Title

*Energy management, planning
and program development*
FINAL REPORT

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Cooperative Agreement CA-12-60795-00

July 1, 1976 - June 30, 1977

MASTER

I. PROGRAM TITLE: Energy Management

The Ohio ERDA is statutorily required to maintain an energy planning capability and to manage a programmatic effort to bring Ohio energy supply and demand into balance consistent with the state's growth and development needs. This goal can be accomplished only through a bold and balanced effort to accelerate development of new energy supplies while increasing efforts to utilize current supplies more efficiently. Consequently, a systematic process of energy management, planning and program development has been undertaken by Ohio ERDA which has focused on:

- (1) The characteristics of Ohio's energy supply/demand situation and the identification of the critical parameters of the State's problems;
- (2) Energy information and data necessary to provide a continuous baseline for framing policy decisions and evaluating Ohio's growth and development options;
- (3) Assessment of alternative policy and program impacts affecting energy supply/demand in Ohio; and
- (4) The implementation of those programs and policies which will have most beneficial effect on Ohio's short and mid-term energy supply and growth policy.

10/2/77

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IA. Program Subtitle: Ohio Energy Information System (OEIS)

Objective: To develop a firm understanding of the sources, flow and usage patterns of energy in Ohio.

This is the most fundamental component in Ohio's energy management capability and Ohio has applied funds budgeted under the Cooperative Agreement towards the operation and expansion of the "Ohio Energy Information System".

Activities: Ohio ERDA now operates and maintains the Ohio Energy Information System (OEIS) developed originally by the Ohio Energy Emergency Commission. Considered the major energy management planning tool, the OEIS encompasses three elements: the Ohio Energy Data Base; the Energy Short-Term Emergency Evaluation Model; and a capability to assess alternative policy action impacts. State energy management planning and program development rely heavily on the OEIS.

(1) The Ohio Energy Data Base consists of a voluminous amount of continuously updated historical data on Ohio energy usage by fuel type and consuming sector. This data base includes supply and demand statistics, resource, prices, and other energy-related data pertinent to the state of Ohio.

(2) The Energy Short-Term Emergency Evaluation Model (ESTEEM) is the second part of the OEIS. In an interactive computer environment, ESTEEM provides a valuable forecasting tool which can help identify the occurrence of an energy shortage in Ohio and determine its economic, environmental, and income impacts on the state. The model

can also forecast the supply and demand of various fuels and identify potential shortages by county, region, and state on a monthly basis for a period up to twelve months.

(3) The Policy Analysis Capability is the third component of the OEIS. This capability now enables Ohio to simulate the impact of alternative policies in such areas as fuel curtailment levels and priorities, fuel conversions, conservation, and price demand elasticity. This capability was used during the winter of 1976-1977 to evaluate a range of natural gas end-user demand restraints. This capability enabled the State to determine the policy actions most responsive to the specifics of the current situation.

Products: Specific reports now produced by the OEIS are listed below, while several sample reports are appended in Attachment A:

- (1) Economic forecasts for Ohio
- (2) Transportation energy demands
- (3) Ohio electric supply and demand by utility
- (4) Ohio electric supply and demand by fuel inventories
- (5) Industrial energy report - BTU Demand
- (6) Petroleum products supply and demand
- (7) Forecast of monthly Ohio sources of gas supply
- (8) Forecast of monthly Ohio gas supply by distribution company
- (9) Ohio industrial energy demand report by fuel and standard industrial code
- (10) Projected energy consumption in Ohio by sector
- (11) Economic impact report

- (12) Environmental impact report
- (13) Curtailment/conservation: Simulates the effect of a reduction in the level of demand for a specific fuel by users in a specific sector.
- (14) Price: Simulates the effect of a price change in a specific fuel.
- (15) Supply constraint: Simulates the effect of constrained sources of supply for specific fuels and sources.
- (16) Energy demand by county
- (17) Electrical demand by franchise area
- (18) Natural gas supply and demand by franchise area

IB. Program Subtitle: Contingency Planning

Objective: To prepare plans that will alleviate hardships and protect the public health and safety in the event of an emergency energy shortage.

Activities: Contingency and related policy planning activities have been a priority activity of the Ohio ERDA during the period of this Cooperative Agreement. The Contingency Plans developed drew upon the work of the Ohio Energy Emergency Commission and the Ohio Energy Information System.

Plans were developed to provide a state response capability to natural gas, coal, petroleum fuels and propane shortages. These plans provide for: (a) allocation of available fuels and end-user priorities; (b) curtailment and end-use restrictions; (c) relief of emergency life support hardships and essential public services fuel needs; (d) the establishment of utility

and supplier energy emergency management capability and coordination with the State; and (e) administrative due process and promulgation of rules during an energy emergency.

In concert with this effort, the Ohio Office of Petroleum Allocation (OOPA) has expanded its responsibilities to support contingency planning and supply management through the monthly collection, summarization, and preparation of data for updating the Energy Information System. Special reports, such as the status of the natural gas curtailments in Ohio, were also generated.

In the fuel planning area, staff-conducted surveys are prepared to assist in carrying out the contingency plans for Ohio, in the event of an energy crisis involving coal, natural gas, or petroleum products. The facilities and staff of OERDA are now prepared to administer hardship applications for all fuels in accordance with Ohio's contingency plans. In a crisis, the OERDA staff are also ready to contact the fuel suppliers and to continuously monitor inventory levels for each fuel.

Products: Three separate fuel specific "Energy Emergency Management Plans" were developed:

- (1) "The Ohio Natural Gas Emergency Management Plan"
- (2) "The Ohio Petroleum Fuel and Propane Emergency Management Plan"
- (3) "The Ohio Coal and Electricity Supply Interruption Contingency Plan"

The Natural Gas Plan was completed and adopted by the State of Ohio in January 1977. The Petroleum and Propane Plan was completed

in February, 1977, but has not yet been formally adopted. Work began on the Coal and Electricity Plan in April, 1977, and was adopted on October 3, 1977. Copies of all Plans are appended in Attachment B.

II. PROGRAM TITLE: Fuel Allocation

Objective: To administer, under Federal guidelines, the State set-aside program for meeting the needs of Ohio users facing petroleum and propane hardships. In accordance with Federal requirements, the Ohio Office of Petroleum Allocation (OOPA) is responsible for setting up the State set-aside as an allocable percentage of available supply, processing hardship and emergency allocation applications, record keeping, and answering general information inquiries.

Activities: The State set-aside program has continued to operate without major difficulty despite the uncertainties of the winter of 1976-1977. The level of activity, as measured by the number of hardship applications, in the last nine month period peaked in January and February of 1977 with 234 and 564 applications, respectively. Since March 1977 the number of applications has gradually decreased to 25 in April, 0 in May, and 0 in June.

The only noticeable annual trend from recent years has been an increase in the number of winter applications for home heating fuels and a decrease in the volume of gallonage of applications for gasoline.

Additional activities of the OOPA included the development of revised hardships application forms in order to capture additional information necessary for case resolution, the establish-

of more formalized criteria for hardship determination, and the promulgation of rules and procedures for applicant appeals and case review. The revised forms and criterion are included in Attachment C.

Techniques used in verifying applicant information consist of contacting applicants, either by letter or phone verifying information contained in the application with the supplier, and on occasion double-checking with end-users to verify needs.

"Hardship" is now defined as "actual or threatened conditions of economic burden or disservice to the commercial, industrial, or residential publics".

"Emergency" is now defined as "actual or threatened conditions of physical crisis or danger to the commercial, industrial or residential publics".

Each case is examined individually on the facts presented:

- (1) Amount requested
- (2) FEO 17 filed
- (3) Current allocation
- (4) Supplier allocation fraction
- (5) Amount on hand (inventory sheet)
- (6) Preceeding years usage
- (7) How fuel was to be used
- (8) Reason for hardship

The largest percentage of cases were allocated under the hardship heading. Five percent were considered emergency situations.

During the energy crisis, January through March 1977, allocations were limited to residential units, hospitals, nursing

homes and other human life support "emergency" needs. The State has received only two "appeals" since the transfer of the set-aside program to Ohio ERDA in January 1, 1976. Texaco, a prime supplier, questioned fuel allocation orders on four occasions in the Spring of 1976. Sun Oil, also a prime supplier, questioned allocations to jobbers several times in the Spring of 1976 and once in the Spring of 1977. In each instance, it was the prime suppliers who questioned state allocation orders. These cases were resolved either by the withdrawal of the complaint or the failure of the jobber to supply that additional information upon which the OOPA could base a decision.

Sun Oil Company has been the only party to formally exercise appellate procedures. The Ohio ERDA Board of Appeals found in a majority decision that the basis for the Sun appeal in April, 1977, was without merit and the appeal was turned down. There were no appeals or complaints of record about the OOPA or its operations stemming from jobbers or retailers.

Products: During the period of July 1, 1976 through June 30, 1977, over 1,500 end-user hardship or emergency applications were approved. The fuels allocated pursuant to such approvals represented relief to the needs of some 15,000 Ohioans. There was a decrease of some 40% in applications and approvals from the preceding fiscal year. This decrease was caused primarily by the following four factors:

- (1) The State set-aside for middle distillates ended April 1, 1977;
- (2) The substantial increase in available gasoline supply over the preceding year;

- (3) The State's moderately successful efforts to encourage pre-heating season product inventory and storage by marketers of oil and propane and by industrial and commercial users. Thus a decrease in applications in the September through December period;
- (4) The State's policy in January, February, and March of 1977 to solicit and to approve middle distillate and propane applications only for genuine human life support emergency needs.

Attachment D appened describes the volumes allocated by type of fuel requested. Also appended in Attachment C are the revised Application Forms, Case Resolution Criteria, and Appeals Procedures.

III. Expenditures by Source of Funds

	<u>FEA</u>	<u>STATE</u>	<u>TOTAL</u>
1. Personal	\$121,185	\$65,283	\$186,468
2. Office Operations			
a. equipment	4,759	2,485	7,244
b. space rental	12,827	8,827	21,654
c. travel	697	376	1,073
d. office operations	12,363	6,253	18,616
e. other	<u>10,379</u>	<u>5,467</u>	<u>15,846</u>
TOTAL	\$162,210	\$88,691	\$250,901

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