

especially, Mideast or say, Mexican oil exploration, increases in oil reserves of 100 billion, rather than 20 billion barrels a year, would reasonably be expected. No great sums of money are really involved — current Mideast investment in exploration amounts to only a small fraction of overall development costs and this is in an area where ultimate reserves are estimated to be 1,000 billion barrels!

With this sort of policy, the picture changes radically. Now let us assume not a piddling 3.5 percent rate of growth but a rapid 20 percent annual rate of growth, and we will find that by 1990 an additional 1,200 billion barrels of oil will have been discovered, 600 billion consumed, and current production will be running about 120 billion barrels a year, or nearly seven times current rates!

With natural gas, it should be noted, the situation is even better, since gas exploitation rates are very low. Given a rule of thumb estimate that gas production gives about two-thirds the energy of oil production from a given region, gas production over the same period could rise to the equivalent of 80 billion barrels of oil a year or nearly a dozen times current output.

What Happens Then?

So, the idea that we can get only a small and crippled rate of growth out of existing oil and gas reserves is absurd. But, even in the scenario here, oil production will in fact top out, although at a much higher level sometime in the 1990s, as the MIT report asserts. The key question however is what happens then? The answer is that first the breeder and then fusion take up the slack.

The assertion that the fission breeder cannot contribute to energy needs before the year 2000 is just as bald an assumption as the limit on oil development. On p. 210 of the book, it is asserted that no more than 5 percent of total nuclear energy can be supplied by breeders by the year 2000. Given well-known limitations on the supply of natural U-235 for existing reactors, the conclusion that nuclear energy can do little to fill the energy gap is inevitable.

But what are the real facts? The first commercial scale breeder reactor is now under construction in France, the Superphoenix, and will be operating as early as 1983. The technology is already in hand, tested out on smaller models and well understood. Given a commitment now to start construction on a large scale of

Superphoenixes, and given the elimination, in this and other countries of laws which virtually prevent nuclear construction, such as the National Environmental Protection Act, within a few years, a major breeder construction industry could be under way. By 1985, large numbers of breeders could be moving directly into the fuel production cycle, accompanied by even larger numbers of light water reactors to use the fuel produced. Given a large overall growth rate to the world economy, and thus to the energy capital goods sector, by 1990, between 10 and 15 percent of total energy needs, and about half of all electricity could be produced by the breeder cycle. The technology is there — all that is required is the necessary investment.

The MIT report handles fusion even more cavalierly. In devoting a total of one paragraph to the subject (p. 215) the report asserts fusion will not contribute any energy by the year 2000. But in the real world, the scientific feasibility of fusion production has already been demonstrated a few blocks from where the Energy Workshop labored, at the MIT Bitter Magnet Lab's Alcator device. And Stephen Dean of the Energy Research and Development Administration states flatly on the basis of all available experimental evidence that given sufficient investment, a fusion reactor could be producing commercial power by the late 1980s.

Given the achievement of fusion power on a small scale in the late 1980s, a full scale production program could bring fusion on line as the dominant energy source, replacing oil and gas in the course of the 1990s. All this assumes a much faster (20) percent annual rate of growth, not the Trilateral Commission's conservation. In fact such accelerated growth is necessary to produce the high standard of living and skill levels which will be needed by a fusion powered economy.

Now of course it is true that time is short, as Mr. Wilson says. We agree. It is almost true that the sort of engineering research and development projects involved in rapid energy growth requires nothing short of a "wartime" mobilization. But the question is war for what? War for sacrifices, austerity and the destruction of the energy base of an industrial society? Or war for rapid expansion of energy, the basis of technological growth, and higher standards of living? Mr. Wilson's Rockefeller-funded report is nothing more than a flimsy cover for the policies of austerity.

— Eric Lerner

Reagan: 'Energy Cover-Up?'

In his syndicated column of May 20, Ronald Reagan, still mentioned as a presidential possibility, questioned whether Jimmy Carter is coming clean with the American people on the issue of Energy. Reprinted below is Reagan's column as taken from the Los Angeles Times.

Energy Cover-Up?

Is the Carter Administration leveling with the people on the energy issue, or is there a heavy dose of propaganda involved in its moves?

Skeptics and sympathizers will debate this for months,

no doubt. But there are some nagging concerns that the Administration hasn't been telling all the truth when it comes to the energy situation.

First, it let the C.I.A. release an unusually gloomy assessment of world energy reserves on the eve of President Carter's energy plan announcement — totally ignoring a recent United Nations survey which draws far more optimistic conclusions.

Next, Mark Siegel, a Deputy Assistant to the President, told the Washington Press Club details of the White House's plans for saturation selling of the Carter program, including the view that they would like to manipu-

late school curricula to fit their concept of America's energy future.

Now, it turns out that a 500-page environmental impact report prepared by the Federal Energy Research and Development Administration is being suppressed by the government, presumably because it does not conform with White House views on nuclear energy.

Carter's proposed program, you will recall, cited a need for some reliance on nuclear power plants, but strictly those operating on uranium, of which we have a limited supply (often estimated at about 20 years). The President's commitment to stopping the spread of nuclear materials around the world apparently led him to the conclusion that he should not advocate the use of breeder reactors which use plutonium, a byproduct of nuclear fission.

Plutonium can be recycled and breeder reactor research has been aimed at creating reactors and peddle colorful scenarios about theft of plutonium by terrorists or devastating accidents which somehow turn nuclear power plants into giant bombs. The latter is technically impossible, and the former is a matter of good security.

The E.R.D.A. report, Document 1554-D, has been gathering dust since February, probably because it does

not fit the Administration's avowed bias against plutonium and breeder reactors. This is despite the fact that this renewable source could solve a lot of our problems.

The E.R.D.A. report makes some important points. Among them, it says that plutonium safety is good and getting better. It says that, "...with full recognition of the need to provide adequate protection against theft...or sabotage of facilities involving nuclear materials, it is concluded that there is no safeguards-related reason to delay the development of fuel cycle facilities to demonstrate reprocessing, including plutonium conversion and storage."

Document 1554-D even makes the point that recycling plutonium is probably safer than not recycling it — as is the case now — for it eliminates the waste disposal problem.

Still the Carter Administration sits on this important report. At least two publications were given the bureaucratic run-around before being allowed to see copies. One even had to threaten use of the Freedom of Information Act to get this self-styled "open" administration to open up its files.

With luck, we may find Mr. Carter's opposition to the use of breeder reactors going the same way as his \$50 rebate.