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A brief note on the Community's regional policy can be found in ANNEX 1.

\*\* The SOLAR ENERGY continuously received by the earth exceeds 80,000 million megawatts (1 megawatt = 1 million watts). Less than 0.1% of this energy (60,000 million kW) would

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guarantee the 6,000 million population which our planet will contain in the year 2,000 an average of 10 kW of energy per capita and an annual per capita consumption of 15,000-18,000 kWh, i.e., a very cosy level of consumption if it is borne in mind that in 1970 the per capita consumption of electrical energy in the Community of the Nine was 2,742 kWh.

This solar energy which is showered on the earth in abundance offers the additional enormous advantage of being neither polluting nor a danger to health. Aware of the advantages inherent in the rational utilization of solar energy, the European Commission proposed, as part of the Community's multiannual research programme, that research should be carried out into the uses of solar energy, and this proposal was finally adopted by the Council of Ministers on 18 June 1973. For further details see ANNEX 2.

\*\* ANNEX 3 contains a selection from the publications recently acquired by the Scientific and Technical Library of the Commission of the European Communities. These can be either consulted on the premises (1, avenue de Cortenberg, 1040 Brussels, Office Loi, 1/43) or taken out on loan.

\*\* During its meeting in Brussels on 20 September 1973, the Council of Ministers expressed its agreement with the broad outline of the communication on a PROGRAMME FOR INDUSTRIAL AND TECHNOLOGICAL POLICY laid before it by the European Commission last May (see IRT No. 168) and requested the Commission to put to it before 1 November 1973 a formal proposal concerning a programme of action with regard to industrial policy so that this can be adopted by the Council before 1 January 1974. Prior to this the Council had heard a report by Mr Spinelli, the Member of the Commission with special responsibility for industrial affairs, in which he stated that the Commission had not

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wished to outline what the industrial structures of the Community should be, but rather to highlight a number of priority projects which would (a) need to be given practical effect through Council regulations and (b) depend on the initiative of industry itself with encouragement from the Commission and support from the Member States. These priorities concern the removal of barriers to trade, a genuine extension of the right to tender for public and semi-public contracts in the Community, the promotion of companies which would be competitive on a European scale (in particular as a result of a Community code of company law, the introduction of Community development contracts, etc.) and, finally, sectoral policies relating to industries facing special problems, such as advanced-technology industries and industries undergoing crises. Consultations are under way with the national authorities and both sides of industry with specific regard to aerospace, shipbuilding, data-processing and the nuclear, paper and textile industries, and the Commission will shortly lay concrete proposals before the Council.

Mr Spinelli hoped that the Council would be able to take a decision before the end of this year on the Commission's proposals relating to development contracts, aerospace and shipbuilding and that it would also be able to discuss the document on multinational companies which the Commission hopes to adopt within the next few weeks.

Mr Gundelach, the Member of the European Commission with special responsibility for the internal market, then stressed the urgent need for approval by the Council of Ministers of all of the proposals still under discussion on the removal of technical barriers to trade and the harmonization measures which are essential to the creation of a genuine internal market.

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\*\* A third programme of research into "TECHNICAL METHODS OF POLLUTION CONTROL IN THE STEEL INDUSTRY" has been passed on by the European Commission for consultation within the Consultative Committee of the Coal and Steel Community (ECSC) and the concurring opinion of the Council of Ministers. This third programme, covering five years, would concentrate on the most important preventive techniques and on the development of methods aimed at the effective reduction of pollutant emissions resulting from steel-making i.e., emissions of dust and fumes, vapours and pollutant gases and the pollution of industrial waste water. The research would extend to technical control of noise and the disposal of industrial, more particularly toxic effluents. The appropriations set aside for this programme of research would amount to 10 million u.a. for five years.

\*\* Pilot schemes concerning the VOCATIONAL TRAINING OF MIGRANT WORKERS in such fields as linguistic training, pre-vocational training and the training of demonstrators/instructors are currently in preparation with the backing of the reformed European Social Fund. The European Commission recently announced this in an answer to a written question from Mr Vredeling, a Member of the European Parliament.

In addition, the Commission is currently examining, within the broader framework of the measures to be initiated by the Community to assist migrant workers under the social action programme, ways of implementing a specific joint project aimed at better occupational, human and social integration of migrant workers and their families in the host countries. This specific joint project would also receive aid from the European Social Fund.

\*\* Basing itself on the ECSC Treaty, which empowers it to facilitate the carrying-out of the Community's Coal and Steel industries' investment programmes, the European Commission recently granted for the first time an ECSC LOAN TO A COMPANY IN A NEW MEMBER STATE. This loan

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(380 million Luxembourg francs, i.e., 7.6 million u.a.) was granted to the Danish company Danske Staalvalsevaerk a/s, Frederiksvaerk, and constitutes an initial contribution towards a project for the development of the company which is geared in its final stages to the raising of steel production from 500,000 to 1,000,000 metric tons a year and the creation of 500 new jobs.

Loans granted on the basis of the ECSC Treaty since 1 January 1973 total 200 million u.a.

\*\* The European Commission is following the research into the EFFECTS OF EMISSIONS FROM SUPERSONIC AIRCRAFT ENGINES with the closest attention and intends to contribute to this work. Such was the answer to a written question from Mr Vredeling, a Member of the European Parliament.

As regards the discharge of nitrogen oxides and vapour by supersonic aircraft engines into the stratosphere, the Commission is unable to make any definitive statement on the immediate adverse effects of these pollutants, since the results of the studies carried out so far are incomplete and conflicting.

The Commission considers at all events that research and development on aero-engine combustion chambers must be continued in order to achieve a substantial reduction in the emissions for these engines, particularly in view of the prospective increase in the number of supersonic flights.

\*\* The European Commission has been invited by the West German Government to attend, in the capacity of observer, the SECOND MINISTERIAL CONFERENCE ON THE POLLUTION OF THE RHINE, which will be held in Bonn on 15-16 November 1972 and will bring together delegates from the Governments of all the States represented on the International Commission

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for the Protection of the Rhine.

- \*\* An analysis of certain experiments concerning industrial-zone planning and management in the countries of the European Economic Community has been published by the European Commission as part of the collection on regional economy and policy (1. Conversion of Industry in Europe). This work, which is published in French, Italian, Dutch and German, is obtainable at a price of FB 150, from the Sales Office for Official Publications of the European Communities (P.O. Box 1003, Luxembourg).
  
- \*\* Whatever the quality and effectiveness of the preventive measures taken in steelworks, accidents happen and the victims should receive all appropriate care and attention as soon as possible. With this in mind, the General Committee on Health and Safety in the Steel Industry has commissioned a group of experts from Community countries to study the problem of rescue and treatment in its entirety. The final conclusions of this Working Party have recently been published by the European Commission in a brochure entitled RESCUE AND TREATMENT.
  
- \*\* It should also be mentioned that the European Commission recently published the proceedings of the SYMPOSIUM ON ACCIDENT PREVENTION which it had held in Luxembourg on 21/23 October 1970 in the context of the activities of the General Committee on Health and Safety in the Steel Industry. This work is obtainable at a price of FB 300 in French, German, Italian, Dutch and English from the Office for Official Publications of the European Communities (P.O. Box 1003, Luxembourg 1).

A REGIONAL POLICY FOR THE COMMUNITY

Over the next three years the Community could devote about 2,400 million u.a. (1 u.a. = about 1 old US dollar) to REGIONAL POLICY if the Council of Ministers were to accept the proposals addressed to it by the European Commission, namely, the setting-up of a European Regional Development Fund having appropriations totalling 2,250 million u.a. at its disposal between 1974 and 1976. The Commission has also upheld its proposal that a proportion of EAGGF monies should be employed for regional purposes so that about 150 million u.a. would be used to create new industrial jobs in agricultural regions between 1974 and 1976.

A major effort will be necessary in order to correct the regional imbalances which the Community's continued expansion since its inception has been unable to eliminate; i.e., although the growth rate in the Community of the Six has been high (the gross national product rose on average by 5.4% a year from 1960 to 1970), this growth has been neither uniform nor geographically balanced and the per capita income in the neglected regions of the Community is still about one-fifth that in the richest areas. It is true that the Community has already taken action on the regional level in different ways: more than 55% of the credits granted by the European Investment Bank, i.e., 1,900 million u.a., have been spent on meeting the regions' needs; about 110,000 new jobs have been created in the declining coal-mining or steel-making areas as a result of the action by the Coal and Steel Community (ECSC); in addition, the EAGGF (guidance section) has spent 265 million u.a. and a further 150 million u.a. has been devoted by the Fund to structural changes in agriculture. Yet all these efforts have proved to be inadequate.

If, in line with the basic objectives of the Treaty of Rome, the will exists to narrow the gap between the various regions by means of a more equitable distribution of the Community's resources and to improve the living



conditions of all the Community's inhabitants, whether in the regions suffering from structural underemployment and a high level of unemployment or in the overpopulated urban centres with a low-quality environment, a coherent regional policy must be forged at a Community level. This regional policy must not supplant the national policies but rather supplement them, both by stimulating the development of the poorer regions and by taking steps to discourage the excessive concentration of economic activities in overpopulated regions. Its success will also depend upon coordination of the various common policies and of the Community's existing financial tools.

At the October 1972 Summit Conference, the Heads of State and Government of the Member States of the Community accorded high priority to seeking a Community solution aimed at correcting the regional imbalances liable to affect the economic and monetary union. The action to be undertaken includes in particular the coordination of the Member States' regional policies and the setting up of a Regional Development Fund.

In May 1973, the European Commission submitted a report on regional problems in the enlarged Community (see IRT No. 189). In accordance with the guidelines laid down in this report, and having regard to the Opinion of the European Parliament and of the employers' and trade-union associations and of local authority organizations, it forwarded to the Council of Ministers last July a draft decision on the formulation of a Community regional policy and a proposal for a regulation setting up a European Regional Development Fund, together with the relevant financial regulation.

The Regional Policy Committee will facilitate the coordination of the Member States' regional policies at a Community level. This Committee, which will be chaired by a representative of the Member States and whose secretariat will be run by the European Commission, will in particular have the task of studying the aims and resources of the Member States as

regards regional policy, development programmes, regional aid systems, disincentives in regions where there is high population density and the promotion of improved channels of information for public and private investors for the purposes of regional development. It is also planned that the Committee will be able to obtain the opinions of the regional bodies concerned and of trade-union and employers' organizations.

The European Commission attaches great importance to finding appropriate means of associating both sides of industry and local and regional authorities with the development of a Community regional policy. To this end, and as soon as the Council has approved the setting-up of the Regional Development Fund, a conference will be convened and attended by both sides of industry and other interested parties for the purpose of devising the most suitable machinery for ensuring the closest possible cooperation. In the meantime, the Commission proposes that the Regional Policy Committee should consult regularly with both sides of industry. In addition, when problems affecting a specific region are examined by the Regional Policy Committee, steps may be taken to ensure that the opinions of the interested parties in that region are obtained.

The Regional Development Fund will be the major vehicle for the mobilization of Community resources for regional purposes. Its activities will centre entirely on the medium- and long-term development of backward or declining regions in order to enable these to achieve a self-sustaining level of growth. The European Commission is currently compiling a list of these regions, which it will pass on to the Council of Ministers in the near future. The existence of national regional aids, a per capita gross national product lower than the Community average, a predominantly agricultural policy or declining industries, structural underemployment, a high rate of unemployment and large-scale emigration are some of the criteria for regional imbalance.

The European Commission proposes that the Regional Development Fund be instructed to grant appropriations of 500 million u.a. for 1974, 750 million for 1975 and 1,000 million for 1976. It should be borne in mind that at the present time 10,000-25,000 u.a. are considered to be needed in order to create one job, to which must be added about 15,000 u.a. for the creation of the social, economic and administrative infrastructure (accommodation, schools, hospitals, roads, etc.).

Community aid must be an extension of, and not a substitute for, action by the Member States. Thus the amount contributed by the Fund may range up to 15% of the cost of investments in industries or services exceeding 50,000 u.a. but must not exceed 50% of the aid granted by the public authorities for these investments. As regards investment in infrastructures the aid must not exceed 30% of the expenditure by the public authorities.

The Fund's resources must be allotted in proportion to the relative severity of the regional imbalances within the Community and to the urgency of each case in its regional context. In addition, since regional problems vary greatly from one country and region to another, Community aid must be able to adapt to the primary needs of each region, e.g., industrialization, provision of tertiary services and infrastructures, all of which are directly linked with economic development.

In order to ensure that Community action operates to the benefit of an overall policy of a clearly European nature, aid from the Fund must be based on development programmes embracing investments and will be examined by the Regional Policy Committee.

A PROGRAMME OF COMMUNITY RESEARCH INTO THE USES OF SOLAR ENERGY

The solar energy continuously received by the earth exceeds 80,000 million megawatts (1 megawatt = 1 million watts). Less than 0.1% of this energy (60,000 million kW) would guarantee the 6 000 million population which our planet will contain in the year 2,000 an average of 10 kW of energy per capita and an annual per capita consumption of 15,000-18,000 kWh, i.e., a very cosy level of consumption if it is borne in mind that in 1970 the per capita consumption of electrical energy in the Community of the Nine was 2,742 kWh.

This solar energy which is showered on the earth in abundance offers the additional enormous advantage of being neither polluting nor a danger to health - a point which carries weight at a time when a realization of all the pollution from and all the adverse affects on the environment and health of, the development of fossil and nuclear fuels is being borne in upon us.

Thus, although it is not easy to get out of the rut of technological habit and to consider long-term developments instead of calculating short-term profits, there is a growing awareness of the benefit to humanity of developing "soft" technologies which do not upset the ecological balance, the rational utilization of solar energy being a case in point. The international symposium on "The Sun in the Service of Man" held in Paris in early July 1973 bears witness to this trend.

Being alive to such a need, the European Commission put forward, as part of the Community's multiannual research programme, which was finally adopted by the Council of Ministers on 18 June 1973 (see IRT No. 195), a proposal that research should be undertaken in the field of new technologies, and particularly into the use of solar energy. A sum of 14,000,000 u.a. and a staff of fourteen have been assigned to this research programme, which will be carried out at the Joint Research Centre's ISPRA establishment.

Research into the uses of solar energy is still at the exploratory stage. The intermittent nature of sunshine raises difficult problems, since daily and seasonal variations and the low efficiency achieved in the conversion of solar radiation into usable energy result in high costs.

Whereas the surface temperature of the sun reaches about 6,000 degrees Centigrade, temperature at the surface of the earth does not exceed 50 degrees. In order to achieve temperatures sufficiently high to power a heat engine, a chemical plant or a domestic heating system, solar radiation would have to be either concentrated with, for example, the aid of mirrors or captured by selective surfaces which prevent infra-red rays from being reflected back into space.

The electro-magnetic nature of solar radiation renders it suitable not only for conversion into heat but also for photo-conversion, i.e., the direct conversion of photons into electricity (the method used in Skylab). However, the low level of efficiency and high cost of this type of conversion seem, at least for the time being, to rule out its use in the large-scale generation of electricity.

Purely biological conversion, i.e., by means of plant cultures (algae, for example) generating heat via direct combustion or chemical conversion can also be ruled out, even though it may be a practical proposition in poor countries, as regards large-scale production owing to its mediocre efficiency and the vast surface areas required.

The use of solar energy could fulfil two types of need, namely:

- (a) It could constitute a source of safe, non-polluting energy for highly developed, densely populated countries where the per capita consumption of energy is high;

- (b) It could constitute a source of free energy which is independent of conventional supply networks in regions where their absence makes energy costly and where the vast spaces available enable solar energy to be more easily trapped (in low-population countries where there is a low standard of living and in isolated spots).

Two different categories of solar energy conversion systems which meet these two types of requirements now enter into the picture:

- (a) high-performance conversion systems having a high night or cloudy-day energy storage capacity the production of large amounts of electrical energy. The technique employed is based on high-performance selective surfaces and the concentration of solar radiation;
- (b) small, low-output units producing only a few kilowatts, without energy storage, for the immediate daily use of the energy captured. The technique used is based on mirrors or low-performance selective surfaces.

The most up-to-date techniques in the field of solar energy conversion have a potentially high performance, the conversion of solar energy into electricity being up to 30% efficient. Theoretically, therefore, the way is open for the use of solar energy in the production of energy on a massive scale. This progress and the new situation emerging on the energy market, where price has clearly ceased to be the sole criterion to be taken into consideration, contribute to making solar ~~radiation~~ ~~an~~ ~~essential~~ ~~non-~~ polluting source of energy of the future.



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