research contractors. The Navy and Air Force, he claims, have never required prior review of scholarly work, and the Army had not sought it until this year. "It is Defense Department policy to have this work published as soon as possible; we want to do nothing that would hamper publication." The Army's policy and the clause in the MRC contract are being revised. "We are working on a DOD regulation now," Gamota said, "that would prevent anyone from trying to hamper the flow of information" or compel authors to revise extramural research papers. There will be no change, however, in conference funding policy. It is generally understood that research dollars may not be used to pay for travel by Communist bloc scientists.

NSF Searches for New Leaders

George Pimentel, the deputy director of the National Science Foundation (NSF) announced last October that he would be leaving the agency on 30 June this year to return to the University of California at Berkeley. In March, the NSF's director, Richard Atkinson, announced that he too was leaving at the end of June to become the chancellor of the University of California at San Diego. Thus, the NSF could be leaderless within a few weeks unless the President nominates a new director soon, and no such move seems imminent. Both the director and his deputy must be confirmed by Congress.

According to NSF watchers in Congress and the Executive, a candidate for deputy director has been chosen, but a final choice of director has not been made. The National Science Board (NSB), which the President must consult in this matter, has sent a list of recommended names to the White House. Representative George Brown (D-Calif.), chairman of the House subcommittee on science, research, and technology, has sent the White House his own list of 16 "exemplary" candidates, all of whom are familiar with Washington politics.

Because of possible delays in getting nominations approved, it may be necessary to bridge the gap this summer with a temporary NSF director. One plan is to have Pimentel postpone his departure and remain for a time as acting director. But Pimentel, according to his assistant, has not been asked to stay. Another choice would be to reach to a lower rung in the agency and make one of the assistant directors a temporary chief. If this happens, says NSF spokesman Jack Renirie, the probable candidates are Francis Johnson, William Klemperer, and Eloise Clark, for they are all presidential appointees. Clark has been at the agency the longest (since 1969).

In the meantime, the NSB, which governs the National Science Foundation, elected a new chairman and vice-chairman on 15 May—Lewis Branscomb and Herbert Doan, respectively. Branscomb, the former director of the National Bureau of Standards and president of the American Physical Society, has been the vice president and chief scientist at IBM since 1972. Doan, a chemical engineer, is a former president of the Dow Chemical Company and a prominent member of the Dow family. He is now chariman of the Doan Resources Corporation.

Oil Embargo Might Cost $270 Billion, CBO Reports

A bit of realism in oil policy is in order, according to a report issued by the Congressional Budget Office (CBO) on 22 May. The report says it is time for American policy-makers to accept the fact that this country will be dependent on oil imports for at least the next decade. Instead of focusing on the (probably unattainable) goal of stopping imports, the United States may wish to develop a more sophisticated strategy for minimizing risks which cannot be avoided. Everett Ehrlich, the principal author, said that he expects to see more imports, higher prices, and a tapering off of domestic oil production.

Ehrlich intended the paper to serve as a benchmark for 1980, useful in measuring the government's progress in attacking the oil problem in years to come. If no dramatic new conservation or energy-producing schemes are undertaken, the CBO's economic model projects a rather conservative increase in domestic oil demand, from 18.5 million barrels a day (mbd) in 1979 to 19.5 mbd in 1985 and 19.9 mbd in 1990. U.S. economic growth is set at a low rate—3 percent a year. If the CBO's estimates of world oil production and demand are sound, the oil shortage will persist for the rest of the decade. The lowest likely forecast price for 1985 is $52 a barrel (the current price is $30), and for 1990, $84.

Perhaps the most striking finding is the estimated cost of a supply cutoff. It is quite conceivable that the United States might have to live for a year with a sudden import reduction of 3.5 million barrels a day. Assuming that the impact would be mitigated by using 500 million barrels of oil stored in the U.S. Strategic Petroleum Reserve (it now contains 91 million), the CBO concludes that in 1984 a reduction of the kind described above would cause a $270 billion loss to the general economy, increase unemployment by 2 percent, and raise inflation by 20 percent.

The authors note that it would be "cost effective" for the United States to continue stocking the oil reserve, at least until it holds the planned capacity of 1 billion barrels. The cost, they calculate, would be between $8 and $10 billion.

The paper suggests several other, less dramatic steps that might be taken to reduce risk:

- The United States should consider following the example of other industrial countries, such as Japan and France, which have signed bilateral trade agreements with oil producers. Long-term pacts might ensure that those who sell oil to this country spend the proceeds of their sales here.
- It might be a good investment, the CBO paper says, to extend credit to non-OPEC nations to finance risky oil exploration projects.
- The United States could lend technical and financial support to develop heavy oil fields in Venezuela, which hold large, but hard-to-process, reserves.
- New financial arrangements should be sought to prevent the deterioration of the dollar as an international reserve currency. A new oil currency might be created to reassure oil producers that their cash assets are not being eaten up by inflation. This, it is suggested, might encourage them to expand production.

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