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WASHINGTON, D.C. 20548

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RELEASED

April 1, 1980

B-125042

The Honorable Henry M. Jackson  
Chairman, Committee on Energy and  
Natural Resources  
United States Senate

SEN 66-300

The Honorable John A. Durkin  
Chairman, Subcommittee on  
Energy Conservation and Supply  
Committee on Energy and Natural  
Resources  
United States Senate

SEN 66-307



111986

Dear Chairmen:

Subject: The Rural Energy Initiative Program for Small  
Hydropower--Is It Working? (EMD-80-66)

Your February 4, 1980, letter requested that we (1) review  
the efficiency of the Rural Energy Initiative (REI) Program to  
develop and commercialize small-scale hydroelectric power, and  
(2) identify problems, if any, the Program has encountered or  
may encounter and suggest how to alleviate them.

In order to be timely in responding to your needs, we  
relied on information developed in our previous hydropower  
study, 1/ and limited our work to reviewing the elements  
comprising the interagency memorandum of understanding (inter-  
agency agreement) governing this Program and the plans to  
implement and monitor the Program. We discussed the program  
with headquarter officials representing each participating  
agency, including the Department of Energy's (DOE's) Federal  
Energy Regulatory Commission and Small Scale Hydroelectric  
Resources Program; the Department of the Interior's Water  
and Power Resource Service (formerly the Bureau of Reclamation);  
the Department of Agriculture's Rural Electrification Adminis-  
tration and Farmers Home Administration; the Department of  
Commerce's Economic Development Administration; the Department

DLG 6/4/80

AG 66-0912

AG 66-1452

AG 66-00233

AG 66-00277

AG 66-00258

AG 66-00371

1/"Hydropower--An Energy Source Whose Time Has Come Again,"  
EMD-80-30, Jan. 11, 1980.

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of Housing and Urban Development's Urban Development Action Grant Program; the Army's Corps of Engineers; the Community Services Administration; and the official in the Executive Office of the President who is responsible for administering the program. As agreed with your staff we obtained oral agency comments.

Although the administration's REI Program is an inter-agency effort intended to aggressively pursue and accelerate the development of small hydropower, we have not seen any significant progress. In addition, the barriers to hydro development identified in our previous report still exist. The administration's effort to foster small-hydropower through REI has not expedited the development of this renewable energy resource. Rather, the Program may impede such development. While the problems facing the REI may be reduced, we believe a more centralized and direct approach for aggressively pursuing small-hydro would not only be preferable, but also more effective and efficient.

#### PROGRAM OVERVIEW

In May 1979 President Carter announced an REI Program with overall objectives of stimulating the development of alternative energy resources and of encouraging a decentralized and dispersed approach to local rural energy development and use. As an integral part of the Program, the administration announced an interagency agreement to bring together the technical assistance and engineering and financial resources of several agencies (see list below) to develop small-hydropower projects at existing dams in rural America. The administration believed that the encouragement of small-hydro development under such a program would, in effect, achieve the same purpose as title IV of the Public Utility Regulatory Policies Act (PURPA) (Public Law 95-617) without requiring additional appropriations. 1/

While the REI Program does not bind an agency to any specific commitment of funds, the agreement did result in the informal understanding that each agency, although not obligated, could provide financial resources between fiscal years 1979 and 1982, as follows:

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1/Title IV authorizes \$300 million for a construction loan program to hasten the development of small hydroelectric plants at existing dams.

<u>Agency or program</u>	<u>Amount (\$ millions)</u>	<u>Type of assistance</u>
Department of Energy Federal Energy Regulatory Commission Small Hydro Program	---  <u>a/\$30</u>	Technical assistance and expediting licensing Feasibility and licensing loans
Department of Agriculture Rural Electrification Administration Farmers Home Administration	80 100	Loan guarantees (note b & c) Loan guarantees (note c)
Department of Commerce Economic Development Administration	<u>d/60</u>	Grants, loans and loan guarantees
Community Services Administration	.15 .10	Grants, technical assistance
Department of Housing and Urban Development Urban Development Grant Program	Indefinite (note e)	Grants
Department of the Interior Water and Power Resource Service	---	Technical assistance
Department of the Army Corps of Engineers	---	Technical assistance

a/Loan funds authorized under Public Law 95-617 for conducting feasibility studies.

b/Direct feasibility and construction loans as well as technical assistance is now available.

c/Because it was believed loan guarantees would not provide a stimulus to encourage development with today's high interest rates, these agencies are now making arrangements for direct loans.

d/Money available under existing legislation is limited to \$7 million annually. Legislation is pending to remove this limit.

e/No specific amount identified.

The objective of this cooperative effort is to have 100 small-hydropower projects under construction by the end of fiscal year 1981 and up to 300 projects by 1985.

INADEQUATE PLANNING AND  
MANAGEMENT CONTROL

The basic framework for a sound and effective program is proper planning and management control. We found very little planning and management control over the development of small-hydropower under REI. For example, while the interagency agreement has assigned general roles for each agency, we found that neither the administration nor most of the agencies has developed specific action plans or milestones for assuring that each agency's contribution will help achieve the overall Program objective. Further, in response to our inquiries to review Program progress/status reports and minutes of interagency meetings, we were advised that documentation was not officially developed or maintained.

Despite the administration's attempts to expedite small-hydropower projects under the Program, only one project has received grant or loan funding for construction since REI was initiated, even though DOE's Small Hydro Program has identified several feasible projects through its grant program. <sup>1/</sup> We were also informed by officials of the financing agencies that they do not know when further projects will be funded. This is occurring even though 35 projects with completed feasibility studies were referred to these agencies from DOE by November 1979. Based on the status of these projects and the fact that most other sites being considered have not had feasibility studies, we believe it doubtful that the REI Program can have 100 projects under construction by the end of fiscal 1981.

While the objective of the REI Program is to pursue aggressively the development of small-hydropower, we believe the approach taken in the REI Program to identify potential sites is resulting in duplicative work which will not help to expedite the development of hydro projects. For example, we noted that under the interagency agreement some agencies were directed to make special efforts to identify possible

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<sup>1/</sup>A conditional loan was awarded in March 1980. The major condition is that a market for the power be found at an acceptable price.

project sites. Such an approach duplicates the effort of the Corps of Engineers' National Hydropower study and DOE's feasibility study program and can result in REI agencies identifying the same project sites. According to a Corps official, there is a slight chance that new sites may be identified, but we question the amount of time taken to gather site information which could have been better spent in focusing on and pursuing promising projects where existing information is available.

NONENERGY SELECTION CRITERIA  
CAN IMPEDE PROGRAM

In reviewing the REI Program we found shortcomings with respect to the manner in which small-hydropower projects are to be selected for financing. Although the interagency effort to financially support small-hydropower projects is in line with the intent of PURPA (see p. 3), we found the project selection and funding approach not only will impede but also limit the potential success of any small-hydropower development effort.

Before any small-hydro project can be considered for financial support under the REI Program, the small-hydro project must be tailored to meet the agency's nonenergy criteria. Even though the project may be feasible from an energy standpoint, if the project fails to meet sufficiently the agency's other criteria, it cannot be funded. For example, one project with a favorable feasibility report was submitted to the Department of Housing and Urban Development from DOE. The project did not meet the agencies' lending criteria and therefore could not be funded. We were advised that this project was referred to another agency.

This method of financing does not always contribute to meeting the Program's objective of aggressive development of sites because it places nonenergy Program criteria before the need to develop sites which can contribute to solving our energy problems. Such a financing approach could actually discourage potential developers from pursuing needed Federal assistance. For example, this approach forces a potential developer of an energy supply source to research and comply with unfamiliar nonenergy criteria and compete with nonenergy projects for funding. Also, the potential developer may be required to deal with multiagency procedures, thus dampening the developer's desire to pursue a sound project.

CONCLUSIONS AND RECOMMENDATIONS

The administration has continually stressed, as a fundamental objective of national energy policy, the need to reduce the Nation's dependency on foreign oil and its vulnerability to supply interruptions. One supply source frequently proposed by the administration to reduce our oil dependency is the development of small-hydro. However, the approach taken to develop hydropower through the REI Program has not been effective or efficient in developing this resource.

Although an REI interagency agreement has been prepared, specific action plans and milestones have generally not been proposed for assuring that each agency's contribution will help achieve the overall Program objective. Further, the approach taken to identify sites duplicates current Federal efforts and requires energy projects to meet nonenergy criteria. In addition, applicants face multiagency reviews which can deter expeditious development of projects. Considering these problems and the fact that only one project has been funded, we doubt whether the Program can meet its goal of having 100 projects under construction by the end of fiscal year 1981.

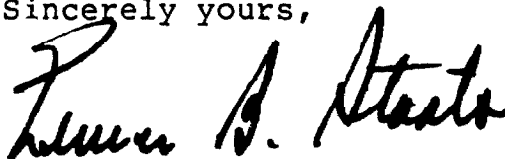
We believe, because of the seriousness of the Nation's energy problems, the administration should be pursuing and expediting hydropower development on its own merits as an energy resource. This approach would be most effective and efficient if undertaken through a central program within DOE. We recognize that actions can be taken to mitigate some of the problems associated with the existing REI Program. We believe, however, a loan program funded and managed by DOE as authorized by PURPA would provide the best environment for aggressively pursuing the development of this energy resource. This view is consistent with the administration's purpose for establishing a Department of Energy to centralize all Federal energy programs.

We therefore recommend that the Congress, acting through its authorizing and appropriation subcommittees, direct the administration to carry out the intent of PURPA by establishing a small-hydro loan program within DOE. It would seem appropriate that such a program should be assigned to the existing Small Hydro Program currently in DOE. In establishing such a program, the administration should be directed to determine if any of the money in the REI Program could be made available to DOE for making loans. In doing so, the administration should assess what funds are necessary to expedite the development of projects and request funding for DOE's program as appropriate, and as authorized by PURPA.

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The REI agencies and the Executive Office of the President were given the opportunity to provide oral comments on a draft of this report. A discussion of their comments and our evaluation is enclosed.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Luther A. Starks". The signature is written in a cursive style with a large initial "L".

Comptroller General  
of the United States

Enclosure

AGENCY COMMENTS AND OUR EVALUATION

Copies of the draft report were furnished for informal oral comments to the Department of Energy's Federal Energy Regulatory Commission and Small Scale Hydroelectric Resources Program; the Department of the Interior's Water and Power Resource Service; the Department of Agriculture's Rural Electrification Administration and Farmers Home Administration; the Department of Commerce's Economic Development Administration; the Department of Housing and Urban Development's Urban Development Action Grant Program; the Community Services Administration; the Army Corps of Engineers; and the Executive Office of the President.

All agency officials, with the exception of the Executive Office, agreed with the basic thrust of our report and expressed the view that it presented an accurate assessment of the REI Program. The report was revised in several sections to reflect technical comments.

Although the agencies agreed with the thrust of the report, some officials believed--Corps of Engineers, Water and Power Resource Service, and Rural Electrification Administration--that any changes to the existing program should recognize their historical roles in hydro and electricity development.

The official in the Executive Office of the President responsible for administering the REI Program did not agree with our report and believed (1) it does not acknowledge the many barriers and problems to hydro development, and (2) the REI effort is the best approach to getting small-hydro projects developed with minimal budget impacts.

We agree that barriers stand in the path of small hydroelectric development. We acknowledged these barriers in our January 1980 hydropower report. Recognition of these barriers led us to our recommendation in that report that efforts should be expedited to develop hydro demonstrations in order to provide the earliest measurement of constraints and demonstrate the capabilities of small-hydro.

We believe that a "ripple effect" would result from such demonstration and move other developers into site renovation and development more quickly than they would otherwise. We do not believe the progress made thus far by the REI approach typifies the expeditious effort we recommended.



ENCLOSURE

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Regarding the official's concern of minimal budget impacts, we cannot say with certainty what the impacts would be until the administration determines if any of the money in the REI Program could be reprogrammed to DOE.