

# The European energy policy



## European File

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**I**n all its different forms – electricity, oil, gas, liquid or solid fuels – energy is a vital factor in industry, agriculture, commerce, domestic comfort and leisure activities. However, we can no longer take the availability of energy for granted. The recent fall in oil prices must not make us forget the not-too-distant past: in 1973, the crisis in the Middle East resulted in supply problems and even, in the Netherlands, in carless Sundays. Successive price rises for crude oil – a quadruple increase in 1973-74, a triple increase in 1979-80 – were one reason for the world economic crisis and the growth in unemployment.<sup>1</sup>

The time lag involved in the installation of new energy-production facilities demands that we take today the decisions necessary for the end of the century. However, it is not improbable that world demand for oil could reach such levels before then as to provoke new price tensions and again affect economic growth. In addition, the political instability of the Middle East, where most world oil reserves are located, means that sudden price rises and supply difficulties cannot be ruled out.

### **A Community policy: why and how?**

Despite progress in recent years, the Community of Twelve remains particularly vulnerable in the energy field. In 1985, external energy procurement accounted for more than 44% of the Community's total consumption, while in the United States external dependence was 12%. In the near future, several factors could deepen the Community's vulnerability: the potential rise in demand for energy resulting from stronger economic growth, a stabilization of European hydrocarbon (oil or gas) production, a possible tendency to reduce efforts to economize on energy and use alternative sources due to more advantageous prices for imported oil, the value of the dollar which is used in payment and which affects the price charged to the consumer.






In facing these challenges, concerted European action gives the Community a better chance of success.

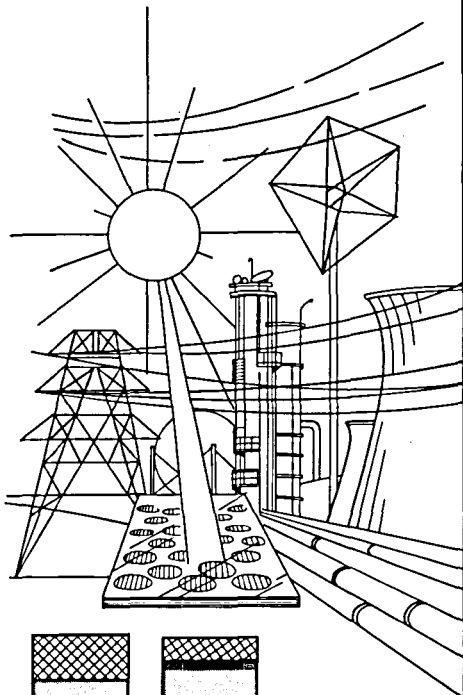
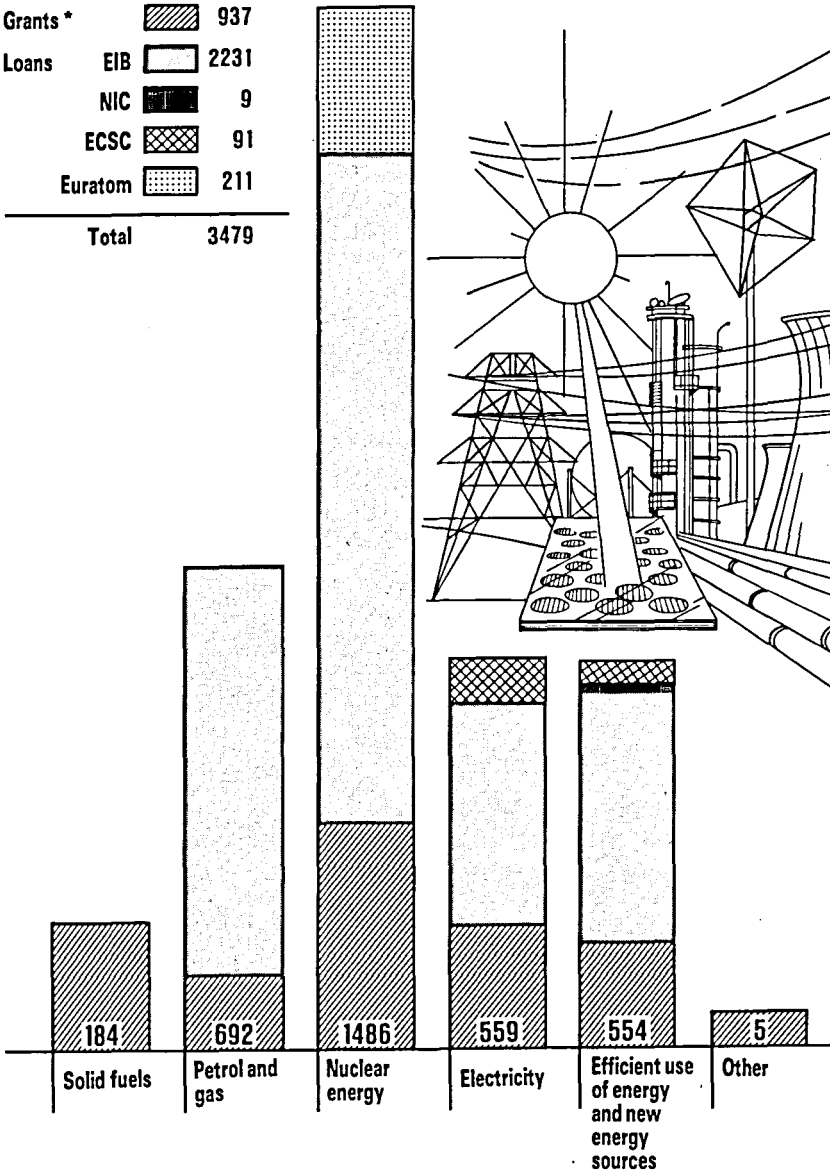
- Although the level of energy dependence among Community countries varies – the United Kingdom and the Netherlands have considerable domestic resources – Community vulnerability is a matter of common interest. The Community's economic growth prospects depend on its energy supplies of its partners, which is itself influenced by their situation. The centralization of all decisions and policies is neither feasible nor desirable and specific national considerations must be scrupulously respected. None the less, all Member States have a common interest in ensuring that their energy policies produce coherent results for the whole of the Community.
  
- Action at European level means greater effectiveness. It avoids the dispersal and duplication of efforts, particularly in the research field. It ensures a larger market

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<sup>1</sup> This file replaces our Nos 12/84 and 12/81.

**European Community financial assistance for the energy sector  
(1985, in millions of ECU)**

Grants *		937
Loans	EIB 	2231
	NIC 	9
	ECSC 	91
	Euratom 	211
<b>Total</b>		<b>3479</b>



\* Charged to the Community's general budget and the ECSC budget.  
Source: Commission of the European Communities, DG XVII.

for new technologies. Despite changing economic circumstances in Member States, it can encourage continuity in both investment and taxation. Moreover, by speaking with one voice, the Community 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 resolve their own energy problems.

The foundation for joint Community action in the energy field is provided by the Treaties which established the European Coal and Steel Community (ECSC) in 1951 and the European Atomic Energy Community (Euratom) in 1957. However, it took the first oil shock of 1973 to provide the impetus for a common policy. Today, this policy is based on:

- The definition of medium-term Community objectives. All Member States, according to their individual situation, are asked to make comparable efforts to attain these objectives. Objectives were first set down in 1974 and elaborated in 1980 with a target date of 1990. The European Commission monitors their realization, particularly in its regular examination of energy policies in the Member States.
- The use of certain Community instruments intended to complement or harmonize the actions of Member States in order to increase efficiency: Community research, development and demonstration programmes; legislative measures in areas such as the sensible use of energy, the harmonization of fundamental principles regarding prices, contingency measures to forestall the effects of an oil supply crisis; the coordination of relations with certain external partners.

In addition, production, investment and modernization of the energy sector are helped by grants from the Community budget and loans from Euratom, the ECSC, the new Community loan instrument (NCI) and the European Investment Bank (EIB). In this way, the Community contributes to the financing of nuclear power stations and equipment for the production and transport of hydrocarbons, the equipping of coal mines and ports, the conversion of oil-fired plants, the strengthening and interconnection of electricity systems, the development of new, renewable energy sources, and various energy-saving projects in industry, public buildings, district heating systems, etc. When account is taken of Community assistance in the research, development and demonstration areas, the Community's overall financial support for the energy sector reached nearly 3 500 million ECU in 1985,<sup>1</sup> some three-quarters of which was made in the form of loans. The diagram on page 4 shows the distribution according to energy source.

The results of unified Community action are clear. Over 10 years, the Community cut its oil imports by half. It is estimated that in 1983 the equivalent of 250 million

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<sup>1</sup> 1 ECU (European currency unit) = about £0.74, Ir £0.76 or US\$1.06 (at exchange rates current on 1 December 1986).

tonnes was saved due to more efficient use of energy. At the same time North Sea oilfields supplied nearly 130 million tonnes and greater use of nuclear energy and natural gas replaced the same amount in imports.

As its common objectives had generally been achieved, the Community defined on 15 September 1986 new energy policy aims for the period until 1995. Based on numerous studies, which explored in particular the prospects for the year 2000, these aims are interdependent and largely dominated by one major concern: the desire to avoid increased dependency on oil and especially imported oil. Some of these aims are sectoral and related to different energy sources. Others are 'horizontal' and concern questions such as the integration of the European market, prices, security of supply, external relations, environmental protection, regional development and technological innovation.

### **Sectoral objectives**

- Efficient use of energy.* The efficiency of final energy demand must be improved by at least 20% between now and 1995. This is not an impossible target because, for a given volume of production, energy efficiency already increased by more than 20% between 1973 and 1983. It is necessary to sustain these efforts: more favourable oil prices might make investment less attractive and the less onerous energy savings have already been achieved. Member States have therefore decided to intensify their action. All sectors of the economy are to be involved: services (30% of consumption, 50% of potential savings), industry, agriculture, transport (this category is nearly 100% oil-dependent). The European Commission has been asked to prepare programmes for the different sectors and to disseminate the results of national and Community demonstration projects, which test the industrial and commercial viability of new equipment. Between 1978 and 1985, the Community devoted approximately 150 million ECU in support of more than 370 energy-saving demonstration projects, while the EIB lent 3 300 million ECU for similar projects, especially small and medium-sized ones, in industry and infrastructure. Furthermore, the European Commission prepares rules for various equipment, products or materials: there are Community texts concerning heat generators, thermal insulation in buildings, car fuel consumption, additives which can be mixed with oil products (substitute fuels) and the consumption levels of domestic appliances.
  
- Oil.* Between 1973 and 1985, the Community succeeded in decreasing the share of imported oil in gross energy consumption from nearly 62% to 31%. To maintain the level of net oil imports below one-third of total energy consumption, a policy of economy and substitution and of encouragement for internal exploration and production must be pursued. Efforts to substitute should be aimed in particular at the transport sector and at electricity generation, which must continue to turn towards other fuels. The Community already supports numerous projects for substitution and for the development of innovative technologies in the hydrocarbon field (exploration, production, storage, transport); it could henceforth also interest itself in prospecting.

- *Natural gas.* The market share of natural gas – 19% in 1985, 50% more than in 1973 – must be maintained with a secure and diversified supply structure. Because European production may decrease, gas exploration and competitiveness should be encouraged. In particular, Community countries should diversify imports coming from third countries. These imports accounted for approximately one-third of consumption in 1984. EIB loans for the construction of gas pipelines (972 million ECU between 1981 and 1985) help to attain this objective.
- *Solid fuels.* The market share of coal, lignite and peat (23% in 1985) must be increased. Sustained efforts will be required to achieve this objective, which involves a reversal of current trends. Despite a doubling of coal imports, consumption of solid fuels has decreased slightly since 1973 (Community coal production has decreased by nearly 16%). The use of coal in electricity stations, district heating systems, etc., should be encouraged and efficient, economic solutions provided for the environmental problems which could result from this use. The Community will continue its efforts to standardize and perfect technologies that cause less pollution. In addition to loans from the ECSC (500 million ECU between 1981 and 1985) and the EIB (506 million ECU), the new Community grant system for production and stepped-up research, development and demonstration should help European production to be more competitive against the increasing challenge from imports.
- *Electricity generation.* This should make more and more use of solid fuels and uranium. The share of hydrocarbons (particularly oil products and gas) – which was cut by half since 1973 – should decrease from 25% in 1983 to below 15% in 1995. Greater use of nuclear power, which cannot be ignored in view of Europe's oil dependency and the slow development of new and renewable energies, is clearly only possible if the public is reassured as regards safety. The European Commission is determined to draw on lessons learnt from the Chernobyl accident. In June 1986, it proposed to Ministers an action plan based on the following points: protection of health, safety of plants and their use, emergency procedures, international cooperation, scientific research.
- *New and renewable sources of energy.* Between now and the year 2000, these should play a perceptibly greater role in replacing traditional fuels. Mini-hydro plants for electricity generation, the use of biomass and waste, solar, geothermal and wind energy, etc., could perhaps account for nearly 5% of consumption by the end of the century. Principal advantages: supply diversification and less energy dependence; a largely regional or local management with generally positive environmental effects; technologies which could be exported to the Third World. Continued attention must be paid to research, demonstration and the dissemination of results already achieved. Between 1978 and 1985, the Community demonstration programme devoted nearly 170 million ECU to more than 500 projects. Investment grants for action closer to the market might also prove useful. The EIB has provided, between 1978 and 1985, more than 200 million ECU in loans for some 100 projects, including small and medium-sized ones (geothermal, solar panels, micro-stations, biogas, etc.).

## Horizontal objectives

A range of horizontal objectives, involving all energy sources, should accompany and facilitate the realization of the sectoral objectives of the Community energy policy:

- *Completion of the internal market.* In the energy field as in others a more determined integration of the European internal market is necessary to reduce costs, encourage competition and strengthen the economic efficiency of energy-consuming industries. Such integration would also improve security of supply by ensuring a better distribution of sources in the event of a crisis. While the market for refined oil products is already largely open and it appears difficult to further open the coal market – imports from outside the Community are less burdensome than coal produced internally – there is scope for greater internal trade in the gas and electricity sectors. Long-term import contracts, cross-border investment and the development, if required, of interconnections between national systems should therefore be encouraged. Interconnections in particular are assisted by loans from the EIB, which provided 302 million ECU for the cross-Channel connection and 64 million for a link-up between France and Italy.
- *Common pricing principles for energy consumption.* The effective operation of a common energy market requires that all energy sectors should follow common pricing principles which are transparent and realistic. Realistic prices are in fact the key to any efficient supply structure. They guarantee the competitiveness of industry by ensuring effective competition between different fuels, preventing waste, encouraging the development of indigenous sources and helping consumers to choose and invest. With this in mind, the European Commission has established procedures for information and transparency. It is also doing more analysis of different energy sectors: gas, electricity, oil, etc. In addition, it is calling on Member States to reduce price disparities which do not result from real differences in costs. It asks Member States to avoid all legislative, fiscal or other measures which would distort competition between their industries or which would inhibit the establishment of a price hierarchy consonant with common policy objectives.
- *Improved security of supply.* This should be achieved by the development of competitive European production, diversification of imports, greater flexibility of consumption and effective contingency measures. Because of the challenge posed by the likely increase in European dependency on imported hydrocarbons, suppliers should first of all be diversified, particularly in favour of long-term import contracts for gas, coal and uranium. There should be more effective use of European sources, especially in the uranium and oil sectors. Further action that might be taken includes the interconnection, already mentioned, of gas pipelines and electricity systems and more flexible supply conditions: a diversified electricity production structure, interruptible contracts



and an increase in multi-purpose plants which would enable industrial consumers to change from one fuel to another. Finally, contingency measures should be adopted to the changing market situation and the resulting risks. Community legislation already provides for the stocking of fuel at electricity plants (30 days' consumption) and for measures specific to the oil sector (stocks equivalent to 90 days' consumption, contingency measures in the event of supply difficulties). Other measures may prove necessary in the gas and coal sectors.

- *Development of external relations.* Parallel with internal measures, a coordinated Community approach to the development of a cohesive external relations policy should strengthen the position of the Community and its Member States (320 million consumers, nearly 14% of the world's energy consumption) in the world energy market. The high degree of interdependence of the world market demands greater cooperation with all partners: the major consumers of the industrialized world, the importing countries of the Third World, the producing countries. In this way, the Community can disseminate new technologies (solar, energy saving, etc.) in the numerous Third World countries that it helps with the evaluation of energy needs and resources (some 60 programmes have already been prepared). As for the producer countries: the Community is preparing to negotiate a major economic cooperation agreement with the Arab countries of the Gulf region, which have the world's largest oil reserves. The European Commission also maintains close relations with OAPEC, the Organization of Arab Petroleum Exporting Countries, and it wishes to increase information exchanges with OPEC. In the nuclear field, a certain stability of supply is assured due to agreements between the Community and its principal uranium suppliers (Australia, Canada, the United States). The Community and its Member States could, however, use their position as a major importer to greater advantage. The European Commission wants to see some Community cooperation as regards policy for major gas supply contracts.
- *Protection of the environment.* Just as environmental policy must take energy requirements into account, so energy policy, like all other Community policies, must take account of the environmental dimension. It must seek a balance between ecology and energy. Energy policy contributes to a healthy environment by encouraging effective use of energy and cost-effective anti-pollution technologies. Conversely, the use of standards and equipment intended to protect human health, forests and buildings should allow increased use of solid fuels. The frequently high cost of investment can clearly affect competition between different fuels or between industries in the Member States. The European Commission therefore intends to define, wherever necessary, a legislative framework to promote the most cost-effective technologies which would enable enterprises to adapt without great difficulty. It has therefore proposed (and in many cases the Council of Ministers has adopted) common standards for the introduction of lead-free petrol, the reduction of toxic emissions from automobiles and large combustion plants and the reduction of the sulphur content of heating oil and diesel fuel.

- *Regional development.* The impact of the Community's energy policy must be strengthened in the less-favoured regions. This means that the readaptation of regions affected by the drop in energy production must be supported and that economic and employment growth in the less-developed or declining regions should be encouraged through investments in energy. The Community already plays an important role in this respect. The adaptation and modernization of the coal sector is assisted by the ECSC, the European Regional Development Fund (ERDF) and the European Social Fund. Furthermore, the ERDF and the European Investment Bank devote a major part of their resources to grants and loans in support of energy investment in the Community's less-favoured regions. These grants will be increased in the future. The integrated Community programmes (IMPs) launched in Greece and the Mediterranean areas of France and Italy take account of energy problems. In addition, the ERDF will devote 400 million ECU to the five-year Valoren programme. This programme should improve the efficiency of energy resources in the less-favoured regions, which are often the most dependent on imported oil: alternative energies, small peat and lignite deposits, efficient use of energy, etc. In preparation for such activities, the Commission carried out studies into activities that can be taken at regional level to economize energy or make better use of local resources.
- *Promotion of technological innovation.* The achievement of the objectives of the common energy policy calls for continued encouragement for new technologies. This is the price to be paid if we wish to overcome environmental problems, develop the use of renewable resources and improve the efficiency of energy production, conversion, transport and use. The Community is pursuing a major research, development and demonstration programme which has been allocated nearly 1 500 million ECU for the period 1984-87.<sup>1</sup> Community research focuses on nuclear safety (reactor security, waste management, control of fissile materials, protection against radioactivity, etc.), controlled nuclear fusion (the one area in which all European research is fully integrated), solid fuels, new energy sources and efficient use of energy. Downstream from research, Community demonstration and technological projects (with financing of 500 million ECU provided for between 1986 and 1989) help to perfect new equipment related to energy saving, new forms of energy, oil substitution, coal liquefaction and gasification and the use of European hydrocarbon resources. EIB loans can help at the industrial stage or with the installation of machinery or equipment contributing to these objectives ■

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<sup>1</sup> See *European File*, No 15/85, 'European research policy', and No 7/86, 'European demonstration projects in the energy field'.

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