

The danger of U.S. fusion budget cuts

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From a Feb. 9 statement by the National Democratic Policy Committee:

The Office of Management and Budget's proposed cuts in the budget for fusion-research work typify a counter-productive bias. Unless this bias is corrected, more or less irreparable damage will probably result.

For example, the single largest and cheapest cut in the Federal deficit would be action to force the Federal Reserve to reduce interest rates. For every one percent increase in the interest rate, the federal debt service costs increase cumulatively by between \$20 and \$25 billion! The increase of the federal deficit caused by Paul A. Volcker's collapsing of the federal tax base is another major cut in the federal deficit accomplished merely by combined executive and congressional action.

It is unfounded, unacceptable and contrary to the Constitution of the United States, to support or tolerate the subversive proposal that the Federal Reserve System may enjoy independence from the government of the United States in matters affecting the general welfare of the nation. Section 1, Article 8 of the Constitution awards to the Congress both the *power* and the *duty* to: "regulate commerce with foreign nations, and among the several states, and with the Indian tribes."

The same Article obliges the Congress to "promote the progress of science and useful arts."

The Federal Reserve System exists by sufferance of Act of Congress, and may be altered, directed, or summarily dissolved by Act of Congress. That, and that alone, is the essence of the matter.

The Federal Reserve System exists only for so long as the people of the United States, through their representatives in the Congress, judge it to be convenient to the general welfare to continue the current practices, executive appointments or very existence of that institution. To entertain the subversive proposal that this private institution, the Federal Reserve, constitutes in effect a fourth branch of the Federal government, is an abomination. To permit that private institution to consort with foreign financial powers to dictate the condition of the general welfare of our nation independently of govern-

ment is to condone a dissolution of the sovereignty of the United States.

Now that the new President is inaugurated, the time has come to act on the implications of his landslide election victory. It is time to bring to an end the great "environmentalist" hoax which has ruined us as an industrial nation over the period since 1967-68.

It is time to face the truth about the "environmentalist" hoax. This aggregation of irresponsible and also deliberately false arguments concerning the "environment" was launched with the issuance of a report authored by the London Tavistock Institute, with which the name of the celebrated Anatol Rapoport was associated. This report deplored the fostering of pro-science rationalist values among our people by the achievements of the National Aeronautics and Space Administration, and recommended curtailment of that and related scientific programs.

This report by the psychological-warfare division of a foreign power was reinforced by the emergence of a wide range of well-financed propaganda campaigns against continuation of technological progress both abroad and within our nation. Exemplary of those neomalthusian propaganda campaigns were the efforts of the World Wildlife Fund and the Club of Rome, as well as the curious proposal for transforming the United States from an industrial power into the "Clockwork Orange" world of a "Technetronic Age."

Lately, we are reminded often of the tens of millions of persons murdered under the direction of Albert Speer in the slave-labor system of the Adolf Hitler regime. Yet, faced with reminder of the lesson of tolerating the Hitler regime during the 1930s, we appear to sit bemused, unaware of an ongoing, "environmentalist" proposal to devote the coming 20 years to conducting genocide on the scale of billions of human beings. Worse, before the recent administration betook itself rather ungraciously from our nation's capital, it issued a report entitled "Global 2000," whose pages propose crimes a hundred times more extensive and more hideous than the evil promises of Hitler's *Mein Kampf*.

This nation requires an approximate minimum of 1,000 gigawatts of additional electrical-output equivalent of energy production capacity during the course of the coming two decades. Most of this must be nuclear energy production. On condition that we terminate the mass of sabotage accomplished legally through legislatures, courts and executive agencies, the required time for construction of nuclear plants can be reduced to between four and five years—rather than the ten to twelve imposed by environmentalist-caused red tape. Under those remedied conditions, nuclear energy is the most cost-stable, relatively the cheapest, and most desirable in environmental impact of any form of large-scale energy production.

All of this increase of energy capacity over the next two decades must be completed before commercial fusion reactors come significantly into the picture.

Taking into account world needs, the total required increase in energy capacity over the coming two decades, if we are to reverse trends toward genocidal famine and epidemic, must be between 5,000 and 7,000 gigawatts.

In rough terms, this means the need to regularly reprocess a charge of approximately one ton of nuclear fuel assemblies for each gigawatt. This means that up to 7,000 tons of fissionable fuel-charges must be maintained with aid of reprocessing by the end of this present century. Perhaps only 5,000 tons, assuming other-than-nuclear technologies take up part of the requirement.

If we compare the fuel requirements of such programs with the reproduction rates available in existing breeder-reactor designs, or in the second generation of fast breeders typified by France's Super Phenix or ongoing Soviet designs, breeder reactors are part of the spectrum of the fuel-supply problem, but are too slow in performance to begin to match overall requirements.

Dr. Edward Teller has proposed to construct a fission-fusion hybrid around the core of the "potato-reactor" design of High Temperature Gas-Cooled Reactor perfected by the Julich research laboratories in the Federal Republic of (West) Germany. He projects a ten-year start-up time for bringing such a developing fission-fusion hybrid on line. Consultation with other leading experts in the matter assures me that Dr. Teller's proposal is eminently supportable, and represents a significant improvement in efforts to solve the problem.

It is still grossly insufficient.

This leaves us with two problems not solved by breeder-reactor programs alone. First, there is the matter of the quantity of fuel required in the pipeline. Second, there is the not-so-insignificant matter of reprocessing thousands of tons of spent fuel charges annually.

Both problems require a shift of the total effort into dimensions outside both the breeder and fission-fusion hybrid. We must develop rapidly beam-accelerator technologies, already in development, which will accelerate qualitatively the process of developing appropriate fissionable fuel, and which will also provide us the "soft neutron" sources needed to destroy non-recyclable portions of the reprocessed nuclear wastes.

In any competent definition of categories of research and development, particle beam and fusion technologies are an indivisible unity of scientific specialization.

Any assumption that a practical trade-off exists between fission-breeder and fusion research programs is absurd. Just as fission energy development is needed to bring the economy over the hump into the period fusion technologies are commercially available, without immediate acceleration of progress in fusion research, it is virtually impossible to deal with crucial requirements of the fission development program.