increasing oil prices. A decision by, say, Saudi Arabia to reduce production by two million barrels a day could speedily put a crimp in the most efficient market. This is why the only long-term solution is that the oil-consuming countries should lessen their dependence on OPEC oil. So much has been clear since 1973, and is enshrined in the policies of most of the international bodies with interests in this field, the International Energy Agency and the European Community in particular. Alas, this is yet another field where declared policy and practice are far apart.

This is not to belittle what has been accomplished. In the past few years there has been a hopeful change in the pattern of energy consumption within the European Community, for example. Total energy consumption has grown less quickly than foreseen five years ago, not simply because economic activity has flagged behind the original estimates but because energy conservation has been a modest success (especially among industrial and commercial users). The supply of energy from sources other than oil has also, unfortunately, fallen behind the targets set in 1975. Both coal and nuclear energy production are unlikely, in the coming decade, to do much to lessen dependence on OPEC oil (which will still account for nearly 50 per cent of European energy consumption in 1985). This, for Europeans, is too much for comfort. Last month, the European Commission did its best (without much success) to persuade the energy ministers of the Nine to look seriously at a series of proposals intended to make the European market in energy internally more efficient — common principles for pricing, taxation and the like.

In the United States, as always more fortunate, the benefits of President Carter's tardy and apparently reluctant freeing of the United States energy market have still to appear. As the letter from Dr Alvin Weinberg illustrates (page 382), it will be some time before even Americans acknowledge that the problem of energy prices is a serious problem. The stakes, at least for oil consumers, are high — nothing less than the perpetuation of a way of life they have grown fond of. The cost of winning the gamble may seem high — a reactor here, a strip-mine there. In reality it is not. For the only way of bringing down the price of oil is for the oil consumers to show that they could, if need be, do without it.

How not to foster new technology

The present British Government seems to be making a thorough muddle of its predecessor's plans for setting up a microcircuit industry in the United Kingdom. More than two years ago, when politicians all at once found out about micro-electronics, the then Labour Government launched a flurry of new (and expensive) programmes — schemes for helping industry at large to become familiar with the new technology, for spreading the word through the educational system, for compiling lists of consultants on information processing and the like. The most striking part of the hastily-assembled package was a decision to invest £50 million in a company called INMOS, newly formed by people with American experience, whose strategic role was to be the design, development and manufacture within the United Kingdom of an advanced range of microcircuit devices. The channel for the Government's investment was the National Enterprise Board, best known as the public shareholder in a variety of companies which successive governments have chosen to rescue from one kind of trouble or another with public funds. Sensibly enough, the NEB decided that INMOS could not have all of the promised £50 milion in one cheque — half was paid over in 1977 on the understanding that the second half would be available when the design and development phase of the enterprise had been completed.

Since then, a great deal has changed. There is a new British Government, suspicious (to say the least) of the function of the NEB. The NEB itself has changed dramatically — in November 1979, the entire board chose to quit when the Department of Industry (to which the NEB is responsible) decided to remove the aero-engine manufacturer Rolls-Royce from its field of interest. And the new government, superintending a board whose mere existence is an embarrassment, is more desperately short of taxpayers' money than it had thought possible.

INMOS, it appears, has been an unlucky victim of these changed circumstances. Last summer, when the design of two microcircuit devices had been completed (physically in the United States) the company asked the NEB for the second tranche of funds. In October, soon before the board's decision to quit *en bloc*, the plan was approved, but a formal recommendation was not passed to the Department of Industry (which keeps the cheque-book). In December, therefore, the newly-constituted NEB reconsidered INMOS's proposals, approved them formally and recommended that the Secretary of State for Industry, Sir Keith Joseph, should write a cheque. Since then, nothing has happened.

To judge from Sir Keith Joseph's exhortations to people in California last week, neither he nor the government to which he belongs has cooled on microprocessors. By all accounts, he was urging American manufacturers to establish themselves in Britain, dangling before them the attractions of tax-breaks and low wages (on paper at least). Nothing appears to have been said about INMOS and the second £25 million.

The truth is, of course, that the British Government is morally committed to provide the second half of the investment estimated as necessary to launch INMOS and its first few products. Nobody claims that the company has failed to meet the conditions laid down when the formation of the company was encouraged by the then government. So far, two sophisticated microcircuit components have been designed and tested — a 16 K static memory and a 64 dynamic memory. Each of them is likely to interest computer manufacturers. There may be doubts about the capacity of a new and relatively small company based in Britain to sell its wares effectively in the international markets to which it must be looking. Yet having helped INMOS so far, it would be folly now not to provide it with the funds it needs to set up its manufacturing plant. To fail to do so would be disreputable. To delay is to load its dice against the company.

None of this implies that Sir Keith Joseph is not right to be agonising (as is said to be his wont) about the good sense of the mechanisms he has inherited for using public funds to sponsor technological innovations. The National Enterprise Board itself is an awkward legacy of Sir (then Mr) Harold Wilson's promise in 1963 that, if elected, he would create a second industrial revolution with "white-hot technology". The surviving marks of that period are a few aluminium smelters scattered through Britain, a number of industrial companies too big for their own comfort and the NEB, the descendant of the old Industrial Reorganisation Corporation.

Throughout this period (as before it began), governments and British governments in particular have demonstrated that they are uncommonly bad at backing technological enterprises. The reasons are simple. Civil servants are not equipped to make judgements of what will work and also sell. They and their political masters are prone to attempt too much in their sponsorship of innovation — they also seek to prop up ailing companies or to provide jobs in depressed parts of the country for reasons which have nothing to do with innovation. It would be entirely proper if the Department of Industry were to seize this opportunity for a radical re-examination of how best to foster new industry. The most important ingredient of a new policy would be to foster circumstances in which people who know what's what find it profitable to back their hunches, but there is much to be said for the British Government deliberately replacing some of its in-house research and development by contracts let to private industry. The National Enterprise Board could be abolished without much harm — and that, of course, may happen anyway if the British Government insists that it should act as an agent for going back on a promise, however unwise that may have been. □

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