until 2015 and a new up to date operating licence was granted to the reactor operator in February 2005.
- (4) The financial contributions to this extension of the supplementary programme will come directly from the Netherlands and France.
- (5) In addition to these contributions, the HFR will receive funds from contracts with third parties and from its participation in the Community programmes on a competitive basis,

HAS ADOPTED THIS DECISION:

Article 1

The supplementary programme on the operation of HFR, hereinafter referred to as "the programme", the objectives of which are set out in Annex I, is extended for a period of one year, effective from 1 January 2007.

Article 2

The financial contributions estimated for the execution of the extension of the programme amount to about 8.5 Mio€. The breakdown of this amount is given in Annex II.

Article 3

The Commission shall be responsible for the implementation of the programme, and to this end, shall call upon the services of the JRC. The Board of Governors of the Joint Research Centre will be kept informed about the implementation of the programme.

Article 4

The Commission shall, before 15 June 2008, submit to the European Parliament, the Council, and the Economic and Social Committee a report on the implementation of this Decision.

Article 5

This decision is addressed to the Member States.

Done at Brussels,

*For the Council
The President*

ANNEX I

SCIENTIFIC AND TECHNICAL OBJECTIVES

The programmes' aims are primarily:

1. The safe and reliable operation of the high flux reactor (HFR) at Petten; this activity involves the normal use of the installation for more than 250 days a year, the management of the fuel cycle under the safety and quality controls.
2. The rational use of this reactor will be developed in a broad range of disciplines: the major Research and Development themes involving the use of HFR are illustrated by the following examples: Improvement of Safety of Existing Nuclear Reactor, Health including the development of medical isotopes to answer the questions of medical research and the testing of medical therapeutic techniques, Fusion, Fundamental Research and Training, and Waste Management including the possibility to develop nuclear fuel devoted to the elimination of weapon grade plutonium.

ANNEX II

BREAKDOWN OF THE CONTRIBUTIONS

The contributions to this supplementary programme will come from the Netherlands and France.

The breakdown of these contributions is as follows:

The Netherlands: 8.2 Mio€

France: 0.3 Mio€

Total: 8.5 Mio€

LEGISLATIVE FINANCIAL STATEMENT

1. NAME OF THE PROPOSAL:

one year extension of the current supplementary research programme, High Flux Reactor.

2. ABM / ABB FRAMEWORK

Policy Area(s) concerned and associated Activity/Activities:

10. Joint Research Centre

10 04 — Completion of previous framework programmes and other activities

3. BUDGET LINES

3.1. Budget lines (operational lines and related technical and administrative assistance lines (ex- B..A lines)) including headings:

10 04 04 Operation of the high-flux reactor (HFR)

Item 10 04 04 02 — Supplementary HFR programme (2004-2007)

3.2. Duration of the action and of the financial impact:

1-01-2004 until 31-12-2007 (one year extension of the existing programme)

3.3. Budgetary characteristics (add rows if necessary):

Budget line	Type of expenditure		New	EFTA contribution	Contributions from applicant countries	Heading in financial perspective
	Non-comp	Diff	NO	NO	NO	No 1a

4. SUMMARY OF RESOURCES

4.1. Financial Resources

This programme implies no direct budgetary funding from the Commission. The prolongation of the supplementary programme is financed from the participating countries. This financing amounts to 8.5 Mio€.

4.1.1. Summary of commitment appropriations (CA) and payment appropriations (PA)

EUR million (to 3 decimal places)

Expenditure type	Section no.		Year n	n + 1	n + 2	n + 3	n + 4	n + 5 and later	Total
Operational expenditure¹									
Commitment Appropriations (CA)	8.1.	a	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Payment Appropriations (PA)		b	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

¹ Expenditure that does not fall under Chapter xx 01 of the Title xx concerned.

Administrative expenditure within reference amount²

Technical & administrative assistance (NDA)	8.2.4.	c	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
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TOTAL REFERENCE AMOUNT

Commitment Appropriations		a+c	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Payment Appropriations		b+c	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

Administrative expenditure not included in reference amount³

Human resources and associated expenditure (NDA)	8.2.5.	d	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Administrative costs, other than human resources and associated costs, not included in reference amount (NDA)	8.2.6.	e	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

Total indicative financial cost of intervention

TOTAL CA including cost of Human Resources		a+c+d+e	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
TOTAL PA including cost of Human Resources		b+c+d+e	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

Co-financing details

If the proposal involves co-financing by Member States, or other bodies (please specify which), an estimate of the level of this co-financing should be indicated in the table below (additional lines may be added if different bodies are foreseen for the provision of the co-financing):

EUR million (to 3 decimal places)

Co-financing body		Year n	n + 1	n + 2	n + 3	n + 4	n + 5 and later	Total
The Netherlands	f	8.200	p.m.	p.m.	p.m.	p.m.	p.m.	8.200
France	g	0.300	p.m.	p.m.	p.m.	p.m.	p.m.	0.300
TOTAL CA including co-financing	a+c+d+e+f	8.500						8.500

4.1.2. Compatibility with Financial Programming

not applicable

² Expenditure within article xx 01 04 of Title xx.

³ Expenditure within chapter xx 01 other than articles xx 01 04 or xx 01 05.

4.1.3. Financial impact on Revenue

- Proposal has no financial implications on revenue
- Proposal has financial impact – the effect on revenue is as follows:

The 2 Member States (the Netherlands and France) will fund this supplementary programme.

It should be noted that the appended proposal for a one year extension of the current supplementary programme mentions only the contribution from two participating Member States.

EUR million (to one decimal place)

Budget line	Revenue	Prior to action [Year n-1]	Situation following action					
			[Year n]	[n+1]	[n+2]	[n+3]	[n+4]	[n+5] ⁴
	a) Revenue in absolute terms		8.5					
	b) Change in revenue	Δ						

4.2. Human Resources FTE (including officials, temporary and external staff) – see detail under point 8.2.1.

Annual requirements	Year n	n + 1	n + 2	n + 3	n + 4	n + 5 and later
Total number of human resources	0.5	p.m.	p.m.	p.m.	p.m.	p.m.

5. CHARACTERISTICS AND OBJECTIVES

5.1. Need to be met in the short or long term

HFR plays an important role, in the European Union, in support to safe nuclear technologies, in materials research for thermonuclear fusion, in fundamental research and in medical research and applications. HFR is very active in the safety of the existing reactors. HFR contributes to the following programmes: reactors' ageing and life management, transmutation of nuclear waste in view of a better safety of waste storage, improvement of the fuel safety.

Fuel containing plutonium (Mixed oxides of U and Pu and high temperature reactor fuel) are studied in view of the elimination of military grade plutonium.

HFR is also used by an association of European centres working on a new treatment for encephalic cancers by using the BNCT (Boron Neutron Capture Therapy) techniques.

The HFR reactor also supports other medical research, like production of new type of isotopes and development of other technical BNCT-applications like for melanoma and other pathologies.

⁴ Additional columns should be added if necessary i.e. if the duration of the action exceeds 6 years

Fundamental research makes use of neutron beams for the study of the material's- structure. This activity is under permanent development and contributes to the understanding of degradation mechanisms and their mitigation relevant to the safety of existing plants. Methods under study are non-destructive evaluation techniques using neutron beams and neutron properties.

In the frame of thermonuclear fusion, several projects have been undertaken at the HFR to test structural and breeding materials for future fusion reactors. The emphasis on materials development lies with low activation properties obtained at higher temperatures as these promote both the environmental and thermal efficiency of the future nuclear fusion power plants. These experiments support the European Long-term Fusion Materials Development Programme. The co-ordination of efforts, dissemination of results and support to harmonisation are carried out through a European network.

5.2. Value-added of Community involvement and coherence of the proposal with other financial instruments and possible synergy

The Commission is the owner of the reactor. This extension is intended to bridge the time lag between the end of the current supplementary programme and the set up of a Joint Undertaking. It should be noted that further to its scientific use the reactor is very important for the European medical sector (production of medical radio-isotopes).

5.3. Objectives, expected results and related indicators of the proposal in the context of the ABM framework

The programmes' aims are primarily:

- To provide more than 250 days of operation of the HFR in order to guarantee availability of neutrons for experiments.
- To allow for the rational use of this reactor according to the needs of research institutions requiring HFR support in areas such as: Improvement of Safety of Existing Nuclear Reactor, Health including the development of medical isotopes to answer the questions of medical research and the testing of medical therapeutic techniques, Fusion, Fundamental Research and Training, and Waste Management including the possibility to develop nuclear fuel devoted to the elimination of weapon grade plutonium.

5.4. Method of Implementation (indicative)

Centralised Management

x directly by the Commission

indirectly by delegation to:

executive Agencies

bodies set up by the Communities as referred to in art. 185 of the Financial Regulation

national public-sector bodies/bodies with public-service mission

Shared or decentralised management

with Member states

with Third countries

Joint management with international organisations (please specify)

Relevant comments:

6. MONITORING AND EVALUATION

6.1. Monitoring system

The nature and frequency of the internal assessment process should enable the Commission to satisfy its obligations.

The quantitative and qualitative indicators and criteria used to assess the results of the programme will be determined for each project: the results will be reported to the members of the JRC Board of Governors and published in an annual report where possible.

6.2. Evaluation

6.2.1. Ex-ante evaluation

This is the one year extension of the current supplementary programme. The preparation of this extension was the subject of detailed internal evaluation by the participating Member States.

6.2.2. Measures taken following an intermediate/ex-post evaluation (lessons learned from similar experiences in the past)

For each experiment carried out specific ex post reporting is made. In addition, monthly reports are made towards the nuclear safety authorities. Annual reporting is made on the HFR operation.

6.2.3. Terms and frequency of future evaluation

In addition to an annual report devoted solely to the HFR (EUR 22297 EN), the Joint Research Centre publishes an "Annual Report" approved by its Board of Governors. The reference of the 2005 report is EUR 22254 EN.

7. ANTI-FRAUD MEASURES

Audit and internal control programme by Joint Research Centre officers, covering the scientific and budgetary aspects, reporting to the JRC Board of Governors, reporting to the financing Member States, and access for the Court of Auditors. Control of the circulation of fissile materials is covered by Euratom and the IAEA.

8. DETAILS OF RESOURCES

8.1. Objectives of the proposal in terms of their financial cost

Commitment appropriations in EUR million (to 3 decimal places)

(Headings of Objectives, actions and outputs should be provided)	Type of output	Av. cost	Year n		Year n+1		Year n+2		Year n+3		Year n+4		Year n+5 and later		TOTAL	
			No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost
OPERATIONAL OBJECTIVE	Days of operation	p.m.	250	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
TOTAL COST		p.m.		p.m.		p.m.		p.m.		p.m.		p.m.		p.m.		p.m.

8.2. Administrative Expenditure

8.2.1. Number and type of human resources

Types of post		Staff to be assigned to management of the action using existing and/or additional resources (number of posts/FTEs)					
		Year n	Year n+1	Year n+2	Year n+3	Year n+4	Year n+5
Officials or temporary staff ⁵ (XX 01 01)	A*/AD	0.5	p.m.	p.m.	p.m.	p.m.	p.m.
	B*, C*/AST	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Staff financed ⁶ by art. XX 01 02		p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Other staff ⁷ financed by art. XX 01 04/05		p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
TOTAL		0.5	p.m.	p.m.	p.m.	p.m.	p.m.

8.2.2. Description of tasks deriving from the action

Management of the Supplementary Programme. That staff is fully financed by the Supplementary Programme.

8.2.3. Sources of human resources (statutory)

- Posts currently allocated to the management of the programme to be replaced or extended
- Posts pre-allocated within the APS/PDB exercise for year n
- Posts to be requested in the next APS/PDB procedure
- Posts to be redeployed using existing resources within the managing service (internal redeployment)
- Posts required for year n although not foreseen in the APS/PDB exercise of the year in question

⁵ Cost of which is NOT covered by the reference amount

⁶ Cost of which is NOT covered by the reference amount

⁷ Cost of which is included within the reference amount

8.2.4. *Other Administrative expenditure included in reference amount (XX 01 04/05 – Expenditure on administrative management)*

EUR million (to 3 decimal places)

Budget line (number and heading)	Year n	Year n+1	Year n+2	Year n+3	Year n+4	Year n+5 and later	TOTAL
1 Technical and administrative assistance (including related staff costs)	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Executive agencies ⁸	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Other technical and administrative assistance	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
- <i>intra muros</i>	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
- <i>extra muros</i>	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Total Technical and administrative assistance	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

8.2.5. *Financial cost of human resources and associated costs not included in the reference amount*

EUR million (to 3 decimal places)

Type of human resources	Year n	Year n+1	Year n+2	Year n+3	Year n+4	Year n+5 and later
Officials and temporary staff (XX 01 01)	0.058	p.m.	p.m.	p.m.	p.m.	p.m.
Staff financed by Art XX 01 02 (auxiliary, END, contract staff, etc.) (specify budget line)	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Total cost of Human Resources and associated costs (NOT in reference amount)	0.058	p.m.	p.m.	p.m.	p.m.	p.m.

⁸ Reference should be made to the specific legislative financial statement for the Executive Agency(ies) concerned.

This staff cost is fully financed by the Supplementary Programme

Calculation– *Officials and Temporary agents*

0.058 EUR million

Calculation– *Staff financed under art. XX 01 02*

p.m.

8.2.6. *Other administrative expenditure not included in reference amount*

EUR million (to 3 decimal places)

	Year n	Year n+1	Year n+2	Year n+3	Year n+4	Year n+5 and later	TOTAL
XX 01 02 11 01 – Missions	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
XX 01 02 11 02 – Meetings & Conferences	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
XX 01 02 11 03 – Committees ⁹	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
XX 01 02 11 04 – Studies & consultations	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
XX 01 02 11 05 - Information systems	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
2 Total Other Management Expenditure (XX 01 02 11)	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
3 Other expenditure of an administrative nature (specify including reference to budget line)	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Total Administrative expenditure, other than human resources and associated costs (NOT included in reference amount)	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

Calculation - *Other administrative expenditure not included in reference amount*

p.m.

⁹ Specify the type of committee and the group to which it belongs.