European coal industry

Conversion plans

Plans for commercial coal gasification plants in West Germany will be complete by December, and liquefaction plants by next autumn, the Federal Ministry for Science and Technology has announced. But because German coal is very deep and very expensive, the intention is more to take a lead in the world market for such technology, than to make much use of it in Germany. So, although the construction of 14 coal refining pilot plants costing £3 billion is under study, Research Minister Volker Hauff said last week that oil and gas derived from coal would supply only 3 per cent of Germany's oil and gas needs in 1990.

Germany was forced to develop gasification and liquefaction techniques during the Second World War to provide the country with fuel, and although the technology then became uneconomic compared with cheap Middle East oil, the industry survived through massive exports to South Africa. After a lull in the sixties, German efforts were revived by the oil price rise of 1973. The United States have since spent more on developing new approaches and principles, but Germany appears to be taking a lead with real plant. German spending on research and development of new coal technologies (including remote extraction) is high, taking the lion's share of the non-nuclear energy research programme, which in turn costs some £230 million a year including industrial participation.

In the United Kingdom, investment is nowhere near so great. British Gas has just placed the contract for one pilot gasifier, using a mix of technologies and capable of converting coal dust and lump coal, at a cost of around £14 million; but this can be set against British Gas profits of some £426 million last year alone on retailing North Sea gas. The National Coal Board (NCB) has less to spend, but has recently recommended the construction of two pilot 1 tonne per hour liquefaction plants, one using the liquid solvent extraction process and the other "super-critical gas extraction"; the cost would be £50 million shared between the NCB, British Petroleum, and the Department of Energy.

However, according to an NCB scientist, the British technology is unique in aiming to produce nearly 100% conversion of the coal into high quality transport fuels, plus some liquid petroleum gas and synthetic natural gas. The technology could provide enough impetus to resist penetration of the British market by German or US technology, and might even provide export potential. The world market in sophisticated coal technologies is expected to reach billions of pounds a year in the 1990s, when oil prices rise to a level which would make coal competitive.

Robert Walgate

Hunter turned hunted

According to the Royal Society for the Protection of Birds at least 17 young peregrine falcons were stolen from UK nests this year. With peregrines selling to falconers at up to £1,500 each, nest robbery threatens to reverse the trend towards restoration of the UK breeding population which was severely affected by organochlorine pesticides twenty years ago. Present legislation prohibits the taking but not the keeping of wild birds. But the UK government has just announced plans to legislate against keeping also; it would require all birds of prey in legal captivity to be registered and ringed.

Third World energy

World Bank aid

Washington

Substantial new funds for energy research in developing countries could be one outcome of the proposals announced by the World Bank in Washington last week to help these countries meet their rapidly escalating fuel bills.

The main focus of the Bank's proposals would be the setting up of a new capital investment fund, which would raise money from private banks and lend it to Third World countries for energy projects ranging from nuclear power stations to conservation programmes.

At the same time, however, ideas for sponsoring relevant lines of research are being discussed. One possibility is that an independent fund or institute for research in renewable energy technologies could be established, perhaps taking a cue from the international group of agricultural research centres whose support the Bank currently coordinates.

In addition to the practical problems caused by energy shortages, World Bank officials have been worried that rising energy costs have made it increasingly difficult for many developing countries to pay off their international debts.

In Brazil, for example, the cost of imported petroleum rose from 12 per cent of export earnings in 1973 to 50 per cent last year; in India the increase was from 22 to 60 per cent over the same period.

The result, according to the *World Development Report, 1980* published by the Bank two weeks ago, is that major oil-producing countries will run current account surpluses of about \$110 billion in 1980, while the oil-importing, developing countries will have a combined deficit of more than \$60 billion. Efforts have been under way for some time to recycle the surpluses to ease the burden on developing countries. The political importance of this

was agreed at the economic summit of western leaders in Venice in June.

The World Bank has been watching the situation closely since 1977 and has started making loans for energy projects. This year, following particularly steep price rises, the Bank's president Mr Robert MacNamara asked his staff for a special report on what additional steps might be taken. This report, including sections on conservation and renewable energy sources, was recently made public.

Its main proposal is that the Bank should set up a special affiliate to raise sufficient money on the private capital market to almost double the \$13 billion in loans which the Bank itself intends to make over the next five years on energy projects. This should be sufficient to seed an additional \$75 billion in bilateral loans, and concessional terms might be arranged for the poorer countries.

The Bank says that many of the projects it already finances show a high return on investment, sometimes up to 30 or 50 per cent. But in many countries difficulty in raising capital has resulted in only superficial efforts to seek oil, and therefore "not enough research and money have been put into the effort to establish whether there are smaller deposits that could make important contributions to their own energy supplies".

Reversing its earlier opinion, the Bank says that it now agrees that conservation programmes offer a substantial potential for cutting back energy needs.

The proposals will be discussed when the World Bank and the International Monetary Fund meet in Washington later this month. However, it is generally believed that Mr MacNamara already has informal commitments that at least part of the money can be raised.

The precise nature of the fund, however, is still open, and so too are details of the way in which money might be used to finance research — although according to World Bank officials one of the biggest needs is the collection and evaluation of performance data about new energy