

James R. Schlesinger, now the White House energy adviser, is expected to head. The department would also take over certain functions and responsibilities from a number of other agencies—most notably, perhaps, it would control some of the terms of oil and gas and coal leases on public lands and the rate of energy production from those leases. The Department of the Interior would remain responsible for the actual leasing itself.

Compared to the budget submitted by President Ford, Jimmy Carter's revised budget more than doubles the amount of money that would be made available to ERDA for energy conservation, raising it from about \$158 million to \$318 million. Of this new money, \$40 million would go toward implementation of the Electric and Hybrid Vehicle Demonstration Act. Conservation funds for the FEA also would be increased, chiefly through the addition of some \$54 million for grants to the states.

R & D funds for fossil fuel technologies would be increased by \$41.6 million, with the new total coming to nearly \$640 million. The total for funds earmarked for solar energy would remain at \$305 million but, within that amount, \$55 million would be shifted from a 10-megawatt solar electric station (a project now cut back to only \$10 mil-

lion to allow a longer period of development) to other activities, principally the demonstration of solar heating and cooling for buildings.

Although a substantial fusion energy research effort would continue, the program budget would be reduced from about \$371 million to about \$311 million—the purpose being to stretch out long-term development in favor of “nearer-term efforts to establish scientific feasibility.”

The breeder reactor program would be cut by almost \$200 million, or from \$855 million to \$656 million—a sum not much greater than the budget proposed for fossil fuel energy. About \$88 million of the cut would come from the Clinch River demonstration project, which, if completed, would not now go on line before sometime in 1984.

In a statement released along with the revised budget, ERDA observed that the cut in the breeder project reflects President Carter's energy priorities, which “stress conservation and nearer-term supply technologies.” It then added:

... Serious questions have been raised about the LMFBR technology and the structure of the current LMFBR program. The energy potential of this option must be weighed against the safety questions associated with the LMFBR and the dangers of nuclear proliferation from plutonium reprocessing needed by LMFBR's. The delays in the [Clinch River]

project and its currently projected costs (\$1.9 billion of which \$154 million already has been spent) make it necessary that a reexamination of the project be undertaken before any final decision is made to proceed with construction. At the same time, we will examine the make-up and direction of the overall LMFBR program with or without this big project. The potential application in the U.S. and the role in the U.S. breeder program of foreign breeder technologies will also be reviewed.

Robert D. Thorne, ERDA's acting assistant administrator for nuclear energy, will head the LMFBR review committee. According to Thorne, this group will be drawn from the technical community, the utility industry, and the public interest groups. In the preparation of the report, he says, individual views or dissents will be filed on those issues where no agreement can be reached. And, indeed, given the disparate membership contemplated (those thus far selected include Carl Walske of the Atomic Industrial Forum and Thomas B. Cochran of the Natural Resources Defense Council), the points of consensus may be few.

The outcome of the breeder study may be strongly influenced by a parallel study the Carter Administration is making of fuel reprocessing and plutonium recycling—an essential precondition for the Clinch River breeder. The results of the latter study will be known within a month or so.—LUTHER J. CARTER

Science in Europe/Nuclear Wastes Stymie West Germans

West Germany's ambitious nuclear plans have come to a temporary halt over the awkward issue of what to do with radioactive waste. In the middle of February a court in the state of Schleswig-Holstein ruled that construction of a nuclear plant in the state, Brokdorf B, could not go ahead until there was a clear national policy for waste disposal.

The court decision was the climax of a rising tide of antinuclear sentiment in West Germany, a country which plans to have a total of 35,000 megawatts of nuclear capacity installed by 1985, five times greater than the present nuclear capacity. The antinuclear movement ranges all the way from moderate and respectable environmentalists to militant groups prepared to invade and occupy nuclear sites in order to prevent work taking place. It was after angry struggles between police and demonstrators last year that the court action in Schleswig-Holstein began.

After the court ruling, the federal government decided to bow to the inevitable and not press forward with the nuclear program until the waste question has been solved. West German Chancellor Helmut Schmidt and representatives of the ten states and of West Berlin appointed a committee to investigate the question and to find a site where waste could be stored at least temporarily until a decision about its disposal can be made.

One of the committee's tasks is likely to be to lean as

heavily as it can on the Prime Minister of Lower Saxony, Ernst Albrecht. The thick salt beds of Lower Saxony have been chosen by experts as the only geologic strata in West Germany which can be used in disposing of long-lived wastes from reprocessing plants. But since nobody actually welcomes a nuclear mausoleum in their back garden, and Albrecht is a rising politician with a constituency to consider, a fair amount of arm-twisting is in prospect. At the time of this writing Albrecht said he expected to be able to name a site within a few weeks.

The site, when it is chosen, will be used for both a waste management facility and a reprocessing plant, since the intention is to build both at the same place. The various antinuclear groups have correctly identified this dual facility as the key to the whole West German nuclear program and have concentrated effort in attempting to disrupt the choice of site. At three potential sites in Lower Saxony antinuclear groups have been camped out, waiting for the drilling rigs to arrive to begin exploratory drilling into the salt formations. They are, it is claimed, in contact by radio with one another so they can make haste to whichever site is chosen for the first hole. In Bonn it is claimed that the groups are politically inspired by the far left and are willing to use violence.

Meanwhile the West German government is fighting hard

on a second front, this time against the United States. Schmidt has sent a series of emissaries to Washington to try to discover just how determined President Carter is to upset the contract by which West Germany will supply Brazil with nuclear plants, uranium enrichment technology, and reprocessing technology. The visits follow a discussion between Schmidt and Vice President Mondale on the subject during Mondale's European tour. According to observers, the West Germans and the French have succeeded in rallying the European Common Market behind them on this issue on the grounds that American opposition is based at least partly on commercial considerations and that if the West Germany-Brazil and France-Pakistan deals are abrogated, Europe would have no future as a nuclear exporter.

Swing Back to Science

The swing away from science in British schools is over, indeed appears to have gone into reverse. Disenchantment with science among British schoolchildren set in during the 1960's and caused much anxiety among policy-makers and universities, who had geared up for a demand which never materialized. Gloomy forebodings about the future of Britain as a technological nation were published in a long series of reports. Conferences were held, working parties established, plans promulgated, and hands wrung.

So now that the trend has reversed, is everybody happy? Alas, no. At a recent meeting the university vice-chancellors told the secretary of state for education that they may not have enough room for all the students clamoring to join science and technology courses.

What had happened was that the government had suggested to the universities that they should take another 4000 students a year in science and technology. The universities admitted the demand was there, but said that their capacity was limited and could only be expanded if more money was provided for more staff and buildings. The government is unlikely to be moved by this plea; it is only a few years since many large science departments at the universities had nearly as many faculty members as students, and the qualifications needed for entry into science courses in Britain have fallen sharply in the past decade. There is, it is felt, still plenty of slack to be taken up.

Heavy Weather over Rockall

An unseemly row has broken out between the governments of Britain and the Republic of Ireland over what must be the least desirable piece of real estate in the world—the island of Rockall, a chunk of rock the size of a tennis court which sticks out of the Atlantic about 250 miles from the Scottish coast. For years Rockall was no more than a name on the radio weather bulletins, along with other obscure areas of sea such as Fisher and German Bight. Almost nobody but trawlermen knew where any of them were.

What has changed things, of course, is oil and, to a lesser extent, fish. The water off Rockall is only 100 to 200 meters deep, which means that it is well within the capacity of the offshore technology developed in the North Sea, and the exclusion of British trawlers from Icelandic waters has meant that other, less attractive fishing grounds must be exploited.

The argument came to a head in the middle of February, when Britain awarded two exploration licenses for areas of

the seabed which Ireland claims is rightly hers. British claims on Rockall rest on a landing made on it by helicopter in 1955 by a Royal Navy officer who formally claimed it for the British crown. He left behind a brass plaque recording the visit and, in proper colonial style, a flag and flagpole. (Such is the fury of the Atlantic that 4 years later no trace of these items could be found, even though they had been placed 60 feet above sea level.)

Irish claims are vaguer. A 6th-century Irish saint, St. Brendan, is said to have made a landing from a skin-covered coracle during an epic voyage, though even the most devout recognize that this is unlikely to be admissible as evidence. More seriously, the Irish say that Rockall is closer to their coast than Britain's and that uninhabited islands cannot count as an extension of a nation's continental shelf.

All this is amusing enough to outsiders but is being taken quite seriously by the two governments. Geological evidence is said to be encouraging, and with the record of the North Sea in mind neither government is going to abandon its claim easily. The Irish government is hoping that if it continues to put pressure on the British they will eventually force the case to go to international arbitration. Britain is showing no enthusiasm for this idea, which was first proposed by Ireland last April.

Polluted Playground

Some progress has been made in the battle to clean up the Mediterranean, Europe's polluted playground. A conference of 16 Mediterranean coastal states called by the U.N. Environment Programme (UNEP) last month (February) made some progress on a protocol to control land-based sources of pollution. Meetings last year had already covered the question of pollution from ships.

There is no doubt that the problem is a very serious one. All around the Mediterranean untreated sewage is pumped straight into the sea, creating dangers for swimmers or for those who simply live along the coast. A cholera outbreak in Naples in 1973, which killed 22 people, was almost certainly caused by untreated sewage. Beaches in Israel and Italy have been closed, and according to William Brumfitt of the Royal Free Hospital in London, one in ten of those living along the Mediterranean coastline has blood changes indicating that he has been in contact with hepatitis viruses.

Industrial wastes are equally serious. Maurice Aubert, director of the French National Institute for Health and Medical Research, has shown that of 31 species of fish he examined, 17 contained mercury in quantities greater than those permitted under French health regulations (0.5 part per million). The United Nations has described the Bay of Muggia, near Trieste, as a biological desert, where only the ten hardiest fish species survive. From the Rhone alone, 500 tons of pesticides and 1250 tons of detergents are dumped into the Mediterranean every year.

UNEP has done well to get 16 of the 18 possible Mediterranean countries around a table to discuss the problem. (The absentees were Albania and Syria.) The next step will be further discussions in Venice in October, and UNEP hopes that a treaty could be agreed on at a conference in Monaco in November. Such a treaty, although arranged, would not come into operation until it had had a necessary number of signatures and ratifications—which, on the basis of past experience in the field, could take 5 years or more.—NIGEL HAWKES