

# industry research and technology

X/664/72-E

WEEKLY

REPRODUCTION AUTHORIZED

Brussels, 12 September 1972

No. 156

- \*\* The budget requested by the Commission of the European Communities for 1973 is preceded by an outline of the motives underlying THE WORK PROGRAMME WHICH THE COMMISSION PROPOSES TO IMPLEMENT NEXT YEAR. ANNEX 1 reproduces the pages devoted to the effort which the Community proposes to make in the INDUSTRIAL, RESEARCH, ENVIRONMENTAL AND ENERGY sectors in 1973.
- \*\* Energy consumption in the Community in 1971 increased by only 1.9% by comparison with the previous year (as against an increase of 7.9% in 1970). The growth in the production of PRIMARY ENERGY SOURCES was 1.5% in 1971 (against 4% in 1970). There was also a drop in fuel imports, which rose by only 1.9% in 1971, and a considerable amount of stockpiling of solid and liquid fuels. ANNEX 2 contains a brief outline of the growth of the energy sectors in the Community in 1971.
- \*\* The second report on COKING COAL AND COKE SUPPLIES FOR THE COMMUNITY STEEL INDUSTRY, recently drawn up

../..

---

This bulletin is published by the Directorate General Press and Information of the Commission of the European Communities

For further information please apply to the

Commission of the European Communities  
Directorate-General for Press and Information  
Division for industrial and scientific information  
200, avenue de la Loi  
1040 Brussels - Tel. 3500 40

or any of the Information Offices of the European Communities (list inside cover)

*The information and articles published in this Bulletin concern European scientific cooperation and industrial development in Europe. Hence they are not simply confined to reports on the decisions or views of the Commission of the European Communities, but cover the whole field of questions discussed in the different circles concerned.*

**PRESS AND INFORMATION OFFICES OF THE EUROPEAN COMMUNITIES**

**I BERLIN 31**  
Kurfürstendamm 102  
tel. 886 40 28

**53 BONN**  
Zitelmannstraße 22  
tel. 22 60 41

**1040 BRUSSELS**  
200, rue de la Loi  
tel. 35 00 40

**GENEVA**  
72, rue de Lausanne  
tel. 31 87 30

**THE HAGUE**  
22, Alexander Gogelweg  
tel. 33 41 23

**LONDON SW 1**  
23, Chesham Street  
tel. 235 4904/07

**LUXEMBOURG**  
Centre européen du Kirchberg  
tel. 479 41

**NEW YORK 10017**  
155 East 44th Street  
tel. 212 MU 20458

**PARIS 16e**  
61, rue des Belles-Feuilles  
tel. 553 53 26

**ROME**  
Via Poli, 29  
tel. 6897 22 à 26

**SANTIAGO DI CHILE**  
Edif. Torres de Tajamar-Apt. 40  
Torre A, Casilla 10093  
Avda Providencia 1072  
Tel. 43872

**WASHINGTON, D.C. 20037**  
2100 M Street, N.W.  
Suite 707  
tel. (202) 296-5131

by the Commission, uses all the available data for the period 1967-70 and reexamines the hypotheses and estimates made for 1975 and 1980. It summarizes the Community's experience hitherto in the matter of aid to coking coal. The new system of Community aid which comes into force on 1 January 1973 will be based on these data.

A short summary of this report is given in ANNEX 3.

\*\* Most economic studies which seek to assess the COST OF THE DAMAGE DONE TO THE ENVIRONMENT BY POLLUTION AND NUISANCES investigate the cost of anti-pollution measures as reflected in public and private investment, administrative costs of monitoring systems, etc. On the initiative and under the guidance of the Commission's departments, a working group composed of national experts is now to make an inventory of the estimates of these costs (overall and sectoral) made in the Member and applicant States in continuation of certain work undertaken by the OECD.

The direct estimation of the SOCIAL COST of pollution is more difficult, since it includes both objective factors which have hitherto rarely been quantified (e.g., the cost of the pathological effects of pollution and of the alteration of the environment) and subjective factors (e.g., evaluation of the psychological consequences of a disease resulting from pollution, or of the moral or psychological damage resulting from the disappearance of an asset). Where studies of this type exist in the Community they have as a general rule been only fragmentary and form a poor basis for generalization. The Commission therefore intends to order a study the primary object of which will be to ascertain the extent to which THE ESTIMATION OF THE SOCIAL COST IS POSSIBLE, to establish the criteria for such an estimate and, lastly, to propose a PRACTICAL METHOD OF CALCULATING THESE COSTS.

\*\* THE LABOUR FORCE in the Community of Six amounted in the spring of 1971 to 71,700,000 persons. Of each 100 active persons, 33 were working in West Germany, 29 in France, 27 in Italy and 11 in the Benelux countries. The overall unemployment rate was about 1.5% (as compared with 5% in the US), but the opportunities for work varied appreciably from one country to another. Of the 1,100,000 unemployed in the Community 49% were located in Italy, 36% in France, 9% in the Benelux countries and 6% in West Germany. It is notable that about one-fifth of the unemployed were under 20 years of age, and a further quarter 20-24 years old, so that 45% of the unemployed were young people. These facts are all the more striking when one considers that for the Community as a whole only 43% of young people aged 14-24 years are on the labour market.

In the Community, out of 100 employed persons, 80 are salary earners and only 20 independent workers or (a very small number) family helps. Industry, with 45% of the available jobs, is the largest labour market; it is closely followed by the services sector with 43%, agriculture accounting for only 12%.

The average age of the Community worker is 38 years for men and 35 for women. In West Germany and France it is a little higher, and in the other countries rather lower, particularly in Italy (36 years for men and 33 years for women). The average age of the independent farmer is 48.

These analyses are now possible thanks to the COMMUNITY POLL ON THE LABOUR FORCE, carried out each year in accordance with harmonized methods and definitions. The latest results, which refer to 1971, have just been published by the Statistical Office of The European Communities ("Social Statistics" Series, No. 3/1972).

\*\* During the first seven months of 1972 the Community's CRUDE STEEL PRODUCTION increased by 5.8% compared with the corresponding months in 1971, and PIG IRON PRODUCTION by 3.2%. The following table shows the trend of steel and pig iron production in the six Community countries:

	Crude steel production		Crude pig iron production	
	Jan-Jul. 1972 (1000 t)	Comparison with Jan.-Jul. 1971 (%)	Jan-Jul. 1972 (1000 t)	Comparison with Jan.-Jul. 1971 (%)
Belgium	8,328	+8.6	6,840	+4.2
France	14,045	+5.6	11,084	+4.1
Germany	24,843	+0.2	18,209	-1.1
Italy	11,660	+16.8	5,443	+10.5
Luxembourg	3,145	+1.7	2,697	-0.3
Netherlands	3,240	+12.9	2,507	+20.7
Community	65,261	+5.8	46,780	+3.2

\*\* The Commission of the European Communities has just taken a FAVOURABLE DECISION ON AN AGREEMENT BETWEEN FIVE FRENCH MANUFACTURERS OF THIN PAPER. Originally three of these firms had made an agreement for close cooperation in the manufacture and sale of thin paper, but this has been adjudged by the European Commission to be contrary to the stipulations of the EEC Treaty. In order to meet the Commission's criticisms the three firms, which had been joined by two others, replaced the original agreement by a new agreement envisaging only specialization and commercial collaboration in the soliciting and obtaining of orders in non-European countries.

The existence of effective competition in this sector, together with the favourable effects of the agreement on production plans and technical progress, which will benefit users as well

..//..

as suppliers, have finally enabled the Commission to take a favourable decision.

In doing so the Commission has made certain stipulations in particular that, after a period of two years from the date of the present decision, the participant firms should communicate to the Commission a report on the functioning of the agreement on specialization and should inform the Commission without delay of any participation or establishment of personal links between the managing bodies of the participant firms, and of any plans for mergers or take-overs between them (or one of them) and any other firm in the thin paper sector.

- \*\* THE EUROPEAN INVESTMENT BANK has granted a loan worth DM25 million (7.1 million units of account) to the Stahlwerke Röchling-Burbach GmbH to finance construction of a four-line drawing mill at Völklingen in the Saar. The loan will bear interest at 7.5% per annum and will be for a period of nine years.
  
- \*\* RESEARCH AND DEVELOPMENT are the essential factors in the development of TEXTILE CONCERNS. In order to collect information on the effort made in recent years by textile research institutes in Community and applicant countries, and thus be in a position to make a valid comparison of programmes and hence eliminate duplication of effort, the Commission of the European Communities has just decided to order a study on the ORGANIZATION OF COLLECTIVE TEXTILE RESEARCH IN THE COMMUNITY.
  
- \*\* Various studies on the technical prospects of the RADIATION PASTEURIZATION OF FROZEN AND DRIED EGGS are at present being implemented by a working party set up by the Commission of the European Communities. On 25 September 1972 this working party will hold a meeting in Brussels at which it will discuss the results obtained hitherto, together with the desirability of initiating a Community programme on the industrial introduction of the radiation pasteurization of frozen and dried eggs.

THE 1973 PROGRAMME OF THE COMMISSION OF THE EUROPEAN COMMUNITIES  
COVERING ACTIVITIES IN THE INDUSTRIAL, RESEARCH, ENVIRONMENTAL AND  
ENERGY SECTORS

(Extract from the introduction to the 1973 budget presented by the Commission of the European Communities)

---

(a) The industrial, technological and scientific development policy

In 1973 the Commission will continue its efforts in support of industrial development by making a detailed examination of the situation in the various industrial sectors at the level of the Ten and by putting forward proposals designed to improve their competitive capacity by promoting the industrial application of research, technological innovations and management economy. A "mutation" of Community efforts in regard to the large industrial sectors is proving indispensable, particularly in the advanced sectors such as the aircraft industry and data processing.

For these purposes it will be necessary to take the following action:

1. To harmonize the sectoral, industrial and technological estimates.
2. To examine the prospects for reorganization into major sectors.
3. To obtain homogeneous and comparable information about commercial companies.
4. To create an office for promoting contacts between Community firms.
5. To examine the market and employment prospects by major sectors, taking into account the steady progress in the international division of labour, the benefits of which are felt by the developing countries in particular.
6. To study the problem of excess investment in certain sectors, and the supply policy.

ANNEX 1 p.2

7. To study measures of cooperation, participation and concentration in firms in the various Community countries, together with the effects which the Common Market has had upon the policy and operation of European companies.
8. To draw up periodic balance-sheets of foreign investments in the various countries.
9. To continue to study proposals for extending the status of "joint undertaking" to non-nuclear firms.
10. To watch the markets from the standpoint of preferences resulting from national rules governing the placing of orders and public contracts, and with the aim of ensuring an effective coordination of public purchasing policies.
11. To make a systematic sectoral study of national aid systems.
12. To define the sociological and regional dimensions of industrial policy.
13. To implement the proposals contained in the Memorandum on the structure and development of trade within the Community.
14. To prepare recommendations concerning small and medium-sized industrial companies in the field of investment, industrial development and technical assistance.
15. To prepare research and development programmes and to devise a system of Community innovation and industrial development contracts backed by the award of bonuses and long-term credits.

In the steel sector the special applications of the ECSC Treaty will require the Commission to take the following action:

1. Supervise the correct implementation of the complex provisions relating to steel undertakings in the new Member States (about 200 firms).



2. Administer an increased number of steel tariff rates, in order to observe the terms of Article 60 of the ECSC Treaty, this increase resulting in a complete revision of the monthly publication of prices.
3. Extend both economic and technical forecasting (particularly of the requirements resulting from the new uses of steel products), and obtain fuller knowledge of all aspects of the location of undertakings and the competitive position of the European steel industry as compared with that of new steel-producing countries, in the light of the general objectives concerning the restructuration of the steel industry and its adaptation to change, and of the broad balance between needs and resources.
4. Continue the work prescribed in Article 55 of the ECSC Treaty on technical research and the standardization of steel products.

In the nuclear sector, the sectoral policy must provide objectives and data of a type to stimulate the initiative of the industry, facilitate the coordinated development of its investment and enable research to support industrial development and follow it closely.

It will be necessary to consider basic industrial, technological and energy policy aspects together with horizontal aspects such as the harmonization of nuclear safety techniques and the siting of power plants with a view to environmental problems.

The Commission has submitted to the Council a memorandum on the objectives and instruments of a common policy on scientific research

and technological development (see IRT No. 148). They are as follows:

1. To enable the best use to be made of the resources devoted to these sectors.
2. To reach a common definition of priority objectives.
3. To press forward with Community measures and promote cooperation between Member States, whose policies should be progressively harmonized.
4. To ensure the implementation of a common strategy with regard to non-Community countries.
5. To improve scientific assistance and the transmission of information to developing countries.

The implementation of this policy necessitates (a) a comparison and gradual coordination of national programmes so as to indicate which projects can be implemented at Community level, (b) the conclusion of study contracts in the fields of scientific research, technological development and industrial innovation and (c) the exchange of information between Member States. It implies the promotion, where necessary, of basic research, the pursuit of the Community's own projects and the harmonization of regulations and procedures concerning research and development.

Initially the Commission would have to make proposals for R&D in two particularly delicate fields - materials and the environment. It would also have to draw up the statute for a European Scientific Foundation after consultation with the scientific circles concerned.

ANNEX 1 p.5

In parallel with these new activities the Commission will continue to develop existing projects in the context of the FREST and COST groups, and also work within its own province on the multiannual programme laid down by the Euratom Treaty.

(b) Environmental problems

The Commission considers that its first duty is to prepare a programme for reducing pollution and nuisances and safeguarding the natural environment.

It must therefore assess the dangers of pollution and nuisances, harmonize measuring methods and fix common rules for the attribution of the costs of anti-pollution measures. Proposals to this effect must be presented before the end of 1973. Their preparation will call for studies on the following matters:

1. The definition of criteria and guidelines, together with the harmonization or adoption of common methods for measuring various pollutants, action specifically relating to fresh water and air and to certain industrial activities, energy production and certain regions of common interest.
2. The coordination and reinforcement of regulations on the supervision of the implementation of anti-pollution measures.
3. Action concerning waste.
4. Economic and statistical aspects.

In addition to these activities the Commission proposes to carry out certain R&D work on pollution and nuisances and water supplies.

This research should help in the preparation of the programme described above and should be carried out jointly or coordinated at Community level. Initially it will include:

1. The creation of a data bank on chemical products liable to contaminate the environment.
2. Research on the harmfulness of atmospheric lead.
3. The results of the discharge of cooling water from thermal power plants, etc.

### Energy policy

In further implementation of the proposals contained in the "First Guidelines for a Community Energy Policy", the Commission's programme includes the presentation of the "framework of action", which consists of reports on the medium-term estimates and guidelines for the oil and gas sectors, the Second Illustrative Nuclear Programme and the prospects for long-term energy supplies. On this basis the Commission will propose a number of measures intended to complete the "First Guidelines" and to speed up the implementation of the proposals contained therein.

The Commission will in particular propose new measures in the oil sector, including the surveillance of supplies under the existing provisions, Community action concerning arrangements to be made in the event of supply difficulties and national regulations on the structure and conditions of the market for oil products. It will try to secure the adoption of the proposals already transmitted to the Council concerning the application of the status of joint undertaking to firms in the hydrocarbons sector and the raising of

ANNEX 1 p.7

the compulsory oil stocks from 65 to 90 days' consumption. In order to solve the problems which arise in this latter field it will recommend principles which could be taken as a basis for a common oil stockpiling policy.

In the field of coal, supplies of coking coal and coke to the Community's steel industry will form the subject of a proposal taking effect on 1 January 1973. The Commission will also examine the general problem of the role of coal in the Community's long-term energy supplies.

With a view to granting loans to promote the use of nuclear energy, the Commission will seek to implement Article 72, Para. 4, of the Euratom Treaty.

Other activities will extend well into 1973. They include the creation of a system for the periodic collection of information on the prices actually charged, the collection of fuller information concerning national regulations in the energy field, particularly as regards the applicant countries, the continuation of work on the security of supplies and the drafting of measures designed to improve this security, the establishment and improvement of commercial and economic relations between oil producer and oil consumer countries, and the drafting of measures for protecting the environment. It will seek to determine the lines to be followed by technological research at Community level from the standpoint of a long-term energy supply policy.

ENERGY IN THE COMMUNITY IN 1971

Energy consumption in the Community in 1971 increased by only 1.9% by comparison with the previous year (as against an increase of 7.9% in 1970). The following table shows the variations in gross internal consumption in the Community, broken down by energy source:

Gross internal consumption of primary sources and equivalents

Community	Millions of tce			
	1971	1970	% 1971/70	% 1970/69
Coal and equivalents	172.4	189.2	-8.9	-7.3
Lignite and equivalents	31.6	33.2	-4.8	-1.4
Crude oil and equivalents	524.2	501.3	+4.6	+12.6
Natural gas	90.0	73.3	+22.8	+29.0
Other fuels	1.6	1.8	-11.2	+5.5
Primary electrical energy	41.8	47.2	-11.5	+10.0
Total	861.6	845.8	+1.9	+7.9

A decrease in the consumption of energy by industry is observable (-2.2% by comparison with 1970), together with a very moderate increase in consumption for non-energy purposes (2.4%, whereas before 1971 increases of up to 20% were noted in the consumption of oil products for non-energy purposes).

The following table shows the variations for the major energy sources in the industrial sector.

Community	Millions of tce		
	1971	1970	% 1971/70
Coal	10.2	12.7	-19.7
Natural gas	36.5	28.7	+27.2
Coke	34.2	38.1	-10.2
Non-gaseous oil products	104.7	113.1	-7.4
Gas derivatives	21.3	23.0	-7.4
Electrical energy	98.7	96.8	+2.0
Total	308.0	315.1	-2.2

ANNEX 2 p.2

This noticeable slowing-down in the growth of internal energy consumption has resulted in a slowing-down of fuel imports, which increased by only 1.9% in 1971 (while the mean annual rate of increase of imports in 1960-70 was 12.5%).

Imports from non-Community countries

Community

Millions of tce

	1971	1970	% 1971/70
Solid fuels	28.4	33.8	-16.0
Crude oil	597.3	580.3	+2.9
Non-gaseous oil products	29.5	27.9	+5.7
Electrical energy	5.2	6.0	-13.3
Total	661.6	649.0	+1.9

The production of primary energy sources in the Community in 1971 followed the upward curve begun in 1968. However, despite an increase of about 6 million tce, the rate of increase was only 1.5%, as against 4% in 1970 and 1969. As in previous years, particularly since the tapping of the Dutch and German fields, the increase in the production of sources of primary energy is attributable to natural gas.

Production of the other energy sources has fallen for various reasons, such as structural decline in the coal industry, gradual exhaustion of oilfields and poor hydraulic conditions for primary electrical energy.

The following table gives the quantities of each primary source

produced in 1970 and 1971 together with the variation.

Production of primary sources

Community

Millions of tce

	1971	1970	% 1971/70
Coal	155.8	161.4	-3.5
Lignite	30.3	31.6	-4.1
Crude oil	17.6	18.8	-6.4
Primary oil products	0.6	0.6	-
Natural gas	90.2	73.5	+22.7
Primary LPG	0.4	0.4	-
Other fuels	1.6	1.8	-11.1
Primary electrical energy	39.2	42.7	-8.2
Total	335.7	330.8	+1.5



COMMUNITY SUPPLIES OF COKE AND COKING COAL

The second report on the supply of coking coal and coke to the Community steel industry, now drawn up by the Commission, makes use of all the available data on the period 1967-70 and reexamines the assumptions and estimates made for 1975 and 1980. It summarizes the experience acquired up to now by the Community as regards aid to coking coal. The new system of Community aid which will come into force on 1 January 1973 must be based on these data.

It appears certain that there will be no fundamental changes up to 1980 in the technical processes of coking and pig iron production. Advances in productivity and a reduction in the specific coke consumption will occur mainly in blast-furnace production processes.

1. During the period 1967-70 the increases in the world production of crude steel (100 million tonnes, raising production to 594 million tonnes) and pig iron (7 million tonnes, raising production to 425 million tonnes) were 50% and 70% respectively for Japan, 4.5% and 22% for the Community and 16.6% and 15% for the UK.

In 1975 crude steel production in the Community of Ten should exceed 170 million tonnes, and pig iron output 125 million tonnes. Extrapolation to 1980 gives a figure of 204 million tonnes for crude steel and 147 million tonnes for pig iron, as compared with a world production of 850-900 million tonnes of crude steel and 600-630 million tonnes of pig iron.

ANNEX 3 p.2

2. The rapid increase in the production of pig iron in the period 1967-70 led to a marked increase in coke consumption in the Community steel industry. At first this increase could be met from pithead stocks of coke and coking coals. But the lack of flexibility of supply became apparent in 1970. The basic coal policies of the member countries meant that production could not be raised, the only possibility being to slow down mine closures. The blast furnaces therefore had to obtain their supplies at excessive prices from remote sources. The Community continues to be obliged to produce the coke it needs for its own requirements.

According to estimates, the coking requirements of the world steel industry will increase from 60 to 70 million tonnes between now and 1980. Thermal requirements, on the other hand, will diminish. This suggests a real increase of 60 million tonnes of coke (= 80 million tonnes of coking coal) for the period 1970-80. It is expected that the coking coal requirements of the Community of Ten will remain unchanged. The movement of the steel industry towards the coast, where the blast furnaces will construct their own coking plants, will probably lead to a fall in demand for Community coal and an increase in import requirements.

3. As a result of the system of subsidies to Community coal, which has enabled the steel industry to obtain Community-produced coal at prices based on scales for imported US coal, and also of the fact that many Member States tolerate or apply import quotas, the Community blast furnaces still purchase supplies on the Community market, though to an unequal extent.

But if the Community steel industry had to cover its requirements for local coking coal at the world price, the revenues of the Community collieries would not equal their costs.

4. As a result of market conditions during the boom period both within and without the Community, of the changes in the organization of coal supply in the Community, of the coal policy inaugurated by the governments of certain Member States, and lastly of the uncertainty caused by monetary events in 1971, the steel industry has taken no long-term measures during the three-year period of the Community decision on aid to the coal industry. After the expiry of this period, i.e., at the end of 1972, the Community will probably acquire four new Member States, one of which - the United Kingdom - is a major producer of coal and steel. The problems of supplying the steel industry with coking coal and coke will remain basically unchanged, and the experience gained hitherto in the Community will help in their solution.

