

EXCLUSIVE

ENERGY

# Nelson Rockefeller's 'New Look' Energy Program

With Jimmy Carter's no energy program in shambles, Nelson Rockefeller is scrambling to merchandise a resurrected version of his 1975 "Energy Independence Authority" boondoggle as an alleged "energy-development" alternative.

The thrust of Rockefeller's \$900 billion "Project Independence" proposal is spelled out in the newly published book, *Power and Security*, whose co-authors are nuclear physicist Edward Teller, a senior research fellow at the Stanford University Hoover Institute on War, Revolution and Peace, and a long-time protégé of Nelson Rockefeller; Dr. Hans Mark, director of the NASA Ames Research Center; and Dr. John S. Foster, Jr., former director of the Pentagon Defense Research and Engineering unit. *Power and Security* is the fourth in the 14-volume series issued recently by the Commission on Critical Choices — the private thinktank established by Nelson Rockefeller in 1973 to help plot Rockefeller family strategy for the coming 25 years.

At first glance, the program elaborated in the volume's opening section, "Energy — A Plan for Action" by Dr. Teller, might well appeal to any citizen interested in seeing the U.S. regain its economic and industrial vitality. Isn't the book's call for *sharp step-up* in energy production a far sight better than Carter's no-energy program?

The answer is *no*. Despite *Power and Security's* attack on anti-technology environmentalists, its program for increasing energy output and consumption, and particularly its heavy emphasis on nuclear fission as one of the most important energy sources available — the program recommended by the Commission — is as fundamentally incompetent. Taken as whole, it betrays one main purpose: saving the Rockefeller financial interests from imminent collapse.

"Energy — A Plan For Action" is not a plan for developing the nation's energy resources and industrial potential. It is a blueprint for a taxpayers' bailout of the Rockefellers via skyhigh energy prices and a multibillion dollar federal handout to Rockefeller's energy-related holdings, under the guise of "energy development."

## Rockefeller Says No To Fusion

Assigned by the Commission "to develop a pragmatic program for meeting the United States' energy needs by the year 2000," as Acting Commission Chairman William J. Ronan puts it in his Introduction to *Power and Security*, that is just what Teller has done. In describing the framework within which he carried out his assign-

ment, Teller is quite candid: "Our objective is to make energy available in a manner that will avoid endangering the stability of the international monetary system and the economy of the world." In other words, Teller announces at the outset, the energy program recommended by Rockefeller's Commission will be tailored to fit the needs of a collapsing international monetary system, whose near-bankruptcy is the source of the current world economic crisis.

The real impact of this "pragmatic" bias comes through in *Power and Security's* rejection of fusion power as a *near-term solution* to the energy crisis. Teller paints a very bleak picture indeed of the ramifications of the energy crisis, predicting that:

*The energy shortage will cause a further slowdown of our economy and could lead to its collapse... The postwar generation — which has never experienced real hardship — may find out what deprivation and hunger mean... The situation abroad is worse... Trouble and despair are bound to react on our own country... An epidemic of bankruptcies similar to those that occurred in the 1930s cannot be excluded...*

Yet the Commission consigns fusion power, the only possible solution to the energy shortage, and the only fuel supply which would allow for a worldwide economic recovery and expansion, to the distant future!

Though Teller and co-author Mark acknowledge that fusion could provide "a clean source of energy with an inexhaustible supply of fuel," and that "intensive scientific research is needed to uncover the principles upon which the fusion reactor is to be based," they explicitly counsel against increasing federal fusion research allocations above the current stand-still level of \$100 million per year. The Commission proposes a \$900 billion overall expenditure on energy development within the next decade. Writes Teller, in an attempt to explain this:

*The realization of an economic power source based on controlled fusion is... in the distant future... What will determine the economy of fusion power will be the needed capital investment and the maintenance costs. It is obvious, even at the present time, that the system will be exceedingly complex and these costs may be quite high. It is, therefore, premature to assert that fusion power will develop into the ultimate energy source...*

*Past experience shows that from demonstration to economic feasibility, two decades are needed. While*

*the development may be faster in this case, the engineering difficulties are also greater. One may assume, therefore, that fusion power will not make a major contribution to the energy economy prior to the year 2000... The vigorous research effort should indeed be continued. But, due to the situation described above, there seems to be limited reason to consider energy shortage as a motivation for uncontrolled expenditures on controlled fusion...*

**Recommendation.** *United States research efforts should concentrate in two areas.*

*a. Continue research on magnetically contained controlled thermonuclear fusion on the present scale and under the present rules which encourage broad international cooperation. Commercial success by the year 2000 is possible.*

*b. Continue recently initiated research on laser fusion (which depends on concentration of high energies in a small volume). Encourage international cooperation on the model of the previous recommendation. Commercial success may be attained in the next century. This research, as well as the research recommended above, may produce interesting applications outside the field of massive energy production.*

Teller's attitude toward fusion has apparently not been changed by recent important breakthroughs in both the Soviet and U.S. fusion programs, nor by the assertions of various ERDA officials that, given proper funding, fusion's economic and scientific feasibility could be proven by demonstration reactors within the decade. At a conference sponsored by the Edison Electric Institute (EEI) two weeks ago, Dr. Teller reiterated the views he expounded in *Power and Security*, announcing that though "We will demonstrate fusion within three years. At that time it will cost \$1,000 per kilowatt hour, and will not become economical before the 21st century... Therefore President Carter was not right to mention it in his (April 20) speech."

Teller's unconscionable relegation of fusion to the 21st century stems directly from the Commission's attitude toward basic science. "We propose to increase production of energy sources *not requiring great innovative research*," (emphasis added) writes Teller.

Teller's co-author, Hans Mark, commits the same basic epistemological blunder in his section of *Power and Security*, entitled "Technology Development and the National Purpose." Mark's overall approach is premised on his separation of basic scientific research, technological development and engineering into separate, *discrete* categories, and on his recommendation that technological development — as opposed to "basic scientific research" — be given top national priority. Such a "quick-fix" approach at this juncture — when only fundamental scientific breakthroughs in especially plasma physics can guarantee meaningful technological development — will ensure that a long-term solution to the energy crisis is never achieved. The rationale behind the Commission's anti-science bias, as offered by co-author Hans Mark, is ludicrous:

*Why is it necessary to take pains to define the process of technology development so carefully? The answer lies in the exponential growth of basic scientific knowledge. This growth in new knowledge, especially in the past few decades, has greatly increased the number of possible choices for new technology developments. In the past, the rate of scientific progress was such that technology developments were generally undertaken as a natural consequence of scientific discovery. Each new scientific discovery was, in due course, developed into new technology and then into engineering projects. That is no longer true today. Since technology development is generally very expensive compared to basic scientific research, choices must be made. We simply do not have enough money to support all the possible technology developments that could be based on current scientific knowledge... Our mechanisms for making choices regarding the initiation of new technology developments are still rudimentary. We have, as we shall shortly see, an established pattern, but it is not at all clear that the pattern we have is properly geared to the national purpose.*

With fusion development thus ruled out, the only "energy development" programs which the Commission can offer are jacking up energy prices through decontrol and deregulation, supposedly to encourage exploration and increased output, and such "advanced technologies" as the Nazi-developed and highly inefficient coal gasification method, and the equally regressive oil-from-shale technique. Apparently, this means among other things, the Soviet Union which already has a marginal military advantage will continue to expand the "technology gap."

### '1985 Targets'

In the section of *Power and Security* entitled "1985 Targets," Teller basically describes how Rockefeller intends to implement an energy autarky in the U.S. based on increased domestic energy output, a large step up in U.S. "energy exports," and a harsh domestic "conservation" program:

*The main thrust of our proposal is to establish badly needed and realistic objectives and a plan for achieving them by the year 1985. The existence of a plan and public understanding of its objectives will make it easier to accept temporary difficulties and to avert dangerous developments. The elements of the plan include:*

- 1. Economic and effective use of energy.*
- 2. Substantially increased oil and gas production in known domestic basins.*
- 3. Much greater use of coal.*
- 4. Public acceptance of and greater use of nuclear energy.*

*Our purpose is to establish by 1985 a strong energy position that can serve as a basis for healthy development of our economy and that can provide badly needed help to our allies by exporting coal and oil*

from the United States. We propose to increase production of energy sources not requiring great innovative research. These are oil, gas, coal and nuclear energy. As early as 1980, our oil imports and coal exports may balance if we pursue this program vigorously.

Our target is a domestic production of energy by 1985 that is 83 percent above the level of 1973, that is, an increase of 5.0 percent per year. This is generally more ambitious than plans proposed by others since the embargo. U.S. domestic demand for energy would increase only by 36 percent, that is, by 2.6 percent per year or by 1.8 percent per person per year. This compares to an annual growth of 3.2 percent per person per year during the last ten years...

If our target is reached by 1985, the United States could export 13 percent of the energy produced domestically. This would include the export of a little less than three million barrels of oil per day, an amount which may be almost 10 percent of the expected oil requirements of our allies. In addition, we would export about a million tons of coal per day. These exports should have a moderating influence in the oil market and would suffice to protect any one country among our allies from the effects of an oil blackmail...

## Conservation A Must

Lest anyone be temporarily seduced by Teller's predictions of increasing energy growth and consumption, note that conservation and high energy prices are an integral part of the Commission's program:

*Our target for 1985 is to constrain U.S. domestic consumption to 103 quads and to export 15 for a total demand of 118...*

*To meet these targets, we will have to slow the rate of growth of domestic consumption... The key is conservation. (emphasis added) Consumption can be influenced more rapidly than production. It is both necessary and possible to reduce U.S. energy consumption immediately... The first step is the development of a national conservation ethic. A substantial and lasting contribution can also be made by the use of energy-conserving technology in our industry and our homes...*

*We must begin at once a serious and continuing effort to conserve energy — particularly oil and gas... The most serious problem is petroleum... we must find ways to live with less petroleum...*

Among the specific conservation measures Teller prescribes are:

*Strict enforcement of the 55 mph speed limit; a conservation ethic for private automobiles...; Cars with better gasoline mileage must be introduced. One straightforward way to do this may be to discourage the use of heavy cars by imposing a substantial annual federal license fee based on weight;...Permitting electric rates to rise...to*

*discourage waste of electricity; Replacing bulk metering of electricity in apartment houses with the metering of the consumption of individual tenants; Requirements for good insulation in new dwellings if a government loan is to be available...*

*Altogether, we propose to invest, by 1985 \$100 billion to save from 5 to 10 quads per year. This corresponds to an investment of more than \$20,000 on the average to save a barrel of oil per day in the favorable case and twice that amount in the unfavorable case...*

*More than half of the capital expenditures on energy-saving devices should be spent before 1980. The public must participate in an effective drive to use less energy. The conservation ethic should be taught in schools; publicity and government initiatives are indispensable. (emphasis added)*

## The Trillion Dollar Payoff

And how much will this program for saving Rockefeller's hide cost the American taxpayer? Let Teller explain:

*The cumulative capital expenditures required to carry out this program up through 1985 are approximately \$840 billion. This amounts to a yearly investment of almost \$80 billion in energy alone, which is about four times what we have spent for this purpose in the past. We believe that this is the most difficult condition that needs to be fulfilled if our plan is to be realized although heavy expenditures will be required in any case during the next decade. In order to finance this plan, other capital intensive programs may have to be cut back and capital formation must be stimulated both by direct and indirect government action. (In other words, liquidity will be siphoned off from other areas of capital investment into the development of largely Rockefeller-owned energy interests —ed.) It may be necessary to increase the fraction of the gross national product going into private investment. How we do this and what we are willing to sacrifice for this purpose are critical choices connected with any energy plan.*

*Of the \$840 billion, approximately \$200 billion is to be spent on electric plants, including transmission and distribution systems... The capital investment to be spent on coal is considerably smaller, approximately \$40 billion. Coal is our largest domestic source of fossil fuel and is a relatively inexpensive form of energy. We plan to expand its production most vigorously.*

*Oil and gas account for a capital investment of \$300 billion. About \$270 billion of this amount will have to be spent to meet increased domestic requirements while eliminating imports.*

*Approximately \$50 billion of capital investment is to be spent on environmental improvements... this expenditure is not excessive.*

*Approximately \$100 billion in capital investments will be needed to introduce energy-saving devices. We assume that funds would be better spent on utilization of energy rather than on the production of more energy wherever this is economically feasible...*

*In the period through the year 1985, \$150 billion will be needed for investments which will produce energy*

after 1985. This gives a total of \$840 billion...

*Of this \$840 billion, approximately \$50 billion is to develop the capability to export 9 quads per year or about a million tons per day of coal and 6 quads per year or nearly three million barrels per day of oil... Beyond the \$840 billion of capital expenditures, about \$40 billion will be required for research and development... This corresponds to an annual research and development expenditure of about \$4 billion — an amount not very different from the present practice if spending by government and by industry is included. The present research and development expenditures are not in an ideal balance. Industry emphasizes developments that are to bear fruit within the next couple of years. Government research, on the other hand, is oriented toward the next century. More should be done to take care of the next ten years. If we emphasize better exploitation of fossil fuels (better drilling equipment and advanced methods of fuel recovery) and short-term development of nuclear reactors (greater safety and a switch to abundant thorium as the main fuel), together with other medium-term developments, the cumulative expenditure of \$40 billion for research and development will be an excellent investment...*

*In addition to the sums given above, about \$20 billion will be required through 1985 for pilot, demonstration, and initial production plants to make sure of the technical and economic feasibility of new fuel production processes.*

As referenced earlier, the Commission on Critical Choices recommends the development of energy technologies which are generally far less efficient than other technologies which are readily available for development such as fusion. This bias — which stems directly from the Rockefellers' need to protect the book value of their current investments in fossil fuels and fission — is most immediately reflected in the Commission's emphasis on coal gasification, oil-from-shale, and the substitution of the thorium fuel cycle in place of plutonium in breeder reactors. It should be noted that the fusion R and D program will be adversely affected by halting developments of the plutonium cycle in the Liquid Fast Metal Breeder Reactor. Teller's comments on these and related techniques explicitly reflect this bias:

*The proposal which we present here differs from other recent studies in two important points. One is that with respect to the international situation we have taken a positive stance of achieving not merely independence, but interdependence, whereby the United States will be in the position to make a positive contribution to the world economy.*

*The other difference is that we are emphasizing some technical possibilities which have not, as yet, received general acceptance. One of these is to incorporate thorium in present nuclear reactor designs to produce uranium-233 as a readily available substitute for other nuclear fuels. Used in this manner, thorium, which is much more abundant and available worldwide, can solve the nuclear fuel shortage problem without a lengthy and expensive development program. (Teller testified in Congress recently*

*in favor of thorium as against plutonium —ed.) The other is the use of in situ processes which, after a relatively brief research and development effort, may well make oil from shale and gas from deep coal deposits available sooner and at much less expense, either in dollars or in environmental damage, than equivalent surface processes.*

Teller's "Plan For Action" also provides for the establishment of government institutions capable of overseeing the Rockefeller-desired militarization of the economy, specifically the supply and allocation of fuel, in the event of an "emergency":

*The security of a substantial fraction of our oil imports will remain in jeopardy in the near future. Announcement of a plan for energy self-sufficiency may tend to discourage an oil embargo. It is necessary, however, to establish emergency measures, such as the legal and administrative bases for emergency allocation, rationing and distribution systems, to be taken in case a new energy shortage should develop for whatever reason. These plans will reduce the impact of any shortage. Measures which are adopted jointly by the oil-consuming countries might be particularly effective.*

#### "Recommendations For Urgent Action"

Following are major portions of the concluding section of "Energy — A Plan For Action." Within this section, entitled "Recommendations For Urgent Action," are contained the Commission's strategies for jacking up fuel prices through the ceiling (decontrol of domestic oil, deregulation of natural gas, electric utility rates hikes to prompt "conservation," etc.); for providing a multi-billion dollar, federal handout to the Rockefeller family under the guise of "energy research and development;" for delaying development of fusion power by keeping funding at an inadequate level, and for developing the mechanisms for total Rockefeller control over all energy sources and distribution:

#### ENVIRONMENT

Recommendation. *The federal government should take additional steps to protect the environment by:*

*\* Prohibiting the import of liquified natural gas (LNG) until the risks associated with LNG ships are reduced to the levels commensurate with, say, nuclear electric generating plants.*

*\* Reducing the chance of spills in harbors, rivers, and bays by establishing and enforcing strict rules on control of traffic, use of pilots, and foul weather procedures.*

*\* Reducing the chance of oil leaks from offshore drilling by setting and enforcing minimum standards on procedures and equipment.*

*\* Imposing a levy on surface-mined coal which is invested in a trust to ensure that funds will be available to rehabilitate or improve surface-mined areas.*

Recommendation. *The federal government should*

also take steps to improve confidence of the public in the safety of nuclear reactors and in the security of nuclear power materials by:

- \* Requiring that nuclear reactors be constructed underground, underwater or in nuclear power parks.

Recommendation. The federal government, in cooperation with the states and industries concerned, should make appropriate plans for the necessary influx of people into the sparsely populated lands where low sulfur coal and high grade oil are currently found.

### PRODUCTION

**OIL AND GAS.** The current worldwide energy crisis is closely connected to the shortage of indigenous supplies of oil and gas in many countries and the high prices of imported oil and gas. Increasing domestic supplies of oil in the United States will help relieve worldwide shortages and will have an impact sooner than substitutions of the other energy sources.

Recommendation. The federal government should stimulate the production of domestic supplies of gas and oil by:

- \* Expediting the submission and processing of environmental impact statements and the leasing of federal lands to facilitate the exploration of new areas, particularly in Alaska and on the outer continental shelf.

- \* Undertaking a federal exploratory drilling program within the coterminous states, giving priority to areas where oil and gas are most likely to be found to arrive at a better estimate of available oil and gas reserves, especially before leasing federal lands.

- \* Making public lands available under federal leases which require little or no front-end money and which are awarded on the basis of guaranteed exploration efforts within specified time limits. This should include appropriate incentives for production or penalties, including loss of lease in case of inadequate performance.

- \* Permitting industry profits adequate to raise, internally or in the market, the necessary capital for needed additional exploration and development and to provide the industry incentives to develop new fields of processes. This might be accomplished in part by eliminating the price differential between "old" and "new" oil and gas and by establishing suitably indexed price floors for oil and gas production...

- \* Establishing a joint federal government industry committee to work with the oil and related manufacturing industries to ensure the availability and appropriate allocation of scarce rigs and materials.

**COAL.** Coal comprises the most abundant fossil fuel reserve in the United States and can be substituted for oil and gas in many non-transportation uses.

Recommendation. The federal government should implement an aggressive program to utilize our abundant deposits of coal in lieu of natural gas and oil by:

- \* Resolving pending legislation regarding surface mining.

- \* Making available public lands containing low sulfur coal under federal leases which require little or no front-end money and which are awarded on the basis of guaranteed production within specified time limits with appropriate incentives for production or penalties, including loss of lease for lack of performance.

- \* Providing guarantees for long-term loans of needed capital to coal producing and consuming companies.

- \* Ensuring the adequate production of coal mining and transportation equipment (such as drag lines, hopper cars, diesel engines, barges, freighters, pipelines) and the improvement of railroad roadbeds, harbors, docks, and canals needed for the transportation of coal by setting appropriate interstate rate structures and by guaranteeing loans, if required.

**NUCLEAR REACTORS.** Nuclear reactors can provide an important alternative to fossil fuels as the heat source for electric power generation.

Recommendation. The federal government should take aggressive action to increase quickly and substantially the use of nuclear electric generating plants in the United States by:

- \* Establishing with industry, standardized reactor designs and, with states and local governments, standardized reactor siting criteria, which will be used as criteria for licensing new reactors and approving current reactor proposals which have not been approved.

- \* Streamlining licensing procedures by establishing federal guidelines and taking appeals out of courts, delegating them instead to a quasi-judicial administrative agency.

Recommendation. The federal government should eliminate potential future bottlenecks in the expanded use of nuclear reactors by:

- \* Increasing the price offered for uranium oxide or yellow cake to encourage more exploration and mining.

- \* Permitting the import of uranium oxide.

- \* Contracting for additional facilities to process spent fuel rods and nuclear waste.

- \* Providing incentives to encourage the installation of new fuel cycles utilizing abundant thorium.

### OIL SUPPLY SECURITY

Recommendation. The federal government should take steps to assure that continued supplies of oil are available by:

- \* Providing the president with standby emergency allocation, distribution, and rationing powers to be used should oil supplies be interrupted...

## RESEARCH AND DEVELOPMENT

### NEW TECHNOLOGY

*Recommendation. The federal government should fund, partially fund or encourage through appropriate tax incentives, research on and development of improved methods for:*

- \* *Discovering new gas and oil deposits in the United States and offshore.*

- \* *Recovering gas from tight formations using hydrofracturing, high explosive or nuclear techniques.*

- \* *Removing sulfur from coal before, during or after burning.*

- \* *Mining underground to improve the percentage of coal removed, to increase the productivity of miners...*

- \* *Making high Btu gas, methanol, and synthetic petroleum from coal emphasizing in situ processes.*

- \* *Incorporating thorium into reactor designs (for example, CANDU, HTGR, Rickover light water) to produce uranium-233.*

- \* *Processing uranium-233*

- \* *Using uranium-233 in lieu of uranium-235 in nuclear power reactors.*

- \* *Other breeder reactors including alternatives to the liquid metal fast breeder reactor (LMFBR)...*

- \* *Removing in situ oil (and possibly minerals, such as alumina) from high grade (greater than 15 gallons of oil per ton) western shale employing high explosives and, later, where appropriate, to scale up to larger production rates, using nuclear explosives to rubble the shale.*

- \* *Recovering economically in situ oil (and possibly minerals, such as uranium) from low grade (less than 10 gallons of oil per ton) shales which are found in many parts of the world as well as in the United States, for example, the Chattanooga shales.*

- \* *Removing nitrogen and sulfur economically from shale oil to make it an acceptable refinery feedstock.*

### DEMONSTRATION PLANTS

*Recommendation. The federal government should partially fund a few each of the following types of demonstration scale plants to determine the technical and economic factors related to large scale production by private industry:*

- \* *In situ coal gasification.*

- \* *In situ shale oil production.*

- \* *Methanol from gas.*

- \* *Synthetic crude oil from coal (to provide insurance against unforeseen difficulties in extracting oil from shale).*

- \* *Surface retorting and recovery of oil and minerals, such as alumina, from high grade (greater than 25 gallons of oil per ton) oil shales to provide insurance against unforeseen difficulties in or costs associated with in situ recovery and to determine environmental feasibility.*

### UNDERGROUND NUCLEAR PLANTS.

*Recommendation. The federal government should encourage the investigation of the engineering, design, and maintenance problems and costs of*

*siting reactors underground to improve safety and security by sharing in costs of designing and constructing a large nuclear power reactor underground.*

### INTERNATIONAL COOPERATION

*Recommendation. The federal government should encourage other nations to participate in joint research and development and should share the results with all nations directed toward:*

- \* *Making gas, methanol, and synthetic oil from coal, sharing the results freely with all nations.*

- \* *Safer and more efficient reactor designs including breeder reactors.*

- \* *Recovering oil and minerals from low grade (less than 15 gallons oil per ton) shale.*

### GENERAL AND INSTITUTIONAL

*Recommendation. The federal government should establish an agency (which might be called the National Resource Mobilization Corporation) to make guaranteed loans and to purchase products above market price to encourage the development of new energy sources by the private sector or provide subsidies for these products. The financial resources for this agency might come from a tax on energy production or use.*

*Recommendation. Through an appropriate federal agency (such as National Resources Mobilization Corporation referred to above) the federal government should contract to purchase from each of five different companies, for example, 10 million barrels of oil produced from shale at \$20 per barrel and another 40 million barrels from each of five companies at \$12 to \$14 per barrel...*

*Similarly, the federal government should contract to purchase from each of six different companies, for example, 5 billion cubic feet of pipeline quality gas made from coal gasification at \$3 per thousand cubic feet and another 20 billion cubic feet from each of six companies at \$1.50 per thousand cubic feet...*

*Recommendation. The federal government should enact legislation establishing an Energy Trust Fund with provisions controlling the expenditure of funds in a manner similar to the Highway Trust Fund. All taxes, fees, and tariffs levied after January 1, 1976 against energy supplies or the companies or individuals producing or using them should be put into the Energy Trust Fund. Disbursements from this fund should be made only to increase the supply or the availability of energy.*

The Commission's recommendations, presented here in their near-entirety, show up the report's title, *Power and Security*, in a particularly ironic light. With the scrapping of basic research in favor of quick-fix, "pragmatic" approaches to the energy problem, Nelson Rockefeller's Commission on Criminal Choices is guaranteeing that the U.S. faces a future of powerlessness, insecurity, and most likely obliteration.

— Kathleen Murphy