II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 21 December 1976

reviewing the energy research and development programme adopted by Decision 75/510/EEC

(77/54/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,

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

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

Whereas Article 4 of Council Decision 75/510/EEC of 22 August 1975 adopting an energy research and development programme (3), lays down that the programme shall be reviewed at the end of the first year;

Whereas it is also desirable, in order to ensure optimum implementation of the programme, to provide for the possibility of modifying the distribution of the funds allocated to the various objectives;

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

HAS DECIDED AS FOLLOWS:

Article 1

The following paragraph shall be added to Article 3 of Decision 75/510/EEC:

'In implementing the programme, the Commission may, after consulting the competent ACPMS and the CREST subcommittee on Energy R & D, and within the limits of 5 to 10 % of the original appropriations as shown in the Annex, carry out transfers between the funds allocated to the various objectives, in the event that, at the beginning of the last year of implementation of the programme, the appropriations available for certain of the objectives cannot be used to advantage, while for other objectives the funds are clearly inadequate in regard to possible developments.'

Article 2

As from 1 January 1977 the Annex to Decision 75/510/EEC shall be replaced by the Annex to the present Decision.

Done at Brussels, 21 December 1976.

For the Council

The President

R. LUBBERS

(1) OJ No C 293, 13. 12. 1976, p. 17.
(2) Opinion delivered on 24 November 1976 (not yet published in the Official Journal).
(3) OJ No L 231, 2. 9. 1975, p. 1.

ANNEX

INDIRECT ACTION

ENERGY RESEARCH AND DEVELOPMENT PROGRAMME

The aims of the programme are as follows :

1. ENERGY CONSERVATION

A maximum of 11·380 million units of account and a staff of six shall be assigned to this objective.

This programme covers the following sectors :

— improved insulation of buildings,
— use of heat pumps,
— urban transport,
— residual heat recovery,
— materials recycling,
— production of energy from waste,
— evaluation of the specific energy consumption of equipment, processes and techniques,
— development of methods for storage of secondary energy.

This work shall be carried out under contract.

2. PRODUCTION AND UTILIZATION OF HYDROGEN

A maximum of 13·240 million units of account and a staff of four shall be assigned to this objective.

This programme comprises the following projects :

Project A : Thermochemical production of hydrogen

Action : 1. Research into chemical and electrochemical reaction cycles of high potential efficiency in the conversion of heat energy into hydrogen energy.

2. Practical experiments on promising cycles.

Project B : Electrolytic production of hydrogen

Action : 1. Improvement of existing electrolytic hydrogen production technology.

2. Study of the viability and economics of high-temperature and high-pressure electrolysis.

Project C : Utilization of hydrogen

Action : 1. Analysis of the potential applicability of hydrogen and of synthetic hydrogen-based fuels.

2. Development of safety specifications for the handling of hydrogen.

3. Improvement of the small-scale storage of hydrogen.

4. Studies related to the problems of industrial-scale (medium-sized) storage of hydrogen.

5. Studies of the possibility of using existing pipelines for the distribution of hydrogen.

This work shall be carried out under contract.

3. SOLAR ENERGY

A maximum of 17·500 million units of account and a staff of six shall be assigned to this objective.

This programme comprises the following projects :

Project A : Solar heat collectors and their application to dwellings

Action : 1. Low-temperature use of solar energy for heating and cooling buildings.

2. Study of plane surface collectors.

3. Pilot applications to dwellings for domestic use.

Project B : Self-contained generating sets for the production of mechanical and/or electrical power

Action : 1. The use in medium and high temperature areas of solar heat to produce mechanical and/or electrical power.

2. Improvement of low-power groups (1 + 10 kw).

3. Pilot installation of 1 MWe.

Project C : Photovoltaic conversion

Action : 1. Development of alternative cells and improvement of existing cells.

2. Feasibility study on new concepts.

3. New methods of preparing semiconductor materials.

4. Silicon thin film.

5. Automation of panel production.

6. New or improved encapsulating materials.

7. Data collation.

Project D : Photochemical, photoelectrochemical and photobiological processes

Action : 1. Basic studies on photochemical, photoelectro-chemical and photobiological systems.

Project E : Photosynthetic production of organic matter

Action : 1. Choice and development of the most suitable energy crops for the different regions of Europe.

Project F : Data network relating to solar radiation

Action : 1. Collection, standardization and distribution of comprehensive data on number of hours of sunshine throughout the Community.

2. Definition of the implications of the large-scale use of solar energy.

This work shall be carried out under contract.

4. GEOTHERMAL ENERGY

A maximum of 13 million units of account and staff of four shall be assigned to this objective.

This programme comprises the following projects :

Project A : Acquisition and collation of existing and new geothermal data

Action : 1. Collation of existing geothermal data.

2. Acquisition and collation of new additional geothermal data.

Project B : Improvement of methods of exploration

Action : 1. Improvement and/or adaptation of existing prospecting methods to specific geothermal requirements and development of new methods of prospecting and exploration.

Project C : Sources of hot water (low enthalpy)

Action : 1. Compilation of geothermal models in the regions concerned.

2. Full-scale experimental verification of theoretical models (operation).

3. Utilization tests on sources of hot water for district and agricultural heating.

Project D : Steam sources (high enthalpy)

Action : 1. Construction of geothermal models in the areas concerned.

2. Improvement of measuring and drilling techniques for experimental work at high temperatures.

3. Study of new stimulation methods.

Project E : Hot dry rocks

Action : 1. Studies and experiments on fracturation.

2. Studies and experiments on heat extraction.

Project F : Training of specialists

Action : 1. Training courses and detachments.

This work shall be carried out under contract.

5. SYSTEMS ANALYSIS : DEVELOPMENT OF MODELS

A maximum of 3·880 million units of account and a staff of seven shall be assigned to this objective.

This programme comprises the following action :

Action : 1. Static models (short term).

2. Dynamic sector models (medium/long term).

This work shall be carried out under contract.