AEI Energy Policy

In the News and Comment article (3 Oct., p. 31) on Americans for Energy Independence (AEI), Deborah Shapley gives a detailed, generally objective—but in one fundamental aspect, misleading—interpretation of the dispute between the executive committee of AEI's board of directors and our resigned president, Admiral Elmo R. Zumwalt, Jr.

For a fledgling organization like ours, the Admiral's resignation was a difficult trauma. Those executive committee members who voted against him in a policy dispute fully appreciate the enormous contributions he made to AEI. His great prestige, personal dedication, and energy make replacing him a difficult task.

Contrary to Shapley's reporting, the split did not come about over the question of whether AEI should give preference to the development of one form of energy over another. Rather the circumstance was that, despite the clear statement of objectives announced at the time of AEI's establishment in June, the staff had, in the view of the executive committee, paid inadequate attention to the implementation of policies and programs designed to attain these objectives.

In AEI's original statement of objectives the organization indicated that it sought to help the United States achieve substantial energy independence *in the near-term* by stressing rapid utilization of all readily accessible domestic fuel resources, whether coal, uranium, oil, or gas. As all AEI statements so far have emphasized, we were not and are not "favoring one domestic source of energy at the expense of another." To suggest otherwise, as the former acting executive director Bruns Grayson asserted to Shaply, is simply incorrect.

When the former staff, moreover, tried—as it did—to shift AEI's emphasis from near-term goals to long-term objectives (such as solar energy), without clearly discriminating between the two types of energy sources, confusion about AEI's purposes was bound to set in. As a result of this, the executive committee felt it essential that Grayson's successor be thoroughly knowledgeable and experienced in the energy field to enable him to better develop and communicate AEI's policies. Unfortunately, when differences developed on this issue, our president resigned.

Letters

All of this is past history, however, and, as should become abundantly clear in the next few weeks, the AEI ship has not only been rapidly stabilized but is already moving fully ahead. For instance, four chapters have been founded in four Northeastern states. Not only has the patient recovered, but in my view he is far stronger today than at any previous moment.

Of course, AEI remains open to all forms of energy development and utilization, but our primary purpose is to assist and prod the nation in its pursuit of substantial energy independence in the nearterm and not merely at some distant future.

In pushing its policy development process, AEI has been assisted by some excellent cooperation from two of our board members-I. W. Abel, president of the United Steelworkers of America, and Joseph Keenan, secretary-treasurer of the International Brotherhood of Electrical Workers. Specifically, the Steelworkers have loaned us the services of Francis X. Gannon, who has extensive experience in governmental affairs and environmental economics, to help our acting president, former Massachusetts governor Endicott Peabody, and our executive committee. AEI is an organization with a broad and growing base of support, and nothing illustrates this better than the cooperation we are receiving from labor.

HANS A. BETHE Americans for Energy Independence, Suite 1405, 1500 Wilson Boulevard, Arlington, Virginia 22209

Letter to *Izvestiya*

Two years ago, *Science* (26 Oct. 1973, p. 334) carried my translation of a letter published in the 29 August 1973 issue of *Pravda*; the letter, signed by 40 members of the Soviet Academy of Sciences, attacked the activities of Andrei D. Sakharov.

Now that Sakharov has been chosen to receive the 1975 Nobel peace prize, a letter condemning his selection appeared in *Iz-vestiya* (26 October) and was signed by 72

Soviet academicians. Of the 40 academicians who had signed the *Pravda* letter 2 years ago, 31 also signed the recent *Iz-vestiya* letter (1).

The following is a translation of the letter to *Izvestiya* with the names of the 72 Soviet academicians who signed it.

Soviet scientists, as is all peace-loving society are deeply satisfied with the positive development within the international community toward the relaxation of tension and the strengthening of peace. It was with hope in the future that we welcomed the results of the Helsinki Conference on Security and Cooperation in Europe as an important step toward universal peace. Soviet scientists, together with progressive scientists in all countries, always have supported peace, friendship, and cooperation among peoples. We fully subscribe to and support the Soviet Union's peace-loving policy. We, therefore, must express our bewilderment and indignation in connection with the Norwegian Storting Nobel Committee's award of the peace prize to Academician Sakharov, whose activities are aimed at undermining the cause of peace and peaceful equal relations among states, and in kindling mistrust among peoples.

People of good will in the world know that the USSR consistently pursues a policy of peace and relaxation of international tension - namely that the Soviet government is one that has shown the initiative in and consistently advocates the banning of nuclear weapons tests, the curbing of the arms race, the reduction of arms and armed forces, the observance in relationships among states of the principles for the respect of sovereignty and the noninterference in internal affairs, and the renunciation of force and the threat of force. Sakharov, however, fights against this policy and urges the West not to believe the Soviet state, urges the West to pursue a "hard" line with respect to it, and to demand as "payment" for détente, the abandonment of the basic achievements of Soviet power, and essentially the granting of freedom for the development of capitalism in our country. He speaks of the danger of détente, and in accord with the anti-Soviets in the West, frightens people about the military threat that allegedly comes forth from our country.

Sakharov constantly sides with those, who through their aggressive actions, have repeatedly brought international tension to the very limit. He condemned the U. S. militaristic circles, not for their aggression in South Vietnam and Cambodia, but for their "insufficient decisiveness and consistency" in carrying it out, and he has called the freedom and peace that was won by the patriots of Indochina a "tragedy." He has condemned the countries that support the just cause of the Arab peoples struggling against Israeli aggression.

Proclaiming himself a defender of humanism and human rights, Sakharov expressed the hope that the Pinochet regime in Chile would open up "an era of revival and consolidation." He is "shaken" by the fate of the "unfortunate Hess"—Hitler's closest associate, convicted by an international tribunal of fascist crimes against humanity. But the Nobel committee proclaims Sakharov "the voice of all mankind's conscience."

Under the pretense of a fight for human rights, Sakharov acts as an opponent of the Soviet peace-loving foreign policy, and of our socialistic system. He slanders the great political, economic, social, and cultural achievements of the Soviet people. We are not surprised, therefore, at the fuss made over this prize in the

get the most out of your gradients



ISCO density gradient fractionators produce a continuous absorbance profile as the gradient is fractionated into a built-in collector. Zones undetectable by other methods are easily resolved and their exact locations plotted. Any size centrifuge tube can be guantitatively scanned at two wavelengths and fractionated with or without piercing.

The Model 570 gradient former sequentially produces up to 22 absolutely identical linear or curved gradients of any size from 3 to 80 ml. Gradient size and shape are precisely and reproducibly determined by differential pumping.

In addition to these instruments, our general catalog describes gradient pumps and scanners for zonal rotors, plus instrumentation for liquid chromatography and electrophoresis. Send for your copy now.



Circle No. 555 on Readers' Service Card

West by certain circles interested in the frustration of the relaxation of international tension and in the revival of the cold war, and in seeking pretexts to defame-by any means-the noble aims and sincerity of the Soviet foreign policy that has gained unanimous gratitude and popularity throughout the world.

The decision of the Nobel committee to confer the peace prize on Sakharov-a decision that fundamentally contradicts the spirit and the letter of the basic provisions relating to this prize-is unacceptable to genuine champions of peace. Soviet scientists believe that the award of the Nobel prize to Sakharov is unworthy and provocative, and is a blasphemy against the noble ideas-dear to all of us-of humanism, peace, justice, and friendship among the peoples of all countries.

[Signed by] G. B. Abdullaev, G. A. Avsyuk, A. P. Aleksandrov, V. A. Ambartsumyan, M. S. Asimov, A. A. Baev, N. G. Basov, N. V. Belov, N. A. Borisevich, A. E. Braunshtein, A. P. Vanichev, I. N. Vekua, E. P. Velikhov, A. P. Vinogradov, S. I. Vol'fkovich, S. V. Vonsovskii, B. M. Vul, Ya. S. Grosul, N. P. Dubinin, N. M. Zhavoronkov, Yu. A. Zhdanov, A. A. Imshenetskii, A. Yu. Ishlinskii, A. P. Kapitsa, K. K. Karakeev, M. V. Keldysh, F. V. Konstantinov, V. A. Kotel'nikov, E. M. Kreps, A. M. Kunaev, G. V. Kurdyumov, A. L. Kursanov, M. A. Lavrent'ev, L. M. Leonov, A. A. Logunov, A. K. Malmeister, M. A. Markov, I. Marchuk, Yu. Yu. Matulis, N. V. Mel'nikov, I. I. Mints, E. N. Mishustin, A. N. Nesmeyanov, A. I. Oparin, B. E. Paton, B. N. Petrov, N. A. Pilyugin, B. B. Piotrovskii, P. N. Pospelov, A. M. Prokhorov, O. A. Reutov, A. M. Rumyantsev, K. M. Ryzhikov, B. A. Rybakov, A. S. Sadykov, N. N. Semenov, D. V. Skobel'tsyn, G. K. Skryabin, V. I. Smirnov, V. I. Spitsyn, V. D. Timakov, A. N. Tikhonov, A. A. Trofimuk, V. M. Tuchkevich, P. N. Fedoseev, N. P. Fedorenko, G. N. Flerov, A. V. Fokin, A. N. Frumkin, M. B. Khrapchenko, N. V. Tsitsin, V. A. Engel'gardt.

IRVING S. BENGELSDORF

Division of Humanities and Social Sciences, California Institute of Technology, Pasadena 91125

1. The nine academicians whose signatures appeared under the 1973 *Pravda* letter, but not under the 1975 *Izvestiya* letter, are N. N. Bogolyubov, B. M. Kedrov, A. M. Obukhov, Yu. A. Ovchinnikov, L. I. Sedov, S. L. Sobelev, I. M. Frank, Yu. B. Khariton, and P. A. Cherenkov.

Wood Versus Fossil Fuel for **Excess Carbon Dioxide**

Erik P. Eckholm's recent estimate, reported by Constance Holden (News and Comment, 3 Oct., p. 36), that "one-third of the world's population depends on wood for cooking (and, to a lesser extent, heating)" has interesting ramifications for detailed interpretations of the carbon dioxide buildup in the atmosphere in the past century. It has been estimated that half of the wood harvested each year is burned.

Lundell (1) has reviewed the box models of the carbon cycle proposed by Craig (2), Bolin (3), and others. Lundell has also calculated the boundary conditions for the shifting of exchange rates among the various carbon dioxide reservoirs. Wood-burning and deforestation have two additive effects. Wood-burning releases a large amount of carbon dioxide into the atmosphere, perhaps much more than has been previously estimated (for example, the estimate that 1.1 metric tons of wood are burned per capita per year in Thailand). Deforestation for lumber (and urbanization) has the additive effect of destroying the photosynthesizing organisms that transfer atmospheric carbon dioxide back into what we now propose as the "cellulose reservoir." The inflow and outflow into the cellulose reservoir during the last century is difficult to estimate, but a key and simple question is, Why hasn't photosynthesis prevented the 15 percent or so increase in atmospheric carbon dioxide in the last century? The current shortage of firewood suggests that part of the answer lies in a rapidly expanding human population burning cellulose much faster than it is being formed and held in living trees. Radiocarbon studies have documented the effects on the atmosphere of burning fossil fuel, but the wood-burning contribution to the atmospheric excess of carbon dioxide is more difficult to document because the cellulose reservoir has a radiocarbon/carbon ratio only a few percent different from that of the atmosphere.

It is possible that the biosphere could restore the cellulose reservoir in some decades, but only if the remaining parts of the reservoir (for example, the Amazon forest) are not depleted, if the population and per capita annual consumption are stabilized, and if, as Eckholm suggests, even more reforestation is undertaken.

J. A. S. ADAMS

Department of Geology, Rice University, Houston, Texas 77001

L. L. LUNDELL Department of Geology, University of Wyoming, Laramie 82070

M. S. M. MANTOVANI

Instituto Astronomico e Geofisico, Universidade de São Paulo, Caixa Postal No. 30.627, São Paulo, S.P., Brazil

References

L. L. Lundell, thesis, Rice University (1973).
H. Craig, *Tellus* 9, 1 (1957).
B. Bolin, *Sci. Am.* 233, 124 (September 1970).

Sex Differentials in Academic Salaries

In Bayer and Astin's article (23 May, p. 796), the section dealing with salaries contains an error that vitiates a large part of their analysis. In August 1974 one of