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II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 12 March 1985

adopting a multiannual research action programme for the European Economic Community in the field of biotechnology (1985 to 1989)

(85/195/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas Article 2 of the Treaty assigns to the Community the task of *inter alia* promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology ⁽⁴⁾ the Council stated that the whole range of available ways and means should be used as appropriate, including concerted action projects, and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas in its resolution of 25 July 1983 on the first framework programme for Community research,

development and demonstration activities ⁽⁵⁾ the Council approved the development of biotechnology as part of the objective 'promoting industrial competitiveness';

Whereas the ongoing multiannual research and training programme for the European Economic Community in the field of biomolecular engineering ⁽⁶⁾ has clearly underlined the possibility and utility of a Community action for the exploitation of modern biology in agriculture and industry;

Whereas the Commission submitted to the Council on 13 June 1983 a communication on the role of the Community in biotechnology;

Whereas the Commission submitted to the Council on 29 September 1983 a communication on biotechnology in the Community;

Whereas a Community research action programme is necessary for the development of biotechnology in the Community and, particularly for:

- the establishment of new methods for the synthesis of compounds with high added value and for lowering production costs,
- more efficient land use through the design of new crops which can provide important feedstocks for European industries,
- application of biotechnology to environmental protection,

⁽¹⁾ OJ No C 23, 25. 1. 1985, p. 4.

⁽²⁾ OJ No C 12, 14. 1. 1985, p. 139.

⁽³⁾ OJ No C 25, 28. 1. 1985, p. 14.

⁽⁴⁾ OJ No C 7, 29. 1. 1974, p. 6.

⁽⁵⁾ OJ No C 208, 4. 8. 1983, p. 1.

⁽⁶⁾ OJ No L 375, 20. 12. 1981, p. 1.

- acceptability of the products of modern biotechnology through the use of new testing methods which render possible a more efficient and less costly evaluation of toxicity and biological activity,
- replacement of animal experiments with tests on cell cultures,
- new approaches in the detection, prevention and treatment of diseases,
- protection of health and environment against risks which may be associated with new developments in and the application of biotechnology;

Whereas the achievement of the objectives mentioned above requires that actions be implemented at Community level which lead to:

- the establishment of a supportive infrastructure for biotechnology research in the Community,
- the elimination, through research and through training, of bottlenecks which prevent the exploitation by industry and agriculture of the materials and methods originating from modern biology,
- the experimental assessment of biohazards possibly associated with applications in agriculture and industry of biomolecular engineering;

Whereas it is necessary to monitor developments in biotechnology, with a view to assessing their strategic significance for Europe, and to promote effective concertation between the Community and its Member States in matters affecting the development of biotechnology; such monitoring is also needed to ensure that problems of a social, ethical and ecological nature, inherent in the application of this technology, may be recognized in good time and their adverse consequences prevented;

Whereas the Treaty has not provided the specific powers necessary for the adoption of this Decision;

Whereas the Scientific and Technical Research Committee (CREST) has expressed its opinion,

HAS DECIDED AS FOLLOWS:

Article 1

A research action programme for the European Community in the field of biotechnology is hereby adopted in the form set out in the Annex for a five-year period starting on 1 January 1985.

The programme includes work carried out as contract research, training and concerted action.

The work will be carried out by means of shared cost contracts to be placed with appropriate industrial organizations, research laboratories or university institutes or combinations of them.

The concerted actions consist of the coordination at Community level of research activities which are part of existing research programmes in the Member States and, where applicable, of the Community.

Encouragement and priority shall be given to contracts bringing together the technological resources of firms and institutions from different Member States, where possible.

Article 2

The funds estimated as necessary for the execution of the programme amount to 55 million ECU, including expenditure on a staff of 15.

Article 3

During the second year the programme shall be reviewed. The result of this review shall be communicated to the Council and the European Parliament. This review may lead to the submission by the Commission of a proposal for a revision of the programme in accordance with the appropriate procedures.

Article 4

The Commission shall be responsible for the execution of the programme with regard to the contract research and shall be responsible for the coordination with regard to concerted actions.

The detailed implementation of the programme, particularly concerning the breakdown of the work between contract research and concerted actions is set out in the Annex.

Article 5

The Commission will be assisted in its function of programme management by the Management and Coordination Advisory Committee (CGC) (Biotechnology) created by Decision 84/338/Euratom, ECSC, EEC ⁽¹⁾.

Article 6

With regard to the concerted actions in accordance with a procedure to be laid down by the Commission, after

⁽¹⁾ OJ No L 177, 4. 7. 1984, p. 25.

consulting the CGC, the participating Member States and the Community shall regularly exchange all useful information concerning the execution of the research covered by such activities.

The participating Member States shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies which are not under their authority.

Any information shall be treated as confidential if so requested by the Member State which provides it.

Article 7

1. In accordance with Article 228 of the Treaty the Community may conclude agreements with non-Member

States participating in European cooperation in the field of scientific and technical research (COST) or international organizations with a view to ensuring cooperation between the Community concerted action projects referred to in the Annex and the relevant programmes of such States or international organizations.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

ANNEX

BIOTECHNOLOGY RESEARCH ACTION PROGRAMME (1985 to 1989)

The objectives of this programme are as follows:

ACTION I: RESEARCH AND TRAINING**SUBPROGRAMME 1:****Contextual measures for R&D in biotechnology****CONTENT**

Measures to upgrade the quality and capabilities of facilities, resources and support services underpinning biotechnology research, particularly by the enhancement of existing activities in the Member States, but not excluding the development of new activities and collaboration in wider international activities where essential.

Measures to enhance access to these facilities, and encourage their use, in research, teaching, agriculture, industry and health care.

1. Bio-informatics
 - 1.1. Data capture techniques (particularly advanced instrumentation and measurement, automated reading).
 - 1.2. Data banks.
 - 1.3. Computer modelling of biological structures, systems and processes.
 - 1.4. Sophisticated computer software for the human interface with computerized facilities relating to the life sciences and biotechnology.
2. Collections of biotic materials
 - 2.1. Organized collections of animal and plant cells, hybridomas, microorganisms, their viruses, and all other forms of biotic material of potential use and relevance to biotechnology.
 - 2.2. Development of information and communication techniques for enhancing the quality and usefulness of such collections.
 - 2.3. Development of techniques for the identification, characterization, conservation and resuscitation of the materials held in such collections.

IMPLEMENTATION

Through training actions and cost-shared contracts with appropriate institutions, with provision as necessary for workshops and meetings.

SUBPROGRAMME 2:**Basic biotechnology****(A) Research and training****CONTENT**

Precompetitive research and research through training in areas of basic biotechnology where technical and scientific bottlenecks prevent the applications of modern genetic and biochemical methods to agriculture and industry.

1. Enzyme engineering
 - 1.1. Development and evaluation of bioreactors (and particularly those which are multienzymatic, multiphasic or cofactor requiring) for industrial and medical applications, depollution and detoxification.
 - 1.2. Modifications of enzyme properties, protein design, synthesis of artificial enzymes and development of new methods (including, for example, filtration, centrifugation and reverse osmosis) for large-scale and highly selective separation of proteins and other substances with industrial or agricultural value.
2. Genetic engineering
 - 2.1. Improvement of soil-microorganisms (particularly Rhizobium, bacteria of the rhizosphere of graminaceae, mycorrhiza) and of cultivated plants important for European agriculture.
 - 2.2. Exploitation of plant products (particularly ligno-cellulose).
 - 2.3. Applications to animal husbandry (particularly the production of vaccines and hormones and gene transfer in animals).
 - 2.4. Production of vaccines, proteins and hormones for human medicine.
3. Physiology and genetics of species important to industry and to agriculture
 - 3.1. Study of poorly understood basic functions in microorganisms (particularly chemo-autotrophs, methanotrophs, mycorrhiza) which appear to be promising for future industrial use.
 - 3.2. Analysis of factors governing the yield and stability of microorganisms during industrial exploitation or in relation to symbiotic relationships with higher plants.
 - 3.3. Identification of factors and mechanisms governing important properties in cultivated plants (particularly in Triticum, Vicia, Brassica).
4. Technology of cells and tissues cultured *in vitro*
 - 4.1. Analysis of factors governing yield and stability during continuous cultivation or in mixed populations.
 - 4.2. Control of the differentiation of plant cells and of their regeneration in entire plants.
 - 4.3. Methodology of animal cell cultures (in particular for the production of monoclonal antibodies).
 - 4.4. Development of microanalytical methods for the identification and quantification of biologically important molecules.
 - 4.5. Study of cell biology applied to the prevention, detection and treatment of a few selected diseases which are particularly important from a socioeconomic point of view.
5. Screening methods for the evaluation of the toxicological effects and of the biological activity of molecules:

the tests (essentially *in vitro* and non-invasive *in vivo*) to be developed should contribute to a better understanding of structure-function relationships and to the uniformization of screening procedures throughout the Community.
6. Assessment of risks:

development of new methods for detecting contamination and for the assessment of possible risks associated with applications in industry (particularly during downstream processing) and agriculture of biomolecular engineering.

IMPLEMENTATION

- Training actions to be implemented, through training contracts, short-term training grants and courses for each of the themes defined above.

- Cost-shared research actions: they will concentrate on the themes which are implemented in the ongoing biomolecular engineering programme and on certain actions foreseen in the following sectors:
 - technology of cells and tissues cultured *in vitro*,
 - screening methods for the evaluation of the toxicological effects and of the biological activity of molecules.

(B) *COST activities associated to the programme as category II*

CONTENT

- Aquatic primary biomass (marine macroalgae)
- Plant *in vitro* culture

IMPLEMENTATION

Through the organization of meetings, consultation of experts, publications, exchange of research workers between laboratories, coordination contracts.

(C) *Involvement in the activities of the 'Technology, growth and employment' working group created at the Versailles summit of 1982*

CONTENT

- Coordination and concertation in 'basic biology' (area 1: data banks; area 2: collections of biotic materials)
- Representation of the Community to the 'International network of biotechnology'

IMPLEMENTATION

Through the organization of meetings, consultations of experts, and publications in the two areas covered by the activities foreseen in 'basic biology'.

ACTION II: CONCERTATION

CONTENT

Concertation activity will be implemented with the objectives of improving standards and capabilities in the life sciences, and enhancing the strategic effectiveness with which these are applied to the social and economic objectives of the Community and its Member States.

In conjunction with the relevant services in the Community and the Member States, the following tasks will be executed:

- monitoring the strategic implications of developments elsewhere in the world for biotechnology-based industry in Europe,
- working with the services of the Community, Member States and other interested parties to identify ways in which the contextual conditions of operation for biotechnology in the Community may be further improved, to promote its development in all useful applications, and the supporting scientific capabilities,
- responding to the needs for research and information in support of the specific actions of other services of the Commission,
- identifying opportunities for enhancing through concertation and cooperation the effectiveness of biotechnology-related programmes in the Member States, and promoting collaborative initiatives in biotechnology with and between industry and universities,
- consideration of how the safe and sustainable exploitation of the renewable natural resource systems in Europe may be enhanced by the application of biotechnology,

- promoting in cooperation with developing countries and relevant institutions the pursuit of the same task (see preceding paragraph) within their respective regions,
- monitoring and assessing developments in biotechnology bearing on safety and other aspects of the 'social dimension',
- disseminating knowledge and increasing public awareness of the nature and potential and risks of biotechnology and the life sciences,
- establishing an *ad hoc* system of collaboration between groups and individuals with interests and capabilities in the life sciences and biotechnology, so creating networks, as informal and flexible as possible, adapted to the particular problems under study: the networks to have the triple function of providing an active input into the programme, encouraging coordination through the exchange of information between the participants, and assisting the broader diffusion of information envisaged in the preceding task.

IMPLEMENTATION

Essentially through in-house work, the setting-up and the exploitation of an organized information base and through missions, but will include as necessary the commissioning of study reports, the organization of workshops and meetings, support for the production of reports and diffusion of information.

COUNCIL DECISION

of 12 March 1985

concerning a multiannual research and development programme of the European Economic Community in the fields of basic technological research and the applications of new technologies (Brite) (1985 to 1988)

(85/196/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas Article 2 of the Treaty assigns to the Community the task of *inter alia* promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas research into the applications of new technologies contributes to the attainment of these objectives;

Whereas promotion of European industrial competitiveness is one of the major goals of the framework programme;

Whereas a grouping of indirect and concerted actions in the field of basic technology would contribute towards this objective;

Whereas the research action programme on industrial technologies includes a number of research programmes of value to European industry but does not yet include a programme of multisectoral, multidisciplinary basic technological research;

Whereas, in order to secure the full economic advantages of the common market, it is necessary to encourage the application of new technologies more widely throughout the Community; whereas it is likewise necessary to bring together technologies from a variety of manufacturing origins for the benefit of specific industrial sectors; whereas it is necessary to encourage the applications of new technologies in a way which will especially benefit small and medium-sized enterprises;

Whereas the research action programme on industrial technologies includes a number of research programmes of value to European industry but does not yet include a programme bringing together technologies from a number of different origins for the benefit of specific industrial sectors;

Whereas this programme meets the absolute need for the constitution or consolidation of a specifically European industrial potential in the technologies concerned, and whereas its beneficiaries must therefore be the undertakings, universities and research centres in the Community which are in the best position to attain these objectives;

Whereas it is necessary to involve small and medium-sized enterprises (SMEs) to the maximum extent possible in the development of industrial technologies;

Whereas the Treaty does not provide the specific powers necessary for the adoption of this Decision;

Whereas the Scientific and Technical Research Committee (CREST) has expressed its opinion,

HAS DECIDED AS FOLLOWS:

Article 1

1. A multiannual programme of research and development of the European Economic Community in the fields of basic technological research and the applications of new technologies (Brite), as described in the Annex, is hereby adopted for a period of four years as from 1 January 1985.

2. The programme shall include work carried out as contract research and as concerted action.

Participants may be industrial organizations, research institutes and universities established in the Community.

Normally, research institutes and universities should participate in a group together with an industrial organization and projects should be carried out by participants from more than one Member State.

As a general rule, the Community contribution will not exceed 50%, the remainder to be provided by the industrial participants.

⁽¹⁾ OJ No C 230, 27. 8. 1983, p. 3.

⁽²⁾ OJ No C 342, 19. 12. 1983, p. 161.

⁽³⁾ OJ No C 358, 31. 12. 1983, p. 1.

The concerted actions consist of the coordination at Community level of research activities which already form an integral part of existing research programmes in the Member States and, where applicable, of the Community.

Article 2

The funds estimated as necessary for the execution of the programme (1985 to 1988) amount to 125 million ECU (including expenditure on a staff of 25), of which 20 % is estimated as necessary for the execution of subprogramme II contained in the Annex.

Article 3

During the second year the programme shall be reviewed. The result of this review shall be communicated to the Council and the European Parliament. This review may lead to the submission by the Commission of a proposal for a revision of the programme in accordance with the appropriate procedures.

Article 4

The Commission shall be responsible for the execution of the programme with regard to the contract research and shall be responsible for the coordination with regard to concerted actions.

It shall decide, in the framework of the programme, on the detailed implementation, particularly concerning the

breakdown of the work between contract research and concerted actions, and the launching of concerted actions.

Article 5

The Commission will be assisted in its function of programme management by the Management and Coordination Advisory Committee (CGC) (Industrial technology) created by Decision 84/338/Euratom, ECSC, EEC ⁽¹⁾.

Article 6

With regard to concerted actions and in accordance with a procedure to be laid down by the Commission, after consulting the CGC, the participating Member States and the Community shall exchange all appropriate information to which they have access and which they are free to disclose concerning R&D activities covered by this Decision whether or not planned or carried out under their authority.

Any information shall be treated as confidential if so requested by the Member State which provides it.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

⁽¹⁾ OJ No L 177, 4. 7. 1984, p. 25.

ANNEX

**BASIC TECHNOLOGICAL RESEARCH AND THE APPLICATION OF NEW TECHNOLOGIES
(BRITE) PROGRAMME (1985 to 1988)**

The objectives of the programme are as follows:

I. Precompetitive basic technological R&D in:**1. *Reliability, wear and deterioration***

Including in particular:

- (a) methods for initial service life and residual life prediction and the assessment of defects in materials, components and assemblies;
- (b) the tribological, wear and erosion properties of materials, components and assemblies in adverse conditions, including those resulting from particularly high stresses;
- (c) fracture mechanics, including unstable fracture, fatigue, creep and corrosion effects, with a view to improving the mechanical behaviour and the predictable life of materials, components and assemblies;
- (d) mechanisms of corrosion and corrosion protection in aggressive environmental conditions including biological action;
- (e) surface treatment and protective coating technology to modify the physical and mechanical properties of materials, components and assemblies, including scaling-up of processes already available on a laboratory scale, surface properties and phenomena at interfaces.

2. *Laser technology and its application and other new methods of metal shaping and forming*

Including in particular:

- (a) high-power lasers for materials processing, including the interaction of laser beams with materials and safety and work procedures involved in the industrial use of lasers;
- (b) near-net-shape manufacturing technology, in particular powder metallurgy.

3. *Joining techniques*

Including in particular:

- (a) new and improved welding techniques, including electron beam, diffusion and friction welding and low-cost automated welding, including sensors and adaptive control systems;
- (b) new or improved adhesive, soldering and brazing techniques and their adaptation for use in mass production. Joining of new and dissimilar materials.

4. *New testing methods including non-destructive testing, on-line testing and computer-aided testing*

Including in particular:

- (a) testing techniques for the measurement, detection and presentation of defects, stresses and deterioration processes, including corrosion, wear, fracture and crack-initiating processes, and biologically induced damage, methods for use under service stresses and their simulation;
- (b) computer applications to testing techniques and systems, particularly with a view to use in manufacturing processes.

5. *CAD/CAM and mathematical models*

Including in particular:

- (a) CAD/CAM techniques for industrial processes exploiting work on architectures and algorithms carried out elsewhere including ESPRIT and related to specific manufacturing

processes and including low-cost techniques suitable for small and medium-sized enterprises (SMEs);

- (b) mathematical modelling of production processes and phenomena including modelling related to flexible manufacturing systems suitable for SMEs.

6. *New materials, in particular polymers, composites and other new materials with special properties*

Including in particular:

- (a) polymers and composites with special and improved physical and mechanical properties and stability for wider use in engineering, medical and agricultural applications;
- (b) new production and conversion techniques for polymers and composites;
- (c) new materials with special electrical, magnetic and opto-electronic properties.

7. *Membrane science and technology and problems in electrochemistry*

Including in particular:

- (a) separation by membrane processes of both gaseous and liquid mixtures including reverse osmosis, ultrafiltration, microfiltration, dialysis and pervaporation;
- (b) new membrane materials including ceramic materials;
- (c) electrolysis technology, in particular fused salt electrolysis, irreversible phenomena of anodic systems and the use of membrane technology in electrolysis systems.

8. *Catalysis and particle technology*

Including in particular:

- (a) zeolites as catalysts in organic chemicals synthesis, including their production, characterization and shaping and application in shape-selective catalysis;
- (b) homogeneous catalysis, in particular for oxidation reactions of potential industrial interest;
- (c) catalytic purification of industrial effluents, including SO₂ and NO_x disposal;
- (d) particle technology, in particular problems related to the manufacture of particles, particle contamination and equipment design.

II. **Precompetitive technological R & D, including pilot and demonstration projects, in new production technologies suitable for products made from flexible materials:**

The following are the three main research areas included in the programme:

- The automated handling of flexible materials and articles made from them. This may include research into:
 - (a) the automated feeding and evacuation of automatic sewing machines, from various delivery systems, with one or more pieces of fabric or subassemblies by robotic devices, in two or three dimensions, with the aid of sensors, grippers, etc.;
 - (b) the automated transport of fabric pieces, subassemblies and finished articles from one work station to another, including adaptive control of the production plan. Transport may be done by mechanical systems or by remote controlled or programmable trolleys;
 - (c) the development of sequential automated sewing units.
- Automated joining of flexible materials and their assembly into finished products. This may include research into:
 - (a) the extension of existing automatic sewing technologies, with particular reference to three-dimensional sewing and the multiple operation of machines by one operator;

- (b) movable sewing heads either on conventional type machines or as a flexible lightweight sewing head;
 - (c) new stitch technology, with particular reference to the possibility of sewing from one side of the work piece only;
 - (d) alternative joining techniques to sewing;
 - (e) technologies to increase the flexibility of automatic sewing machines, for example by interchangeable tools;
 - (f) microelectronic control techniques (and software) might be required for extending automated sewing techniques, especially in three dimensions.
- The integration of the above technologies together with others leading to flexible sequential automated manufacture, with particular emphasis on the need to accommodate multiproduct manufacture and frequent model changes. This may include research into:
- (a) elements necessary to construct a fully automated system other than those already covered above. Some of these could involve quality control, fabric control, cutting and finishing operations. More than one possible eventual solution can be envisaged and it is important not only that the work carried out fits into one or other of the possible solutions, but that each possible solution is effectively researched;
 - (b) the automatic creation of models in three dimensions and the resulting two-dimensional pattern, including modifications to the model;
 - (c) the development of knitting technology as an alternative to the cutting and sewing of fabric;
 - (d) the automatic marking and identification of individual parts, and the interpretation of the operations to be carried out on them.
-

COUNCIL DECISION

of 12 March 1985

adopting a plan to stimulate European scientific and technical cooperation and interchange
(1985 to 1988)

(85/197/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living; whereas the activities to be performed to this end by the Community are set out in Article 3 of the Treaty;

Whereas, in its resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology ⁽⁴⁾, the Council entrusted the Commission with the task of defining projects of interest to the Community and selecting appropriate ways and means of implementing these projects;

Whereas, in Decision 83/331/EEC of 28 June 1983, the Council adopted an experimental Community action to stimulate the efficacy of the European Economic Community's scientific and technical potential ⁽⁵⁾, and on 28 February 1984 requested the Commission to put forward a proposal for a stimulation plan for the years 1985 to 1988;

Whereas by its resolution of 25 July 1983 ⁽⁶⁾ dealing with the first framework programme for the Community's research, development and demonstration activities, the Council approved the goal of 'improving the efficacy of the Community's scientific and technical potential';

Whereas the Treaty does not provide for the specific powers necessary for the adoption of this Decision;

Having regard to the opinion of the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

A plan to stimulate European scientific and technical cooperation and interchange, hereinafter referred to as the 'stimulation plan' and as set out in the Annex, is hereby adopted for a four-year period commencing on 1 January 1985.

Article 2

The stimulation plan consists of a range of activities which have as their aim the establishment of a network of scientific and technical cooperation and interchange at European level, which will gradually be extended.

It covers all fields of science and technology – both exact and natural sciences. However, in choosing activities to be supported, particular attention shall be given to the areas set out in the Annex in view of their special interest.

Article 3

The funds estimated as necessary for the execution of the stimulation plan amount to 60 million ECU, including expenditure on a staff of 12.

Article 4

The Commission shall undertake the implementation of the stimulation plan by means of research grants, contracts encouraging the twinning of laboratories and operations contracts.

It shall be assisted by the Committee for the European Development of Science and Technology (Codest), set up under Decision 82/835/EEC ⁽⁷⁾ as well as by consultants.

⁽¹⁾ OJ No C 142, 29. 5. 1984, p. 4.

⁽²⁾ OJ No C 315, 26. 11. 1984, p. 115.

⁽³⁾ OJ No C 343, 24. 12. 1984, p. 12.

⁽⁴⁾ OJ No C 7, 29. 1. 1974, p. 2.

⁽⁵⁾ OJ No L 181, 6. 7. 1983, p. 20.

⁽⁶⁾ OJ No C 208, 4. 8. 1983, p. 1.

⁽⁷⁾ OJ No L 350, 10. 12. 1982, p. 45.

Article 5

During the second year the stimulation plan shall be reviewed. The result of this review shall be communicated to the Council and the European Parliament. This review may lead to the submission by the Commission of a proposal for a revision of the plan in accordance with the appropriate procedures.

Article 6

The Commission shall negotiate and conclude the contracts needed to implement the selected projects. To this end it shall draw up contracts showing the rights and obligations of each party, particularly the methods of disseminating, protecting and exploiting the research results and of making any reimbursement that may be necessary of the funding given.

Regulation (EEC) No 2380/74 ⁽¹⁾ shall apply with the exception of the Commission's right to issue sublicences in cases where there is a refusal to exploit the results of shared cost research by the contractor concerned.

Article 7

The Commission shall be responsible for the definition and, following consultation of CREST, the implementation of such complementary measures to accompany the stimulation plan set out in the Annex as

are appropriate to encourage the mobility and interchange of researchers within the Community.

Article 8

The Commission shall be responsible, following consultation of the sectoral Management and Coordination Advisory Committees (CGCs) and CREST, for defining the range of measures to be implemented in the context of sectoral programmes in order to encourage mobility and training as well as the amount of financial resources to be allocated to these specific measures.

Article 9

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with European non-member States, with a view to associating them with this stimulation plan.
2. The Commission is authorized to negotiate the agreements referred to in paragraph 1.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

⁽¹⁾ OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

STIMULATION PLAN FOR EUROPEAN SCIENTIFIC AND TECHNICAL COOPERATION AND INTERCHANGE (1985 to 1988)

1. The stimulation plan takes the form of a range of measures to aid the mobility of researchers, communication among scientists and the development of cooperation in the field of research and development in the Community.

These are therefore support measures for research workers, teams or research and development organizations to facilitate:

- transfers of researchers (whether novice or experienced) from one Community country to another,
 - the bringing together of expertise which is geographically separated in the Community so that joint projects may be undertaken,
 - the strengthening of communication and exchanges of information within the European scientific and technical system.
2. Measures to stimulate interchange and cooperation apply to all fields covered by the exact and natural sciences; the following fields will be given obvious attention:
 - chemistry: particularly synthetic chemistry, composite materials and monomer chemistry,
 - 'biocommunication',
 - earth sciences: all aspects relating to structures and materials,
 - optics: particularly research involving integrated optics,
 - mathematics and data processing,
 - oceanography: marine sciences,
 - surface chemistry and physics: principally catalysis, intersurface exchanges, polymer-metal adhesion,
 - scientific instrumentation.
 3. In the field in which support will be granted, multinational projects concerned by Community assistance measures will be chosen on the basis of their quality, the extent to which they are multidisciplinary in content, their innovative aspects and their value in terms of breaking down barriers between different forms of R&D.
 4. The stimulation plan will be implemented by making use of:
 - multisectoral incentive measures: laboratory twinings, operations, research grants. These actions imply a European network of research centres, on which they will rely;
 - contextual measures to encourage the mobility of scientists: examination of the feasibility of a researchers' travel voucher, the organization of concentration meetings between Member States to organize a career endorsement for researchers who have worked abroad, an attempt to establish an inventory of national possibilities for exchange and cooperation.

5. The choice of stimulation incentive measures and the teams concerned will be made by the Commission which, with the help of the Committee for the European Development of Science and Technology (Codest), will make use of a peer review system. The Commission will see to it that there is consistency between stimulation activities and programmed R&D activities by consulting the committees set up under its aegis to assist it in programme management.

The contextual and sectoral measures will be specified after consulting CREST and the relevant CGCs and will be implemented following a favourable opinion from these committees.

6. The Commission will at the same time undertake a series of consultations, surveys and seminars with the cooperation of Community scientific and technical circles in order to analyze and evaluate scientific and technical needs and opportunities, with the aim of providing more detail to the content of the stimulation plans.

The Commission will cooperate closely with the national authorities to ensure consistency between these activities and national policies on research stimulation.

In this connection, the Commission will carry out directly with the competent authorities of the Member States all necessary checks to ensure that there is no wastage as a result of duplication or any unacceptable interference in national research and development policies. In addition, the Commission will keep the Council regularly informed of current work.

COUNCIL DECISION

of 12 March 1985

adopting a research and development programme in the field of non-nuclear energy
(1985 to 1988)

(85/198/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposals from the Commission ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas on 9 June 1980 the Council adopted a resolution concerning Community energy policy objectives for 1990 and convergence of the policies of the Member States ⁽⁴⁾;

Whereas the implementation of an energy strategy for the Community calls for priority to be given to strengthening research, development and demonstration policies at Community level;

Whereas on 25 July 1983 the Council adopted a resolution ⁽⁵⁾ on framework programmes for Community research development and demonstration activities and a first framework programme 1984 to 1987;

Whereas the energy research and development programmes adopted by Decisions 75/510/EEC ⁽⁶⁾ and 79/785/EEC ⁽⁷⁾ have produced encouraging results and opened up promising prospects in relation to the objectives sought;

Whereas the research and development activities referred to in this Decision therefore seem necessary and are an appropriate means of following up the projects already in progress, and of starting new ones, with a view to attaining the objectives aimed at;

Whereas it is appropriate that the activities covered by this programme be supplemented by research and development activities in the hydrocarbons field;

Whereas Regulations (EEC) No 1971/83 ⁽⁸⁾ and (EEC) No 1972/83 ⁽⁹⁾ provide for the granting of financial support for pilot industrial projects and demonstration projects relating to the liquefaction and gasification of solid fuels and for demonstration projects relating to the exploitation of alternative energy sources and to energy saving and the substitution of hydrocarbons;

Whereas such support is to be granted solely to projects proven industrially and commercially viable by previous studies and research;

Whereas the Treaty does not provide the specific powers necessary for the adoption of this Decision;

Having regard to the opinions of the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme of the European Economic Community in the field of non-nuclear energy as defined in the Annex is hereby adopted for a four-year period starting on 1 January 1985.

Article 2

The funds estimated as necessary for the execution of the programme amount to 175 million ECU, including expenditure on a staff of 40.

Article 3

The Commission shall be responsible for the implementation of the programme and shall be assisted

⁽¹⁾ OJ No C 218, 13. 8. 1983, p. 4 and OJ No C 154, 14. 6. 1984, p. 5.

⁽²⁾ OJ No C 322, 28. 11. 1983, p. 279 and OJ No C 72, 18. 3. 1985, p. 30.

⁽³⁾ OJ No C 341, 19. 12. 1983, p. 27 and OJ No C 25, 28. 1. 1985, p. 23.

⁽⁴⁾ OJ No C 149, 18. 6. 1980, p. 1.

⁽⁵⁾ OJ No C 208, 4. 8. 1983, p. 1.

⁽⁶⁾ OJ No L 231, 2. 9. 1975, p. 1.

⁽⁷⁾ OJ No L 231, 13. 9. 1979, p. 30.

⁽⁸⁾ OJ No L 195, 19. 7. 1983, p. 1.

⁽⁹⁾ OJ No L 195, 19. 7. 1983, p. 6.

by a Management and Coordination Advisory Committee (CGC) (Non-nuclear energy) set up by Decision 84/338/Euratom, ECSC, EEC ⁽¹⁾.

Article 4

In the light of the experience gained in the course of implementing the programme and after receiving the opinion of the Management and Coordination Advisory Committee (CGC) the Commission shall be authorized to transfer funds from one subprogramme to another, provided that the final appropriation for any subprogramme does not differ by more than 15 % from the original appropriation as set out indicatively in the Annex hereto.

Article 5

During the second year, the programme shall be reviewed. The result of that review shall be communicated to the Council and the European Parliament. That review may lead to the Commission submitting a proposal for a revision of the programme in accordance with the appropriate procedures.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

⁽¹⁾ OJ No L 177, 4. 7. 1984, p. 25.

ANNEX

RESEARCH AND DEVELOPMENT PROGRAMME IN THE FIELD OF NON-NUCLEAR ENERGY

The objectives of this programme are set out in the following subprogrammes, which will be carried out under cost-sharing contracts:

DEVELOPMENT OF RENEWABLE SOURCES OF ENERGY

1. Solar energy

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 35,5 million ECU.

- A. Solar energy applications in buildings
- B. Thermomechanical solar-power plants
- C. Photovoltaic power generation
- D. Solar radiation data
- E. Solar energy application in agriculture and related industry

2. Energy from biomass

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 20 million ECU.

- A. Development and recovery of biomass for energy purposes
- B. Biomass conversion technologies
- C. Utilization of biomass as a source of energy
- D. Photochemical and photobiological processes

3. Wind energy

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 18 million ECU.

- A. Assessment of resources in Europe
- B. Wind-generator experiments
- C. Development of technologies and prototypes

4. Geothermal energy

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 21 million ECU.

- A. Exploration and assessment of resources
- B. Properties of geothermal reservoirs
- C. Production and management of reservoirs
- D. Utilization and conservation of resources
- E. Hot dry rocks
- F. Training and education

RATIONAL USE OF ENERGY

5. Energy conservation

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 26,5 million ECU.

- A. Buildings
- B. Industry
- C. Transport
- D. Energy storage

6. Utilization of solid fuels

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 20 million ECU.

- A. Heat and power production
- B. Transportation and handling of solid fuels
- C. Solid fuels science

7. Production and utilization of new energy vectors

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 10 million ECU.

- A. Production of synthetic fuels from coal
- B. Production of synthetic fuels from biomass
- C. Studies on systems and materials specific to these two production methods
- D. Generation of hydrogen for synthetic fuel production
- E. Fuel cells

8. Optimization of hydrocarbon production and use

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 15 million ECU.

- A. Improvement in the knowledge of hydrocarbons deposits
- B. Use of natural gas
- C. Use of petroleum heavy fractions
- D. Fuel/engine matching

9. Energy systems analysis and modelling

By way of indication, the funds estimated as necessary for the execution of this subprogramme amount to 9 million ECU.

- A. Maintenance and utilization of existing models
 - B. Development of new models
 - C. Application of the models and consolidation of the associated infrastructure
-

COUNCIL DECISION

of 12 March 1985

adopting a research and development programme on the management and storage of radioactive waste (1985 to 1989)

(85/199/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 submitted by the Commission after consulting the Scientific and Technical Committee ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas the use of nuclear energy inevitably involves the production of radioactive waste; whereas it is therefore essential to implement effective solutions to guarantee the safety and protection of man and the environment against the potential risks associated with the management of such waste;

Whereas the European Communities' action programme on the environment, which was approved by the Council and the Representatives of the Governments of the Member States meeting in the Council in the declaration of 22 November 1973 ⁽⁴⁾, the continuation and implementation of which are the subject of the resolutions of 17 May 1977 ⁽⁵⁾ and 7 February 1983 ⁽⁶⁾, underlines the need for Community action on the handling and storage of radioactive waste, and specifies the content of and procedures for implementing such action;

Whereas, by its resolution of 18 February 1980 ⁽⁷⁾ on the implementation of a Community plan of action (1980 to 1992) in the field of radioactive waste, the Council resolved to ensure the continuity of the R&D programmes in this sphere during the plan;

Whereas the Council resolution of 25 July 1983 on the framework programme of research, development and

demonstration Community activities and on the first framework programme 1984 to 1987 ⁽⁸⁾, lists the development of nuclear fission energy among the scientific and technical objectives for 1984 to 1987;

Whereas the programme on the management and storage of radioactive waste adopted by Decision 80/343/Euratom ⁽⁹⁾ has enabled a large amount of information to be obtained which it is advisable to complete and validate by the implementation of research, development and demonstration actions representing the real waste management and storage conditions which can be expected in the future;

Having regard to the opinion of the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme of the European Atomic Energy Community on the management and storage of radioactive waste, as defined in the Annex, is hereby adopted for a five-year period as from 1 January 1985.

Article 2

The funds estimated as necessary for the execution of the programme amount to 62 million ECU, including expenditure on a staff of 12.

Article 3

During the second year, the programme will be re-examined. The result of this re-examination will be submitted to the Council and the European Parliament.

⁽¹⁾ OJ No C 166, 26. 6. 1984, p. 4.

⁽²⁾ OJ No C 46, 18. 2. 1985, p. 63.

⁽³⁾ OJ No C 343, 24. 12. 1984, p. 3.

⁽⁴⁾ OJ No C 112, 20. 12. 1973, p. 1.

⁽⁵⁾ OJ No C 139, 13. 6. 1977, p. 1.

⁽⁶⁾ OJ No C 46, 17. 2. 1983, p. 1.

⁽⁷⁾ OJ No C 51, 29. 2. 1980, p. 1.

⁽⁸⁾ OJ No C 208, 4. 8. 1983, p. 1.

⁽⁹⁾ OJ No L 78, 25. 3. 1980, p. 22.

This re-examination may lead to the submission by the Commission of a proposal for the revision of the programme in accordance with the appropriate procedures.

Article 4

The Commission shall implement the programme and shall be assisted by the Management and Coordination Advisory Committee (CGC) (Nuclear fission energy –

fuel cycle/processing and storage of waste), set up by Council Decision 84/338/Euratom, ECSC, EEC ⁽¹⁾.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

⁽¹⁾ OJ No L 177, 4. 7. 1984, p. 25.

ANNEX

RESEARCH PROGRAMME ON THE MANAGEMENT AND STORAGE OF RADIOACTIVE WASTE (1985 to 1989)

The programme is aimed at perfecting and demonstrating a system for managing the radioactive waste produced by the nuclear industry ensuring, at the various stages, the best possible protection of man and the environment.

The programme will cover:

A. Waste management studies and associated R&D actions

- Task 1: Systems studies
- Task 2: Improvement of radioactive waste treatment and conditioning technologies
- Task 3: Evaluation of conditioned waste and qualification of engineered barriers
- Task 4: Research in support of the development of disposal facilities; shallow burial and geological disposal studies
- Task 5: Safety of geological disposal
- Task 6: Joint elaboration of radioactive waste management policies

B. Construction and/or operation of underground facilities open to Community joint activities (initially for the three projects listed below, but taking into account that additional proposals are likely)

- Project 1: Pilot underground facility in the Asse salt mine (Federal Republic of Germany)
- Project 2: Pilot underground facility in the argillaceous layer located under the Mol nuclear site (Belgium)
- Project 3: Experimental underground facility in France in a geological medium of complementary nature

The work described above will be carried out mainly under contract.

COUNCIL DECISION

of 12 March 1985

adopting a multiannual research and training programme for the European Atomic Energy Community in the field of radiation protection (1985 to 1989)

(85/200/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 of 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 general strategy of the Commission for research and development within the framework programme for the scientific and technical activities of the Community emphasizes the need for a radiation protection programme;

Whereas the protection of man and his environment, forming an integral part of the objective of improving living and working conditions and being a prerequisite for the safe production of energy, calls for a renewal of the present 1980 to 1984 radiation protection programme for the period 1985 to 1989;

Whereas it is in the interest of the Community to supplement, broaden and deepen the information necessary for an objective study of the effects of ionizing radiation, for an evaluation of their hazards and for the development of methods to control and reduce adverse consequences of radiation, in order to guarantee adequate protection of the general public, workers and the environment;

Whereas scientific collaboration, the exchange of information and mobility and interchange of scientists at Community level are essential to radiation protection;

Whereas the research covered by this Decision is an appropriate way of pursuing such action; whereas it is

therefore in the common interest to adopt a multiannual programme in the field of radiation protection;

Whereas the Committee for Scientific and Technical Research (CREST) has expressed its opinion,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of radiation protection as defined in the Annex is hereby adopted for a five-year period beginning on 1 January 1985.

Article 2

The funds estimated as necessary for the execution of the programme amount to 58 million ECU, including expenditure on a staff of 57.

Article 3

During the second year, the programme shall be reviewed. The result of this review shall be communicated to the Council and the European Parliament. This review may lead to the submission by the Commission of a proposal for a revision of the programme in accordance with the appropriate procedures.

Article 4

The Commission shall implement the programme and shall be assisted by the Management and Coordination Advisory Committee (CGC) (Radiation protection) created by Decision 84/338/Euratom, ECSC, EEC ⁽³⁾.

Done at Brussels, 12 March 1985.

*For the Council**The President*

F. M. PANDOLFI

⁽¹⁾ OJ No C 46, 20. 2. 1984, p. 106.

⁽²⁾ OJ No C 23, 30. 1. 1984, p. 12.

⁽³⁾ OJ No L 177, 4. 7. 1984, p. 25.

ANNEX

RADIATION PROTECTION PROGRAMME (1985 to 1989)

1. The objective of the programme is to improve the conditions of life with respect to safety of work and protection of man and his environment and to assure a safe production of energy from atomic fission and, later, fusion. It endeavours, through a cooperative European effort.
 - to screen and assess problems related to radiation protection and to study such problems by scientific means,
 - to improve methods necessary to protect workers and the population by updating the scientific basis for appropriate standards and by further developing techniques to prevent and counteract harmful effects of radiation,
 - to provide methods to cope with the consequences of radiation accidents,
 - to assess radiation risks and set them in perspective to other risks arising in modern society,
 - to provide pertinent and up-to-date information for decision-making.
2. The programme will cover research on:
 - radiation dosimetry and its interpretation,
 - behaviour and control of radionuclides in the environment,
 - non-stochastic effects of ionizing radiation,
 - radiation carcinogenesis,
 - genetic effects of ionizing radiation,
 - evaluation of radiation risks and optimization of protection.

The programme will be carried out principally by research contracts and, to a small degree, by the Commission's Biology Group at the Ispra establishment. The Commission will support the mobility of research workers in order to allow contracting laboratories an optimal execution of research work.

COUNCIL DECISION

of 12 March 1985

adopting a research and training programme in the field of controlled thermonuclear fusion
(1985 to 1989)

(85/201/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 ⁽¹⁾ presented after consultation of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament ⁽²⁾,

Having regard to the opinion of the Economic and Social Committee ⁽³⁾,

Whereas the energy problem is common to 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 these considerations have been taken into account in the first framework programme 1984 to 1987 laid down in the Council resolution of 25 July 1983 ⁽⁴⁾ on framework programmes for Community research, development and demonstration activities;

Whereas thermonuclear fusion forms an important objective within the framework programme;

Whereas, in its Decision 82/350/Euratom ⁽⁵⁾, the Council adopted a research and training programme (1982 to 1986) 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 1984, a review proposal designed to replace the 1982 to 1986 programme by a new five-year programme (1985 to 1989) with 1985 and 1986 constituting years common to both programmes; whereas Decision 82/350/Euratom should therefore be replaced;

Whereas, as a result of Decision 82/350/Euratom being replaced, approximately 45,6 million ECU of the sum

estimated necessary for the preceding programme, exclusive of JET (Joint European Torus), and some 72 million ECU of the sum estimated to be necessary for the preceding programme for the JET project will not have been used; whereas these amounts can be assigned to the new programme; whereas such assignment, together with the fact that the programme embraces all work carried out in the Member States in this field, must be taken into account in determining the amounts estimated to be necessary for the execution of the new programme;

Whereas, in view of the extent of the effort needed to reach the stage of applications 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 work hitherto undertaken in this field must continue on a joint basis at its various stages of development;

Whereas the research proposed by the Commission constitutes an adequate 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 continuation of the programme should be based on the following strategy:

- pursuit of a substantial programme based on the Tokamak route to a demonstration reactor; completion of the first stage of the programme formed by the JET project with its extensions and by the full exploitation of the devices in existence or under construction in the Associations,
- continuation of the definition and predesign of the second stage of the Tokamak programme, the Next European Torus (NET) and pursuit of the technological developments necessary to its design and construction and of those needed in the longer term for the fusion reactor,
- investigation, depending on the resources available, of alternative confinement systems, concentrating on reversed field pinches and stellarators, subject to periodic reassessment of their reactor potential compared with that of the Tokamak;

⁽¹⁾ OJ No C 198, 27. 7. 1984, p. 3.

⁽²⁾ OJ No C 46, 18. 2. 1985, p. 72.

⁽³⁾ OJ No C 25, 28. 1. 1985, p. 9.

⁽⁴⁾ OJ No C 208, 4. 8. 1983, p. 1.

⁽⁵⁾ OJ No L 157, 8. 6. 1982, p. 22.

Whereas this strategy should be reviewed when a decision is taken on launching D-T operation in JET and on launching the detailed design of NET;

Whereas the research programme of the Joint Research Centre adopted by Decision 84/1/Euratom, EEC ⁽¹⁾ provides for participation by the JRC in the field of NET and technology;

Whereas Sweden, Switzerland and Spain are associated with Community activities in the field of controlled thermonuclear fusion;

Whereas the Community should continue to encourage the construction of certain equipment relating to projects accorded priority status, support for JET and NET by the associations and certain developments in the field of fusion technology by granting a preferential rate of participation in expenditure on such projects;

Whereas the direct involvement of industry in implementation of the programme, in particular with regard to NET and fusion technology, must be strengthened;

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

Whereas it is necessary to implement the Council's Decision of 19 December 1984 to spread the technology programme over a longer period than previously planned,

HAS DECIDED AS FOLLOWS:

Article 1

A European Atomic Energy Community programme of research and training in the fields of controlled

thermonuclear fusion, as defined in the Annex, is hereby adopted for a five-year period commencing 1 January 1985.

Article 2

The funds estimated as being necessary for the execution of the programme amount to 690 million ECU, including expenditure on a workforce of 270 staff and the unused amounts from the previous programme.

Article 3

During the second year, the programme shall be reviewed. On the basis of this review, the Commission will submit to the Council a proposal for revision aimed at replacing the present programme by a new five-year programme in 1987.

Article 4

Decision 82/350/Euratom is hereby replaced by this Decision with effect from 1 January 1985.

However, amounts which are authorized under the relevant headings of the 1982, 1983 and 1984 budgets pursuant to Decision 82/350/Euratom and which on 1 January 1985 have not yet been committed, or have been committed but not yet paid, will be used for execution of the present programme.

Done at Brussels, 12 March 1985.

For the Council

The President

F. M. PANDOLFI

⁽¹⁾ OJ No L 3, 5. 1. 1984, p. 21.

ANNEX

CONTROLLED THERMONUCLEAR FUSION

1. The programme to be executed will cover:

- (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 and predesign of NET (Next European Torus), and technological developments necessary to its design and construction and those needed in the longer term for the fusion reactor; all these activities will be spread over a longer period than previously planned;
- (g) extension of the JET device to full performance; operation and exploitation of JET.

The work referred to in (a), (b), (c), (d), (e), and (f) will be carried out by means of association or limited duration contracts which are designed to yield the results necessary for implementation of the programme and which take into consideration the work carried out by the Joint Research Centre, in particular work relating to NET and the 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 forms part of a long-term cooperative project embracing all activities undertaken 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 funds allocated to the programme are intended to finance:

- (a) priority projects at a uniform rate of approximately 45 %, as specified in paragraph 4;
- (b) running expenditure of the associations at a uniform rate of approximately 25 %;
- (c) certain industrial contracts in the fields of 'NET/fusion technology' and the development of advanced plasma heating methods at a rate of 100 %, as specified in paragraph 4;
- (d) administration costs and expenditure intended to ensure the mobility of staff to enable them to work in organizations cooperating in implementation of the programme and in the NET team;
- (e) the operational costs of the NET team at a rate of approximately 75 %;
- (f) the Community contribution at a rate of 80 % of the commitments entered in the budget of the JET Joint Undertaking. The Swedish and Swiss contributions to the JET project will be deducted directly from the share of the overall appropriation for this project to be paid from the Community budget.

Any positive balance from the contributions of associated third countries under the programme, exclusive of JET, will be devoted to financial participation by the Community in the expenditure referred to in paragraphs 3 (a), (b), (c), (d) and (e).

4. After consulting the Consultative Committee of the Fusion Programme the Commission may finance at a uniform rate of approximately 45 %, as specified in paragraph 3 (a), projects belonging to one of the following areas:

- (a) Tokamak systems and support for JET;
- (b) other toroidal machines;

⁽¹⁾ OJ No L 151, 7. 6. 1978, p. 10.

- (c) heating and injection;
- (d) NET and fusion technology.

If such projects belong to areas (c) and (d) and if they are carried out by industry, the Commission may finance them at a rate of 100 % as specified in paragraph 3 (c).

In return, all associates will be able to take part in the experiments carried out with the equipment thus constructed.
