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THE WHITE HOUSE

WASHINGTON

February 18, 1976

ADMINISTRATIVELY CONFIDENTIAL

MEMORANDUM FOR:

JAMES T. LYNN

FROM:

JAMES E. CONNOR *JEC*

SUBJECT:

Response to Senator Mansfield's  
request for additional funds for  
construction of an MHD research  
facility in Montana

Confirming phone call to your office yesterday, the President reviewed your memorandum of February 12 on the above subject and approved the following:

"Authorize ERDA to reprogram \$20 million of FY 1976 funds from other coal research and development for the CDIF, which results in full funding of the project's currently estimated total cost of \$31.5 million."

Please follow-up with appropriate action.

cc: Dick Cheney

THE WHITE HOUSE  
WASHINGTON

February 17, 1976

MR PRESIDENT:

Response to Senator Mansfield's request  
for additional funds for construction of  
an MHD research facility in Montana

Staffing of the attached memorandum from Jim Lynn  
resulted in the following:

Messrs. Cannon, Marsh, Friedersdorf, Seidman  
and Zarb all agree with OMB's recommendation.  
Some additional comments were offered by the  
following individuals:

Marsh - "Option 1, but ERDA must mend fences  
with Teague & Yates".

Friedersdorf - "Reprogram funds and call Senator  
Mansfield."

Cannon - See comments at TAB A.

Jim Connor



EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF MANAGEMENT AND BUDGET  
WASHINGTON, D.C. 20503

ACTION

MEMORANDUM FOR:

FROM:

SUBJECT:

FEB 12 1976  
THE PRESIDENT

JAMES J. LYNN

Response to Senator Mansfield's request for additional funds for construction of an MHD research facility in Montana

This memorandum provides the information you will need in order to respond to Senator Mansfield's request for additional funds for construction by ERDA of an MHD research facility in Montana. If you wish, ERDA is prepared to reprogram \$20 million for the MHD facility. This should satisfy Senator Mansfield's main concern as expressed in his letter of February 3 (see attached).

Background

If they can be successfully developed by the 1990's, magnetohydrodynamic (MHD) generators would provide an increase in the overall efficiency of systems for converting coal into electric power. Relative to other energy research and development activities, OMB believes that the MHD program has fairly low priority because of the long-term nature of any payoff and substantial technical, economic, and environmental problems that need to be resolved before making larger dollar commitments. In addition, other power systems have more promising R&D potential. Despite this low priority, MHD funding has rapidly increased over the past 5 years, partially in response to congressional interest.

Senator Mansfield's Request

The MHD research facility of immediate concern to Senator Mansfield is known as the Component Development and Integration Facility (CDIF) which will be located near Butte, Montana. The CDIF will test and integrate individual components of MHD generators. Senator Mansfield also wants funds to initiate design of an MHD pilot plant called the Engineering Test Facility. However, we understand sufficient funds have now been identified by ERDA for this purpose.

Based on last fall's tentative cost estimate for the CDIF (\$15-20 million), your FY 1977 budget includes \$10 million in FY 1976-1977 for this project with the remaining funds to be provided in FY 1978. Senator Mansfield believes that this funding level would cause an unacceptable delay in the project. However, OMB does not agree that a year's delay (to 1979) in this long-term R&D program is very critical to the Nation's energy R&D needs.

OMB believes that the primary funding problem for the CDIF results from a very recent ERDA reestimate of the project's total cost from \$15-20 million to \$31.5 million. Since this reestimate occurred after the FY 1977 budget was prepared, there was no opportunity to consider additional funds for the CDIF.

As a result of Senator Mansfield's inquiry, ERDA has examined alternatives for providing additional funds for CDIF and has identified \$20 million of funds previously appropriated for other coal research and development which could be reprogrammed for this purpose. Since the coal R&D program has grown very rapidly and currently has large unobligated balances, the effect of reprogramming FY 1976 funds into MHD from other coal R&D programs would probably not be severe. ERDA would have to obtain the agreement of its congressional authorization and appropriations committees for the reprogramming. In this regard, neither the House authorization (Congressman Teague) nor House appropriations (Congressman Yates) committees have been supportive of Senator Mansfield's previous MHD proposals.

### Conclusions

The Administration has already agreed to proceed with the CDIF project. Reprogramming of an additional \$20 million would provide Senator Mansfield with firm assurance that construction of the CDIF will be completed expeditiously despite the cost reestimate. Since sufficient funds for the conceptual designs of the Engineering Test Facility have been identified by ERDA, this should no longer be an issue.

### Decision

 Authorize ERDA to reprogram \$20 million of FY 1976 funds from other coal research and development for the CDIF, which results in full funding of the project's currently estimated total cost of \$31.5 million.

\_\_\_\_\_ Inform Senator Mansfield that the Administration will not object if Congress adds \$20 million for the CDIF in the FY 1977 budget.

\_\_\_\_\_ Inform Senator Mansfield that additional funds are not warranted for the MHD program in the FY 1977 budget.

*Mr. President: Assuming you accept our recommendation, in your call to Senator Mansfield you might emphasize the resistance of Teague and Yates in the past to MHD and emphasize howed to convince them. L.*

United States Senate  
Office of the Majority Leader  
Washington, D.C. 20510

February 3, 1976

The President  
The White House  
Washington, D. C.

Dear Mr. President:

As you know from our previous discussions, I feel very strongly that the magnetohydrodynamics (MHD) research and development program under the auspices of ERDA must move forward in an accelerated way. I have urged the development of this important technology for the generation of electric power because of its substantial increase in efficiency and its environmental benefits.

MHD research and development is mandated by Public Law 93-404, enacted in August, 1974, calling for the operation of a commercial size 500-megawatt MHD demonstration plant by the mid-1980's. As a part of the development process to achieve this objective of Public Law 93-404, last year the Energy Research and Development Administration under its MHD program plan committed itself to the construction and operation of an MHD component development and integration facility (CDIF) in Butte, Montana. ERDA committed to begin the construction of the CDIF in the spring of 1976 and to complete the CDIF installation by the latter part of 1977. This commitment is not being fulfilled. ERDA's program plan and requested budget amount for fiscal year 1977 does not include the construction of this CDIF facility.

In a June 13, 1975, letter to me, Dr. Seamans stated, "The development process for MHD has reached the point where a structured engineering oriented program has to be initiated to replace the more loosely coordinated research activities which have hitherto existed. We must obtain engineering experience to establish if MHD can, indeed, reach its promised efficiency and environmental potentials."

At this time of national energy crisis, the main problem in development of the MHD technology has been Administration budgetary restraints. The original FY 1976 budget request for MHD was only \$13.7 million, a figure tantamount to a cutback from the FY 1975 funding level. You will recall, however, that on June 27, 1975, you called me to indicate that a FY 1976 Supplemental request for MHD would be \$29.3 million. Subsequently, \$37.3 million was appropriated for the national MHD program in FY 1976 plus the transition quarter.

February 3, 1976

On November 11, 1975, Dr. Seamans commented in a letter to me that "essentially, the MHD program is being accelerated and emphasis is being shifted from a research activity which has proved the basic concept of MHD to a structured engineering-oriented program." He further stated in the ERDA MHD Position Memorandum #2 that the total budget request for FY 1976 was considered to be sufficient "to continue and expand the base of the current research and development activities and at the same time to initiate the required engineering effort." In this same Memorandum, Dr. Seamans announced plans to "begin construction of the laboratory support building in the spring of 1976 as a first step and to follow this with the main Component Development and Integration Facility installation on a schedule so that shakedown can start in the latter part of 1977." Dr. Seamans also announced his intention to begin the preliminary design work on the ETF in accordance with Public Law 93-404, saying that "by getting this preliminary work underway in the near future, it will be completed in time to utilize the experience from the CDIF and the EDGF to finalize the ETF design and proceed with its construction."

In view of the above, I spoke with Jim Lynn in OMB on December 12, 1975, to request his support in seeing that the FY 1977 budget figures for MHD corresponded with the accelerated program developed by ERDA. He stated he would call me back but, because of the pressures of work, he was unable to do so. This, I can understand, but I had hoped to talk to him about MHD and the importance of its application to Montana for this fiscal year.

Now that I have studied the FY 1977 budget request for MHD, I am greatly disturbed. In a year when MHD was to receive accelerated attention in an effort to comply with public law, the budget contains a request for only \$37.4 million instead of approximately \$70 million needed for such an effort. This request does not contain funds estimated at \$24 million for construction of the CDIF in Montana. Of the estimated \$10 million needed for preliminary work on the ETF as required by public law, ERDA requested only \$2.6 million and OMB approved nothing.

This matter is of great concern to me. This failure to plan and request funding for the CDIF will result in an unacceptable delay. The purpose of the CDIF as described by ERDA is to test combustors designed specifically for use in MHD generators. In the words of the ERDA plan itself, "the development of a combustor to meet the very stringent requirements of the MHD generator is of prime importance, yet nowhere in the world has a combustor been operated under appropriate MHD power plant conditions and coupled to an MHD generator." The present program has not yet undertaken the coal combustion development work specifically designed to satisfy the unique requirements of an MHD generator. What is required is to proceed with the design and construction of the CDIF building and support equipment while at the same time to conduct MHD coal combustor development work specifically designed to meet the requirements of an MHD generator. By constructing the CDIF facility and conducting

The President

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February 3, 1976

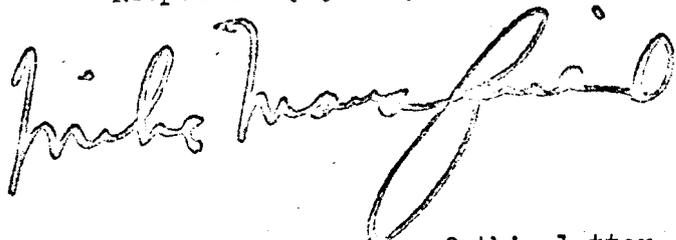
the MHD coal combustion development in parallel, a combustor will be ready for testing when the CDIF is completed. As outlined in the ERDA plan, this MHD coal combustor development research should be done in close proximity to the CDIF in Butte by qualified industrial MHD research and development capabilities which will be established in Butte to support component development and test operations for the CDIF and the following Engineering Test Facility.

The Office of Management and Budget and ERDA should be working together to further the development of the MHD technology. Congress should not permit an agency to ignore public law and the intent of the Congress in the development of this program--as you are well aware in view of your Congressional service.

It appears that I may have been misled by OMB and ERDA. As a result, I ask that you have this program reviewed with particular attention to directing the departments concerned to comply with the provisions of P.L. 93-404. The law clearly requires accelerated construction of an Experimental Test Facility in Montana. This cannot effectively be accomplished without first building the Component Development and Integration Facility beginning this year. (I hope that necessary funds will be provided or requested in the immediate future to expedite this important program through construction of the CDIF and design engineering for the ETF.) This program is of the highest importance to my state and to me personally. Anything you can do, Mr. President, to be of assistance will be most deeply appreciated.

With best personal wishes, I am

Respectfully yours,

A handwritten signature in cursive script, appearing to read "Mike Mansfield". The signature is written in dark ink and is positioned below the typed name "Mike Mansfield".

P. S. With your permission, I am sending copies of this letter to Jim Lynn of OMB and Dr. Robert Seamans of ERDA. Regards, MM

The President

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February 3, 1976

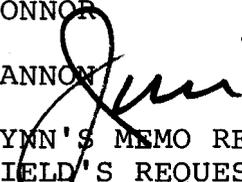
P. P. S. I have just come across the MHD Division of ERDA FY 1977 Budget Estimates. It indicates that the MHD Division requested a total of \$59,350,000; ERDA requested \$49,350,000; and the OMB allowance was \$37,441,000. The total cut from the original MHD Division request of \$59,350,000 and the final OMB allowance of \$37,441,000 has Montana being cut over \$20 million, or almost 95 percent from the original request. Why?



THE WHITE HOUSE

WASHINGTON

February 13, 1976

MEMORANDUM FOR: JIM CONNOR  
FROM: JIM CANNON   
SUBJECT: JIM LYNN'S MEMO REGARDING SENATOR  
MANSFIELD'S REQUEST FOR MHD FUNDS

I recommend that the President approve the first alternative listed in Jim Lynn's memorandum. As indicated in the attached memo from Schleede to Max Friedersdorf, there is little left to do but take that approach.

Attachement

THE WHITE HOUSE

WASHINGTON

February 12, 1976

MEMORANDUM FOR: MAX FRIEDERSDORF  
FROM: GLENN SCHLEEDE  
SUBJECT: ADDITIONAL FUNDS FOR CONSTRUCTION OF  
AN MHD RESEARCH FACILITY IN MONTANA

Attached at Tab A is a copy of Jim Lynn's memorandum to the President on this subject. The memorandum outlines three alternative responses to the Senator's request for funding for the facility -- known as the Component Development and Integration Facility (CDIF).

- Authorize ERDA to reprogram \$20 million of FY 1976 funds (this \$20 million plus funds of approximately \$5 million already in the 1976 appropriations and \$5 million already in the 1977 budget request would cover the current estimated costs for the MHD facility).
- Inform the Senator that the Administration would not object if the Congress adds \$20 million in FY 1977.
- Inform the Senator that no additional funds are warranted in the FY 1977 budget.

Both OMB and ERDA favor the reprogramming of \$20 million in 1976 funds as the way to solve the problem.

As you are already aware, Dr. Seamans has met with Senator Mansfield and outlined several alternatives for dealing with the problem. He delivered a copy of the letter which is attached at Tab B.

A draft of a suggested telephone call recommendation is attached at Tab C.

Attachments

cc: Jim Cannon