

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(75) 344 final

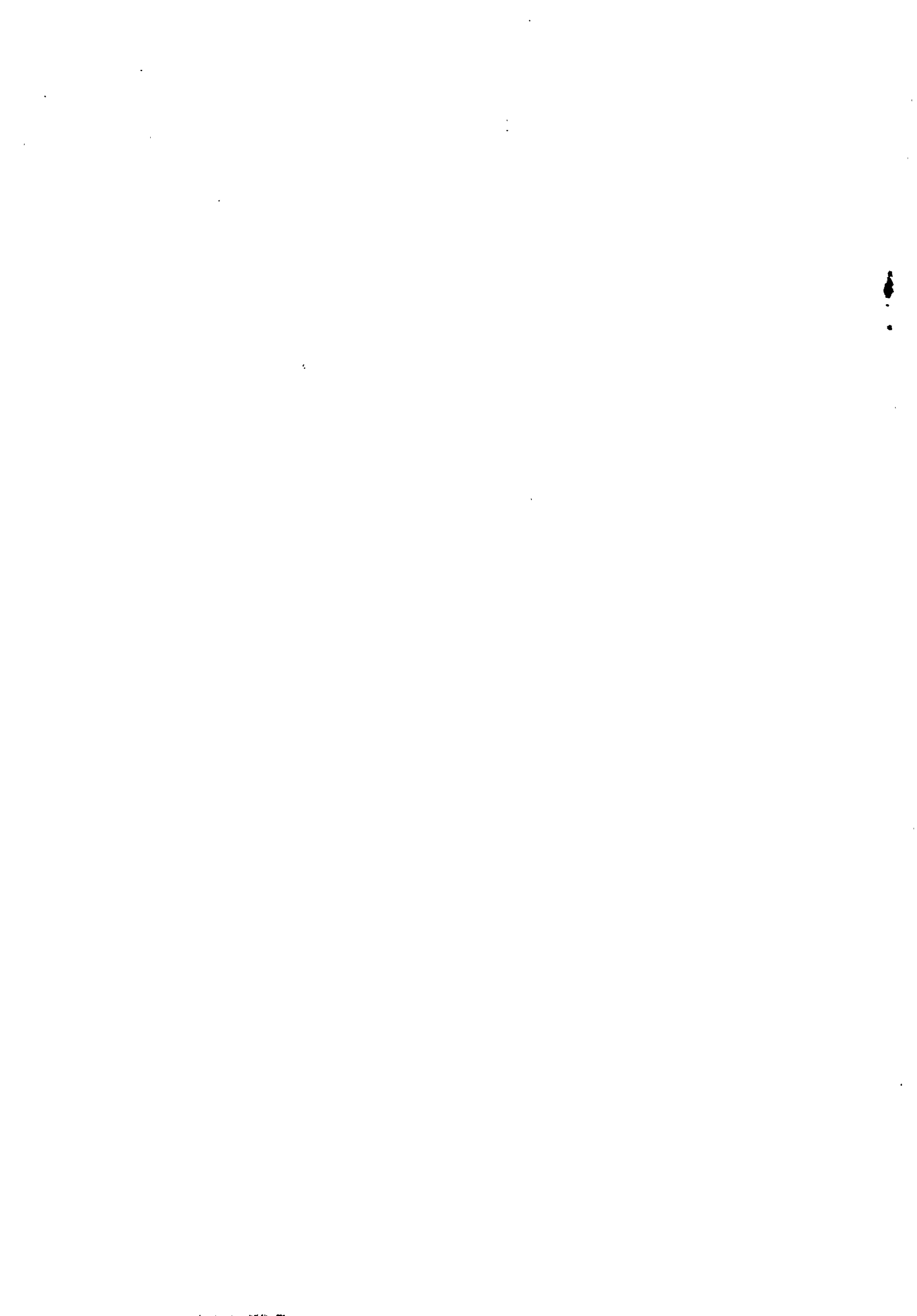
Brussels, 7 July 1975

PROPOSAL FOR A
COUNCIL DECISION (CEE)

adopting a research programme for the
continuation of the DRAGON project

(submitted by the Commission to the Council)

COM(75) 344 final



Explanatory memorandum

The DRAGON Agreement (which is implemented under the auspices of the OECD) is due to expire on 31 March 1976. On 17 April 1975, the Board of Management of the Dragon Project approved a proposal to extend the Agreement up to 31 March 1981, i.e., for a period of five years instead of three as in the past. In this proposal, however, provision is made for the programme to be reviewed after three years, i.e., by 31 March 1979. If, when this review takes place, there does not seem to be any further point in continuing the Agreement, the next two years would be spent in winding up the programmes in an orderly manner, on both the technical and on the financial side. If, on the other hand, it is considered desirable to go on with the Agreement, a decision to this effect would likewise have to be taken by 31 March 1979. One advantage of this approach is that it would do much to facilitate the administration of Project personnel, and thus improve their efficiency and the quality of the services which the project can provide for the signatories of the Agreement.

In accordance with Article 3 of the Agreement currently in force, the decision concerning a further extension must be taken not later than 30 June 1975. In the absence of any decision by that date, the project management would become so critical that preliminary action to wind up the project would have to be taken in July 1975. This would mean in particular giving the three months notice laid down in the staff regulations to practically all the staff, shutting down the reactor to start unloading, and giving notice of the termination of all outside contracts (irradiation, helium loops for testing materials, etc.). The project is now left with very little room for manoeuvre, and it will not be long before irreversible steps have to be taken. The financial position has been made very difficult by the rate of inflation, which is much higher than was anticipated when the current extension was being negotiated.

Having regard to the medium- and long-term importance of high-temperature reactors both for power production and for other applications (synthetic fuels, high-temperature chemical and metallurgical processes, etc.), and the fact that the Dragon Project might contribute substantially to facilitate and speed up the attainment of these objectives, the Commission feels that it would be expedient to extend the Agreement on the lines proposed by the Board of Management. The technical programme would include the following objectives :

- 1) The operation of the Dragon reactor up to March 1980
- 2) The rational utilization of the irradiation facilities in the Dragon reactor and other European test reactors, supplemented by an appropriate programme of post-irradiation examinations, with the twofold aim of supporting any commercial initiatives that might be taken, and later developing the fuel technology with a view to advanced applications
- 3) Use of the primary circuit of the reactor for testing materials and components associated with power reactors (e.g., thermal insulation, heat exchangers)
- 4) Use of the primary circuit of the reactor for studies on the diffusion, deposition and entrainment of fission products. These studies should enable the advantages of the HTR concept to be more clearly defined from the point of view of component accessibility and of safety
- 5) A general evaluation of the HTR concept in regard to safety
- 6) Research and development on materials for the primary circuit, with special emphasis on the problems posed by advanced applications. The tests planned under this programme will be carried out in the Dragon reactor itself, as well as in existing loops which are being used under contracts concluded with outside contractors

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- 7) Definition and quantification of the major problems associated with materials for advanced applications : this would be undertaken by a small team, who would proceed to evaluate these systems in cooperation with bodies and industrial undertakings in the signatory states.

For the implementation of this programme, the Board of Management for the Dragon project has recommended a total budget of 28 M L (67.2 m.u.a.) for five years. This amount allows for the estimated effects of inflation, as well as for the closing down of the reactor if it is finally taken out of service on termination of the Agreement.

The Commission proposes that the contributions should be on the same basis as in the current Agreement, namely, that Austria, Sweden and Switzerland should continue to bear 9.64 % of the total budget between them, and that the overall contribution of the United Kingdom (UKAEA contribution plus the UK participation in the joint programme of the Nine) should remain at 48.30 %. Having regard to the time scale for the forecast expenditure, this should represent a contribution of 6.48 m.u.a. (9.64 %) for Austria, Switzerland and Aktiebolaget Atomenergi of Sweden, 24.86 m.u.a. (36.99 %) for the UKAEA and 35.86 m.u.a. (53.37 %) for the Community.

In view of the foregoing, the Commission requests the Council to adopt a programme of research in continuation of the Dragon Project (Art. 7 of the EAEC Treaty).

FINANCIAL RECORD SHEET

Budget entry: Chapter 3.40 (DRAGON Agreement) in the Statement of expenditure relating to research and investment activities (Annex I, Section III - Commission - of the Budget of the European Communities).

Legal basis : Article 7 of the EAEC Treaty

Proposal forwarded to the Commission on

Programme decision of the Council of

Authorizing Department: Directorate-General for Industrial and Technological Affairs

Description and objectives of and reasons for the project:

Prolongation of the Agreement on the high-temperature gas reactor (OECD Dragon Project) beyond March 31st, 1976, expiry date of present Agreement which has been running since April 1st, 1973.

The programme comprises:

- 1) operation of the Dragon reactor until March 31st, 1980;
- 2) R & D and assessments in connection with fuels, core materials and structures of the reactor, advanced applications and safety.

The project is justified by the medium- and long-term advantages of the high-temperature reactor type, both for electricity generation and for other applications (synthetic fuels, chemical and metallurgical processes at high temperature).

Duration of project: 1.IV.1976 to 31.III.1981 (5 years)

Staff requirements : 16 A grade

4 B grade

20 persons

These 20 persons are Commission officials seconded to the Dragon Project for which the total staff complement of A + B equivalent will be about 77.

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Cost of the project:

The total cost of the programme is estimated at 67.2 MUA (£ 28 million) for 1976-1981.

The Commission will contribute about 53.37 %, i.e. 35,86 MUA (£ 14,943 million).

Schedule of commitments and payments:

	<u>Commitments</u>	<u>Payments</u>
1976	25,000 MUA	7,000 MUA
1977	6,360 MUA	6,910 MUA
1978	1,500 MUA	7,300 MUA
1979	1,500 MUA	7,300 MUA
1980)		
1981)	1,500 MUA	7,350 MUA

Funding of the project:

The funds covering the Commission's financial contribution to this project will be requested for the first time in the preliminary draft budget for the financial year 1976.

Supervision:

Scientific, technical and financial supervision of the results is carried out by the management and steering committees of the Dragon Project, on which the Commission is represented.

Financial supervision in respect of the Commission's contribution is carried out by the Directorate-General for Financial Control.

PROPOSAL FOR A
COUNCIL DECISION

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THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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; which has consulted the
Scientific and Technical Committee

Considering that the Agreement concerning the high temperature gas cooled
reactor (Dragon) between the Community, the United Kingdom Atomic Energy
Authority, the Republic of Austria, the Aktiebolaget Atomenergi (Sweden)
and the Government of the Swiss Confederation expires on the 31st March 1976

Considering the medium-long term interest of the high temperature gas cooled
reactor system

Considering, in consequence, the interest of extending the Agreement and of
continuing the participation of the Community

HAS DECIDED AS FOLLOWS :

Article 1

A research programme, as outlined in Annex, is adopted for the period 1st
April 1976 to 31st March 1981.

Article 2

The financial obligations in respect of that programme shall not exceed
35.86 million units of account.

Done at Brussels,

For the Council
The President

Annex

The technical programme shall include :

- 1) The operation of the Dragon reactor up to March 1980
- 2) The rational utilization of the irradiation facilities in the Dragon reactor and other European test reactors, supplemented by an appropriate programme of post-irradiation examinations, with the twofold aim of supporting any commercial initiatives that might be taken, and later developing the fuel technology with a view to advanced applications
- 3) Use of the primary circuit of the reactor for testing materials and components associated with power reactors (e.g., thermal insulation, heat exchangers)
- 4) Use of the primary circuit of the reactor for studies on the diffusion, deposition and entrainment of fission products. These studies should enable the advantages of the HTR concept to be more clearly defined from the point of view of component accessibility and of safety
- 5) A general evaluation of the HTR concept in regard to safety
- 6) Research and development on materials for the primary circuit, with special emphasis on the problems posed by advanced applications. The tests planned under this programme will be carried out in the Dragon reactor itself, as well as in existing loops which are being used under contracts concluded with outside contractors
- 7) Definition and quantification of the major problems associated with materials for advanced applications : this would be undertaken by a small team, who would proceed to evaluate these systems in cooperation with bodies and industrial undertakings in the signatory states.

This programme shall be executed by means of a new extension of the revised Agreement concerning the high temperature gas cooled reactor project (Dragon).