

E U R O P E A N C O M M U N I T Y I N F O R M A T I O N S E R V I C E

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C O M M O N M A R K E T · E U R A T O M · C O A L & S T E E L C O M M U N I T Y

BACKGROUND INFORMATION

FOR IMMEDIATE RELEASE

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EURATOM RESEARCH CONTRACTS TOTAL 250

So far Euratom has concluded 250 research contracts involving an outlay of \$156 million. Of these, \$50 million worth are concerned with the setting up of the four establishments of the Joint Research Center and \$106 million worth of contracts for industrial research or studies. This expenditure represents at least 60% of the sum of \$215 million available for Euratom's first five-year research program. For the second five-year program (for which around \$480 million is being asked) the proportion to be spent on contracts will probably be 50%.

In addition to the 250 contracts, 61 supplementary agreements have been signed. Of this total of 311, 178 were concluded in 1961 and 63 during the first months of 1962.

These 250 contracts fall into two categories:

Research contracts:

- 12 "contracts of association" covering a wide field and involving large financial and technical resources and extending for up to 20 years. They involve a joint budget, administration through a joint steering committee and joint research teams.
- 227 short-term contracts of limited scope, of which 61 have been extended or amended under supplementary clauses.

Industrial application or industrial development study contracts:

These are concerned with promoting industrial uses of atomic energy, and relate, for instance, to Euratom's participation in the start-up costs of large-scale nuclear power plants, in design studies for nuclear-powered merchant vessels and in the study of the industrial applications of radioisotopes.

Breakdown by subject

Excluding supplementary contracts, the breakdown of the contracts includes:

- 68 (of which 37 in 1961) under the research and development program of the US-Euratom Agreement (see Annex 2)
- 46 (26) for the Euratom Orgel project
- 34 (19) for the equipment of the Ispra and Geel establishments of the Joint Research Center
- 23 (10) for automatic documentation studies being carried out by the European Scientific Data Processing Center (CETIS)
- 17 (7) for the study and development of radioisotopes and marked molecules.
- 5 for Transplutonium elements work
- 6 for Thermonuclear fusion work
- 5 (2) for the BR2 high neutron flux test reactor
- 12 (8) for Biology, the majority concerning radiobiology, the others relating to basic biology studies aimed at obtaining a better knowledge of cellular phenomena and also the specific effects of radiation on living matter
- 4 for Geology (isotope distribution in ice, dating of rocks)
- 2 for the Community participation in the ENEA 'Dragon' and Halden projects
- 11 for physical measurements, the development of apparatus, irradiation loop design studies, oxidation of zirconium in a gaseous medium, the design of containers for fuel element transportation, etc.

Euratom Research results in 131 inventions

By 1 February, 1962, Euratom's Patent Bureau had examined 131 inventions resulting from work carried out under the first research program. By the same date, patent applications had been filed for 89 of these inventions in a Community country or in the UK ('Dragon'). Euratom researchers are responsible for 20 inventions resulting from work on the Orgel project and from the ECO and ESSOR test reactor studies. The Orgel contracts resulted in 11 patent applications filed by the contracting parties and the granting to Euratom of a license

and the right to grant sub-licenses under certain conditions. Euratom has also control over about a dozen patents stemming from work carried out on controlled thermonuclear fusion. Within the framework of the Euratom/CEN association contract, 21 inventions have been submitted, 16 patents being taken out by Euratom and 1 by CEN.

Euratom's partners in these research contracts

- 40 contracts have been awarded to national organizations: the French Atomic Energy Commission (CEA), the Belgian Nuclear Energy Study Center (CEN), the Italian Atomic Energy Commission (CNEN), the Dutch Reactor Center (RCN) and the German Nuclear Research Center, Juelich.

- Universities and public and private research institutes have taken part, notably in the field of theoretical studies and research; in Belgium, the Universities of Brussels, Ghent, Liège and Louvain and the Inter-University Institute of Nuclear Science; in France, the Universities of Grenoble and Paris, the National Institute for Agricultural Research (INRA), the Collège de France, and the National Scientific Research Center (CNRS); in Italy, the Universities of Milan, Padua, Pisa and Turin, Bocconi University, Pallanza Institute of Hydrobiology and the Rome Pharmaceutical Chemistry Institute; in Holland, the University of Amsterdam, the TNO and ITAL institutes and Eindhoven College of Technology; in the German Federal Republic, the Universities of West Berlin, Freiburg, Goettingen, Hamburg, Heidelberg, and Sarrbruechen, the Hahn-Meitner Institute, Plasma Physics Institute at Munich-Garching, the Federal Institute of Geological Research at Hanover, etc.

- Industrial firms (metallurgical and chemical firms, and undertakings or groups specializing in the field of nuclear energy) have been awarded a number of contracts in the technological or industrial sphere. These firms include: Alsthon, Caratom, the Compagnie française de téléphonie sans fil (CSF), the Groupement atomique Alsacienne-Atlantique (GAAA), Indatom, Pechiney, Progil, Thomson-Houston and Tréfileries et Laminoirs du Havre (France); Ateliers de Construction électrique de Charleroi (ACEC), Arcos, Belgonucléaire, Cebelcor, Evance Coppée, SERAI and Soudométal, (Belgium); Ansaldo, Fiat, Montecatini and Sorin (Italy); High Voltage, Neratoom and RTP (Netherlands); AEG, GKSS, Interatom, MAN, Metallgesellschaft, Nukem and Siemens (German Federal Republic).

A breakdown of contracts and agreements concluded is attached as Annex 1.

DISTRIBUTION OF CONTRACTSCONCLUDED BY EURATOM AS AT 10.5. 1962

	Ger. Fed. Rep.	Bel- gium	France	Nether- lands	Italy	Comm. Con- tracts	Other Coun- tries (Swit- zer- land)	TOTAL
<u>RESEARCH CONTRACTS:</u> Research and Development Programs under Euratom/ US Agreement	13	19	20	4	10		1	67
ORGEL Project	1	8	20	5	7	5		46
Ispra	2	2	12	2	7			25
European Scientific Data Processing Center (CETIS)	5	5	4	2	7			23
Central Nuclear Meas- urements Bureau	1	5	2	1				9
Fast Reactors		5						5
BR2 Reactor		2	2			1		5
Halden and Dragon Projects							2 (UK & Norway)	2
Suspop Project				1				1
Fusion	3		2		1			6
Transplutonium elem.		3	1	1				5
Radioisotopes	4	7	4	1	1			17
Biology		5	3	2	2			12
Isotope Geology	1	1				2		4
Physical Measurements					1			1
Studies & Miscellaneous		4	2		1	3		10
TOTAL	30	66	72	19	37	11	3	238
<u>INDUSTRIAL DESIGN & DEVELOPMENT CONTRACTS:</u>								
Power Reactors					2	1		3
Radioisotopes			1	1				2
Marine Propulsion	3	1		1	1	1		7
TOTAL CONTRACTS	33	67	73	21	40	13	3	250
<u>SUPPLEMENTARY AGREE- MENTS</u>	<u>5</u>	<u>17</u>	<u>25</u>	<u>2</u>	<u>10</u>	<u>2</u>		<u>61</u>
GRAND TOTAL	<u>38</u>	<u>84</u>	<u>98</u>	<u>23</u>	<u>50</u>	<u>15</u>	<u>3</u>	<u>311</u>

In addition, four special agreements - accompanied by two supplementary contracts - were signed by Euratom with the Governments of Belgium, the German Federal Republic, Italy and the Netherlands for the setting-up of four Joint Research Center establishments on their territory.

CONTRACTS SIGNED UNDER THE JOINT RESEARCH AND DEVELOPMENT PROGRAM OF
THE U.S.-EURATOM AGREEMENT

The guiding principle of the joint research and development program is that proposals made by laboratories or firms must be closely related to the types of nuclear power plants to be constructed under the U.S.-Euratom agreement, signed November 9, 1958. Two nuclear power plants of types proven in the United States are under construction in Europe--the Italian Garigliano plant (installed power: 150 electrical megawatts), which will have a boiling-water reactor, and the Franco-Belgian plant at Chooz, near Givet, on which construction has just started. The Chooz reactor will be erected in an excavation dug in the shale of a steep-sloped loop of the Meuse River. Its installed power of 210 MWe can be raised to 242 MWe. (Other proposals for nuclear power plants to be built under the auspices of the Joint U.S.-Euratom program have been received and are under active study.) Thus far, 68 contracts have been signed in Europe under the U.S.-Euratom Joint Research and Development Program. The geographical distribution of these contracts is as follows: 13 in Germany (F.R.), 19 in Belgium, 21 in France, 10 in Italy, 4 in the Netherlands, and 1 in Switzerland. Five of the contracts might be described as "Community-wide" since they were signed with a consortium of contractors formed by firms of member states for this specific purpose. Twenty-two of the contracts have been extended or modified by riders. The contracts affect 26 large European firms, five universities and institutes, and three governmental or semi-governmental institutions specializing in nuclear energy.

The areas under study break down as follows:

- . nuclear fuels (improvement of manufacturing processes, reprocessing, cladding 30 contracts
 - . heat exchange, corrosion, disposal of radioactive water and waste 16 contracts
 - . materials (steels, welding processes, plating of thick sheets, etc.) 14 contracts
 - . techniques of measuring, of chemical analysis, study of neutron detectors, etc. 8 contracts
- 68 contracts