Pittsburgh Conference:

Scientists, Industrialists, Labor Meet To 'Expand Human Resource Base'

"More important than the amount of money we recommend for fusion power is the commitment — to do the job and pay the bill," a top federal science official told the Conference on Energy and Technological Development here today. Dr. Stephen Dean, assistant director of the Energy Research and Development Administration's magnetic confinement fusion program, told the audience of over 120 industry and institutional representatives that the government's fusion budget could be at least doubled in an efficient, rapid development program. How soon the virtually limitless potential of fusion power becomes a commercial energy source, Dr. Dean stated flatly, depends on how much funding fusion research receives.

The conference, initiated by the Fusion Energy Foundation and the Pittsburgh-area Three Rivers Coalition for Science and Technology, was subtitled "Solving the Energy Crisis," and participants representing local, national, and international science and industry heard a series of high-level presentations on the only practicable solution to the energy problem — what FEF Director Dr. Morris Levitt termed "the expansion of the human resource base."

Conference sponsors which included the Pennsylvania Rural Electric Association and the Allegheny Electric Cooperative, declared the gathering an "extraordinary success" despite the Carter Administration's heavy-handed interference, through the FBI and other agencies, to prevent the attendance of previously committed industry and labor representatives. The loudest and longest applause during the day came in response to the announcement that a federal court judge had just issued a temporary restraining order against Carter's Special Assistant on Energy James Schlesinger and the FBI, ordering them to cease all such tactics against the conference's participants and sponsors.

The Carter Administration's proposed energy program was harshly criticized by many conference speakers. In the concluding session this evening, Fusion Energy Foundation Director of Research Uwe Parpart declared, "The Administration's policy is a profound political challenge, because it challenges all the reasons that the American Revolution was successfully fought 200 years ago." "We have a tremendous fight on our hands," attorney John Bradley, the co-chairman of the Three Rivers Coalition, added, "but we can win it."

The press here has given prominent coverage to the conference. Both the NBC-affiliated WIIC-TV and the local CBS television station, KDKA-TV, featured the conference on their evening news shows tonight, and the FEF's Dr. Levitt will be on a two-hour KDKA radio talk show this evening. Excellent coverage also came from this city's second largest radio station, KQV. But the national press apparently proved an easy mark for the Carter Administration's counterorganizing efforts, and news of this historic conference has thus far been censored from the national media.

The international significance of the event is indicated by the range of its participants. Representatives of local industry, journalists, and scores of area physicists, nuclear engineers, and other scientists were joined by attendees from major and minor oil companies and several foreign firms and embassies. Utility companies and machine tool industries were well represented. Also present were two representatives from the offices of U.S. Rep. Dent (D-Pa.) and U.S. Rep. Gaydos (D-Pa.)

The Conference Sessions

The conference's deliberations extended over a full day of presentations and panel discussions, an intensive 12 hour educational experience that the participants found remarkable both for its scientific competence and its political excitement.

The conference was welcomed by its co-chairman, George Shankey of the Three Rivers Coalition. First on the speaker's list was FEF Director Levitt, who delivered an extraordinary presentation on the proper conceptual approach to the energy problem, which he described as "the necessity to expand the human resources base."

The development of energy technologies, not "discovery" or "conservation" of natural reserves of fuel per se, actually qualitatively redefines what exists in nature for use as a resource by man, Levitt emphasized. He proceeded to summarize one million years of human evolution and its mediating role in the development of the biosphere, proving the positive connection between increased "energy consumption" and cohering increases in rates of human and ecological development — expansions in the human resource base that also represent the greater relative potential for continued development in this way. Levitt's discussion left the upside-down notions of "conservation" and "austerity" in tatters.

Levitt was followed by panelist William Simmons, a Pennsylvania construction engineer experienced in the building of nuclear plants, who posed a simple question regarding the Carter program to his audience: "Why

does the United States want to turn itself into a backward nation?" Imagine connecting solar power to our present power grid — "it would drive utilities crazy. We'd be shipping energy from one part of the country to another as the sun came up?" Solar power, he documented, is an advanced technology only if it advanced in the context of a fusion power economy.

On the same panel, Warren Lamm, Executive Assistant to the Pennsylvania State Legislature's Agricultural Committee, addressed the "terrific productivity" American agriculture has achieved on the basis of new energy technology. Other countries now gauge their own productivity as a percentage of the United States, said Lamm, who outlined the past 50 years of changes on the farm "from manpower to machines, that is, more energy-intensive," to the point that today, while 16 percent of all U.S. energy is consumed in producing and processing the U.S. food supply, only three percent of the U.S. population is required.

The morning session ended with Three Rivers Coalition co-chairman Bradley, speaking on "Energy and Law." Bradley at one point provoked a member of the ennvironmentalist Sierra Club when he attacked "extremists" associated with Ralph Nader for filling the courts with legal suits whose purpose is "to obstruct orderly progress." The nuclear engineer from the Sierra Club was enraged — but not at the speaker. He demanded to know how safeguards could be set up against the extremists' "ridiculous Interventionism."

Immediately Available Technologies

This afternoon's session refocused the conference theme on specific, available or accessible energy technologies and the fight to realize them.

FEF nuclear engineer Jon Gilbertson spoke on technologies transitional to fusion power, the fast-breeder reactor (now banned by the Carter Administration), integrated industrial processes like the Jordan steel process, and the promise held out for that industry by the subsequent development of the "fusion torch."

"How can you exceed an apparently limited resource base?" asked Gilbertson. Uranium supplies that are "naturally" fissionable will last only 15 years, but the fast-breeder reactor and plutonium recycling process, so much more efficient than the conventional light-water reactor, overcomes this "resource limitation." He considered the similar "alarming" rate of resource exhaustion permitted by the Jordan process in steelmaking, which must lead to a shortage of iron ore — this made both necessary and permissible by the subsequent application of the fusion torch, which will entirely free the steel industry of its dependence on high-grade iron ores, a total redefinition and expansion of "natural resources."

The FEF's Marsha Freeman supplemented Gilbertson's talk with a film-showing and talk on the Soviet Union's demonstration MHD (Magneto-Hydrodynamic) electricity plant. The MHD generator, by reducing coal to a plasma (of lower temperature than that required for fusion), operates with extraordinary coal-consuming efficiency, making it, and not coal gasification and the rest of the Carter package, a genuine transition technology toward fusion power.

The final afternoon panel focused on the feasibility of fusion itself, and featured ERDA's Dr. Dean. Controlled fusion "break-even" — that is, a fusion reaction producing more energy than it takes to make it — is five years away, he suggested. "We may not have a demonstration reactor until 1990," he said, but added that it will either be "funded less and be achieved more slowly, or funded more and achieved more quickly."

FEF nuclear physicist Dr. Steven Bardwell responded to Dr. Dean's presentation with a call for a $6 billion funding program for fusion research and a more ambitious 1980s timetable. Involved are basic problems of research and development, he said, but they are problems we can solve — and quickly — if we devote sufficient resources to doing so. When Dean expressed caution about the $6 billion figure — current funding is in the $300 million range — a representative of an Ohio machine tool manufacturer rose and said, "How many dollars does this country spend to import oil that's been vastly inflated in price? Six billion dollars just doesn't sound like that much to me."

"A Profound Challenge"

The evening session was opened by conference co-chairman Shankey, who, noting that today is his 70th birthday, said "I've gone through two world wars; and I've seen poverty and dangerous times." But these crises, he concluded, like the crisis today, are also "the birth-pains of opportunity."

Speaker Uwe Parpart, the FEF's Research Director, began his presentation on the same note. The challenge we face today is analogous to that which gave birth to the Renaissance, he said, and future generations will look back on what we are doing much as we look back to the Renaissance which produced us.

Parpart located that challenge in terms of the alarming national security danger that the Carter Administration's energy plan and its associated programs represent. "National security has nothing whatsoever to do with military power per se," he told the conference. What is necessary is to "examine the issues that arise between nations that lead to warfare and conflict." If two nations, such as the U.S. and the Soviet Union, both operate on the basis of a general development strategy, he explained, peripheral issues may cause conflict but there remains sufficient "elbow room" for coexistence. But if development and economic expansion are seen as no longer possible, then conflict becomes unavoidable because this stagnation must necessarily lead to deadly competition over dwindling resources. "The Administration's energy policy signals a commitment such that we will necessarily arrive at an adversary position to anyone who 'gets in our way' in dealing with shrinking energy resources."

Thus the Carter policy "is *not* an energy policy," Parpart stressed, "—it's a policy for *control of raw materials*," that intends to make sure that no new resources can be developed to break through that control. Carter's ban on plutonium and the breeder reactor, which effectively reduces nuclear power to just another dwindling increasing high-priced resource, shows the real content of the Carter proposals. "In fact Carter's plan makes no provision for conservation at all!" Par-

part said, for it says nothing about developing technologies to more efficiently use existing resources, such as coal MHD.

"Our attitude (toward the energy problem) must be 'This is the problem we are determined to solve,' " Parpart concluded, "not, 'This is the problem we propose to cave in to.' " Historically the United States has always been a world science center, Parpart said. Now the carter plan presents us with "a profound political challenge, because it challenges all the reasons that the American Revolution was successfully fought 200 years ago."

Following Parpart, John Bradley of the Three Rivers Coalition said, "As you may be able to tell, I'm almost completely overwhelmed. We started planning this conference in February, and we never dreamed it would be as important as it has turned out to be. The stature of the people present here is extraordinary," he said, and the Carter Administration's efforts to stop the conference "can be considered a backhanded compliment to that importance. We've posed the only positive program."

The full proceedings of the Pittsburgh "Conference on Energy and Technological Development: Solving the Energy Crisis" will soon be available from the Fusion Energy Foundation. The cost for the booklet will be $50. Advance orders should be sent to:

Fusion Energy Foundation
231 West 29 Street
New York, N.Y. 10001

Fusion Bills Pass In Illinois And Pennsylvania

The Pennsylvania House of Representatives passed a memorial April 26 calling on Congress to adopt an expanded fusion energy program by a landslide 177-23 margin.

Passage of the memorial, a House Resolution which explicitly criticized the Carter Administration's planned cutbacks in the U.S. fusion and fast breeder fission programs, followed on the heels of approval of a similar fusion memorial in the Illinois House of Representatives April 22, by an almost-unanimous 139-1 vote, and brings to five the number of fusion memorials around the nation which have passed at least one house of a state legislature.

The use of the memorials, which advise Congress and the President of the deliberative sentiments of state lawmakers and local constituents, is an institution dating back to the early years of the U.S. republic, but which has not seen such coordinated use around a vital national issue for decades.

Fusion memorials have now been introduced in 11 states, and two, in Delaware and Pennsylvania (which required no action beyond the House) have already been sent to Carter and to the U.S. Congress. A third fusion memorial, in Maryland, has passed both Houses of the legislature, and is awaiting the signature of ailing Gov. Marvin Mandel.

Illinois Rips Zero Growth

The Illinois memorial, which now requires action by the Senate, repudiates "those policymakers who through their adherence to 'zero growth' would act to subvert the historic American commitment to progress" and "demobilize the American economy."

Modeled on a similar resolution which passed the Washington State Senate last week, the Illinois bill was initiated by the U.S. Labor Party and sponsored by Reps. Theodore Meyer (R-Chicago), A.C. Bartulis (R-Beneld), Betty Lou Reed (R-Deerfield), and LeRoy Van Duyne (D-Jolliet).

Chief sponsor and floor manager was Rep. Meyer, a veteran legislator who has advocated the development of high technology energy sources since at least 1969, when he spoke in favor of the plasma-based MHD coal process Meyer bypassed the legislature's committee structure — where a logjam of some 3000 bills awaits consideration in the next 10 days — in order to secure its rapid passage.

The resolution calls on Congress to prevent the deindustrialization of the U.S. "by implementing policies of industrial research and development, and the development of controlled nuclear fusion power." The measure calls on the U.S. to "undertake the necessary enabling measures to accelerate and broaden the research and development of thermonuclear fusion," and to "enact complementary enabling measures to develop fossil fuel usage and nuclear energy expansion under existing technologies to bridge the period between the present and the mid-1980s, when controlled fusion energy can come on line."

It also asks measures "to foster the expansion and development of commerce and industry by the development of stable capital goods markets," and "to strengthen basic scientific education."

Carterites Crushed in Penna.

The Pennsylvania memorial was passed April 26 after sponsors, led by Rep. Ivan Itkin (D-Pittsburgh), by a vote of 182-11 cursched efforts by a tiny minority of pro-Carter forces to recommit the bill to committee.

Besidès attacking the Carter fission and fusion budget cuts, the Pennsylvania memorial calls for increased energy consumption by the nation as a whole, stating that "the living conditions for all of the residents of the United States are directly related to an abundance of energy for their comfort, convenience and mobility."