II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 25 May 1982

adopting a research and training programme (1982 to 1986) in the field of controlled thermonuclear fusion

(82/350/Euratom)

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 submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the energy problem is shared by all the Member States; whereas joint efforts to resolve this problem are likely to produce better results; whereas thermonuclear fusion is one possible solution to the energy problem in the longer term; whereas the rational use of all the different energy sources must be coordinated; whereas the Community must therefore continue to ensure optimum consistency in its efforts between Community activities in the various sectors of energy and energy research;

Whereas, in its Decision 80/318/Euratom (3), as amended by Decision 81/380/Euratom (4), the Council adopted a research and training programme (1979 to 1983) in the field of controlled thermonuclear fusion; whereas Article 3 of that Decision provides that the Commission will submit to the Council, not later than 1 July 1981, a review proposal designed to replace the 1979 to 1983 programme with a new five-year programme (1982 to 1986) with 1982 and 1983 constituting years common to both programmes; whereas Decision 80/318/Euratom should therefore be repealed;

Whereas, as a result of such repeal, 67 million ECU assigned to the preceding programme, exclusive of JET (Joint European Torus), and 35 million ECU assigned to the preceding programme for the JET project will remain available; whereas these amounts will be assigned to the new programme; whereas such a step must be taken into account in determining the upper limit for expenditure commitments necessary for the execution of the new programme;

Whereas, in view of the considerable efforts needed to reach the application stage of controlled thermonuclear fusion, which could be of benefit to the Community, particularly in the wider context of the security of its long-term energy supplies, the various stages of development of the work hitherto undertaken in this field should continue on a joint basis, attaching great importance to the strategy of concentrating effort on the Tokamak line and sizeable effort on two alternative lines in magnetic confinement, the reverse field pinch and stellarators, subject to a periodic reassessment of the reactor applicability of these lines compared with that of the Tokamak;

Whereas the scientific progress achieved in this field in recent years in the Community and the rest of the world illustrates the need, particularly for Tokamak systems, to construct larger and more complex devices and to concentrate in particular on the development of plasma heating techniques, attaching greater importance to experiments relating to ignition with compact

(1) OJ No C 87, 5. 4. 1982, p. 127.
(2) OJ No C 348, 31. 12. 1981, p. 5.
(3) OJ No L 72, 18. 3. 1980, p. 18.
(4) OJ No L 149, 6. 6. 1981, p. 32.

devices having a high magnetic field, if the feasibility thereof has been proved;

Whereas it is necessary to complete the construction of JET in its basic performance, to extend the device to its full performance and to operate and exploit it;

Whereas the time has come to start the definition of the large device constituting the next step after JET and to launch, with the collaboration of the Joint Research Centre, the technological developments required for its design and construction as well as those needed in the longer term for the fusion reactor;

Whereas the research proposed by the Commission constitutes an appropriate means of pursuing such action and it is, consequently, in the common interest to adopt a multiannual programme in the field of controlled thermonuclear fusion, the existence of which is moreover necessary to enable the Community to participate in international cooperation in this field;

Whereas it is important that the Community should continue to encourage the construction of certain equipment concerned with projects accorded priority status, the support of JET by the Associations and certain developments in the field of fusion technology, by granting a preferential rate of participation in the expenditure for such actions;

Whereas, furthermore, the mobility of staff between organizations cooperating in the execution of the programme should be promoted,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of controlled thermonuclear fusion as defined in the Annex is hereby adopted for a five-year period as from 1 January 1982.

Article 2

The upper limit for expenditure commitments for the programme exclusive of JET shall be fixed at 301 million ECU, including an amount of 67 million ECU remaining from the previous programme. The maximum number of staff shall be progressively reduced from 113 to 105 over the period of the programme.

The upper limit for expenditure commitments for JET during the duration of the programme shall be fixed at 319 million ECU including an amount of 35 million ECU remaining from the previous programme. The number of temporary employees within the meaning of Article 2 (a) of the conditions of employment of other servants of the European Communities shall be progressively increased from 150 to a maximum of 165 over the first three years of the programme.

Article 3

The Commission shall submit to the Council, not later than 1 July 1984, a review proposal designed to replace the present programme with a five-year programme with effect from 1 January 1985.

Article 4

Decision 80/318/Euratom is hereby repealed with effect from 1 January 1982.

However, amounts which, pursuant to Decision 80/318/Euratom, are authorized under the relevant headings of the 1980, 1981 and 1982 budgets and which on 1 January 1982 have not yet been committed, or which, by that date, have been committed but not yet paid, may be used for the execution of the present programme.

Done at Brussels, 25 May 1982.

For the Council

The President

L. TINDEMANS

ANNEX

CONTROLLED THERMONUCLEAR FUSION

1. The subject matter of the programme to be executed shall be :

   (a) plasma physics in the sector concerned, in particular studies of a basic character relating to confinement with suitable devices and to methods for producing and heating plasma ;

   (b) research into the confinement, in closed configurations, of plasma of widely varying density and temperature ;

   (c) research into light-matter interactions and transport phenomena and the development of high-power lasers ;

   (d) the development and application to confinement devices of sufficiently powerful plasma heating methods ;

   (e) improvement of diagnostic methods ;

   (f) definition of the large device constituting the next step after JET and technological developments required for its design and construction as well as those needed in the longer term for the fusion reactor ;

   (g) completion of the construction of the JET device in its basic performance ; extension of JET to full performance ; operation and exploitation of JET.

   The work referred to in (b) must be pursued having regard to progress elsewhere in the world in order to establish a position for mutual technical exchanges whenever cooperation in a larger international framework takes place.

   The work referred to in (a), (b), (c), (d), (e) and (f) shall be carried out by means of association or limited duration contracts which are designed to yield the results necessary for the implementation of the programme and which take into consideration the work carried out by the Joint Research Centre, in particular in relation to the next step and technology referred to in (f).

   The implementation of the JET project referred to in (g) has been entrusted to the 'Joint European Torus (JET), Joint Undertaking', established by Decision 78/471/Euratom [1].

2. The programme set out in point 1 shall be part of a long-term cooperative project embracing all work carried out in the Member States in the field of controlled thermonuclear fusion. It is designed to lead in due course to the joint construction of prototypes with a view to their industrial production and marketing.

3. The appropriation of 301 million ECU fixed for the programme exclusive of JET can be broken down as follows :

   (a) about 43 % for the financing at a preferential rate of approximately 45 % of projects, as specified in paragraph 4 ;

   (b) about 2 % for certain industrial contracts within the activity of 'Next Step and Fusion Technology' financed at a rate of 100 %, as defined in paragraph 4 ;

   (c) about 6 % for the financing of administration costs and for expenditure intended to ensure the mobility of staff to enable them to work in organizations cooperating in the implementation of the programme ;

   (d) the amount not set aside for the operations and expenditure referred to in (a), (b) and (c), and any positive balance from the contributions of associated third countries under the programme exclusive of JET, shall be devoted to the financial participation by the Community in other expenditure incurred by the associations. This participation shall be at a uniform rate of about 25 %.

[1] OJ No L 151, 7. 6. 1978, p. 10.

4. After a technical examination, the Consultative Committee of the Fusion Programme may accord priority status to projects belonging to one of the following areas :

   (a) Tokamak systems and support for JET ;

   (b) other toroidal machines ;

   (c) heating and injection ;

   (d) Next Step and Fusion Technology.

   After Commission may finance projects in areas (a), (b), (c) and (d) at a uniform preferential rate of about 45 %.

   After consulting the Consultative Committee of the Fusion Programme, the Commission may support industrial contracts in area (d) at a rate of 100 %.

   In return, all Associations shall have the right to take part in the experiments carried out with the equipment thus constructed.

5. The upper limit for expenditure commitments for the JET project is fixed at 319 million ECU. The amount in question is intended to finance the completion of the construction of the JET device in its basic performance, the extension of JET to full performance and the operation and exploitation of JET until the end of the year 1986, with a participation rate of 80 %. The Swedish and Swiss contributions to the JET project shall be deducted directly from the financing of that part of the overall budget laid down for the project which is to be borne by the Community budget.