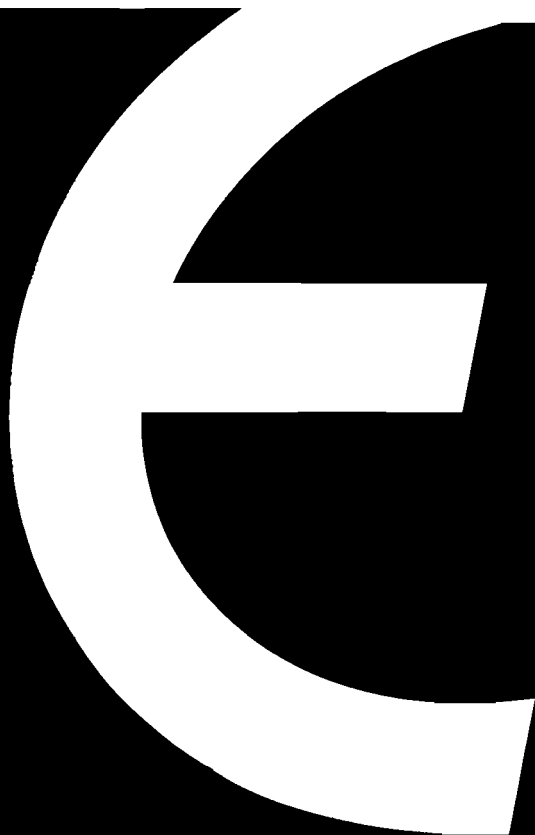


A European Energy Strategy



European File

Energy in all its forms – electricity, oil, gas, liquid and solid fuels – is a vital factor in industry, agriculture, commerce, domestic comfort and leisure activities. The availability of energy supplies is no longer absolutely guaranteed. The crisis in the Middle East in 1973 caused considerable supply problems. One of the causes of the world recession was the rise in oil prices, which increased fourfold in 1973-4 and doubled in 1979. More recently, the war between Iran and Iraq has revived anxiety.¹

The European Community and its Member States face a major challenge. The Community is the world's largest oil importer. It relies for more than one-third of its supplies on three countries, Saudi-Arabia, Libya and Nigeria. In 1983 oil still accounted for nearly 50% of European energy consumption (against 63% in 1973). The Community's oil bill, in dollars, has increased fivefold since 1973, despite a 50% reduction in net imports. This cut in imports results partly from an increase in domestic production (mainly from the North Sea) and partly from the replacement of oil with other forms of energy and the more economic use of fuel. But it also reflects a fall in demand, caused by the industrial recession.

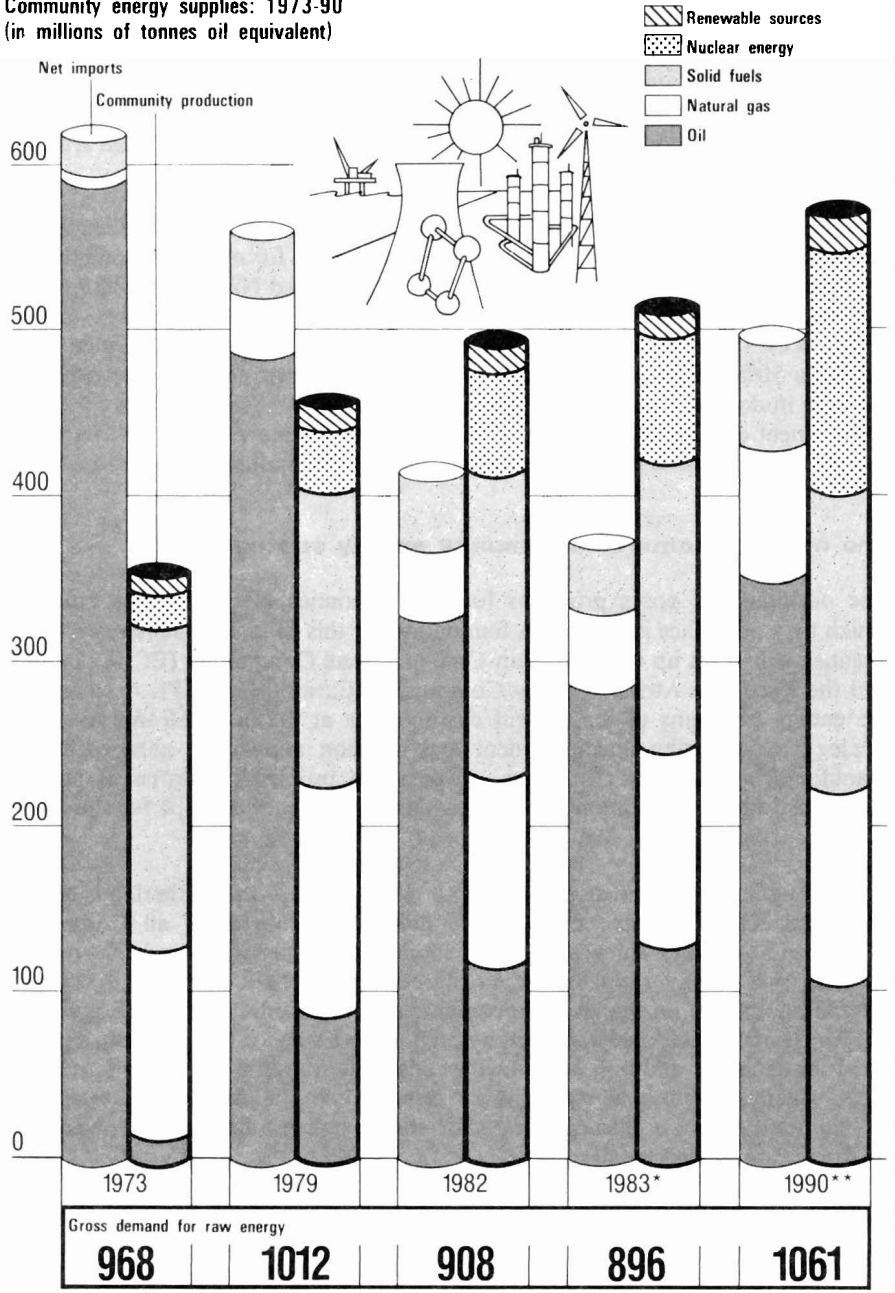
The main elements of Community energy strategy

The oil challenge poses problems for the economies of Community countries which they must face in unison. A foundation for this solidarity is provided by the Treaties which set up the European Coal and Steel Community (ECSC) in 1951 and the European Atomic Energy Community (Euratom) in 1957. A solution to the energy problems of the present day must lie at the heart of any successful strategy for reducing unemployment and inflation and giving new impetus to manufacturing industry. In facing up to these problems, Europeans share a common destiny; a common strategy can give them renewed hope for the future. Thus:

- Although their dependence on energy imports varies – the Netherlands and the United Kingdom have considerable domestic resources – all Community countries are very vulnerable. Their economic prosperity depends not only on their own energy supplies, but in the context of the Community's common trading market, on the level of economic activity in other Member States. This can clearly be adversely affected by high import bills for oil. The centralization of all decisions and policies is neither desirable nor possible. Specific national considerations must be scrupulously respected. But all Member States have a common interest in ensuring that their energy policies are moving towards the same Community goals.
- European action is a guarantee of greater effectiveness. It avoids the dispersal and duplication of scarce resources in the research field. It provides a larger market for new technologies. It can encourage continuity in investment and

¹ This file updates and replaces our No 8/82.

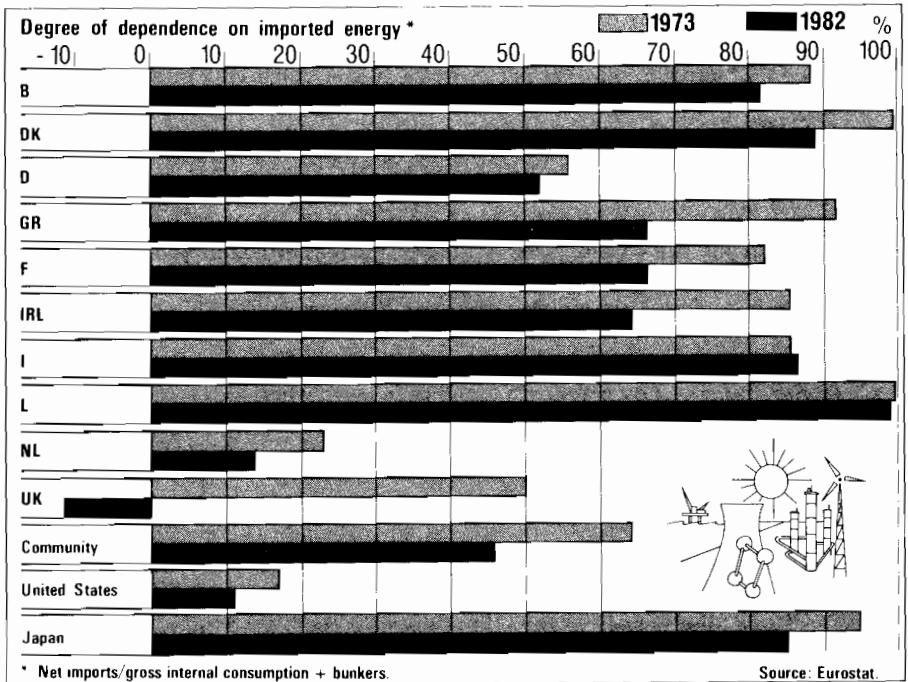
Community energy supplies: 1973-90
(in millions of tonnes oil equivalent)



Estimate.

** Average forecasts.

Source: Eurostat and Member States.



taxation policy, despite the changing economic circumstances in Member States. The Community, speaking with one voice, is more likely to be heeded by oil exporting countries to the same degree as other large-scale importers. It can also help the non oil-producing countries of the Third World to solve their own energy problems.

For a number of years the Community and its Member States have been gradually, probably too gradually, developing a common energy policy. This common action is based on targets set in 1974, and elaborated in 1980 with 1990 as the target date. The aim is to reduce, through more economic use of energy, the relation between the growth in energy consumption and the growth of gross domestic product to at least 0.7. Member States are expected to conduct broadly equivalent programmes of energy savings. Oil consumption is to be reduced to about 40% of gross raw energy consumption. Solid fuels (coal, lignite and peat) and nuclear power must take over between 70% and 75% of electricity generation. The increased use of renewable forms of energy must be encouraged. Energy pricing policy must be compatible with these Community targets.

The Community has to use all means at its disposal to reduce dependence on oil. By 1990 it must increase gas consumption (now accounting for 18% of energy needs) through increased imports. Use of solid fuels must be similarly encouraged. Renewable energy sources must be developed (solar, geothermal and hydraulic

power), although the growth potential in this area is comparatively small. The Community must also promote the use of nuclear energy. It cannot afford to ignore any alternative to oil. Nuclear power is also a potentially important factor in increased industrial competitiveness. One kilo of uranium produces as much energy as 10 tonnes of oil, for one-third of the price. Fast breeder reactors could produce the equivalent of 600 tonnes when they enter in service. The nuclear share of total electricity production was expected to top 27% in 1973 (9% of total energy needs, but with wide disparities between Member States). By 1990 it must reach 40%. At the same time, however, the protection of health and the environment must be a *sine qua non* of the development of nuclear power. The Community is undertaking massive research programmes in this area.

These Community objectives can only be attained by the coordinated efforts of the Member States and by action at Community level, where this is more effective. Action must concentrate on five priority areas: investment, prices and taxation, research and development and demonstration projects, safety measures against market disturbances and external relations.

Promoting investment

The key to the modernization and the continued competitiveness of European industry is the diversification and more economic use of energy supplies. But this requires massive investment which must not be deflected by short-term economic and budgetary problems. At present, Community investment in energy is substantially below that in the United States and Japan. The development of the coal and nuclear industries has often been held back by public concern for safety and the environment. Investment in energy saving has also encountered obstacles: uncertainty about the relative long-term cost of different energy forms; the slow return on investment; inadequate training and information; inflexible financing systems; high and unstable interest rates; and the proliferation of national regulations, which constrict the potential market. In the unfavourable financial and economic conditions of the present day, these problems are particularly acute in high energy consumption industries, the building trade, small and medium-size businesses and the infrastructure sector. Action is needed in a number of areas:

- The improvement of the economic climate;
- More consistent and logical energy pricing and taxation policies;
- The promotion of nuclear energy and solid fuels by extending Community activities in safety research and standards and providing balanced information on the advantages and disadvantages of the different options;
- The promotion of new forms of energy, modern energy technology and energy savings by boosting research, development and demonstration programmes, encouraging better information and training of the public and specialists alike, modifying standards and other regulations and improving financial conditions.

such as subsidies and other cash incentives. Decision-making must be decentralized but the Community market must be opened up by the adoption of common standards. Existing Community action in this field includes measures to increase the effectiveness of heat-pumps, the insulation of buildings, fuel consumption in cars and information on the power-consumption of household electrical goods.

□ The promotion of investment in energy:

- The Community already contributes to the financing of nuclear power-stations, equipment for producing and transporting hydro-carbons (oil and gas pipelines), the re-equipment and modernization of coalmines, the conversion of oil-fired plants to coal, the inter-connection of Community and neighbouring electricity power grids and many energy saving projects in industry, public buildings and district heating systems. In 1983 loans to the energy sector from the ECSC, Euratom, the European Investment Bank and the New Community Instrument (NIC) totalled about 2.6 billion ECUs.¹
- But much more extensive action is needed. In the nuclear sector — whose targets, investments and impact on economic conditions are regularly described in Commission publications — action is needed to encourage uranium prospecting, promote the construction of power stations (with help from the EIB, NIC and Euratom whose lending capacity has been doubled), and improve facilities for the temporary storage and treatment of radioactive material by coordinating, as far as possible, the activities of Member States. In the solid fuels sector, it is necessary to promote the conversion of oil-fired boilers in industry, public buildings and district heating systems, develop handling facilities in ports and adapt other transport facilities and modernize Community coalmines, many of which could be made profitable, given increased investment and productivity. Action is also needed to encourage the discovery and development of new natural gas fields in the Community and promote the development of new forms of energy, through a Community-wide approach which will allow the speediest possible progress in Member States. Finally, Community farmers must be encouraged to grow energy-producing crops (fuel for motor vehicles can be obtained from certain vegetables) and to adopt energy saving methods and techniques.
- Special efforts are needed in energy saving: investment in this area could top 250 billion ECUs by 1990, or 1% of the gross domestic product of the Community (compared to 0.4% at present). It has been estimated that this investment could create between 300 000 and 500 000 new jobs by making Community firms more energy-efficient, modern and competitive, by creating markets for new products and techniques and improving the Community's balance of payments. But to make this possible Member States must

¹ 1 ECU (European currency unit) = about £ 0.58, Ir.£ 0.73 or US \$ 0.8 (at exchange rates current on 10 May 1984).

unite and coordinate their efforts. The Community is therefore encouraging all Member countries to adopt the systems and methods (improvements to financial incentives, training and information) which have shown good results in some countries already. Thanks to the strengthening of the loan capacity of the NIC and the EIB, the Community will be able to step up its own contribution to these efforts. The intention is to promote the convergence of the economies of Community countries by ensuring that priority is given to projects in regions where the needs are greatest and the resources the weakest.

The adoption of a realistic and transparent pricing policy

Energy accounts for a varying, but often substantial, part of industrial costs. Energy prices therefore affect the relative competitiveness of industry, both in Member States and between the Community and the rest of the world. At the same time, energy prices must accurately reflect the likely trends of the market in the long term and encourage consumers to invest in appropriate energy forms. Anything which tends artificially to influence prices must be clearly identified and price disparities between Member States gradually reduced, where they do not result from genuine differences in costs of production.

- The first stage in achieving greater coherence in pricing policy and practices is greater market transparency. The Community already monitors trends in many forms of energy. These efforts must be strengthened in areas where price transparency causes problems: gas, electricity, supplies to industry etc. The publication of six monthly energy price bulletins by the European Commission is a step in this direction.
- But more must be done. Energy prices are too often influenced by disparities between policies in the Member States and the financial structure of energy undertakings and their accounting methods. Prices are sometimes even kept deliberately above their economic level, either for all consumers or for particular types of consumers. The Commission wants to see a more logical system of price-fixing for each form of energy. It wants to create a genuinely common energy market, where price differences between countries will reflect only local advantages (quality of equipment, transport costs, etc) or priorities which conform with Community objectives (reduced dependence on imported oil, etc). Other measures are also necessary to ensure that short-term economic and national price policies do not conflict with common long-term objectives.

Taxation can, at the same time, have a considerable influence on the final price to the energy user. The oil sector is a case in point. The Commission is urging a gradual reduction in the disparities between national taxation systems, in order to limit distortions of competition. Taxation should not be used to create differences in energy prices between one country and another. It should not become an obstacle to the adjustment of prices to conform with long-term market conditions

or the creation of a price hierarchy for different energy forms which will encourage energy saving and the displacement of oil.

The promotion of research, development and demonstration projects

Research, development and demonstration projects — the latter providing a testing ground of the industrial and commercial viability of new methods and technologies — are a key factor in industrial innovation and economic growth. Considerable resources are required. Community action allows greater common returns on investment, the sponsorship of projects too large for a single Member State, the avoidance of waste of resources through duplication, a wider dissemination of results and a more effective use of the continental-scale trading market.

- In 1983 total Community expenditure on research, industrial development and demonstration projects in the energy sector topped 400 million ECUs. Community spending represented 10% of total public investment in energy research in the Member States. A still larger proportion of this investment is coordinated by the Community. Major programmes include nuclear safety (the safety of reactors, management of radioactive waste, monitoring of fissionable materials, radioactive protection, etc), controlled nuclear fusion (all Community research in this area has been combined), solid fuels and new forms of energy. Technological and demonstration projects have been launched in areas such as hydrocarbons (the exploration of underwater oil and gas fields), solid fuels (the liquefaction and gasification of coal), geothermal, biomass and solar energy and energy saving methods. In March 1984 the Council of Ministers approved a programme of demonstration projects worth 295 million ECUs between 1983 and 1985.
- But once again it is necessary to go further. The European Commission has proposed a substantial increase in Community spending on research and demonstration in the next few years as part of a five year action programme for energy and energy research. Further action is needed in a number of areas: energy savings, renewable energy sources, nuclear fusion, nuclear fission (especially the management and storage of radioactive waste), and solid fuels (the solution of ecological problems, conversion into gas etc). Going beyond research and demonstration proper, action is needed to ensure that the dissemination of knowledge is better organized and that Community standards allow the profitable and effective use of new technologies and the renewal of industrial equipment.

Protection against disruption of the energy market

Events in Iran in 1979 showed how a limited and short-lived reduction in oil supplies, or just the threat of such a reduction, can cause an abrupt rise in prices, irrespective of market realities. Community solidarity can provide a shield against problems of this kind.

- A system of fuel stocks at power stations (enough for 30 days supply) has already been introduced.
- Another system of buffer stocks has been introduced in the oil market (90 days supply) to insure against any substantial shortfall in deliveries. In the case of crisis, a system of monitoring trade in oil and a gradual reduction in consumption has also been set up. This system has been agreed at Community level in coordination with the other great industrial powers (the United States, Japan etc). The Community has, in addition, agreed a range of other measures which can rapidly be triggered if the oil market is disrupted by a short-term interruption of supplies. Here again, the cooperation of all industrialized countries would be advisable.
- In the solid fuels and gas sectors, stocks and safety measures would also be useful in the event of crisis. The Commission has suggested that certain gas fields should be kept in reserve, the inter-linking of distribution networks and the increased use of suspendable supply contracts with major users, who are capable of switching to coal or oil.

A united front internationally

Security of energy supplies does not only mean internal safeguard measures. It must also mean the diversification of imports, the establishment of stable relations with exporting countries and a dialogue with other major importers. Community strategy must therefore extend to international relations. If the 273 million Community consumers speak with one voice, they have a better chance of being heard.

- In the nuclear sector, the Community has already signed agreements with the principle exporting countries (Australia, Canada, the United States) which will ensure a certain stability of supplies. Further efforts are needed to ensure that there is no discrimination between consumers of nuclear fuels within the Community. In the coal sector, consultations and long-term agreements are needed with the major exporting countries, who include the countries listed above. In the gas sector, the Community is increasingly dependent on external supplies (from Algeria, Norway, the USSR etc). The Community should adopt a common approach before agreeing major contracts.
- The Community can also help to relieve energy shortages by increasing its cooperation with other major importing countries. At the Tokyo summit in 1979, the United States and Japan reached an agreement with the Community to restrict oil imports up to 1985. Attention must also be given to the non-oil producing countries of the Third World, whose needs are placing increasing pressure on the world market. The Community and its Member States are already active in energy developments in the Third World. Their loans and grants in this area are already running at over 700 million ECUs a year. These

efforts must be increased by encouraging investment by European firms and boosting public investment in a number of areas: the assessment of needs and resources, prospecting for and developing new oil, gas and coal fields, the popularization of solar energy and the introduction of energy saving methods and training courses for technicians etc.



Community energy strategy is closely related to other European policies, whether in external relations, research, industry, economic affairs, or employment. In all these areas, the coordinated efforts of the Community and its Member States must lift our Europe, as quickly as possible, and under the best possible conditions, from the economic recession ■

The contents of this publication do not necessarily reflect the official views of the institutions of the Community. Reproduction authorized.

Commission of the European Communities

Information offices (countries fully or partially English speaking*)

Ireland 39 Molesworth Street, Dublin 2 – Tel. 71 22 44

United Kingdom 8 Storey's Gate, London SW1P 3AT – Tel. 222 81 22
– 4 Cathedral Road, Cardiff CF1 9SG – Tel. 371631
– 7 Alva Street, Edinburgh EH2 4PH – Tel. 225 2058
– Windsor House, 9/15 Bedford Street,
Belfast BT2 7EG – Tel. 40708

Australia Capitol Centre, Franklin Street, PO Box 609,
Manuka 2603, Canberra ACT - Tel. (062) 95 50 00

Canada Inn of the Provinces-Office Tower, Suite 1110, 350 Sparks Street,
Ottawa Ont. K1R 7S8 – Tel. (613) 238 64 64

USA 2100 M Street, NW, Suite 707,
Washington DC 20037 - USA – Tel. (202) 862-9500
– 245 East 47th Street, 1 Dag Hammarskjöld Plaza,
New York, NY 10017 - USA – Tel. (212) 371-3804

* Offices also exist in other countries including all Member States.