## COMMISSION OF THE EUROPEAN COMMUNITIES

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FINANCIAL STATEMENT

MULTIANNUAL PROGRAMME

OF THE JOINT RESEARCH CENTRE

1980 - 1983

(presented by the Commission to the Council)

### FINANCIAL STATEMENT

### 1. RELEVANT BUDGETARY LINE :

Chapter 33 - Research and investment expenditure.

Article 330 - Joint Research Centre (JRC) -

Joint programme.

Article 331 - Joint Research Centre (JRC) -

Complementary programme.

#### Title of action :

Research programme to be implemented by the Joint Research Centre for the European Atomic Energy Community and for the European Economic Community (1980-1983).

#### 2. LEGAL BASIS :

Article 7 of the Treaty establishing the EAEC. Article 235 of the Treaty establishing the EEC.

## 3. DESCRIPTION OF THE ACTION :

#### 3.1. Description:

The continuation of activities in progress, with certain changes of emphasis and direction to adapt the research to the evolution in the requirements of the Community and to developments in the Commission's sectoral policies, to take account of the research carried out in the indirect action programmes, and more generally to draw the lessons from the experience gained.

The utilization for the benefit of the Community as a whole and of the JRC of the investments made in the activities undertaken; the optimization of the use of the JRCbresources by their increased concentration on activities of significant dimension.

## 3.2. Objective:

To carry out research in the following areas:

"Nuclear Safety and the Fuel Cycle", consisting of four programmes:

- Reactor Safety
- Plutonium Fuels and Actinide Research
- Safety of Nuclear Materials
- Fissile Materials Control and Management.

"New Energies", consisting of four programmes:

- Solar Energy
- Hydrogen Production, Energy Storage and Transport
- Thermonuclear Fusion Technology
- High Temperature Materials.

"Study and Protection of the Environment", consisting of two programmes:

- Protection of the Environment
- Remote Sensing from Space.

"Nuclear Measurements", consisting of a single programme.

# "Specific Support to the Sectoral Activities of the Commission", consisting of six programmes:

- Informatics
- Support to Safeguards
- Support to the Community Bureau of Reference
- Training and Education
- Utilization of Research Results
- Provision of Scientific and Technical Services on Request.

"Operation of large scale installations"; consisting of the programme for the operation of the HFR reactor.

#### 4. JUSTIFICATION OF THE ACTION:

General objectives :

To contribute to:

- the long-term supply of resources (raw materials, energy, agriculture and water);
- the promotion of internationally competitive economic development;
- the improvement of the living and working conditions;
- the protection of the environment and nature;

To contribute to the creation of the conditions necessary for the growth of nuclear industries and to the acquisition and dissemination of information in the nuclear field (articles 1 and 4 EAEC).

To satisfy the Council Resolution of 14 January, 1974 on the coordination of national policies and the definition of Community actions in the field of science and technology.

## 5. FINANCIAL IMPLICATIONS OF THE ACTION:

5.1. Total cost during the period foreseen (4 years from 1.1.1980 to 31.12.1983) : 542,6 MEUA.

## 5.2. Partition of financing:

100 % to the charge of the Community budget.

## 5.3. Multiannual expenditure timetable

5.3.1.1. Commitment appropriations

in MEUA

Nature of expenditure	1980	1981	1982	1983	TOTAL
Personnel Operating	65,4 67,8	70,8 65,6	69,9 68,4	69,9 64,8	276,0 266,6
TOTAL	133,2	136,4	138,3	134,7	542,6

## 5.3.1.2. Payment appropriations

in MEUA

Nature of expenditure	1980	1981	1982	1983	1984
Personnel Operating	65,4 57,6	70,8 65,6	69,9 68,4	69,9 64,8	10,2
TOTAL	123,0	136,4	138,3	134,7	10,2

The expenditure timetables accord with the planning of the new programme.

Comparison year by year with expenditure of the same type under the current 1977-80 programme would not be meaningful since several research activities included in the new programme did not figure in the previous programme, although being accounted for in chapter 33 or other chapters of the budget. These activities are in particular those in support of the sectoral policies of the Commission and those of physical protection of the establishments and of operation of the ESSOR reactor.

This presentation conforms with the wish of the Budgetary Authority for greater transparency in the budget.

After the investment phase of the years 1978 and 1979, the expenditure on physical protection of the establishments becomes essentially that of expenditure on upkeep and operation of the installations. It seems logical on this count to consider it as a further general service expenditure.

Further, the new programme includes new research activities which require important investments, in particular reactor safety, safety of nuclear materials and fusion technology.

Consequently the commitment appropriations of the preceding programme remaining at the end of 1979 will be annulled by the budgetary procedure.

#### 5.3.2. Method of calculation

#### a) Personnel expenditure:

Requirements have been evaluated on the basis of 2,260 agents paid from research appropriations.

Further, and in view of probable overall personnel departures from 1980 to 1983 (natural departures in application of a possible early retirement scheme), certain transitional measures are proposed of a type to promote rejuvenation and correction of the skill profile of the personnel. The JRC would be enabled to have at its disposal from 1980 and in excess of its authorised staff level 70 posts in anticipation of the effects of these departures. The Commission would undertake to restore this excess of staff to normal within a reasonable time and in any case before the last year of the programme.

On the practical level, these transitional measures could be the subject of a special agreement of the Budgetary Authority, and would find a temporary solution in the staff table. The Commission for its part would undertake to manage these posts in the best joint interest and would keep the Budgetary Authority regularly informed. On these bases and in accordance with the hypotheses adopted by the Commission for the 1979 budget for the development of remunerations, the total cost of personnel expenditure has been estimated at 282 MEUA at the remuneration level foreseen at 1 January 1980.

The Italian contribution for the ESSOR personnel in 1980, estimated at 6 MEUA, should be deducted from this total, giving a total personnel cost under the programme of 276 MEUA at 1 January 1980. After each decision of the Council modifying the levels of remunerations, the Commission will re-evaluate this expenditure and will inform the Budgetary Authority of the corresponding incidence of this reevaluation on the programme envelope.

b) Operational and Investment Expenditure:

Requirements have been estimated at 266.6 MEUA. This amount represents a flat-rate evaluation expressed at current 1980-1983 values. These appropriations, contrary to the present situation, cover all activities of the JRC, including those carried out on behalf of other Directorates-General. This proposed presentation corresponds to the development of the budget structure as wished by the Budgetary Authority.

The following table sets out the distribution of the envelope and staff between the proposed programmes as in the draft decision :

- Column 1 : (R.S. = research staff) personnel of all categories directly allocated to the objective in question.
- Column 2 (Agents) : total personnel attributed to the objective, i.e. personnel of the 1st column plus a proportion of the personnel of the general services and infrastructure in general support of the research.
- Column 3 (specific programme appropriations) : this represents in budgetary terms the appropriations inscribed charges for each objective, i.e. the approin primary priations directly allocated to the realisation of the objective.

On average they consist of :

36.5% costs of technical operation

33.5% current and large scale investments

30% study and evaluation contracts in direct support of the research to reinforce the link with economic and industrial realities and to allow skills lacking in the JRC in highly specialised fields to be complemented. These appropriations are evaluated on the basis of requirements as established and amounts as allocated during the 1978 and 1979 budgets. To these are added forecasts of requirements for the development of main objectives, for example in reactor safety and fusion technology.

- Column 4 (specific appropriations for services):
this represents in budgetary terms the appropriations
inscribed in primary charges for the appropriation accounts
covering the expenditure of the different general
services (computing centre, large-scale installations,
workshops, general infrastructure).

These appropriations largely cover routine expenditure and their evaluation is based on experience in recent years.

- Column 5 (total appropriations): this represents the total of columns 3 and 4 and of total personnel expenditure on each objective.

In the complex structure of the functional budget the appropriations as evaluated are entered on a double entry system with one part showing expenditure by destination and the other by type.

Computer processing gives results which appear very precise, but which are in practice no more than evaluations.

## SUMMARY TABLE OF THE 1980 - 1983 PROGRAMME

Appropriations in million EUA

		Col.1	Col.2	Col.3	Col.4	Col.5
Item	Programme	R.S.	T.S.	Specific appropriations for the programme	Specific appropriations for services	Total appropriations
A1	Reactor Safety	287	679	36,680	40,602	155,930
A2	Plutonium Fuels and Actinide Research	117	205	9,902	23,823	59,230
A3	Safety of Nuclear Materials	52	114	2,781	5.234	22,235
A4 Fissi and M	Fissile Materials Control and Management	60	120	2,677	5,455	23,114
	Total Nuclear Safety	516	1,118	52,040	75,114	260,509
В1	Solar Energy	63	122	5,381	5,160 <sup>17</sup>	25,818
в2	Hydrogen Production, Energy Storage and Transport	40	79	2,253	3,332	15,447
вЗ	Thermonuclear Fusion Technology	63	130	4,988	7,161	28,409
в4	High Temperature Materials	38	63	3,167	4,928	15,976
To	Total New Energies	204	394	15,789	20,581	. 85,650
Cl	Protection of the Environment	90	174	4,636	8,939	35,220
C2	Remote Sensing from Space	50	97	3,060	4,567	19,736
	Total Protection of the Environment	140	271	7,696	13,506	54,956
D1	Nuclear Measurements	113	194	7,107	16,562	47,947
El	Informatics	26	52	1,641	2,817	10,923
E2	Support to Safeguards	18	37	1,529	2,847	9,036
E3	Support to the Community Bureau of Reference	7	13	371	773	2,725
E4	Training and Education	9	17	544	763	3,463
E5	Utilization of Research Results	4	14	510	453	2,760
Е6	Provision of Scientific and Technical Services on Request	32	62	376	2,877	10,949
	Total Specific Support to the Commission	96	195	4,971	10,530	39,856
Fi	HFR Reactor	41	88	2,039	40,688	53,705
TOTAL		1,110	2,260	89,642	176,981	542,623 <b>*</b>

R.S. = Research Staff T.S. = Total Staff

266,623 + 276,000 = operational personnel expenditure and investments

<sup>\*</sup> including a provisional amount of 6.772 reserved for-the "PAHR" project.

The total of 542,6 MEUA includes a provisional amount of 6,77 MEUA for a particular project in the Reactor Safety programme (PAHR project), to be begun in 1982 in the event of favourable opinions from the relevant Consultative Committees.

## 8. IMPLICATIONS ON RESOURCES:

Since a joint programme is essentially involved, it is financed by the normal resources of the budget.

The operation of the HFR reactor (point F of the preceeding table) has so far been the subject of a complementary programme financed by the Federal Republic of Germany and the Netherlands according to a financial partition key of 50 %-50 %.

In order not to prejudge the position of member states on this programme, the Commission should present it in a manner analogous to the other actions.

On the other hand, the operation of the ESSOR reactor will not be further financed by the Italian Government after 31.12.1980.

The programme provides for its utilization after this date for a joint reactor safety programme.

#### 9. SYSTEM OF CONTROL FORESEEN:

- Control of the execution of the programme by the Advisory Committees on Programme Management and the General Advisory Committee of the JRC.
- Control of the financial management by the Financial Control (DG XX).
- Control by the Court of Auditors.
- Control by the Budgetary Authority on the occasion of the discharge relating to the annual budget.