

Energy objectives for 1990 — where does the Community stand ?

European File

More than half of the energy consumed in Europe is imported, although the level of dependence of each Community country on imports varies widely. In 1979, Luxembourg relied on imports for 99% of her energy, Denmark 98%, Belgium 93%, Greece 88%, Italy 83%, France 82%, Ireland 81%, the FR of Germany 60%, but the UK only 17% and the Netherlands only 8%. The last two countries are the only Community Member States to own sufficient domestic energy resources to allow them to export to their neighbours.

This year oil should cover 51% of total primary energy consumption in the Community, coal and coke 24%, natural gas 18%, nuclear energy 5.5% and various other sources, including hydraulic, 1.5%.

The share of oil in the total has decreased considerably since 1973 when it accounted for 61% of Community energy consumption. The development of alternative energy sources and the exploitation of North Sea resources, linked with a variety of energy-saving measures and a fall-off in demand caused by the economic crisis have allowed Community net imports to be cut from 573 million tonnes in 1973 to 420 million tonnes in 1980. But the cost of oil imports continues to weigh heavily since oil-exporting countries have increased prices. The Community's oil bill rose from 10 000 million ECU in 1973 to around 76 000 million ECU¹ in 1980. This enormous increase is one source of rising inflation and unemployment affecting Europe's economies. In order to limit its effect and at the same time guarantee security of supply, it is vital to save energy and diversify the resources used.

¹ 1 ECU (European Currency Unit) = about £0.53 or Ir. £0.69 (at exchange rates current on 15 May 1981).

Amongst the alternatives to oil are gas, whose production in Europe is now approaching its ceiling, and of which 25% of Community needs are already imported; nuclear energy, which accounted for 12% of electricity generated in 1980, but whose development is still held up in certain Member States by political opposition; renewable energy sources, of which some (hydraulic) have already reached their full potential, while others (solar) are developing with the inevitable slowness of all new technologies.

The energy problem is a key one in all industrialized societies. Without energy everything would grind to a halt. The availability of energy in sufficient quantities on a sure and sound economic basis is therefore a necessary precondition for the attainment of the Community's economic and social goals. Amongst the duties that the Treaty of Rome confers on the Community is special responsibility in the coal and nuclear sectors and, even though there is no provision for a Community energy policy, it is obvious that steps have to be taken at Community level — which implies at the very least a coherent and coordinated approach — if certain problems are to be effectively overcome.

- The economic interdependence of Community countries means that they all have an interest in common or convergent action. The existence of a European common market implies a certain degree of solidarity in the face of tensions on the world market; European countries are less vulnerable in their dealings with supplier countries if they act together. What is more, the size of the Community market offers new openings for producers of, for example, equipment designed to save energy. The pooling of research efforts ensures a higher cost effectiveness and reduces the risk of duplication.
- Clearly, economic difficulties in one country caused by too heavy an oil bill arising, for example, from a shortage of investment in alternative energy sources, would have adverse effects on the economies of other Community countries. On the other hand, increased coordination of energy policies can provide Community Member States with the means to limit the impact of energy problems on economic growth, employment and prices.

It was with this in mind that in 1974 the Community Member States set themselves certain common energy-policy objectives. These were aimed primarily at reducing dependence on imported energy, in particular oil, and encouraging energy savings between now and 1985. In May 1980 new targets were set for 1990 and the Council of (Energy) Ministers asked the European Commission to carry out an annual review assessing progress so that national policies could be aligned. The main problems highlighted in the first review are listed below against each of the objectives. The review is based for the most part on data collected at the end of 1980.

The objectives and their prospects of achievement

1. The average ratio of the rate of increase in energy consumption to that of gross domestic product should be 0.7 or less. In fact Member States' forecasts for economic growth between 1985 and 1990 point to an increase of 0.65% in energy consumption. There is however a degree of uncertainty about this since:

the forecast is based on an assumption of economic growth averaging 3.2% per year over the next decade. A lower level of growth will affect both demand for energy and capacity for investment. Programmes aimed at energy saving could be affected and there could well be unpleasant surprises in store even if the economic situation picks up.

the results achieved between 1973 and 1979 vary considerably. Significant progress was made in Denmark, France and the UK and also in the Federal Republic of Germany. Results were less impressive elsewhere, particularly in Ireland and Greece, two countries where industrial expansion is inevitably causing increases in demand for energy. Nevertheless, Ireland has just stepped up its energy-saving efforts.

2. Member States should adopt comparable overall programmes within the framework of a Community energy-saving strategy. In the aftermath of the first oil crisis, a reduction in wastage yielded significant energy savings without major investment. Although estimated at 7.5% of potential consumption in 1975, these savings had still only reached 10.7% in 1979. National programmes aimed at encouraging energy saving, which should have been in force at the end of 1980, have been held up in Belgium and Italy. The public spending to back these programmes has only been significant in France, the FR of Germany, Denmark and the Netherlands. While spending has just been increased in Ireland, it has actually been cut back in the UK. In some sectors a good deal remains to be done. For example:

some Member States still do not have compulsory standards for the construction of new buildings; existing standards, which vary widely from Member State to Member State are often piecemeal or outdated;

companies which receive public financial aid for restructuring should be required to meet certain obligations with regard to rational use of energy; means of information and consultation should be set up to help small and medium-sized businesses; fuel consumption of old and new road vehicles could be further reduced;

progress could also be made in other sectors, particularly in heat generation, agriculture and fisheries, where France, the FR of Germany and the Netherlands have already achieved promising results.

3. Oil consumption should be cut to around 40% of gross primary energy consumption. Although total energy demand looks set to increase by a quarter between now and 1990, demand for oil should stabilize. Nevertheless this would still mean oil accounting for 43% of total consumption by 1990, more than originally planned. If, on the other hand, production targets for nuclear energy and coal are not met, the oil consumption target could be exceeded, possibly by as much as 50 million tonnes a year. The FR of Germany, France, Luxembourg and the UK should meet the oil consumption target, but the same cannot be said of their partners.

In Belgium, too slow a redeployment towards solid fuels (especially coal) means an exaggerated reliance on oil (52% of consumption in 1979, 48% in 1990) particularly in industry. However, the slowdown in economic growth could cut oil use faster.

- Denmark should cut its oil reliance from 77% — a Community record — to 53%. Oil imports should be cut by 30%, which would be on target. But will increased imports of coal, the expansion of home-produced natural gas and district heating plans be enough to avoid falling back on nuclear power ?
- Greece plans to cut its dependence on oil from 75% to 54%. But even with domestic coal production being tripled, oil imports will still increase by 40%. Possible alternatives include nuclear energy, natural gas and the development of domestic hydrocarbons.
- Ireland intends to reduce its use of oil from 74% to 65% of total energy consumed, again by increasing use of coal. However, with economic expansion causing a sharp increase in demand for energy, imports of oil, which still cover two-thirds of Ireland's industrial needs, are likely to rise by more than 50%.
- Italy aims to cut its dependence on oil from 71% to 59 or 54%, with a highly ambitious programme involving drastic energy savings, massive increases in the use of coal and considerable expansion of nuclear power and gas. It remains to be seen whether all these objectives will be met.
- The Netherlands is the only country in the Community which envisages an increase in its dependence on oil, from 45% to 47 or 49%. The reason for this is the stagnation of the Dutch nuclear power programme, slow progress in the development of coal use and a desire to save home-produced natural gas. The policy chosen is therefore in contradiction with that of the Community as a whole.

4. Solid fuels and nuclear energy must cover 70 to 75% of total electricity generation. In fact this proportion could rise from 60 to 77% between 1979 and 1990 — this threshold has already been passed in the UK and the FR of Germany, but four countries, Ireland, Italy, Luxembourg and the Netherlands are well below, with comparable totals between 33 and 48%. The overall forecast is affected by a number of uncertainties. All Member States plan to step up the use of coal, but:

- the expansion of nuclear energy remains insufficient, particularly as half of present capacity is in one country — France. At the end of 1980, Ireland and Denmark, who were both counting on coal alone to meet their objectives, had still not taken a decision on the development of nuclear power. The German nuclear programme is being implemented at a far slower rate than forecast and Belgium has yet to decide whether to continue her nuclear programme once power plants already being built are completed;
- the use of natural gas in electricity generating stations is widespread in Belgium, the FR of Germany, Ireland and the Netherlands although this low-polluting and flexible energy source is still largely reserved for other uses — for heating, for use by smaller industries, etc;
- the use of oil in generating stations will remain a major factor in Denmark, Ireland and Italy; it will even increase in the Netherlands.

5. Use of renewable energy sources (hydraulic, geothermal, biomass, solar, wave and wind) must be encouraged. According to current forecasts, the proportion of energy generated by renewable sources will only cover between 1.4 and 2% of Community needs between 1979 and 1990. Although spending on research, development and demonstration more than tripled between 1974 and 1978 (a quarter of it financed by the Community) it is still insufficient. Between now and 1990, only France envisages major progress in this field (development of non oil-based fuels, etc.) despite the fact that recycling of only one-tenth of biological agricultural waste, for example, would enable a 2% saving on the oil bill. Nevertheless, important progress has been made in Italy, and increased research spending is planned in the FR of Germany and in the Netherlands.

6. Energy pricing policies must be compatible with the Community's energy objectives. To achieve this, energy prices must be transparent, reflect the state of the world market and take account of the replacement cost and development of alternative energy sources. Fixing realistic prices, in fact, encourages energy saving and investment. Since the 1979 oil-price rises there has been a tendency to relax price controls and let the laws of the market have free play. The problem with this is that the prices of different products are not always positioned in the price hierarchy in a rational manner; furthermore there are wide disparities between the Member States, even without taking account of the different tax levels, whose share in the total cost has by and large fallen since 1973. There are other important factors also:

- the particularly low prices in Luxembourg and, except for petrol, in Greece, compared with high prices in Ireland and Denmark, where the level of tax bolsters the Governments' energy savings policy. Italian prices have increased considerably as have prices in the UK, which are now approaching the Community average thanks to the abolition of price controls, the increase in taxes, and the strength of sterling;
- in order to encourage energy savings the degressive element in certain taxes on electricity has been reduced or lifted altogether in the FR of Germany, Italy and the Netherlands. In the FR of Germany and France increased use of coal and nuclear power will have an influence on the price of electricity, which has already tended to increase less quickly than that of other forms of energy in France. The opposite tendency is taking place in the Netherlands where the aim has been to align the price of natural gas with the higher price of diesel fuel.

Investment: the means behind the policy

As the Community energy ministers stressed at their meeting on 3 March 1981, the achievement of the energy objectives listed above implies a major investment effort. Over the next ten years, the Community energy sector should be able to count on new financial resources of around 500 000 million ECU of which approximately:

- 20% will be spent on improving energy productivity (spending on energy savings will increase by 80% over the 1978 level);

- 80% will be spent on developing non-oil supplies (increase of 50% in coal production and non-nuclear generated electricity).

Current investment programmes for oil, coal, gas and non-nuclear electricity are in general sufficiently ambitious, although doubts exist as to whether they can be effectively implemented. Large question marks, too, hang over the outlook for nuclear energy development. Despite concerted efforts to guarantee a yet higher level of safety for nuclear power than for other energy sources, the development of nuclear energy meets political obstacles fed more by public unease than by a shortage of financial means. While continuing its efforts on nuclear safety, the Community must help national governments convince the public that nuclear energy is indispensable if the ruinous effects of over-dependence on imported oil are to be avoided.

In most cases investors should find the necessary financial means available on the market, although a significant degree of public spending will still be necessary in a number of sectors:

- more non-renewable energy can be saved by improving energy productivity and by further developing new energy sources. In some countries such as France and the FR of Germany, energy-price increases have encouraged investment; but in others, the recession has had an opposite effect, particularly in the UK, where public spending has been cut back. The current inertia amongst consumers must therefore be overcome, and investors, householders and businesses motivated. The implementation of Community pricing principles and the reduction of certain disparities in the sector must be linked with financial backing, notably for energy-intensive industries, or those producing new equipment (the French example in this regard deserves to be studied). Better coordination of Community aid in this sector would be desirable not only to guarantee equal conditions of competition, but also to ensure an increased return on industrial research and development too often widely dispersed;
- district heating networks allow a range of different energies to be used. Major projects are underway in Denmark, the FR of Germany and France and are being prepared elsewhere. But the high investment cost and lengthy time-lag before such projects become viable point to the need for public aid;
- in the coal sector, internal Community production is only being maintained at high public cost, financed by the producer countries and justified as much in terms of security of supply as by social and regional needs. On the consumption side, coal burning is economically viable for a number of industries, but conversion only takes place as existing fuel or gas equipment is replaced. It would be desirable to speed this up. Finally, turning to imports, which could triple, or even quadruple by the end of the century, considerable investment is required in infrastructures (ports, storage facilities, etc.).

The total cost of new investment, both public and private, will be considerable, representing annually about 2% of the Community's gross domestic product and nearly 10% of total investment (a 40% increase compared with 1968 to 1980). Overall this level

of investment is unlikely to cause difficulties, although its weight will be very unevenly spread between the Member States. This could cause two particular problems:

- if the programmes are carried out as envisaged, Greece, Ireland, the UK and Italy will spend between 2 and 3.2% of their GDP on energy investment. Apart from the UK, these countries are also those with the heaviest oil-import bills. It is worth underlining just how important an effort these countries will have to make before they can hope to reduce their dependence on imports over the period in question;
- in a situation of weak economic growth there is a real danger that some programmes may be cut back, particularly in those countries where growth is lowest. This would only increase dependence on oil and further slow down economic growth. Despite the unfavourable climate for investment (doubts over the future, public spending cuts, high interest rates, etc.), the task of breaking this vicious circle remains the fundamental priority of all energy policies.

A Community approach is all the more indispensable to respond to these challenges because failure would increase the disparities between the Community countries and provoke — after a period of false security — a fierce upturn in oil consumption once the economic situation improved. It is therefore vital that each Member State shows in concrete terms its readiness to take steps to involve itself in a concerted Community effort ■



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