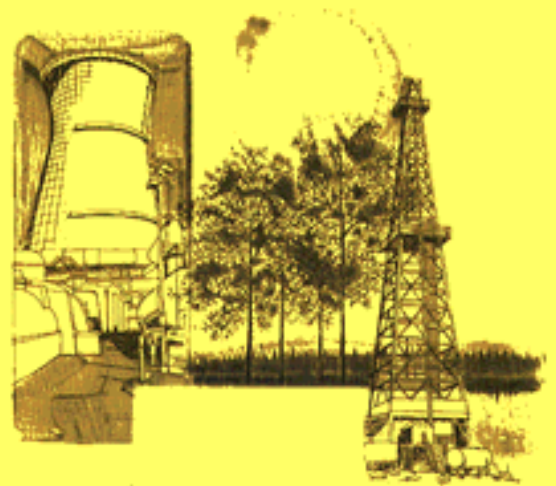


An Analysis of the ERDA Plan and Program

October 1978

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**An Analysis of the
ERDA Plan and Program**



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Office of Technology Assessment

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October 21, 1975

The Honorable Henry M. Jackson
Chairman, Committee on Interior
and Insular Affairs
United States Senate
Washington, D.C. 20510

The Honorable Olin E. Teague
Chairman, Committee on
Science and Technology
U.S. House of Representatives
Washington, D.C. 20515

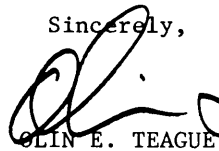
Gentlemen:

On behalf of the Office of Technology Assessment, we are pleased to forward a report: An Analysis of the ERDA Plan and Program.

The report was prepared by the Office of Technology Assessment with the assistance of six panels of experts conversant with the major program areas of the Energy Research and Development Administration (ERDA). It is an analysis of the program plan submitted by ERDA to the Congress on June 30, 1975, entitled: A National Plan for Energy Research, Development and Demonstration: Creating Energy Choices for the Future.

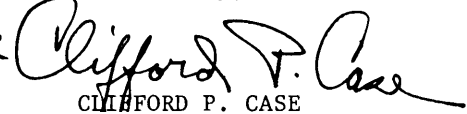
This report is being made available to your Committees in accordance with Public Law 92-484.

Sincerely,



OLIN E. TEAGUE
Chairman
of the Board

Sincerely,



CLIFFORD P. CASE
Vice Chairman
of the Board

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WASHINGTON, D.C. 20510

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DANIEL V. DE SIMONE
DEPUTY DIRECTOR

October 21, 1975

The Honorable Olin E. Teague
Chairman of the Board
Office of Technology Assessment
Congress of the United States
Washington, D. C. 20515

Dear Mr. Chairman:

In response to the requests to OTA from the Chairman of the House Committee on Science and Technology and the Chairman of the Senate Committee on Interior and Insular Affairs, I am pleased to submit a report entitled: An Analysis of the ERDA Plan and Program.

This report was prepared by the staff of the Office of Technology Assessment with the assistance of six panels of experts conversant with the major program areas of the Energy Research and Development Administration (ERDA) and personnel from three universities with centers for energy policy analysis.

It is anticipated that this analysis, which identifies major issues, summarizes their import, raises key questions, and provides background data, will be of use to Congressional committees reviewing the comprehensive energy research plan and program submitted by ERDA to Congress on June 30, 1975, in accordance with Public Law 93-577.

Sincerely, -



EMILIO Q. DADDARIO
Director

INTRODUCTION

The Office of Technology Assessment is pleased to present this report on its analysis of the Energy Research and Development Administration (ERDA) Plan and Program "Creating Energy Choices for the Future." The Plan, was presented to Congress on June 30, 1975 in accordance with Public Law 93-577.

The Office of Technology Assessment (OTA) was asked by Chairman Teague and Congressman Mosher of the House Committee on Science and Technology to analyze the Energy Research and Development Administration Plan and Program. This request was joined by Senator Jackson, Chairman of the Senate Interior and Insular Affairs Committee and by the Joint Committee on Atomic Energy.

ERDA became operational on January 19, 1975. It was created by combining elements from several agencies, notably the Atomic Energy Commission, Department of Interior, National Science Foundation, and Environmental Protection Agency. During the initial months of its existence, ERDA's task was to develop and staff an organization which would concern itself with all forms of energy supply and use, not exclusively with one form of energy (e.g. as in the case of the AEC).

The Non-Nuclear Energy Research and Development Act (Public Law 93-577) which established ERDA, also required the agency to submit to the Congress a national plan for energy research, development, and demonstration, hereafter referred to as the Plan. This document was issued as ERDA-48, volumes I and II.* Volume I articulates a set of goals for national energy R&D policy, discusses these goals in light of a set of energy scenarios, and identifies R&D priorities for three time scales: near-term (to 1985); mid-term (to 2000); and long-term (past 2000), Volume II of the Plan sets forth a set of specific programmatic elements intended to achieve the Plan objectives.

In the letter from Chairman Teague and Congressman Mosher to OTA, dated December 17, 1974, they foresaw that before the Congress could satisfactorily judge the Plan and Program that would be submitted to it by ERDA, analysis, interpretation, and evaluation would be required. Since the ERDA plans reflect the President's view of national energy R&D policy, they will in large measure determine the broader options for our future national energy policy. The OTA assessment of the ERDA Plan and Program is intended to provide the Congress with much of the background information necessary for an effective analysis of ERDA's energy R&D programs.

The analysis was performed largely by task groups assembled in each of the ERDA major programmatic areas:

1. Fossil Energy;
2. Nuclear Energy;
3. Solar, Geothermal, and Advanced Technologies;
4. Conservation; and
5. Environment and Health.

* The ERDA Plan is supplemented by certain additional materials in the area of solar energy. These are ERDA-49, National Solar Energy Research, Development Demonstration Program (June 1975), and ERDA-23, National Plan for Solar Heating and Cooling [March 1975].

These panels, whose members are identified at the beginning of each chapter, were structured to contain a balance of viewpoints; participating authorities were drawn from major manufacturing industries, energy utilities, academic research centers, public health disciplines, environmental protection groups and professional engineering, architectural, and legal societies. The five panels addressed specific aspects of energy, development, and demonstration in week-long sessions starting in early July. A sixth panel, which included the chairmen of the first five groups, was assigned the task of providing a coordinated overview. Each task group prepared written material on the important issues it had identified.

Three universities which have developed active centers for energy policy analysis provided personnel to support the task groups and to assist the OTA staff in conducting this project. Staff members from the Massachusetts Institute of Technology, the University of Oklahoma, and the University of Texas at Austin worked with each of the six review panels, aided in the preparation of this report, and prepared background papers on a variety of topics not easily covered by a task group. Independent papers on other subjects were also prepared by a number of diverse outside groups and individuals. Critiques of the ERDA Plan were solicited from a wide range of organizations.

In undertaking this analysis, the OTA task groups relied not only on the ERDA Plan and Program, but also on the President's amended budget; interviews with key energy staff members from the Environmental Protection Agency, Federal Energy Administration, and Office of Management and Budget; and interviews with a large number of senior ERDA management personnel. Special thanks are due to ERDA Administrator Robert Seamans, Deputy Administrator Robert Fri, Assistant Administrators Roger LeGassie (Planning and Analysis), Philip White [Fossil], Richard Roberts (Nuclear), John Teem (Advanced Systems), James Kane (Acting-Conservation), and James Liverman (Environment).

This report contains an executive summary with the major conclusions of each task group and a chapter for each of the six task groups, includes a summary, and set of related issue papers representing the diverse viewpoints of the task group members. Each issue paper provides a list of specific questions relating to the ERDA Plan.

Attachment I contains critiques of the ERDA Plan received from diverse interest groups listed in the attachment.

The OTA staff effort was directed by Dr. Jon M. Veigel. The regular OTA energy staff of Mr. Alan T. Crane, Mr. T. Patrick Gaganidze, Mr. Lionel S. Johns, Ms. Linda M. Parker, and Ms. Joanne M. Seder. The staff was supplemented by Ms. Pamela Bloomfield, Dr. George Leppert, Dr. Richard E. Rowberg, Dr. George M. Seidel, and Dr. N. Richard Werthamer. Dr. Rowberg was on loan from the Federal Power Commission. The others came from universities or private industry.