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January 3, 1975

Dr. Robert C. Seamans, Jr.
Administrator, ERDA
The Reporters Building
7th and D Streets, S.W.
Washington, D.C. 20545

Dear Bob:

Several times in the past 25 years this nation has faced situations which have led it to focus its intellectual ability on particular subjects of grave national concern. Nuclear weapons development, national air defense, both against manned bombers and missiles, and inertial guidance technology are clear examples. The possibility that radar and related control technologies could serve important military purposes led to organization of the Radiation Laboratory at MIT and several successor organizations. The possibility of applying nuclear technology to weapons development led to the organization of the Manhattan Project. Critical problems of air defense led to the establishment of Lincoln Laboratory, and work on the development of inertial guidance technology was concentrated in the Instrumentation Laboratory, both at MIT. NASA was formed to manage the Space Program, and it in turn invested in the development of organizations which served as sources of knowledge and expertise. Other examples could be cited.

In detail, there were important differences among these cases, but broadly in each case a judgment was made that the particular situation required an intellectual as well as an organizational response. In fact, the organizational arrangements were designed to elicit the required intellectual response.

There can now be little doubt that the national well-being is critically involved in the developing energy situation. In recognition of this there have been a series of organizational rearrangements in all levels of government. At the federal level these rearrangements of responsibility appear to be continuing. Also, at the intellectual level, organizations are being formed to contribute to presently perceived and anticipated needs.

As you know, two years ago we at MIT formed a special laboratory in the Lincoln, Draper tradition to focus our talents on energy-related problems, and judging from the extent to which we have been involved directly in policy making and selected technology development, it appears that we may

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be seen as having some comparative advantage in talent, energy and judgment in the field of energy. We are both pleased and concerned about the present situation, however.

We see real talent as an extremely scarce commodity and the ability to organize this talent as an even scarcer commodity. At the moment we seem to be spending too much of both kinds of resources in attempts to solve short-term funding problems which we see as both disfunctional and disruptive. We see the real threat that, before long, individuals whose talents we believe could make a real difference in our energy policy and research and development strategy shifting their attention to areas which are simultaneously less important and more stably funded. We would prefer the flow to be the other way and believe that at small cost it could be.

I would like you to consider committing on the order of $15,000,000 per year to the MIT Energy Laboratory--this money to be spent to support a program of work which would be periodically reviewed and modified by a joint planning group made up of MIT people and representatives of your organizations.

In other words, I am proposing an arrangement not unlike that which has worked well over the years between Lincoln Laboratory and the Department of Defense.

We believe that we can make a significant, and, in some ways, unique contribution to the nation's energy research activities. MIT has a breadth of experienced personnel and facilities dedicated to energy activities with a long history of accomplishments that is not available at another institution. It also has extensive experience in managing large-scale national programs and facilities.

The current national program to rapidly develop a research and policy base for dealing effectively with both short and long term energy supply, demand and environmental issues cuts across some of the most intricate technical, economic and social relationships of our time and requires inputs to government and industry planning and implementation which involve a new dimension for the nation.

We believe that ERDA, in its response to these issues, would benefit from a large independent facility involved in a broad spectrum of energy activities, covering policy analysis, economic analysis, technology development, and research which would be available for evaluating energy

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alternatives and recommending energy research and development strategies as well as conducting research.

The MIT Energy Laboratory is such a facility. It has the ability to integrate diverse programs and to synthesize approaches not conceived by narrower specialized research groups. It was formed to bring together activities at MIT in order to focus on the problems of energy production and consumption. The Laboratory involves specialists in science, engineering, economics and management in a range of applied research programs funded by government, industry and the Institute.

ERDA funding of the Energy Laboratory would also provide a uniquely important opportunity for the nation to increase its supply of scientists and engineers experienced in the most critical areas of energy technology and the broader aspects of energy supply, demand and policy. We estimate that in the very near term as many as 100 professors, 200 students, and approximately 150 professional staff including post-doctoral associates could be effectively involved in important energy research by the Energy Laboratory.

MIT has a long history of contributions to energy technology and its various schools and research laboratories span the full range of energy activities and are well staffed with experienced experts intimately involved in current energy problems. The Energy Laboratory in drawing on these capabilities represents, in addition to proven competence, a stable source of informed personnel who can deal effectively with the complex technical, economic and social problems of energy production and utilization.

My colleagues and I look forward to discussing this proposal with you and exploring the most effective way for us to continue to contribute to the nation's energy program.

Very truly yours,

David C. White
Director

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