

COMMISSION OF THE EUROPEAN COMMUNITIES

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PROPOSAL FOR
A COUNCIL DECISION ON THE ESTABLISHMENT OF THE
"JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING"
and
A COUNCIL DECISION
ON THE CONFERRING OF ADVANTAGES
ON THAT JOINT UNDERTAKING

(forwarded by the Commission to the Council)

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1.

REASONED OPINION OF THE COMMISSION
ON THE ESTABLISHMENT OF A JOINT UNDERTAKING
FOR THE IMPLEMENTATION OF THE JET PROJECT
in accordance with Article 46, para 2, subpara 1
of the Euratom Treaty

The implementation of the JET Project is a critical stage in the development of the Community's fusion programme. The ultimate aim of the programme is to make it possible to generate energy at competitive prices from fusion reactions between light atomic nuclei and, if successful, to undertake the joint construction of prototypes with a view to industrial-scale production and marketing.

Having regard to the magnitude of the effort which will be needed to reach the stage of application of controlled thermonuclear fusion and the significant benefits which the Community can derive from it, particularly in the general context of safeguarding its long-term energy supplies, the work so far carried out in this field must be followed up jointly throughout the various phases of its development.

In the continuation of this work, industry will be called upon to play an increasingly vital rôle, as one approaches the construction of a future fusion reactor prototype. Already in the design phase of the JET Project, close links have been established with industry, notably by the award of about a hundred contracts for studies or for manufacture of prototype components.

The importance of the JET Project, its scientific and technological complexity, its scale and the costs involved require a form of organization in which decisions can be taken and executed without delay. The project management bodies must be vested with full responsibility for all aspects - technical, financial and administrative.

The legal form and organization of the project must be such as to guarantee its Community character.

For the scientific and technical success of the project, it is vitally important that effective collaboration be established between the project and the Associated European Fusion Laboratories.

The draft statutes of the JET Joint Undertaking indicate adequate solutions to all these problems, and demonstrate that this Undertaking, in the form defined in these statutes, constitutes a form of organization appropriate to the implementation of the JET project.

The form of organization proposed within this general framework might set a pattern for the implementation of other major Community projects which will be required before reaching the stage at which the industrial applications of controlled thermonuclear fusion becomes a reality.

Accordingly, the Commission delivers a favourable opinion with regard to the establishment of a Joint Undertaking for the implementation of JET.

2. EXPLANATORY MEMORANDUM

2.1 Background

On July 31 1975 the Commission presented to the Council a proposal for a multiannual programme (1976-1980) of the European Atomic Energy Community in the field of controlled thermonuclear fusion and plasma physics (Fusion Programme) including the construction and initial operation of a large Tokamak-type torus device (Joint European Torus - JET). (1)

This proposal has been endorsed by the European Parliament (2) and by the Economic and Social Committee. (3)

On 25 March 1976 the Council adopted the Fusion Programme (1976-1980), excluding the JET Project. (4)

On 14 July 1976 the Council had an exchange of views on the JET research programme relating to controlled thermonuclear fusion and formed a favourable opinion on the rapid implementation of the project under the Community's multiannual research and training programme (1976-1980).

On 6 October 1976, the Commission presented the Council with a proposal for a Council decision aimed at implementing the JET Project within the 1976-1980 Fusion Programme. (5) The Commission proposed, among other things, to establish, for the implementation of the Project, a Joint Undertaking in the sense of Chapter V of the Treaty setting up EURATOM.

On 17 October 1977 the Council approved the "Arrangements for Implementing the JET Project" (6) and on 25 October 1977 decided that the JET Project should be sited at Culham.(7)

(1) O.J. N° C 201 of 3 September 1975.

(2) O.J. N° C 7 of 12 January 1976.

(3) O.J. N° C 35 of 16 February 1976.

(4) O.J. N° L 90 of 3 April 1976.

(5) Doc. COM(76) 523 final

(6) Doc. R 2404/77 (ATO 116) (Annex)

(7) Doc. R/2943/77 (ATO 126)

The Council accepted the proposal of the Commission to institute a Joint Undertaking, for the implementation of the JET Project, and an Interim JET Council has been set up which has unanimously approved the draft Statutes of such a Joint Undertaking.

2.2 Establishment of the Joint Undertaking

- a) The establishment of the Joint Undertaking needs two decisions of the Council :
- a decision on the actual establishment of the Joint Undertaking (see pages 13 and following of the dossier) and
 - a second decision on the conferment of certain advantages foreseen in Annex III of the Treaty (see pages 59 and following of the dossier).
- b) By the first decision the Council will adopt the statutes of the Joint Undertaking (Art. 46, par. 2 (b) of the Treaty) which include arrangements for :
- location (Article 46, para 2 (a) of the Treaty) ;
 - participation by the Community in the financing of the Joint Undertaking (Art. 46, para 2 (d) of the Treaty) ;
 - participation by a national of a third State (Art. 46 para 2 (e) of the Treaty).
- c) The second decision will concern the conferring of some of the advantages listed in Annex III of the Treaty (Article 46, para 2 (f) of the Treaty).
- d) The scale of and timetable for financing the Joint Undertaking (Article 46, para 2 (c) of the Treaty) as they are shown in para 2.3c) below, not being covered by either of these two decisions, the Commission requests the Council to show their approval in the records.

2.3 The different proposals call for the following comments :

a) Location

In conformity with the Council decision of 25 October 1977, Article 2.2 of the draft statutes fixes the site of JET at Culham. The headquarters of the Joint Undertaking will be at the same place (Article 1.2 of the statutes).

b) The Statutes

The draft Statutes annexed to point 3 (Council Decision on the establishment of the Joint Undertaking) have been drawn up by a group of experts combining representatives of the Partners and of the services of the Commission. They received the unanimous approval of the Interim JET Council. They comply with the guidelines given by the Council and take account of the work done on this subject prior to the setting up of the Interim Jet Council.

The voting arrangements within the JET Council envisaged in Article 4.1 of the draft Statutes do not depart materially from the rules established by the Council (1). In fact they safeguard the spirit of those rules, the underlying principles of which are that a decision can be :

- approved by five members having five votes plus one member having one or two votes ;
- rejected by two members having five votes plus one member having two votes, or two members having one vote.

In order that these principles can be maintained in the absence of Switzerland, the weight of five votes has been reduced to four and the majority necessary to secure decisions from twenty six to twenty one votes.

(1) Document R 2404/77, (ATO 116) (Annex), paras 7 and 8.

The Interim JET Council has agreed that the voting arrangements foreseen by the Council will be applied as soon as Switzerland becomes a Member of the Joint Undertaking, always assuming that the Council approves a proposal to amend the Statutes in this sense, submitted by the Commission in conformity with Article 50 of the Treaty.

The rule established by the Council stipulating that one of the two representatives on the JET Council must be a scientist (1), will be effected by an internal rule of the JET Council.

It is intended that before the adoption of the Statutes by the Council, the States and organizations named in Article 1.3 of the draft Statutes will declare themselves ready to become members of the Joint Undertaking and to assume all the rights and obligations in conformity with the Statutes.

c) Scale of and timetable for financing

(i) Scale of financing

The cost of the constructional phase of the JET Project extending up to the middle of 1983 and covering its actual construction, its commissioning and its initial operation within its basic performance is estimated at 7500 MFB at January 1977 prices, equivalent to 184.6 EUA (1 EUA = 40.6207 FB at the rate of 3 January 1977). This amount does not include the cost of the investments required to enable the installation to reach its extended performance level during the operational phase. It seems likely that some of this expenditure will have to be incurred during the second half of the construction phase. It is understood that these additional expenses can only be committed on the basis of a new programme decision of the Council.

The operational phase of the Project will probably cover a period of five to seven years following on from the construction phase. It is estimated that the annual cost of the Project during this second period will approximate to that incurred during the first period.

(1) Document R 2404/77 (ATO 116) (Annex), para 6.

(ii) Timetable for financing

The annual breakdown of the 184,6 MEUA during the construction phase is planned as follows :

Years	1976/77/78	1979	1980	1981	1982	1983 1st half	Total
Commitments MEUA	20	60	48	35	17	4.6	184.6
Payments	12	35	50	43	30	14.6	184.6

The estimated expenditure for the years 1976/77/78 includes :

- Commission expenditure set against the 4 MUA released for the Project on 4 October 1976 ;
- expenditure incurred since 1 January 1977 by bodies associated with the Fusion Programme in respect of staff seconded to the JET Team, and by the host laboratory in providing support for the project (hosting expenses).

(iii) The Commission will notify the Council if the timescale established by the Joint Undertaking in the framework of its annual budgetary procedure and converted to the rates of 1 January 1977 differs from the timescale above whether this is due to :

- more rapid commitments, or
- a likelihood of the estimated cost of building the experiment being exceeded.

d) Community participation in the financing of the Joint Undertaking

(i) In accordance with the rules established by the Council (1), Article 9.1 of the draft Statutes provides that the expenditure of the Joint Undertaking is to be borne by :

EURATOM	80 %
The UKAEA	10 %

The remaining 10 % is to be shared among all the Members of the Joint Undertaking (other than EURATOM) who have a contract of association with EURATOM in amounts proportional to the latter's financial participation

(1) Document R 2404/77 (ATO 116) (Annex) para. 3.

in the cost of their respective Associations, including general support for priority actions but excluding the additional support granted for such actions.

A Member's annual contribution will be related to the participation of EURATOM in his Association for the preceding year, such participation being expressed in European units of account.

- (ii) The appropriations needed to cover the Community's participation in the financing of the Joint Undertaking will have to be entered in the annual budget of the European Communities and approved every year by the budgetary authority. The Commission therefore requests that the following entry be made in the Council minutes :

"The amount of the Community's participation in the financing of the Joint Undertaking as referred to in Article 46 (2) (d) of the Treaty shall be determined by the budgetary procedure defined in Article 177 within the framework of the programme decision taken in accordance with Article 7 of the Treaty".

- e) Participation by a national of a third State in the financing of the Joint Undertaking

- (i) On 10 May 1976, the Commission and Sweden concluded a cooperation agreement in the field of thermonuclear fusion and plasma physics, the purpose of which was to associate Sweden with the Community Fusion Programme.

Under the terms of this agreement, the Commission has concluded a contract of association with the National Swedish Board for Energy Source Development.

Article 1.3 of the draft Statutes makes provision for that body to become a Member of the Joint Undertaking.

By virtue of being a Member, it will participate in the financing (second paragraph of Article 9.1 of the draft Statutes) and management of the Joint Undertaking. It will be represented on the Jet Council

and the JET Executive Committee. That body and Sweden will have the same rights in respect of information and patents resulting from the implementation of the project as Members who are nationals of the Member States and the Member States themselves.

Article 20.7 of the draft Statutes provides that this organization shall cease to be a Member of the Joint Undertaking at the date of expiry of the cooperation agreement between EURATOM and Sweden.

It should be borne in mind that over and above the Swedish body's contribution to the expenses of the Joint Undertaking in accordance with Article 9.1 of the draft Statutes, Sweden will share in the 80 % Community financing of the Joint Undertaking through its contribution to the Fusion Programme.

- (ii) Once the cooperation agreement and the contract of association with Switzerland have been concluded, and the terms of that country's membership of the Joint Undertaking settled, the Commission will present a proposal to the Council for the amendment of the Statutes in such a way as to make Switzerland a Member of the Undertaking.

f) Advantages

The advantages which are requested in respect of the Joint Undertaking can be grouped in two categories :

- those covered by Annex III of the Treaty ;
- those not covered by Annex III of the Treaty, and which require a specific agreement.

- (i) The conferment of some of the advantages listed in Annex III of the Treaty

Paragraph 1 of Annex III, (Public interest of the acquisition of immovable property and procedures for expropriation).

The United Kingdom Atomic Energy Authority is the owner of the land and will make it available to the Joint Undertaking under the terms of a lease.

This being so, conferment of the advantages referred to in this paragraph is not necessary.

Paragraph 2 (Granting of licenses)

Conferment of this advantage is not necessary.

Paragraph 3 (Duties and charges when Joint Undertakings are established)

The British Government has stated that no duties or charges will be payable by the Joint Undertaking or its Members at the time of its establishment, nor will the contributions to the Joint Undertaking by its Members be regarded as assets within the meaning of par. 3 of Annex III to the Treaty.

Accordingly, no application is made for the conferment of the advantages referred to in this paragraph.

Paragraph 4 (Duties and charges levied upon acquisition of immovable property and registration and recording charges)

It cannot be ruled out that the Joint Undertaking might be interested in purchasing immovable property (as opposed to renting it), particularly from the point of view of providing temporary accommodation for JET staff to facilitate their installation near the site, or for other persons temporarily working on the Project.

Conferment of the advantages provided for in this paragraph is therefore requested.

Paragraph 5 (Direct Taxes)

Conferment of these advantages is requested.

To the extent that its activities are directed towards achieving the objective for which it was established, the Joint Undertaking, its property, assets and revenue will have to be exempted from all direct taxes and charges having equivalent effect.

This exemption will include income tax, capital gains tax, corporation tax, and municipal rates levied on the official premises of the Joint Undertaking ; as is the custom for diplomatic mission, however, exemption will not apply to charges for specific services rendered to the Undertaking.

The Joint Undertaking will likewise be exempted from vehicle excise duty.

Paragraph 6 (Customs duties)

Conferment of these advantages is requested.

The Joint Undertaking will have to be exempted from all customs duties and charges having equivalent effect, and from all prohibitions and restrictions on imports or exports, whether of an economic or fiscal nature, with regard to :

- a) scientific and technical equipment, excluding building materials and equipment for administrative purposes :
- b) substances which have been or have to be processed in the Joint Undertaking.

The conferment of additional advantages in the field is foreseen in the agreement concluded between the Community and the United Kingdom, mentioned in paragraph III.4 of the present dossier (page 80).

However, the Joint Undertaking remains responsible for the payment of services rendered.

Paragraph 7, Article 182 of the Treaty (Exchange facilities)

Under this paragraph, it is requested that the Joint Undertaking be enabled to transfer into the currency of one of the Member States its holdings of currency of another Member State without restriction, to the extent necessary for purposes of the Joint Undertaking.

The Joint Undertaking may freely make use of amounts in the currencies of non-member countries derived from the contributions of its Members.

Paragraph 8 (Entry and residence)

The entry and residence in each Member State for nationals of Member States employed by the Joint Undertaking and for their spouses and dependent members of their families are ensured by the EEC-Treaty and its implementing regulations. Therefore, the conferring of the advantages referred to in this paragraph is not necessary.

(ii) Advantages not listed in Annexe III and requiring a specific agreement.

The agreement concluded between the Commission and the British Government on the Joint Undertaking's exemption from indirect duties, taxes on sales and all customs duties shown in para 6. below (page 69).

In the same agreement the British Government undertakes to allow nationals of third States, of which an organization is a Member of the Joint Undertaking, who are working on the JET project, and their spouses and dependent members of their families, the same privileges as are granted to Member State nationals in accordance with the EEC-Treaty, and its implementing regulations, and to take all appropriate measures compatible with English law, in order to facilitate the entry, residence and departure of nationals of countries other than those mentioned above as well as their spouses and dependents.

3.
PROPOSAL FOR A
COUNCIL DECISION ON
THE ESTABLISHMENT OF THE "JOINT EUROPEAN TORUS (JET); JOINT UNDERTAKING"

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

HAVING REGARD to the Treaty establishing the European Atomic Energy Community and in particular Articles 47 and 49 thereof,

HAVING REGARD to the Opinion of the Commission,

HAVING REGARD to the report from the Commission,

HAVING REGARD to the proposal from the Commission,

WHEREAS the Fusion Programme of the European Atomic Energy Community provides for the construction, operation and exploitation of a large tokamak machine ("Joint European Torus" : JET Project) ;

WHEREAS the implementation of the JET Project will constitute an important stage in the aim of the Fusion Programme to reach the status of controlled thermonuclear fusion applications from which the Community could derive benefit, in particular in the more general context of the security of its long term energy supply,

WHEREAS the scale and scientific and technological complexity of the Project as well as its dimensions and cost render necessary a joint effort in the form of an organization able to guarantee the maintenance of the Community character of the Project and permit, on the one hand, effective interaction and cooperation between the Project and the laboratories associated with the Fusion Programme and, on the other, the concentration of the financial and personnel resources under one management which shall be entirely responsible for the execution of the Project ;

HAVING REGARD to the Agreement concluded between the Community and Sweden on 10 May 1976 for cooperation in the field of controlled thermonuclear fusion and plasma physics, and that consequently a Swedish organization is participating in the JET Project,

DECIDES :

Article 1

For the execution of the JET Project, there shall be established a Joint Undertaking within the meaning of Chapter V of the Treaty for a duration of 12 years beginning on 1 June 1978.

The name of the Undertaking shall be "Joint European Torus (JET), Joint Undertaking".

Its aim shall be to construct, operate and exploit, as part of the Community Fusion Programme and for the benefit of the participants therein, a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus - JET) in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor.

JET will be constructed at the seat of the Joint Undertaking, situated in the United Kingdom of Great Britain and Northern Ireland at Culham in the County of Oxford.

Article 2

The Statutes of the "Joint European Torus (JET), Joint Undertaking", annexed to the present Decision, are adopted. The annex forms an integral part of the present Decision.

Article 3

The present Decision shall be published in the Official Journal of the European Communities and shall come into force on 1 June 1978.

Done at Brussels

For the Council

The President

STATUTES

OF THE

"JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING"

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ANNEX

Article 1

Name, Headquarters, Members

- 1.1 The name of the Joint Undertaking shall be "Joint European Torus (JET), Joint Undertaking".
- 1.2 The seat of the Joint Undertaking shall be at Culham, Oxfordshire, in the United Kingdom of Great Britain and Northern Ireland.
- 1.3 The Joint Undertaking shall have the following Members :

The European Atomic Energy Community (hereinafter referred to as EURATOM),

the Belgian State, acting for its own part (Laboratoire de Physique des Plasmas of the Ecole Royale Militaire) and on behalf of the Université Libre de Bruxelles (hereinafter referred to as Belgium),

the Commissariat à l'Energie Atomique, France, (hereinafter referred to as CEA),

the Comitato Nazionale per l'Energia Nucleare, Italy, (hereinafter referred to as CNEN),

the Consiglio Nazionale delle Ricerche, Italy, (hereinafter referred to as CNR),

the Forsøgsanlaeg Risø, Denmark, (hereinafter referred to as Risø),

the Grand-Duché de Luxembourg (hereinafter referred to as Luxembourg),
Ireland,

the Kernforschungsanlage Jülich GmbH, Federal Republic of Germany, (hereinafter referred to as KFA),

the Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. - Institut für Plasmaphysik, Federal Republic of Germany, (hereinafter referred to as IPP),

the National Swedish Board for Energy Source Development (hereinafter referred to as the Board),

the Stichting voor Fundamenteel Onderzoek der Materie, the Netherlands, (hereinafter referred to as FOM),

the United Kingdom Atomic Energy Authority (hereinafter referred to as the Authority or the host organization).

Article 2

Object and location

- 2.1 The object of the Joint Undertaking shall be to construct, operate and exploit as part of the EURATOM Fusion Programme and for the benefit of the participants in this programme a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus - JET) (hereinafter referred to as 'the Project') in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor.

- 2.2 The JET device and its auxiliary facilities shall be constructed at Culham, according to the general design set out in the report EUR-JET-R5 "The JET Project - design proposal" as may be modified in accordance with the present Statutes.

Article 3Organs

- 3.1 The organs of the Joint Undertaking shall be the JET Council and the Director of the Project.
- 3.2 The JET Council shall be assisted by a JET Executive Committee and may seek the advice of a JET Scientific Council.

Article 4

JET Council4.1 Composition, Right of vote

4.1.1 The Members of the Joint Undertaking shall be represented in the JET Council as follows, the vote of each pair of representatives being weighted as indicated :

<u>Representing</u>	<u>Number of Representatives</u>	<u>Weighting of ; vote</u>
EURATOM	2	4
Belgium	2	2
CNEN and CNR jointly	2	4
CEA	2	4
Risø	2	2
Ireland	2	1
Luxembourg	2	1
IPP and KFA jointly	2	4
the Board	2	2
FOM	2	2
Authority	2	4

4.1.2 For their adoption acts of the JET Council shall require at least 21 votes in favour.

4.2 Functions

4.2.1 The JET Council shall have the responsibility for the management of the Joint Undertaking. It shall take the basic decisions for implementing the Project and exercise overall supervision of the execution of the Project, and report to the Members.

4.2.2 In particular, the JET Council shall :

- (a) ensure the collaboration between the associated laboratories and the Joint Undertaking in the execution of the Project, including the establishment in due time of rules on the operation and exploitation of JET,
- (b) approve the agreements governing relations between the host country and/or the host organization and the Joint Undertaking,
- (c) approve the conclusion of agreements regarding cooperation with third countries and with institutions, undertakings or persons of third countries or with international organizations,
- (d) nominate the Director and the senior staff of the Project with a view to their appointment by the Commission or the host organization as appropriate and determine their period of assignment, approve the main structure of the Project Team and decide the procedures for the assignment and management of staff,
- (e) adopt the Financial Regulations in accordance with Article 11.4,
- (f) in accordance with Article 10 approve the annual budget including establishment of staff as well as the Project Development Plan and the Project Cost Estimates,
- (g) approve the annual accounts and balance sheet,
- (h) decide on any acquisition, sale and mortgaging of landed property and other titles to real estate, as well as on the giving of any sureties or guarantees, taking out shares in other undertakings or institutions, and on any granting or taking of loans,
- (i) approve any proposal involving a significant change in the design of the JET device and its auxiliary facilities,

- (j) issue the annual reports on the current status of the Project and its financial situation, referred to in Article 13.2,
- (k) have such other powers and perform such other functions, including the establishment of subsidiary bodies, as may be necessary for the purposes of the Project.

4.3 Meetings, Rules of Procedure

- 4.3.1 The JET Council shall meet at least twice a year. Extraordinary meetings shall be held either on request of one third of the members of the JET Council or on request of its Chairman, or the Director of the Project. The meetings shall normally take place at the seat. The JET Council shall elect its chairman from among its Members. Unless otherwise decided in a particular case the Chairman of the JET Executive Committee and the Director of the Project shall participate in the meetings.
- 4.3.2 The JET Council shall adopt its Rules of Procedure.

Article 5

JET Executive Committee

5.1 Composition, Right of vote

The provisions of Article 4.1 shall apply to the representation of the Members in the JET Executive Committee and its voting arrangements.

The Chairman of the JET Executive Committee shall be appointed by the JET Council.

5.2 Functions

The JET Executive Committee shall assist the JET Council in the preparation of its decisions and shall undertake any other tasks which the JET Council may entrust to it.

The JET Executive Committee shall in particular :

- (a) advise the JET Council and the Director of the Project on the status of the Project on the basis of regular reports,
- (b) comment and make recommendations to the JET Council on the Project Cost Estimates and the draft budget including the establishment of staff drawn up by the Director of the Project,
- (c) approve, in accordance with the rules on the award of contracts to be established by the JET Council, the tendering procedure and the award of contracts,
- (d) promote and develop collaboration between the associated laboratories and the Joint Undertaking in the execution of the Project.

5.3 Meetings, Rules of Procedure

The JET Executive Committee shall meet at least 6 times a year. The meetings shall normally take place at the seat of the Joint Undertaking. Subject to the approval of the JET Council, the JET Executive Committee shall draw up its rules of procedure.

Article 6

JET Scientific Council

6.1 Composition

The JET Council shall appoint the members of the JET Scientific Council and its Chairman.

6.2 Functions

The JET Scientific Council shall :

- (a) upon the request of the JET Council advise on scientific and technical matters, including proposals involving a significant change in the design of JET, its exploitation and its long term scientific implications,
- (b) perform such other tasks as the JET Council may request it to undertake.

6.3 Rules of Procedure

Subject to the approval of the JET Council, the JET Scientific Council shall draw up its Rules of Procedure.

Article 7

The Director of the Project

- 7.1 The Director of the Project shall be the chief executive of the Joint Undertaking and its legal representative.
- 7.2 He shall execute the Project Development Plan and direct the execution of the Project within guidelines established by the JET Council to whom he shall be responsible, and he shall supply the JET Council, the JET Executive Committee, the JET Scientific Council and other subsidiary bodies with all information necessary for the performance of their functions.
- 7.3 In particular, the Director of the Project shall :
- (a) organize, direct and supervise the Project Team,
 - (b) submit to the JET Council proposals on the main structure of the Project Team, and propose to the JET Council the nomination of senior staff,
 - (c) draw up and regularly update the Project Development Plan and the Project Cost Estimates in accordance with the Financial Regulations and submit them to the JET Council,
 - (d) draw up, in accordance with the Financial Regulations, the annual draft budget including establishment of staff, and submit it to the JET Council,
 - (e) in accordance with the Financial Regulations, keep accounts and inventory records, draw up the annual accounts and the balance sheet, and submit them to the JET Council,
 - (f) submit to the JET Council any proposal involving a significant change of the design of JET,

- (g) organize, together with the associated laboratories, special meetings ("workshops") on scientific and technical topics relating to the Project and submit reports on these meetings to the JET Council,
- (h) undertake, where necessary in conjunction with the host organisation, steps to obtain the permits and licences required for the construction, operation and exploitation of JET, including buildings, as well as draw up any reports required in this respect,
- (i) be responsible for safety and undertake all organizational measures to meet the relevant safety requirements,
- (j) draw up in accordance with Article 16 rules on publication and public communication of information and submit them to the JET Council,
- (k) draw up the annual report on the current status of the Project and its financial situation and such other reports which may be requested by the JET Council and submit them to the JET Council.

Article 8

Project Team

- 8.1 The Project Team shall assist the Director of the Project in the performance of his duties. Its staff shall be fixed in the staff establishment as defined in the annual budget. It shall be composed of staff coming from the Members of the Joint Undertaking as provided for in Article 8.3 and of other personnel. The staff of the Project Team shall be recruited in accordance with the provisions of Articles 8.4 and 8.5 below.
- 8.2 The composition of the Project Team shall strike a reasonable balance between the need to guarantee the Community nature of the Project, especially in the case of posts for which qualifications of a certain level are required (physicists, engineers, administrative staff at an equivalent level) and the need to give the Director of the Project the widest possible authority in the matter of staff selection in the interests of efficient management. In applying this principle account shall also be taken of the interests of the non-Community Members of the Joint Undertaking.
- 8.3 The Members of the Joint Undertaking shall make available to the Joint Undertaking qualified scientific, technical and administrative staff.
- 8.4 Staff made available by the host organization shall remain in the employment of the host organization on the terms and conditions of service of that organization and be assigned by the latter to the Joint Undertaking.
- 8.5 Unless decided otherwise in special cases in accordance with the procedures for the assignment and management of staff to be decided by the JET Council, staff made available by the Members of the Joint Undertaking other than the host organization as well as other personnel shall be recruited by the Commission on temporary posts in accordance with the "Conditions of Employment of Other Servants of the European Communities" and assigned by the Commission to the Joint Undertaking.

- 8.6 All staff forming part of the Project Team will come under the sole management authority of the Director of the Project.
- 8.7 All staff expenditure, including expenditure related to staff assigned to the Joint Undertaking by the Commission and the host organization shall be borne by the Joint Undertaking.
- 8.8 Each Member having a contract of Association with EURATOM will undertake to re-employ the staff whom it placed at the disposal of the Project and who were recruited by the Commission for temporary posts, as soon as the work of such staff on the Project has been completed.
- 8.9 The JET Council shall establish the detailed procedures for assignment and management of staff.

Article 9

Financing

9.1 The expenditure of the Joint Undertaking shall be borne by :

EURATOM	80 %
Authority	10 %

The remaining 10 % shall be shared between all Members other than EURATOM, having contracts of association with EURATOM in proportion to the EURATOM financial participation in the costs of their Associations, including the general support for priority actions but excluding any additional support for these actions. The annual contribution of such Member shall relate to the EURATOM participation in its Association for the previous year, expressed in European Units of Account.

9.2 All revenue of the Joint Undertaking shall be applied in promoting the objects as defined in Article 2. Subject to Article 21 no payment by way of division of any excess of revenue over expenditure of the Joint Undertaking shall be made to the Members of the Joint Undertaking.

Article 10

Financial Year, Budgetary procedure

- 10.1 The financial year shall correspond to the calendar year.
- 10.2 The Director of the Project shall, before 31 March of each year, transmit to the Members the Project Cost Estimates as approved by the JET Council. The Project Cost Estimates shall include a forecast of annual expenditure for the following five years, taking into account the relevant decisions concerning the EURATOM fusion programme. Within this forecast the estimates of revenue and expenditure for the first financial year (preliminary draft budget) shall be drawn up in such detail as is necessary for the internal budgetary procedure of each Member regarding its financial contribution to the Joint Undertaking. The Director of the Project shall supply the Members with all supplementary information needed for this purpose.
- 10.3 The Members shall communicate to the Director of the Project forthwith their comments on the Project Cost Estimates and in particular on the estimates of revenue and expenditure for the following year.
- 10.4 Based upon the approved Project Cost Estimates, and taking into account the comments received from the Members, the Director of the Project shall prepare the draft budget for the following year and submit it to the JET Council before 30 September.
- 10.5 After notification by the Commission of the appropriation relating to its financial contribution to the Joint Undertaking as shown in the finally adopted budget of the European Communities, the JET Council shall adopt the budget of the Joint Undertaking.
- 10.6 To meet the requirements of Article 171(3) of the Treaty establishing EURATOM, the Director of the Project shall send to the Commission before 31 March of each year the budget adopted for the current year including the estimates of revenue and expenditures referred to in that Article, together with the operating accounts and the balance sheet of the previous year. The Commission shall place them, at the latest together with its preliminary draft budget for the following year, before the Council of the European Communities and the European Parliament.

Article 11

Financial Regulations

11.1 The purpose of the Financial Regulations is to ensure the economic and sound financial management of the Joint Undertaking.

11.2 In particular, they shall include the principal rules on :

- (a) the unit of account or currency in which the accounts of the Joint Undertaking shall be kept,
- (b) the presentation and structure of the Project Cost Estimates and the annual budget,
- (c) the implementation of the annual budget and on internal financial control,
- (d) the calculation and payments of contributions by the Members of the Joint Undertaking in accordance with Article 9 of the present Statutes,
- (e) the keeping and presentation of accounts and inventory records as well as the drawing up and presentation of the annual balance sheet,
- (f) the procedure regarding calls for tenders, based on non-discrimination among the countries of the Members of the Joint Undertaking, the placing and the terms and conditions of contracts and orders on behalf of the Joint Undertaking.

11.3 As regards the placing of contracts, the Financial Regulations shall provide for the selection of the tenders giving the economically and technically most efficient solution. The Director of the Project shall, in collaboration with the JET Executive Committee and the Members, strive to achieve as wide as possible a distribution of contracts, taking into account the Community nature of the Project.

11.4 The Financial Regulations shall be adopted by the JET Council in agreement with the Commission.

Article 12

Auditing

Within two months after the end of each financial year the Director of the Project shall submit the annual accounts of the preceding year and the annual balance sheet to the Court of Auditors of the European Communities. The audit executed by the Court of Auditors shall be based on records and performed on the spot. The Director of the Project shall present the annual accounts and the annual balance sheet together with the report of the Court of Auditors to the JET Council for approval. The Director of the Project is entitled and, if requested by the JET Council, obliged to comment on the report. The Court of Auditors shall send its report to the Members of the Joint Undertaking, to the Council of the European Communities and to the European Parliament.

Article 13

Project Development Plan, Status and other reports

- 13.1 The Project Development Plan shall specify the plan for the execution of all elements of the Project, in particular work, to be performed by the Project Team, by third parties and by the Members of the Joint Undertaking. It shall cover the whole term of the Joint Undertaking and regularly be updated.
- 13.2 The annual report shall show the current status of the Project, in particular with regard to timetables, cost, performance of the scientific programme, and its position in the EURATOM Fusion programme and in the world-wide development of fusion research.

Article 14

Work to be performed by the Associations

Where contracts of association contain provisions for work to be carried out in support of the Project, such work shall be specified and controlled by arrangements concluded between the Joint Undertaking and the Association concerned, and the cost of such work shall be borne in accordance with the relevant provisions of the contract of association.

Article 15

Support from the host organization

- 15.1 The host organization shall make available to the Joint Undertaking land, buildings, goods and services required for the implementation of the Project as summarized in the Annex to the present Statutes and under terms outlined therein. The Annex shall form an integral part of the present Statutes.
- 15.2 Subject to the approval of the JET Council in accordance with Article 4.2.2 (b), the details of such support, as well as the modalities of cooperation between the Joint Undertaking and the host organization, shall be covered by an agreement to be concluded between them.

Article 16

Information and Patent Rights16.1 Information

- 16.1.1 All information generated in the execution of the Project, including but not limited to drawings, designs, computations, reports and other documents, know-how and inventions, whether or not patentable, shall be the property of EURATOM, subject to the following provisions of this Article.
- 16.1.2 The Joint Undertaking shall be entitled to use the information referred to in Article 16.1.1 without charge for the execution of the Project. The Members of the Joint Undertaking shall be entitled to use such information without charge for their own research purposes.
- 16.1.3 Each Member of the Joint Undertaking shall be duly kept informed on the progress of the Project through the JET Council and at regular intervals be provided with reports on the progress made and the results obtained (including the reports specified in Article 13 of the present Statutes).
- 16.1.4.1 The Commission will, in accordance with the provisions of Article 13 of the Treaty establishing EURATOM and subject to the conditions contained therein, communicate the reports referred to in Article 16.1.3 to the Member States, to persons and undertakings (as defined in article 196 of that Treaty) as well as to the Government of Sweden and to persons and undertakings established on its territory.
- Dissemination of such reports by the Commission to States and to persons and undertakings other than those specified above and dissemination as such of the reports by the Joint Undertaking

and by its other Members shall be at the discretion of and on conditions approved by the JET Council, but without preventing the customary exchange of views and ideas between scientists.

- 16.1.4.2 The JET Council shall establish terms and conditions under which the Joint Undertaking and its Members may proceed to dissemination and/or licensing of the information and in particular of the drawings, designs, computations, documents, know-how and non-patentable inventions referred to in Article 16.1.1.

16.2 Patents

- 16.2.1 Where patentable inventions are made in the execution of the Project the Commission may, in the name and at the cost of EURATOM, file patent applications and obtain patents. The Joint Undertaking shall promptly inform the Commission about inventions and shall in due time forward to the latter any document and information required for filing of the patent applications. The Commission shall transmit to the Joint Undertaking the administrative data and a copy of such patent applications or patents.
- 16.2.2 Under the patent applications and patents referred to in Article 16.2.1, the Joint Undertaking and the Members thereof shall be entitled to royalty-free, non-exclusive, irrevocable licences with the right to grant sublicences after consultation with the Commission.
- 16.2.3 Under the patent applications and patents referred to in Article 16.2.1, the Commission may, in accordance with the provisions of article 12 of the Treaty establishing EURATOM and subject to the conditions contained therein, grant on request non-exclusive licences to the Member States of EURATOM, to persons and undertakings (as defined in article 196 of the Treaty), as well as to the Government of Sweden and to persons and undertakings established on its territory.

Granting of non-exclusive licences by the Commission to States, persons and enterprises other than those specified above shall be on the conditions approved by the JET Council.

- 16.2.4 Should the Commission in regard to any invention, patent application or patent referred to in Article 16.2.1 for adequate reasons (including in particular lack of budgetary allocations) intend to waive its right to file, or to abandon patent applications and/or patents, it shall inform the Joint Undertaking and the other Members thereof in due time. If in such event a Member requests assignment of the pertinent EURATOM rights, the Commission shall comply with such request and the Member involved shall then be entitled to file patent applications and to pursue or maintain such patent applications and patents as were already filed or granted. If the request for assignment is made by several Members and no agreement can be reached among them on a sole assignee, then the Commission shall refer the matter to the JET Council for decision.
- 16.2.5 In regard to any invention, patent application or patent referred to in Article 16.2.4 and assigned to a Member of the Joint Undertaking, or filed and obtained by such Member after assignment, EURATOM shall be granted a royalty-free, non-exclusive licence for its own research purposes, and the licence and sublicensing rights granted to the Joint Undertaking and the other Members thereof shall be maintained and extended to the inventions, patent applications and patents filed and obtained after assignment.

16.3 Other provisions

- 16.3.1 Any contract or order concluded by the Joint Undertaking shall contain provisions to the effect that the rights conferred and obligations laid upon the Joint Undertaking and its Members under this Article shall not be affected by the terms and conditions of such contracts and orders.
- 16.3.2 The rights conferred and obligations laid upon the Members of the Joint Undertakings by the provisions of this Article shall subsist after the winding up of the Joint Undertaking.
- 16.3.3 Each Member of the Joint Undertaking, while retaining full ownership, shall undertake to make available free of charge to the Joint Undertaking any information and invention required for the sole purpose of the execution of the Project unless it cannot do so by reasons of obligations to third parties.
In particular, the Commission shall make available free of charge to the Joint Undertaking all information acquired under contracts and orders implemented under the JET Design Agreement.
- 16.3.4 The provisions of this Article shall apply without prejudice to applicable national laws relating to inventions made by employed inventors.

Article 17

Liability and Insurance

- 17.1 The contractual liability of the Joint Undertaking shall be governed by the relevant contractual provisions and by the law applicable to the contract in question.
- 17.2 In case of non-contractual liability, the Joint Undertaking shall make good any damage caused by it, to such extent as the Joint Undertaking is under a legal liability under the relevant national law.
- 17.3 Any payment by the Joint Undertaking for covering the liability referred to in Articles 17.1 and 17.2 and the costs and expenses incurred in connection therewith shall be considered as expenditure of the Joint Undertaking within the meaning of Article 9.
- 17.4 The Director of the Project shall propose to the JET Council any necessary fire and other insurance, and the Joint Undertaking shall take out such insurance as the JET Council may direct.

Article 18Accession by new Members

- 18.1 The Joint Undertaking is open for accession by new Members which can provide a useful contribution to the object of the Joint Undertaking.
- 18.2 Any request for accession shall be addressed to the Director of the Project, who shall transmit it to the JET Council. The JET Council shall decide whether the Joint Undertaking shall start negotiations with the applicant on the conditions of accession. In case of a positive decision, the Joint Undertaking shall negotiate the conditions of accession and submit them to the JET Council for agreement. If the JET Council agrees the Commission shall submit to the Council of the European Communities the proposal on the amendment of the present Statutes required for the accession of the applicant concerned.

Article 19**Duration of the Joint Undertaking**

19.1 The Joint Undertaking shall be established for a period of twelve years.

19.2 According to progress in achieving the object of the Joint Undertaking as defined in Article 2 that period may be prolonged by amending the present Statutes in accordance with the provisions of Article 24. It may be shortened either by such an amendment or by action under Article 20.6 or Article 21.1.

Article 20

Withdrawal of Membership

- 20.1 For a period of five years from the establishment of the Joint Undertaking, its Members shall not be allowed to withdraw their membership.
- 20.2 After that period each Member shall be entitled to give notice of withdrawal by registered letter to the Director of the Project, such withdrawal taking effect at the end of the financial year following that in which notice of withdrawal is given. However, withdrawal shall not be allowed to the host organization.
- 20.3 If a Member gives notice of withdrawal, the JET Council shall decide within six months whether the Joint Undertaking shall continue or be wound up.
- 20.4 If the JET Council decides the continuation of the Joint Undertaking the Commission, acting on proposal of the JET Council, shall submit to the Council of the European Communities the amendments to the present Statutes required for the continuation of the Joint Undertaking.
- 20.5 The Member so withdrawing shall bear its share as specified in Article 9 of all commitments and liabilities incurred by the Joint Undertaking up to the date when its withdrawal becomes effective. Furthermore it shall not be entitled to claim from the Joint Undertaking or from any of its Members any compensatory payment with respect to the assets of the Joint Undertaking.
- 20.6 If the JET Council decides the winding up of the Joint Undertaking the Commission will submit to the Council of the European Communities the proposal on the winding up of the Joint Undertaking. If the Council of the European Communities decides to wind up the Joint Undertaking, Article 21 shall apply.
- 20.7 Subject to Article 20.5 Members having concluded with EURATOM a cooperation agreement in accordance with Article 101 of the Treaty establishing EURATOM or a contract of association pursuant to such an agreement shall cease to be a Member of the Joint Undertaking upon termination of that cooperation agreement.

Article 21

Winding up

- 21.1 If the Joint Undertaking terminates, either by ending its duration as specified in Article 19 or by decision of the Council of the European Communities, the Joint Undertaking shall be wound up.
- 21.2 For the purpose of conducting the proceedings in winding up the Joint Undertaking the JET Council shall appoint one or more liquidators, who shall comply with the instructions issued by the JET Council.
- 21.3 When the Joint Undertaking is being wound up, it shall :
- return to the host organization any physical support item made available to it in accordance with Article 15,
 - assign to the host organization the JET device, buildings and any other fixed or movable assets acquired by the Joint Undertaking.
- The host organization shall at its own cost and liability :
- re-take possession of the physical support items mentioned above,
 - take over and assume responsibility for the JET device, buildings and any other fixed or movable assets assigned to it.
- 21.4 If the Joint Undertaking decides to end the use of any support item or any fixed or movable asset before the winding up, the provision of Article 21.3 shall apply to such specific support item or asset unless the Joint Undertaking decides to dispose otherwise of assets acquired by it.
- 21.5 If within a period of six months after the termination of the Joint Undertaking in accordance with Article 21.1, the Commission requests the use for the Community fusion activity of any asset acquired by the Joint Undertaking and assigned to the host organization in accordance

with Article 21.3 and 21.4, the host organization shall make such asset available without any charge for depreciation or rent. This shall not prevent the decommissioning of the JET device.

21.6 When fixed and movable assets have been dealt with as provided in 21.3, any further assets (cash, amounts receivable, intangible assets) shall be used to cover the liabilities of the Joint Undertaking and the costs relating to its winding up except those to be borne by the host organization in accordance with Article 21.3. Any surplus shall be distributed among the Members existing at the time of the winding up in proportion to their total contributions actually made by them in accordance with Article 9. In the event of a deficit, this shall be met by the existing Members in the same proportions as those in which their contributions have been assessed for the financial year then current in accordance with Article 9.

Article 22

Subsidiary reference to national Law

22.1 In any matter not covered by these Statutes, English law shall apply.

22.2 Without prejudice to the provisions of paragraph 3 of Article 49 of the Treaty establishing EURATOM, for the avoidance of doubt the Joint Undertaking shall not be regarded as a company within the meaning of the Companies Act 1948 and 1967 of the United Kingdom.

Article 23

Assignment of Commission Rights

- 23.1 The Commission shall assign free of charge to the Joint Undertaking any title, rights and obligations with respect to the ownership of materials and other goods supplied or to be supplied under contracts and orders placed for the Project prior to the establishment of the Joint Undertaking to the extent allowed in such contracts and orders.
- 23.2 The Joint Undertaking shall take over any contract and order placed by the Commission for the Project prior to the establishment of the Joint Undertaking. Immediately after the establishment of the Joint Undertaking the latter and the Commission shall take all steps required for this.

Article 24

Amendments

- 24.1 Any Member of the Joint Undertaking may submit to the JET Council proposals for amendment of the present Statutes.
- 24.2 If the JET Council agrees to the proposals, the Commission will make a proposal to the Council of the European Communities for their approval in accordance with Article 50 of the Treaty establishing EURATOM.
- 24.3 The amendments shall enter into force on the date on which the Council of the European Communities shall have approved the amendments, or on such other date as that Council may decide.

Article 25

Disputes

- 25.1 Any dispute either between Members of the Joint Undertaking or between one or more Members and the Joint Undertaking concerning the interpretation or application of the present Statutes, which is not settled by the good offices of the JET Council, shall, at the request of any party to the dispute, be submitted to an arbitration tribunal.
- 25.2 The arbitration tribunal shall be established in each individual case. It shall be composed of three members nominated jointly by the parties in the dispute. The members of the arbitration tribunal shall elect the chairman from amongst themselves.
- 25.3 If the parties in the dispute fail to nominate one or several members of the arbitration tribunal within two months of the request for submission of a dispute to the arbitration tribunal, or if within one month of the nomination of the members these members do not elect a chairman, such member or members or the chairman shall be nominated by the President of the Court of Justice of the European Communities at the request of one of the parties in the dispute.
- 25.4 The arbitration tribunal shall reach its decision by a majority of votes. Such decision shall be binding and final.

Article 26

Definitions

For the purpose of these Statutes the following terms shall have the following meaning :

- (a) "EURATOM Fusion Programme" means the research and training programme (1976-1980) in the field of fusion and plasma physics adopted by decision of the Council of the European Communities, pursuant to Article 7 of the Treaty establishing EURATOM, as well as any further programme in that field adopted by Council Decision.
- (b) "Contract of Association" means a Contract of Association concluded between EURATOM and any Member of the Joint Undertaking which provides for the execution of part of the EURATOM Fusion Programme.
- (c) "Association" means the Association established by such a Contract of Association.
- (d) "Associated Laboratory" means the laboratory or laboratories of each Member of the Joint Undertaking associated with EURATOM by a Contract of Association, in which the programme of that Association is being executed.
- (e) "JET Design Agreement" means the Agreement n° 030-74-1 FUAC (Doc. XII/524/73) concluded between EURATOM and the Members of the Joint Undertaking (other than Ireland and Luxembourg) on 4 April 1974 and modified by successive Supplementary Agreements.
- (f) "Commission" means the Commission of the European Communities.

ANNEX TO THE STATUTES
OF THE JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING

SUPPORT FROM THE HOST ORGANIZATION

1. In addition to the financial participation specified in Article 9 of the Statutes the host organisation shall bear the cost of putting the JET site into "standard condition".
2. The requirements for the "standard condition" are summarized as follows :
 - (a) Land to be put at the disposal free of charge of the JET Project allowing for the construction and possible extension of all JET buildings and auxiliary services, including tritium handling and handling of radioactive materials.
 - (b) Main services to be supplied to the site boundary are : water, gas, electricity, sewage and drainage, alarm systems, telephone, and telex.
 - (c) Licensing and all official permits needed for the erection and installation of buildings and services, and the operation of the experiment, including its operation under tritium.
 - (d) Roads, paths and bridges as necessary to provide access to the site boundary for the maximum size and weights of JET equipment, and for staff and visitors.
 - (e) Temporary accommodation
 - i) Offices, including drawing offices, and if necessary small laboratories and workshops, to house the estimated build-up of JET staff.

ii) storage for housing equipment and supplies arriving prior to completion of permanent accommodation.

iii) Furniture and services for this temporary accommodation.

These accommodations will be free of charge for the first two years of the Project.

(f) Permanent accommodation

This includes all working and storage accommodation other than the specific JET buildings which are referred to in report EUR-JET-R5 and whose cost is included in the JET Project Estimate. The non-specific buildings to serve the Project are in net working space :

offices	2,400 m2
small laboratories	2,000 m2
workshops	600 m2
ancillary areas	<u>1,000 m2</u>
	6,000 m2

These permanent buildings are to be provided with all necessary services and furniture for a suitable rental.

(g) Power supplies

Installation and maintenance up to the site boundary of power supplies able to provide up to 500 MW and security line, with characteristics as specified in report EUR-JET-R5.

(h) Cooling system

Water cooling capability of 25 MW continuous, capable of extension to 50 MW later, either by direct water supply or by recirculation with cooling towers.

(i) Computing

Direct connection of the JET Project with a suitable computer.

3. In addition to providing the items summarized above the host organisation shall undertake to supply, at proven cost (unless any of them are offered free), such technical, administrative, and general services as are required by the Joint Undertaking. Examples of such services are :

Safety (Doctor, Fire Brigade, Watchmen)
 Workshop approximately 1,000 m²
 Site Services (Waste disposal, Cleaning, Gardening)
 Restaurant
 Documentation (Library, Translation, Reproduction)
 Communications (Mail, Telephone, Messenger, Telex,
 Conference Rooms)
 Office Equipment
 Welfare (Schooling, Housing, Language Courses)
 General Support Services
 Computer time
 Electricity
 Water
 Gas
 Heating

4. In addition to providing staff in accordance with Article 8 of the Statutes the host laboratory shall provide support staff, at proven cost, to meet the requirements of the JET Project. Such staff shall be under the management authority of the Director of the Project.
5. The host organisation shall be responsible for the disposal of radioactive waste at the expense of the Joint Undertaking. Upon the termination of the Joint Undertaking in accordance with Article 21.1 of the Statutes, the cost of the disposal of radioactive waste will fall to the host organization.

6. Forward estimates of the requirements of the Joint Undertaking for services and support staff in accordance with paragraphs 3 and 4 above shall be agreed between the Joint Undertaking and the host organization in a manner to be specified in the agreement to be concluded between them in accordance with Article 15.2 of the Statutes.

4.

PROPOSAL

FOR A COUNCIL DECISION OF
ON THE CONFERMENT OF ADVANTAGES ON THE
"JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING"

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

HAVING REGARD to the Treaty establishing the European Atomic Energy Community, and in particular Article 48 thereof,

HAVING REGARD to the proposal from the Commission,

WHEREAS the "Joint European Torus (JET), Joint Undertaking" established by Council Decision of for a duration of 12 years has for object the construction, operation and exploitation, as part of the Community Fusion Programme and for the benefit of the participants therein, of a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus - JET) in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor ;

WHEREAS JET will be constructed in the United Kingdom of Great Britain and Northern Ireland, at Culham, in the County of Oxford ;

WHEREAS the implementation of the JET Project will constitute an important stage in the advancement of the Fusion Programme to the status of controlled thermonuclear fusion applications from which the Community could derive benefit, in particular in the more general context of the security of its long-term energy supply,

WHEREAS the entry and residence in each Member State for nationals of Member States employed by the Joint Undertaking and for their spouses and dependent members of their families are ensured by the EEC-Treaty and its implementing regulations,

WHEREAS because of the particular nature of the JET Project and its importance for the development of controlled thermonuclear fusion research and in order to promote an effective and economic management of the Joint Undertaking there is a need to confer on the Joint Undertaking certain advantages provided for in Annex III of the Treaty,

HAS ADOPTED THIS DECISION :

Article 1

The Member States shall confer on the "Joint European Torus (JET), Joint Undertaking", as long as it exists, and within the scope of its official activities the following advantages provided for in Annex III of the Treaty :

paragraph 4 of Annex III :

Exemption from all duties and charges levied upon acquisition of immovable property and from all recording and negotiation charges.

paragraph 5 :

Exemption from all direct taxes to which the Joint Undertaking, its property, assets and revenue might otherwise be liable.

paragraph 6 :

Exemption from all customs duties and charges having equivalent effect and from all prohibitions and restrictions on imports and exports whether of an economic or a fiscal nature with regard to :

- a) Scientific and technical equipment excluding building, materials and equipment for administrative purposes ;
- b) Substances which have been or are to be processed in the Joint Undertaking.

paragraph 7 :

Within the scope of para 7 the Joint Undertaking can transfer without restriction in the currency of a Member State its holdings in the currency of another Member State to the extent necessary for their

use for the objects of the Joint Undertaking. The Joint Undertaking may freely make use of amounts in the currencies of non Member States derived from the contributions of its Members.

Article 2

This Decision is addressed to the Member States and to the "Joint European Torus (JET), Joint Undertaking".

Done at Brussels

for the Council

The President

5.

SUMMARY OF THE DETAILED REPORT ON THE WHOLE JET PROJECT

- 5.1 A detailed description of the JET Project is set out in Report EUR-JET-R5, "The JET Project - design proposal", to which reference is made. The Report was prepared by the JET Design Team and adopted by all the partners associated in the Fusion Programme. An introduction to that Report will be found below, as well as a summary of its essential points apart from financial matters, which are dealt with elsewhere in this dossier.
- 5.2 For almost twenty years the whole of the research work on controlled thermonuclear fusion has been the subject of close collaboration between the European laboratories engaged in this activity, under the auspices of Euratom. The advances accomplished in recent years, especially in the Tokamak field, justify the hope that a thermonuclear reactor will be developed by the end of the century. As the characteristics of the plasmas now obtained still differ to some extent from those of a reactor and as much larger -therefore more costly - machines are needed to achieve progress in that direction, the Commission and the associated bodies decided to study the joint development of a large Community project.
- 5.3 The essential objective of JET (Joint European Torus) is to obtain and study a plasma approximating to the dimensions and conditions which a thermonuclear reactor would require. This objective involves four main areas of activity :
- (i) the evolution of plasma behaviour, when the parameters approximate to the reactor model,
 - (ii) plasma-wall interaction under these circumstances,
 - (iii) the study of plasma heating,
 - (iv) the study of the production and confinement of alpha particles, and the resultant plasma heating.

The relevant proposals are set out in the Report EUR-JET-R5 mentioned in para 5.1 above, and of which the main lines are listed below :

- 5.4 The JET Project chosen is a machine of squat appearance and large dimensions. The relatively moderate magnetic field should enable a plasma current of 3 MA to be obtained in the initial stage (basic performance). In a later stage (extended performance), the magnetic field and therefore the current will be able to be increased : the coils and the mechanical structures have been designed to be able to withstand the heavier loads involved. The design of the machine, in particular the elevation elongated in the vertical plane, confers some mechanical advantages and makes for great flexibility in the forms and dimensions of the plasma.

The advances achieved in recent years in the fusion field and reported at several international conferences, such as the IAEA International Conference on Fusion (Berchtesgaden, 1976) and the European Conference on Controlled Fusion (Prague, 1977), have not revealed any need to alter the parameters of the machine.

- 5.5 The geometrical dimensions of JET are as follows :

Plasma minor radius (horizontal)	a(m)	:	1.25
Plasma minor radius (vertical).....	b(m)	:	2.10
Plasma major radius	R_o (m)	:	2.96
Plasma aspect ratio	R_o/a	:	2.37
Plasma elongation ratio	b/a	:	1.68

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For the purposes of the basic performance (BP) and the extended performance (EP), the respective physical parameters are as follows :

		BP	EP
Flat top pulse length	(s) :	20	10
Toroidal magnetic field at the centre	(T) :	2.77	3.45
Plasma current :			
- circular plasma	(MA) :	2.6	3.2
- D-shaped plasma	(MA) :	3.8	4.8
Voltseconds available to drive the plasma current	(VS) :	25	34

5.6.1 Like every Tokamak, JET is a form of transformer in which the plasma acts as the secondary electrical circuit - the current passing through the plasma helps to heat it to a certain extent (ohmic heating phenomenon). However, its main purpose is the creation of a poloidal magnetic field which, in conjunction with a strong toroidal magnetic field previously created, can ensure a stable plasma confinement.

5.6.2 In order to isolate the plasma from the ambient atmosphere and to guarantee its purity, it is enclosed in an Inconel vessel weighing 68 tonnes. This enormous hollow torus consists of eight sections of four rigid sectors interconnected by thin double bellows. The assembly has been designed for ease of remote handling. To be able to ensure the very-high quality vacuum required, the vessel must be capable of being heated to 500° C whilst maintaining very good mechanical and electrical integrity. The internal volume of the vessel is 190 m³, compared with a surface area of about 220 m² (or 450 m² if the folds of the bellows are included).

5.6.3 The toroidal magnetic field is generated by 32 water-cooled copper coils weighing a total of 380 tonnes. The choice of a 'D' shaped form for the coils minimizes the mechanical stresses.

Their characteristics have been calculated to allow them to be used unmodified at 34 kG in the extended performance mode when more powerful energy sources are available.

- 5.6.4 A second set of coils, the "poloidal field coils", has the dual function of determining the equilibrium position and the shape of the plasma and acting as the transformer primary circuit. An eight-limbed soft iron core weighing 2500 tonnes is used to improve the linkage with the secondary plasma torus.
- 5.6.5 Physicists fully understand that ohmic heating efficiency drops as the plasma temperature rises. JET has therefore had to be provided with additional heating in the form of an injection of fast neutrals ranging from 3 to 10 MW in the basic performance mode. The latest estimates have shown the need to adopt the upper limit of 10 MW from the start of operation. In view of the fact that the power sources were already designed for that level, the additional cost should remain within the "contingency" limits included in the cost evaluation for the construction phase. In addition, adiabatic compression is intended to be used for heating the plasma, or radio-frequency heating if the results of other experiments are conclusive.
- 5.6.6 The mechanical structures have been designed with very special care, bearing in mind the considerable forces unleashed in the machine. The supporting structures are designed to enable the coils to withstand the forces produced by the magnetic fields in the extended performance mode. By way of example, in the basic performance mode the centring force is already equal to 1800 tonnes per coil.
- 5.6.7 The power sources feeding the toroidal field coils have a maximum output of 250 MW (or 380 MW in the extended performance mode) and dissipate an energy of about 3600 megajoules (or 5600 in the EP mode) in the case of the discharges having a peak duration of

20 seconds (or 10 seconds in the EP mode). They comprise a static unit and a "motor-generator" set (flywheel sets). The source of power to the poloidal field coils, of the "motor-generator" type, should produce an energy of about 1300 megajoules and a power exceeding 230 MW.

- 5.6,8 Two sets of measuring systems will make it possible to follow the evolution of the machine data on the one hand and of the plasma parameters fed back by the diagnostics on the other. All the information will be fed into a computer for processing with control and simulations codes. The plasma diagnostics require a very special effort, since, having regard to the extreme temperature conditions involved, no physical measuring instrument could possibly be put into contact with the plasma. Electromagnetic or atomic measurements must therefore be used, which impart a fundamental importance to the interpretation.
- 5.6,9 Given the circumstances in which JET operates, its metallic structures will acquire some degree of activation. When tritium is in use, this degree of activation will rule out all direct "in situ" human work. JET has therefore been designed to operate with a remote-handling device for the purposes of both modifications and repairs.
- 5,7, The Groupe de Liaison asked that an independent assessment be carried out on the JET Project. In the light of the findings, the Consultative Committee on Fusion was able to express (in May 1976) its confidence that the machine could be built and commissioned as planned without the Project needing to be re-studied (apart from the buildings, the plans of which were not completed owing to the lack of a decision on site).
- 5,8 Following the construction stage, which is expected to be completed in 1983, the operational programme, as now planned, might proceed as follows :
- , in the first phase, exploratory studies on hydrogen plasmas will be conducted, this will comprise the achievement of the

EXCHANGE OF LETTERS

Summary of the whole of the proposals
submitted for Council approval

The Council is requested :

A. Establishment of the JET Joint Undertaking

- a) To establish for the execution of the JET Project a Joint Undertaking within the meaning of Chapter V of the Treaty establishing the European Atomic Energy Community.
- b) To approve the Statutes of the Joint Undertaking as they figure in the Commission proposal.

These Statutes determine, among other things :

- i) The location of the Joint Undertaking and the JET Project (Article 1.2 and 2.2 of the Statutes) ;
 - ii) the participation of the Community in the financing of the Joint Undertaking (Articles 9.1 of the Statutes),
 - iii) the participation of a Swedish organization in the financing and in the management of the Joint Undertaking (Articles, 1.3, 4.1, 5.1, 9.1, 14 and 20.7 of the Statutes).
- c) To approve the scale and timetable for financing of the Joint Undertaking as they figure in the Commission proposal.

B. Conferring of some of the advantages listed in Annex III of the Treaty establishing the European Atomic Energy Community

- a) To decide the conferring by Member States to the Joint Undertaking for its lifetime and within the scope of its official activities the advantages shown in the following paragraphs of Annex III of the Treaty ;

- i) Paragraph 4 : Exemption from all duties and charges levied upon immovable property and from all registration and recording charges ;

- ii) Paragraph 5 : Exemption from all direct taxes to which the Joint Undertaking, its property, assets, and revenue might otherwise be liable ;

- iii) Paragraph 6 : Exemption from all customs duties specified in this paragraph, it being understood that additional advantages in this field have been conferred on the Joint Undertaking by an agreement concluded between the Community and the United Kingdom as shown in the proposal submitted by the Commission ;

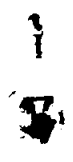
- iv) Paragraph 7 : The Joint Undertaking can transfer without restriction in the currency of a Member State its holdings in the currency of another Member State to the extent necessary for the use of the Joint Undertaking ;

The Joint Undertaking may freely make use of amounts in the currency of non-Member States derived from the contributions of its Members.

- C. In taking the Decisions mentioned above to take note :
- a) that all the States and organizations named in Article 1.3 of the Statutes of the Joint Undertaking have declared their readiness to become participants in the Joint Undertaking and to assume all the rights and obligations in accordance with the Statutes ;
 - b) that the amount of the Community's participation in the financing of the Joint Undertaking as referred to in Article 46, paragraph 2 (d) of the Treaty will be determined by the budgetary procedure defined in Article 177 of the Treaty within the framework of the programme decision taken according to the provisions of Article 7 of the Treaty ;
 - c) that, in accordance with Article 50 of the Treaty, the Commission will present a proposal to the Council for amending the Statutes so as to enable Switzerland to accede to the Joint Undertaking, as soon as the agreement for cooperation and the contract of association have been concluded with Switzerland and the conditions of accession settled, and
 - d) that the Members of the Joint Undertaking have agreed to apply the voting procedure and the weighing of votes within the JET Council, as laid down in Sections 7 and 8 of Doc. R 2404 (ATO 116) (Annex), as soon as Switzerland is a Member of the Joint Undertaking, provided that the Council approves a proposal for amending the Statutes accordingly ;
 - e) of the Agreement concluded between the Commission and the United Kingdom Government on the subject of the exemption of the Joint Undertaking from payment of indirect duties, taxes on sales and all customs duties and on the subject of the exemption from restrictions on entry and residence concerning members of third States working for the Joint Undertaking ;
 - f) of the declaration of the Government of the United Kingdom that :
 - as far as the paragraph 1 of the Annex III of the Treaty is concerned, the United Kingdom Atomic Energy Authority will

place the site at the disposal of the Joint Undertaking in the form of a lease under the conditions specified in paragraph 2.a of the Annex to the Statutes of the Joint Undertaking ;

- concerning paragraph 3 of the above mentioned Annex, no duties or charges will have to be paid by the Joint Undertaking or by the Members in connection with the establishment of the Joint Undertaking and the contributions of the Members to the Joint Undertaking shall not be considered as assets within the meaning of paragraph 3 of Annex III to the Treaty ;
- the exemptions accorded in conformity with paragraph 5 of this same Annex include income tax, capital gains tax and corporation tax, as well as taxes levied by local authorities on the official premises occupied by the Joint Undertaking (with the exception of the proportion which, as in the case of diplomatic missions, is in payment for services rendered), and the Joint Undertaking will also be exempt from vehicle excise duty.



COMMISSION OF THE EUROPEAN COMMUNITIES ⁽⁷⁾

ADDENDUM

COM(78) 158 final/2.

pages 68, 69, 70, 71, 72, 7

Brussels, 24 May 1978.

E

PROPOSAL FOR
A COUNCIL DECISION ON THE ESTABLISHMENT OF THE
"JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING"
and
A COUNCIL DECISION ON THE CONFERRING OF ADVAN-
TAGES ON THAT JOINT UNDERTAKING

(forwarded by the Commission to the Council)

| COM(78) 158 final/2.
|



6.

- a) Agreement between the European Atomic Energy Community and the Government of the United Kingdom relating to :
- the exemption of the Joint European Torus (JET) Joint Undertaking from indirect taxes and charges as well as from all customs duties,
 - the exemption from restrictions on entry and residence of nationals of non-Member States working for the Joint Undertaking.
- b) Declaration of the Government of the United Kingdom on the subject of paragraphs 1,3, 4 and 5 of Annex III of the Treaty establishing the Community.

a)

OFFICE OF THE UNITED KINGDOM
PERMANENT REPRESENTATIVE
TO THE EUROPEAN COMMUNITIES
Rond-point Robert Schuman 6
1040 Brussels
Telephone 736 99 20

3 May 1978

Mr G. Brunner
Member of the Commission
Commission of the European Communities
rue de la Loi 200
1049 BRUSSELS

Sir,

1. I have the honour to refer to discussions which have taken place between representatives of the Commission and the United Kingdom Government about certain privileges to be granted to the Joint European Torus (JET) which is shortly to be established by the Council of the European Communities as a Joint Undertaking under Chapter V of the Treaty establishing the European Atomic Energy Community.

./.

2. In the light of these discussions I have the honour to propose that the Joint Undertaking shall be granted by the United Kingdom Government the following privileges :

(a) GENERAL GOODS

(i) Internal Taxation

The Joint Undertaking shall be accorded a refund of Value Added Tax and all other taxes paid on the supply of goods, other than motor cars, or services which are necessary for the exercise of the official activities of the Joint Undertaking and which involve considerable quantities of goods or considerable expenditure. No refund shall be made in respect of any claim for goods or services where the value of the goods or services does not amount in the aggregate to £ 200 Sterling or more including all taxes.

(ii) Custom Duties

Goods, other than motor cars, whose import or export by or on behalf of the Joint Undertaking is necessary for the exercise of its official activities shall be exempt from all customs duties and charges having equivalent effect (except mere payments for services rendered), Value Added Tax and all other taxes imposed by reason of importation or exportation and from all prohibitions and restrictions, whether of an economic or fiscal nature, on imports or exports.

(b) MOTOR CARS

(i) Purchase in the United Kingdom

The Joint Undertaking shall be accorded a refund of Car Tax, Value Added Tax and all other taxes paid on the purchase of new motor cars of United Kingdom manufacture which are necessary for the official activities of the Joint Undertaking.

(ii) Imports

Motor Cars whose import or export by the Joint Undertaking is necessary for the exercise of its official activities shall be exempt from all customs duties and charges having equivalent effect (except mere payments for services rendered), Value Added Tax and

all other taxes imposed by reason of importation or exportation and from all prohibitions and restrictions, whether of an economic or fiscal nature, on imports and exports.

(c) HYDROCARBONS

The Joint Undertaking shall be accorded a refund of the Customs Duty, Value Added Tax and all other duties or taxes included in the price of hydrocarbon oils purchased by it and necessary for the exercise of its official activities.

(d) IMMIGRATION CONTROL PROCEDURES

The United Kingdom Government shall accord to all staff members working for the Joint Undertaking and who are nationals of States which are directly or through organisations participating in the Joint Undertaking, other than Member States of the European Communities, as well as their spouses and dependent members of their families, the same facilities regarding entry, stay and departure as those granted under Article 12(b) of the Protocol on the Privileges and Immunities of the European Communities : for staff members working for the Joint Undertaking and who are nationals of other third States the United Kingdom Government shall take all appropriate measures consistent with its laws to facilitate their entry, stay and departure and that of their spouses and dependent members of their families.

(e) CLAIMS AND REFUNDS PROCEDURE

The Joint Undertaking shall submit claims for refunds to the appropriate authorities, as advised by the United Kingdom Government. Claims for refunds should normally be made at three monthly intervals. No claims for purchases more than one year old shall normally be accepted.

3. If the above proposals are acceptable to the European Atomic Energy Community I have the honour to propose that this letter and your reply to that effect shall constitute an Agreement between the United Kingdom Government and the European Atomic Energy Community in this matter which shall enter into force on the date of establishment of the Joint Undertaking.

4. I have the honour to renew the assurances of my highest consideration.

(signature)

Donald MAITLAND

GUIDO BRUNNER
Mitglied der Kommission
der Europäischen Gemeinschaften

Rue de la Loi 200
1049 Brüssel, den 3 May 1978.

H.E.

Sir Donald Maitland
Ambassador of the Permanent Mission of
the United Kingdom to the European
Communities
Rond-Point Schuman 6
1040 BRUXELLES

Sir,

1. I have the honour to refer to your letter of 3 May 1978 which reads as follows :

/text of letter from Sir D Maitland to Mr G. BRUNNER, Member of the Commission/

2. In reply, I have the honour to inform you that the foregoing proposals are acceptable to the European Atomic Energy Community, and that accordingly your letter, together with this reply, shall constitute an Agreement between the European Atomic Energy Community and the United Kingdom Government in this matter which shall enter into force on the date of establishment of the Joint Undertaking.

3. I have the honour to renew the assurances of my highest consideration.

(signature)

Guido Brunner

b)

OFFICE OF THE UNITED KINGDOM
PERMANENT REPRESENTATIVE
TO THE EUROPEAN COMMUNITIES
Rond-point Robert Schuman 6
1040 Brussels
Telephone 736 99 20

2 May 1978.

Mr G. Brunner
Member of the Commission
Commission of the European Communities
rue de la Loi 200
1049 BRUSSELS

Dear Commissioner,

JET

1. In connection with the advantages which the Commission has proposed should be conferred upon the Joint Undertaking under Article 48 and Annex III of the Euratom Treaty, I should like to provide the following information :

(a) Paragraph 1 of Annex III

As the land will be put at the disposal of the Joint Undertaking by the United Kingdom Atomic Energy Authority in the form of a lease in accordance with the conditions set out in paragraph 2(a) of the Annex to the Statutes of the Joint Undertaking, it will not be necessary to confer on the Joint Undertaking the Advantages provided for under paragraph 1 of Annex III.

(b) Paragraph 3

Neither duties nor charges will arise when the Joint Undertaking is established, and the contributions made by the members of the Joint Undertaking are not considered as assets for the purposes of paragraph 3 of Annex III.

(c) Paragraph 4

Since the Joint Undertaking will not acquire immovable property for its official premises, no occasion will arise for levying duties or charges upon the Joint Undertaking under this Paragraph, nor will any registration or recording charges arise. However, should the Joint Undertaking purchase other premises in order to provide a hostel as temporary accommodation for JET staff to facilitate their installation near the site, or for other persons temporarily working on the Project, effect will be given by the United Kingdom to the exemptions required by this Paragraph by making suitable arrangements whereby the Joint Undertaking will not bear the burden of Stamp Duty or Registration Charges payable in respect of the acquisition of such property (no other duties or charges being payable in that context).

(d) Paragraph 5

The direct taxes from which the Joint Undertaking will be exempt in the United Kingdom include Income Tax, Capital Gains Tax and Corporation Tax. For the purposes of paragraph 5, direct taxes will be regarded as including municipal rates levied on the official premises of the Joint Undertaking, with the exception of the proportion which, as in the case of diplomatic missions, represents payments for services rendered. The Joint Undertaking will also be exempt from vehicle excise duty.

2. If the Joint Undertaking purchases premises in order to provide a hostel as temporary accommodation for JET staff to facilitate their installation near the site, or for other persons temporarily working on the Project, the Joint Undertaking will not be required to bear the burden of municipal rates levied on that property, with the exception of the proportion which, as in the case of diplomatic missions, represents payments for services rendered.

Yours sincerely,

(signature)

Donald Maitland