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## EUROPEAN COMMUNITY RESEARCH SPENDING GREATER THAN THE USA'S- ACCORDING TO EC ENERGY COMMISSIONER GUIDO BRUNNER

In a recent keynote speech delivered to an audience in Saarbrücken, Mr. Brunner said the European Community is currently spending more than the USA on Research and Development (R & D) and nearly twice as much as Japan.

Total R & D spending in the Member States amounted to 11.1 billion EUA\* (\$15.5 billion) in 1978 against the United States' 10.7 billion EUA (\$14.8 billion) and Japan's 6. billion EUA (\$8.3 billion) for civil projects.

There is considerable increase compared with the sixties and early seventies when we were well behind our main industrial rivals, Mr. Brunner said. The total amount is impressive and we must now get the best out of our investments.

This requires great efforts at Community level where much needed to be done to avoid wasteful duplication in Member States' programs, Mr. Brunner went on.

The task for the EC Ministers responsible for research was now to give a new impulse, Mr. Brunner said.

Community R & D activities had been developing since January 1974, and since 1977 had been following four main objectives:

- improvement in the long term security of Community supplies (energy, agriculture, primary products)
- development of economic competitiveness

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\* One EUA = approximately \$1.39 on October 31, 1979.

- improvement of living and working conditions
- protection of the environment and of nature

The EC Member Governments should strengthen this policy during the next four years. The Commission proposes to more than double expenditure on total R & D from .819 million EUA (\$1.1 billion) to 1.9 billion EUA (\$ 2.6 billion). Well over 70% is being devoted to supply security, mostly in the energy field. Nearly half this .882 million EUA (\$1.2 billion) will go towards research into nuclear safety. (see table) It should be stressed that these figures represent the multilateral Community budget separate from national R & D budget.

Nevertheless, Community R & D expenditure remains modest, not much more than 2% of total Member States expenditure on R & D.

There are two new Commission proposals in the pipeline concerning controlled thermo-nuclear fusion, and the program for the Joint Research Center, Mr. Brunner said.

#### NEW CONTROLLED THERMONUCLEAR FUSION PROGRAM 1979-83

This program is a development of the previous 1976-80 program, and should help the nine Member states to keep up with developments in the science of magnetic confinement of plasmas with the United States, Japan and the Soviet Union.

There are two parts:

- a. JET (Joint European Torus under construction at Culham, England) for which the 200 million EUA (\$278. million) requested will permit us to build the machine and prepare for putting it into operation (20 million EUA - \$27 million) have already been committed):
- b. The associated Fusion Program in the Member States. The cost is estimated at 745 million EUA (\$1. billion) of which more than 200 million EUA (\$278. million) will come from the Community budget. This program embraces all nuclear fusion activities in the Member States as well as in Sweden and Switzerland.

#### JOINT RESEARCH CENTER'S NEW FOUR YEAR PROGRAM (1980-83)

This program focuses on five priority areas: nuclear safety and fuel cycle, new energies, study and protection of the environment, nuclear measurements, and specific support to the Commission.

Apart from a significant reinforcement of the JRC research into alternative energy sources, notably solar energy and fusion research, the Commission has proposed doubling the JRC research effort for reactor safety and increasing the financial volume from 83 million EUA (\$115. million) at present to 156 million EUA (\$216. million) in the future.

This program features in particular the Super-SARA project, a reactor safety experiment, which is expected to make a significant contribution to international reactor safety research.

The overall costs of the program are estimated at 542 million EUA (\$753. million).

The other programs approved by an October meeting of the Research Council of Ministers of the EC are:

- Recycling of municipal and industrial wastes : 9 million EUA - (\$12.5 million)
- Second 5-year Program on Radioactive Waste Management and Storage, 1980 - 1984 : 43 million EUA (\$60. million)
- Report on the Radiation Protection Program of the Community : 63 million EUA (\$87.6 million)

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M = million

COMMUNITY BUDGET EXPENSES FOR R & D (by sector)

SECTOR	1974 - 1978		1979 - 1983	
	Total paid million EUA	% of total expenses	Total forecasts million EUA (*)	Structure (%)
1. Resources	585.9	71.6	1370.6	73.9
a. Energy	558.3	68.2	1226.4	66.1
- fossil	131.3	16.0	151.6	8.2
- nuclear	353.7	43.2	881.6	47.5
- new	65.3	8.0	159.1	8.6
- energy saving	8.0	1.0	34.1	1.8
b. Other sources	27.6	3.4	144.2	7.8
2. Industrial development	114.2	13.9	197.1	10.6
3. Individual consumption	57.1	7.0	160.6	8.7
4. Environment	47.0	5.7	96.0	5.2
5. Others	14.7	1.8	30.3	1.6
<b>TOTAL</b>	<b>818.9</b>	<b>100.0</b>	<b>1854.6</b>	<b>100.0</b>

(\*) To these estimates one can add the following endowments used for demonstration projects:

- energy savings 1979-82 55 MEUA
- liquefaction of coal 1979-83 100 MEUA
- geothermal energy 1979-83 22.5 MEUA
- solar energy 1979-83 22.5 MEUA

The expenses foreseen in the energy sector (R & D and Demonstration) will be 1.4 billion EUA, or 69.4% of the total forecast for 1979 - 1983.