

The European Community's energy strategy

European File

Electricity, oil, gas, liquid and solid fuels: in all its various forms, energy is vital for industry, agriculture and trade as well as for comfort in the home and for leisure activities. But Europe can no longer count on unhampered energy supplies. In 1973, the Middle East crisis triggered supply problems. Successive price rises for crude oil since then — quadrupled in 1973-74, then doubled in 1979 — have been a key factor in the world economic crisis.¹

For the European Community and its Member States, the energy crisis poses a major challenge. The Community is the world's single largest oil importer, with over half its supplies coming from three countries — Saudi Arabia, Libya and Nigeria. Oil accounted for 51% of Europe's energy consumption in 1981 (compared to 61% in 1973). The Community's oil bill (in dollars) multiplied eightfold between 1973 and 1981, even though net imports fell by 40%. This drop in imports was the result of an increase in domestic production (the development of North Sea oil), substitution of oil by other energy forms, conservation measures and a slackening in demand, reflecting the economic recession. Unless lasting structural changes are made, there is a risk that an upturn in economic activity will stimulate an increase in demand for oil. The Community's balance of payments, already forced into deficit by oil imports, could be upset at any moment by the oil exporting countries deciding to increase oil prices again, a strengthening of the dollar — the currency in which oil prices are expressed — or an increase in demand from other importing countries.

¹ This document updates and replaces *European File* No 8/79.

The foundations of European strategy

The oil challenge imposes constraints on Community countries to which they must respond in a unified manner. The foundations for unified action were laid down in the Treaties creating the European Coal and Steel Community (ECSC, 1951) and the European Atomic Energy Community (Euratom, 1957). Today, solutions to the energy problem lie at the heart of all measures to reduce unemployment and inflation and restore dynamism to European industry. Europeans are in the same boat and common action can give them new hope for the future.

- Although their degree of energy dependence varies — The Netherlands and the United Kingdom have substantial domestic resources — all European nations are very vulnerable. Their economic well-being depends both on stability of energy supply and on the level of economic activity of their partners, which can be affected by high oil bills. Although it is neither possible nor desirable to centralize all decision-making and action and although differing national situations must be carefully borne in mind, all Community Member States have a common interest in ensuring that energy policy yields the same fruits throughout the Community.
- Coordinated Community action means increased effectiveness. It concentrates effort and avoids duplication of research, etc. Through investment and taxation Community action can help maintain continuity free from the fluctuations that affect individual Member States. Finally, by speaking with one voice, the Community can better influence energy exporting countries and other major importers. The Community can also help non-producing Third World countries to solve their energy problems.

For several years, gradually and without doubt too slowly, the Community and its Member States have been piecing together a common energy policy, based on common objectives fixed in 1974 and finalized in 1980, for implementation by 1990. In line with these objectives, the Member States must rationalize energy use to keep the average relationship between the rate of growth of energy consumption and that of gross national product to 0.7% or less; comparable global energy conservation programmes must be fixed; oil consumption must be cut to around 40% of gross primary energy consumption; solid fuels (coal, etc.) and nuclear energy should supply 70 to 75% of electricity generated; use of renewable energy sources must be encouraged; energy pricing policies must be compatible with the Community's energy objectives.¹

The Community must call on all its available resources to reduce its dependence on oil. Between now and 1990, it must maintain gas consumption (currently fulfilling around 18% of energy needs) by doubling imports. Between now and the year 2000, the Community must increase coal consumption from 314 million tonnes (around 21% of needs) to about 500 million tonnes, of which half will be imported. The Community must also develop renewable energy sources (solar, geothermal, hydroelectric, etc.), whose potential, however, will only increase slowly. Finally, the Community must

¹ See *European File* No 12/81 'Energy objectives for 1990: where does the Community stand?'

stimulate nuclear power, because it cannot afford to ignore any source of supply and because nuclear energy will increase industrial competitiveness: a kilo of uranium can generate as much electricity as 10 tonnes of oil (and as much as 600 tonnes when fast-breeder reactors come on stream) for a third of the price. The share of nuclear power in electricity generating should increase from 16% (6% of overall energy production, but with wide variations between Member States) to about 38% in 1990. Development has to take into account health, safety and environmental needs, to which the Community devotes a substantial research effort.

These Community objectives can only be achieved by coordinated action between the ten Member States and the Community in the interests of greater efficiency. There are five fields of action that should be regarded as priorities: investment, prices and taxation, research, development and technological demonstration, safeguard measures to offset the risk of market instability and external relations.

Promoting investment

Diversifying energy supplies and ensuring more rational energy use are keys to economic change and to the survival of European competitiveness, and require a massive and sustained investment effort, that ignores short-term budgetary or economic fluctuations. Energy investment in the Ten is currently stagnant at around 1.6% of gross national product and will not exceed 2.2% between now and the end of the decade. The United States of America envisages energy investment worth 4% of GNP and Japan 3% or more. European investment could even be lower than forecast. Coal and nuclear investment are often slowed down by public concern about safety and potential environmental damage. Investment in rationalization of energy use runs up against numerous obstacles: uncertainty about long-term price changes for different energy forms, lengthy time-gaps for returns on investment, insufficient training and information, unsuitable financing conditions, high and unstable interest rates and the expansion of national technical norms that divide up the Community market. In the current tricky economic and financial climate, these obstacles have a particular effect on high energy-consuming industries, such as construction, small and medium-sized firms and the infrastructure sector. To overcome these obstacles to investment, action is required on several fronts:

- to improve the general economic climate, along the lines proposed in the Community's fifth medium-term economic programme;
- to ensure coherence between Member States' energy pricing and taxation policies;
- to facilitate increased use of nuclear power and coal, by developing European research and safety standards and by presenting balanced information on the pros and cons of the various options;
- to promote new energy sources, modern energy technology and the rational use of energy, by stepping up research and development and technical demonstration, by

improving information and education both for specialists and for the public at large, by introducing technical norms and other legislative and financial incentives. This should be backed up by a greater decentralization of decision-making and a de-partitioning of the European market through the adoption of common technical standards. Amongst the measures already taken by the Community in this field are ways to increase the efficiency of heat generators, thermal insulation of buildings, reduction in car fuel consumption and information on how much energy household appliances consume;

□ to encourage and facilitate investment in the energy sector.

- The Community already contributes to the financing of nuclear power stations, plants for the production and transport of hydrocarbons (oil and gas pipelines), the equipment and modernization of coal mines, the conversion to coal of oil-burning plants and a range of energy conservation projects, mainly in industry. In 1981, loans to the energy sector from the ECSC, Euratom, the European Investment Bank and the new Community lending and borrowing instrument (NCI) totalled about 1 900 million ECU.¹
- But needs remain huge and more investment is required. In the nuclear sector, on which the Commission is to regularly publish material on objectives, investment and impact on the economy, the Ten must stimulate uranium exploration, power station building (with the aid of Euratom, whose borrowing capacity has just been doubled), and prepare plants for the temporary storage and treatment of radioactive fuels. In the coal sector, the Community must encourage conversion in industry, public buildings and urban heating networks, as well as building ports and other transport infrastructures, and modernizing European collieries, which could often be made profitable with investment, resulting in greater productivity. The Community must encourage exploration and exploitation of Europe's gas resources and stimulate development of other new energy sources, where a common approach would enable all Member States to progress more rapidly. Finally, European agriculture must be encouraged to produce raw materials for energy (car fuels can be obtained from some vegetables) and to develop more energy-conscious production methods.
- Rationalization of energy use merits special attention: investment in this field could reach 250 000 million ECU by 1990, or 1% of Community GNP (compared with 0.4% at present). By making European industry more energy efficient, modern and competitive, by creating markets for new products and processes and by improving the Community's balance of payments these investments could create between 300 000 and 500 000 new jobs by 1985. But to achieve this, the Member States must act together. That is why the Community has encouraged Member States to generalize practices and mechanisms (such as improved financing, education and information) that have had positive results in a good many

¹ 1 ECU (European Currency Unit) = about £ 0.56, Ir. £ 0.69, US \$ 1.02 (at exchange rates current on 16 March 1982).

cases. The Community can boost its own contribution to this effort following an increase in the resources of the NCI. By giving priority to regions which have the greatest need and whose financial resources are slimmest, the Community will also be contributing to the convergence of European economies.

Applying realistic and transparent pricing policies

Energy accounts for a varying, but often substantial share of industrial production costs. The price of energy therefore influences industrial competitiveness between the Member States and *vis-à-vis* third countries. Care must be taken to ensure that prices give the consumer an accurate indication of long-term market developments and encourage him to invest accordingly. Measures that influence prices artificially must be clearly identified and price disparities between Member States gradually reduced, so that they do not lead to significant cost differences.

- The first step towards greater coherence in pricing policies must be to bring about better market transparency. The Community has already established an information system covering numerous energy sources. This system should be improved in certain sectors where price transparency poses particular problems: gas, electricity, supply to industry, etc.
- But even more needs to be done. Energy prices are often too highly influenced by differences in Member States' pricing policies, the financial structure of companies in the energy sector or by their accounting practices. Prices are sometimes deliberately kept below economic levels, either generally or for a specific group of consumers. The European Commission wants greater coherence in the way Member States set prices for each form of energy. It wants to see a genuine common market for energy, in which prices do not vary from one country to another more than is justified by local advantages (quality of equipment, transport costs, etc.) or by priorities conforming with the Community's objectives (lower dependence on oil, etc.). Further measures are necessary to prevent national price control systems from conflicting with common energy objectives.

Taxation also sometimes has a significant effect on prices paid by the final consumer. The oil sector needs special attention in this respect. The European Commission is pressing for a gradual alignment of national tax systems in order to limit distortions in competition. Taxes must not be used to create differences in energy costs from one country to another. They must not act as an obstacle to the adjustment of prices to long-term market conditions or the establishment of a price hierarchy for different energy forms which would encourage people to save energy and substitute other fuels for oil.

Stimulating research, development and technological demonstration

Research, development and demonstration projects aimed at testing the industrial and commercial viability of new methods and technologies, encourage industrial innovation

and economic growth and require substantial financing. Community intervention in this field allows the greatest collective benefit to be derived from the funds invested and enables projects to be carried out that are too costly or too large scale for one Member State to carry out alone. It avoids wasted resources, caused mainly by duplication, ensures a wider diffusion of research results and makes sure that optimal advantage is taken of the Community market.

- In 1981, overall Community funds for industrial research and development projects in the energy sector totalled 334 million ECU. Community financing represents some 10% of total public aid to energy research in Europe. In fact, a far larger proportion of European research is actually coordinated by this finance. Amongst the major programmes currently underway are a number concerned with nuclear safety (reactor safety, disposal of radioactive wastes, control of fissile materials, radiation protection, etc.), controlled nuclear fusion (European research in this field is totally integrated), coal and new energy sources. Current demonstration projects include hydrocarbons (notably for the exploitation of undersea resources), coal (liquefaction and gasification), geothermal and solar power and energy conservation.
- But, once again, more needs to be done. Community research and development funds must be increased appreciably over the next few years. More spending must be channelled into a number of sectors: rationalization of energy use, renewable energy sources, nuclear fusion, nuclear fission (particularly problems of storage and disposal of radioactive wastes), coal (solution of ecological problems, use in the form of gas, etc.). Better organization of the diffusion of knowledge and the implementation of European standards will improve the profitability and efficient use of new technologies and the modernization of industrial plant.

Avoiding instability on the market

After the events in Iran in 1979, it became clear how a limited and temporary reduction in supplies, or even the mere threat of such a reduction, could provoke a sharp rise in oil prices unrelated to the real state of the market. Community solidarity defuses the impact of such situations.

- A system of fuel oil stocks for power stations (equivalent to 30 days' consumption) already exists.
- Another compulsory stocking system for oil (equivalent to 90 days' consumption) also operates to offset the risk of a serious shortfall in supplies. In addition, a special system for monitoring the market and a plan for a gradual reduction in consumption in times of crisis are envisaged. The Community plan operates in agreement with the other major industrial powers (the United States, Japan, etc.). The Community has decided to supplement it with a range of contingency measures that can be introduced rapidly in cases where a limited supply shortage causes difficulties on the market. Joint action by all the industrialized countries would also be desirable here.

- In the coal and gas sectors, stocks and safeguard measures would also be useful in times of crisis. In addition, the Commission proposes placing some of Europe's gas resources in reserve, linking distribution networks and extending the system of exchangeable contracts for large consumers, to switch from gas to coal or oil.

Presenting a united front to the world

Ensuring security of energy supplies not only calls for internal measures; it also requires external purchases, the establishment of stable relations with exporters and a dialogue with other major importers. The Community's energy strategy must therefore be extended on to the world stage, where the unified voice of 270 million European consumers ensures a more balanced dialogue.

- In the nuclear sector, the Community has already concluded agreements with its major suppliers (Australia, Canada and the United States of America) assuring a degree of stability; a greater effort must be made to ensure non-discrimination between common market users. In the coal sector, consultations and long-term agreements should be sought with main suppliers, which include the countries listed above. In the gas sector, where the Community will increasingly rely on external suppliers (Algeria, Norway, the USSR, etc.), consultations between the Ten are required before major contracts are drawn up.
- The Community can also help to ease energy problems by strengthening cooperation with other importing countries. At the Tokyo Summit (1979), the United States of America, Japan and the Community agreed to hold down their oil imports until 1985. This leaves the non-energy-producing Third World countries, whose needs are weighing increasingly heavily on the world market. The Community and its Member States already cooperate substantially in the development of energy resources in the Third World: total European subsidies and loans in this field amounted to over 700 million ECU in 1980. This contribution must be increased by encouraging European companies to invest in developing countries and by stepping up public aid in a number of sectors, including the evaluation of resources and needs, exploration and exploitation of new resources, and development of solar energy and technologies for the rationalization of energy use and the training of technicians.



The Community's energy strategy is inextricably bound up with other European policies, in the field of external relations, research, industry, economics and employment. The marriage of Community and national Member States' efforts gives Europe the means to recover faster, and in better shape, from the present world economic crisis ■



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

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