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POWERPLANT AND INDUSTRIAL FUEL USE ACT ANNUAL REPORT

MARCH 1, 1981

**U.S. DEPARTMENT OF ENERGY
Economic Regulatory Administration
Office of Fuels Conversion**

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POWERPLANT AND INDUSTRIAL FUEL USE ACT

ANNUAL REPORT

**SUBMITTED PURSUANT TO
P.L.95-620, SECTION 806**

MARCH 1, 1981

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**U.S. DEPARTMENT OF ENERGY
Economic Regulatory Administration
Office of Fuels Conversion
Washington, D.C. 20461**

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PREFACE

This Annual Report has been prepared for the Congress by the Secretary of the Department of Energy (DOE) in conjunction with the Acting Administrator of the Environmental Protection Agency (EPA) as required by Section 806 of the Powerplant and Industrial Fuel Use Act of 1978 (FUA), Public Law 95-620, enacted November 9, 1978. This Annual Report describes actions taken under the legislation, which was enacted to promote national energy self-sufficiency and encourage the use of the alternate energy resources in electric powerplants and major industrial fuel-burning installations (MFBI's) in the utility, industrial and Federal governmental sectors.

This report discusses annual FUA implementation activities and satisfies legislative requirements that the Annual Report discuss: actions taken under FUA and under Section 2 of the Energy Supply and Environmental Coordination Act of 1974 (ESECA) Public Law 93-319 during the preceding calendar year; and the effectiveness of the provisions of both laws in achieving their purposes.

As required by Section 807 of the Act, copies of this report have been submitted to the Committee of Energy and Natural Resources of the Senate and to the Committee on Energy and Commerce of the House of Representatives. As required by Section 403(c) of the Act, a separate report will be submitted to Congress by May 8, 1981, covering implementation of the Act concerning fuel-burning facilities owned or operated by the Federal Government.

ABBREVIATIONS AND ACRONYMS

Act	Powerplant and Industrial Fuel Use Act of 1978
Bbls/day	Barrels of oil per day
Btu	British thermal unit
DCO	Delayed Compliance Order
DOE	Department of Energy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERA	Economic Regulatory Administration
ESECA	Energy Supply and Environmental Coordination Act of 1974
FEA	Federal Energy Administration
FONSI	Finding of No Significant Impact
FUA	Powerplant and Industrial Fuel Use Act of 1978
FY	Fiscal Year
MFBI	Major Fuel Burning Installation
MM	Megawatt
NEPA	National Environmental Policy Act of 1969
NOI	Notice of Intent
OFC	Office of Fuels Conversion
OGC	Office of General Counsel
OMB	Office of Management and Budget

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FUEL USE ACT ANNUAL REPORT
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I. INTRODUCTION

BACKGROUND

This report will review the achievements and major implementation problems of Federal regulatory programs which have attempted to foster the use of coal and other secure domestic energy resources in American powerplants and industrial fuel-burning facilities.

A number of plants have been converted to coal prior to 1980 after having been ordered to do so under the ESECA program. Successes have occurred primarily in expediting conversions to coal by giving electric powerplants and major fuel-burning installations (MFBI's) access to delayed compliance orders from the Environmental Protection Agency. These orders allow earlier coal burning by deferring compliance with permanent pollution control requirements provided that Federal air quality standards protecting public health are not violated. Action by the Department of Energy to prohibit oil or gas burning is a prerequisite of these orders.

To a lesser extent, the Department of Energy's (DOE's) Powerplant and Industrial Fuel Use Act of 1978 (FUA) program has succeeded in helping firms through state environmental and regulatory procedures.

POWERPLANT AND INDUSTRIAL FUEL USE ACT

FUA, enacted in 1978, contains both statutory and discretionary prohibitions against the use of petroleum and natural gas by powerplants and MFBI's. FUA also allows mixtures of oil or natural gas with alternate fuels in those instances where a total conversion is not feasible.

ENERGY SUPPLY AND ENVIRON- MENTAL COORDI- NATION ACT

Efforts to promote the greater use of coal and alternate fuels in place of petroleum and natural gas began with enactment of the Energy Supply and Environmental Coordination Act of 1974 (ESECA).

Under ESECA, the Federal Energy Administration (FEA), later a part of DOE, was authorized to prohibit certain existing powerplants and MFBI's from using petroleum and natural gas as a primary energy source. ESECA also authorized FEA to order that new powerplants and MFBI's, in their early planning process, be designed and constructed with the capability of burning coal as their primary energy source.

Appendix A describes in detail the provisions of both ESECA and FUA.

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II. ACCOMPLISHMENTS IN 1980

VOLUNTARY CONVERSIONS

DOE's Economic Regulatory Administration (ERA) has placed a high priority on mechanisms which encourage commitments for the voluntary conversion of existing facilities. During 1980, ERA's Office of Fuels Conversion (OFC) elicited written commitments for 13 voluntary conversions: four powerplants, six Federal units and three MFBI's. Upon conversion they would potentially displace a total of 9,400 barrels of oil per day and would potentially use 847,000 tons of coal per year.

Voluntary commitments received through December 31, 1980, are contained in Table B-1 (Appendix B).

FUA PROPOSED PROHIBITION ORDERS

During 1980, DOE took actions which could lead to the displacement of 89,700 barrels of oil per day. Proposed prohibition orders were issued for 21 powerplants, 9 Federal facilities and 2 MFBI's. An estimated 8.5 million tons of coal would be consumed annually in these facilities upon conversion. FUA orders issued through December 1980 are contained in Table B-2 (Appendix B).

ESECA PROHIBITION ORDER ACTIVITY

In June 1980, OFC made effective prohibition orders under ESECA to New England Power Company's Brayton Point Units 1, 2, 3. These units are expected to begin burning coal permanently in 1981. Estimated oil displacement for these units is about 32,000 barrels of oil per day and projected coal utilization is 2,900,000 tons per year. In November 1979, the Environmental Protection Agency (EPA) issued a Delayed Compliance Order (DCO) to the Brayton Point facility. By allowing emissions to temporarily exceed applicable requirements, the orders enabled coal burning to begin immediately. ESECA orders outstanding as of December 1980 are contained in Tables B-3 and B-4 (Appendix B).

CLEAN AIR ACT DELAYED COMPLIANCE ORDERS

One powerplant at Virginia Electric Power Company's (VEPCO's) Portsmouth generating station that was subject to a FUA proposed prohibition order received a Clean Air Act DCO to permit coal burning before receiving a final FUA order. Coal burning resulted in an oil displacement of 6,700 barrels per day.

One powerplant under an ESECA order at VEPCO's Chesterfield generating station is currently burning coal, prior to its receiving a Notice of Effectiveness. This plant received a DCO from EPA in 1980. (Estimated oil displacement is 5,300 barrels of oil per day; and the potential coal utilization is 917,000 tons per year).

28 DCO's were issued by EPA through December 1980. See Table B-6 (Appendix B).

EXEMPTIONS

Natural Gas: Special Temporary Public Interest Exemption

On April 4, 1979, ERA promulgated a special public interest rule to temporarily exempt burning of natural gas from prohibitions of Section 301 (2) and (3) of FUA when such gas was substituted for petroleum. Since April 1979, when the special gas rule was issued, ERA has received petitions for temporary public interest exemptions for 1,295 powerplants. The chart below shows the status of these petitions as of the end of 1980.

<u>NUMBER OF PETITIONS</u>	<u>STATUS</u>
1,003	Granted exemptions
55	Petitions being processed
<u>237</u>	Ineligible
1,295	TOTAL

Potential oil displacement in barrels per day for the exemptions granted is estimated as follows:

	<u>Granted</u>	<u>In Process</u>	<u>Total</u>
Middle Distillate	74,386	9,137	83,523
Residual Fuel Oil (0.5% sulphur or less)	287,743	36,082	323,825
Residual Fuel Oil (greater than 0.5% sulphur)	235,078	1,863	236,950
Total	597,207	47,082	644,298

Existing Powerplants

In 1980, petitions for exemptions were filed by 13 utilities for 63 existing electric powerplants. These petitions were filed by utilities seeking exemptions from the prohibitions of Section 301 of FUA which prohibits: use of natural gas as a primary energy source after January 1, 1990; use of natural gas as a primary energy source before January 1, 1990, in powerplants which did not use natural gas in 1977; and increased use of natural gas as a primary energy source beyond average proportional uses of natural gas during the years 1974 through 1976 in powerplants which used natural gas in 1977. The status of these petitions is as follows:

	<u>Number of Units</u>
Received in 1980	63
Rejected in 1980	40
Withdrawn in 1980	4
In Process (as of 12/31/80)	18
Accepted for analysis	1

Petitions under review or accepted for analysis are listed in Table B-6 (Appendix B).

New Powerplants
and MFBI's

Through the end of 1980, petitions for exemption from the statutory prohibitions of Title II of FUA were filed for 33 powerplants and 39 MFBI's. The status of these petitions is as follows:

	<u>Powerplants</u>	<u>MFBI's</u>
In process (as of 12/31/79)	14	10
Received in 1980	33	39
	<hr/> 47	<hr/> 49
Rejected or withdrawn in 1980	6	7
Granted in 1980	10	14
Under review for acceptance	3	1
Accepted for analysis	28	27
	<hr/> 47	<hr/> 49

Tables B-7 and B-8 (Appendix B) show the exemption petitions processed in 1980 and their status as of December 31, 1980. All powerplant exemptions granted for new powerplants in 1980 were for peakload exemptions, under which the utilities would not be operated more than 1,500 hours per year and then only to meet peakload needs. About half of the new MFBI petitions involved fuels mixtures exemptions, which would permit the use only of certain minimum amounts of oil and natural gas.

EMERGENCY
CONTINGENCY
PLANNING

In case of a severe energy supply interruption, emergency Presidential authorities pursuant to Section 404 of FUA may be used to allocate coal supplies and prohibit the use of natural gas or petroleum. During 1980, OFC participated in the development of various emergency contingency planning measures relating to the exercise of such Presidential authorities in the event of a severe supply interruption.

TRANSITIONAL
FACILITIES

Under the so-called transitional facility regulations, issued under the authority of Section 103 of FUA, ERA receives requests from utilities and industry to classify as "existing" certain units which were not operational on April 20, 1977, but for which a contract for construction or acquisition was signed prior to November 9, 1978. To date, requests have been received to classify 112 powerplants and 127 MFBI's. At the end of 1980, 27 cases remained unresolved, pending completion of analysis or submittal of supplemental evidentiary materials.

SYSTEM COMPLIANCE
OPTION

Notwithstanding the statutory deadline on the use of natural gas as a primary energy source by utilities after January 1, 1990, Section 501 of FUA provides authority to the Secretary to give utilities additional time for system-wide phasing out of natural gas use. Under this authority, utilities must submit and obtain approval of system compliance plans which meet certain conditions and commitments for the reduction of consumption of natural gas. Of 51 utility operators who indicated in 1979 that they would file system compliance plans to ERA for approval, 40 companies actually submitted such plans in 1980. ERA reviewed these filings and determined that all but one were eligible for further processing. Table B-9 (Appendix B) contains a list of the 39 utilities.

FEDERAL FACILITIES
FUA DATA BASE

Executive Order 12217, issued on June 18, 1980, directed Federal agencies to survey their electric powerplants and MFBI's to identify those subject to FUA. This survey was initiated in 1980 and contains survey data which are compiled into the Federal Facilities Fuel Use Act Data Base. The data base, which will be completed in April 1981, will be an up-to-date inventory of government-owned civil and military powerplants and MFBI's with a heat input rate greater than 50 MMBtu/hr.

FEDERAL AGENCIES
ANNUAL FUEL
SUBSTITUTION PLANS

Executive Order 12217 also directs each Federal agency to submit Annual Fuel Substitution Plans to the Office of Management and Budget (OMB) through DOE. DOE published guidelines in the August 15, 1980 Federal Register to assist agencies in the preparation of their plans. A more detailed discussion of DOE's responsibility for development and implementation of the survey

and plans will be contained in the Federal Facilities Annual Report to Congress.

REGULATIONS
PUBLISHED

Among regulations issued in 1980 are final rules for "new" and "existing" MFBI's and powerplants and proposed rules for calculations of costs of using alternate fuels and exemptions for cogeneration.

NORTHEAST REGIONAL
ENVIRONMENTAL
IMPACT STUDY

OFC is currently studying the cumulative environmental impacts of the potential conversion of 42 coal-capable powerplants in the northeastern United States. A list of the powerplants included in the study is in Table B-10 (Appendix B). OFC anticipates that a draft of the study will be available in early 1981. When completed, the Northeast Regional Environmental Impact Study will provide a framework to assist Federal, state, and local authorities in making decisions regarding the number and timing of conversions.

PROGRAM FUNDING

Congressional action initially provided funds in FY 1980 in the amount of \$27.3 million to implement FUA and ESECA, \$19 million of which was for contractual support. An additional \$6 million was provided in the same fiscal year by Congress.

OFC STAFFING

At the end of 1980, the OFC program staff included 162 full-time employees, which represents 78 percent of authorized strength.

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III. PROGRAM EFFECTIVENESS

FUA OBJECTIVE

The stated objective of the FUA program is to reduce U.S. dependence on unreliable sources of imported energy supplies. This objective is to be achieved in a manner consistent with national environmental requirements and without severe economic costs or energy supply interruptions.

NEW FACILITIES

It is not always possible to determine the impact of FUA on fuel choice decisions without a thorough case-by-case analysis of each decision. The reasons for decisions regarding fuel types for new powerplants and MFBI's generally are not available for public scrutiny unless an exemption from FUA prohibitions is requested. However, an analysis of boiler sales, commitments to alternate fuel choices, and the nature of requests for FUA exemptions provide insight as to current business trends and the impacts of the FUA program.

Utility Powerplants

For several years, with few exceptions, utility fuel choice decisions for new base load facility construction have been in favor of coal because of the high prices of oil and uncertainty of interruptable natural gas supplies. Exemption petitions received during 1980 include an exemption, later withdrawn, for a temporary exemption based on the eventual use of synthetic fuels as the primary fuel. The remainder of the petitions were for peaking units. Thus, FUA has had no major impact on new utility powerplant fuel choice decisions.

Industrial Facilities

With respect to MFBI's, it is also evident that economic conditions and rising fuel costs had a dramatic impact on total boiler sales and types of fuel choices made by industries.

- In 1980, 24 boilers with a capacity of 100 MM Btu/hr or greater were ordered by industry; 3 were oil/gas units.
- In 1978, a total of 136 boilers were ordered; 77 were oil/gas units.

See Chart 1.

DOE analysis of available data for new facilities tends to support the conclusion that economics, conservation, and the market place, not FUA, have forced industry to evaluate alternate fuels in depth and those fuel choices now often coincide with the goals of FUA. Of 28 petitions for

CHART 1
INDUSTRIAL BOILER UNITS ORDERED
BY PRIMARY FUEL
1977 - 1980
(100 MM Btu/hr & Larger)

exemptions in process during 1980, only five indicated a firm commitment to oil or natural gas burning. The remainder were for exemptions that minimize the use of oil or natural gas, such as exemptions for burning fuel mixtures.

EXISTING
FACILITIES

ESECA

In the seven years since ESECA was enacted, 29 boilers have been converted to coal after the orders were made effective. Another 35 units covered by ESECA were converted before the prohibitions were made effective. These orders were rescinded in 1978 because the ESECA goals had been achieved. There are 48 outstanding ESECA prohibition orders which have not been made effective as of December 31, 1980. EPA certified 41 of these units for conversion to coal, representing a potential displacement of over 150,000 barrels of oil per day. See Tables B-4 and B-5 (Appendix B).

FUA

Under FUA, proposed prohibition orders involving an additional 53 boilers (see Tables B-2 and B-3) were issued, which have a potential displacement of approximately 241,000 barrels of oil per day.

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IV. MAJOR IMPLEMENTATION PROBLEMS

FINANCIAL

Conversion of an existing coal-capable facility may cost tens of millions of dollars for upgrading existing coal handling and pollution control equipment and for new equipment. For companies with older boilers, these expenditures may be only marginally cost-effective. However, if conversion is not cost effective, the FUA cost test is meant to provide for an exemption. Some companies have short-term cash flow or capital availability problems which might make it difficult to raise the required capital, regardless of the cost effectiveness of the projects. There may be immediate and substantial payoffs to users through reduced fuel costs, but without up-front capital to finance construction or conversion costs, the savings cannot be realized.

ENVIRONMENTAL

The Clean Air Act provides favored treatment for Federally ordered conversions to coal by exempting recipients of FUA orders from performance standards (both new source performance standards and new source review under the prevention of significant deterioration program) otherwise applicable to modified facilities and by authorizing the delayed compliance orders described earlier. Furthermore, the cost disparity between coal and oil makes conversion, even with flue gas desulfurization (scrubbers), economically attractive in most cases, as shown in analyses by DOE, EPA, the President's Commission on Coal, and the World Coal Study. However, technology intensive pollution controls require large capital expenditures that may exceed the financial capabilities of utility companies.

Disputes over environmental requirements may delay conversions. Companies often seek to relax emission limits in order to reduce pollution control costs. The air quality modeling performed to demonstrate that such relaxations will not violate national standards is detailed, requiring time and technical expertise. Local citizens and companies may object to pollution increases; the citizens out of concern for public health and welfare, the companies because more pollution from one source leaves less room for other facilities to increase their emissions. In short, environmental concerns may delay conversion, not because of insurmountable statutory, economic, or technical problems, but because deciding how the available air quality increment is allocated involves distributing costs and benefits among groups with competing interests.

TECHNICAL

Utility operators and industrial fuel burners are reluctant to switch to different or innovative fuels and technologies. This is because the acquisition and handling problems associated with alternate fuels such as coal, wood, municipal waste, and petroleum coke are often greater than those of oil or gas, and represent a substantial departure from traditional operations. This constraint applies mainly to industrial firms.

APPENDIX A
LEGISLATIVE AND REGULATORY SUMMARY

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LEGISLATIVE SUMMARY

SCOPE AND PURPOSE OF THE LEGISLATION

FUA was enacted on November 9, 1978. The Act became effective May 8, 1979, and was primarily designed to:

- o promote national energy self-sufficiency and reduce United States dependence on imported petroleum;
- o conserve petroleum and natural gas for uses for which no feasible substitutes exist; and
- o encourage the greater use of coal and other alternate fuels in lieu of petroleum and natural gas as primary energy sources in new and existing electric powerplants and MFBI's.

UNITS COVERED

The oil and natural gas prohibitions of FUA apply to electric powerplants and MFBI's.

- o For purposes of FUA, a powerplant is a stationary electric generating unit consisting of a boiler, a combustion turbine, or combined cycle unit which produces electric power for purposes of sale or exchange and has a design fuel heat input rate of 100 million Btu's per hour or greater, or which--in combination with other electric generating units located at the same site--has an aggregate fuel heat input rate of at least 250 million Btu's per hour.
- o For purposes of FUA, an MFBI is a stationary unit consisting of a boiler, gas turbine unit, combined cycle unit, or internal combustion engine which has a design fuel heat input rate of 100 million Btu's per hour or greater, or which--in combination with other such units located at the same site--has a fuel heat input rate of at least 250 million Btu's per hour.

STATUTORY PROHIBITIONS

FUA prohibits the use of petroleum and natural gas in certain facilities. Under FUA:

- o new powerplants are prohibited from being constructed without coal or alternate fuel capability unless specifically exempted by the Secretary of Energy;
- o new electric powerplants and new MFBI boilers are prohibited from using petroleum or natural gas as a primary energy source, unless specifically exempted by the Secretary of Energy;
- o existing electric powerplants are prohibited from using natural gas as a primary energy source after

January 1, 1990;

- o existing electric powerplants which used natural gas as a primary energy source in 1977 are prohibited prior to January 1, 1990 from increasing their proportional use of natural gas as a primary source above 1974-1976 levels, unless specifically exempted by the Secretary of Energy;
- o existing electric powerplants which did not use natural gas as a primary energy source during 1977 are prohibited from using natural gas as a primary energy source prior to January 1, 1990, unless specifically exempted by the Secretary of Energy; and
- o existing electric powerplants which used coal or other alternate fuel as a primary energy source during 1977 are prohibited from using petroleum as a primary energy source in excess of the amounts used in 1977 unless granted a special permit by the Secretary of Energy.

DISCRETIONARY
PROHIBITIONS

FUA also authorizes the Secretary of Energy to issue rules or orders prohibiting petroleum and natural gas use in certain MFBI's and powerplants. Figure A-1 shows the prohibition order processing flow. The Secretary may prohibit an existing electric powerplant or MFBI from using natural gas or petroleum as a primary energy source upon determining that:

- o the unit has or previously had the technical capability to burn coal or another alternate fuel as a primary energy source;
- o the unit has the technical capability to use coal or another alternate fuel as a primary energy source or could have such capability without:
 - substantial modification to the unit or
 - substantial reduction in its rated capacity; and
- o it is financially feasible for the unit to burn coal or other alternate fuel as a primary energy source.

The Secretary may prohibit by rule or by order the use of petroleum or natural gas in new MFBI's which are nonboilers, although no prohibitory rules were proposed in 1979. The Secretary may also prohibit the use of petroleum or natural gas beyond that needed in a mixture of oil or gas and an alternate fuel to maintain operational reliability and a reasonable level of fuel efficiency.

FIGURE A-1

PROHIBITION ORDER PROCESSING FLOW

LEGEND:

1] FOLLOWED BY A THREE MONTH PUBLIC COMMENT PERIOD.

2] INCLUDES ANALYSIS OF PUBLIC COMMENTS.

3] FOLLOWED BY A 30-DAY PUBLIC COMMENT PERIOD AND A PUBLIC HEARING (IF REQUESTED).

4] FOLLOWED BY A 45-DAY PUBLIC COMMENT PERIOD AND A PUBLIC HEARING (IF REQUESTED).

EXEMPTIONS

FUA authorizes the Secretary to receive and act upon petitions for temporary and permanent exemptions from its prohibitions under a variety of conditions. Figure A-2 shows the exemption petition processing flow. Temporary exemptions may be granted for up to five years and, in some cases, extended for an additional five years.

OTHER PROVISIONS OF FUA

FUA also contains other key provisions relating to coverage, administrative procedures, and other legislation.

Federal Facilities

Federally owned or operated powerplants and MFBI's are subject to FUA to the same extent as equivalent nongovernment facilities.

System Compliance

FUA provides an option for utility systems that are heavily dependent on natural gas to phase down natural gas usage on a systemwide basis through an orderly progression which allows some gas usage beyond the 1990 deadline applicable to individual powerplants. The system compliance option requires electric utility operators to file plans with OFC, for its approval, demonstrating their commitment to compliance with requirements of Section 501 of FUA.

Procedures

FUA provides for administrative procedures governing general rule making, notices of rules and orders imposing prohibitions, and petitions for exemptions. Table A-1 displays all of the administrative environmental, and technical activities which OFC must complete in order to finalize a prohibition order.

Enforcement

The Act authorizes the Secretary of Energy to collect information required to implement and monitor compliance with the legislation. The Act also authorizes the Secretary to issue notices of violation of the Act and sets forth criminal and civil penalties for such violations.

Coordination With Other Laws

Except for temporary exemptions and certain permanent exemptions for existing facilities which are pursuant to Section 763 of FUA, specifically not deemed to be major Federal actions under the National Environmental Policy Act of 1969 (NEPA), ERA must meet NEPA requirements when implementing the FUA exemption program. When environmental impacts are insignificant, a memorandum documenting that fact will be sufficient. If the impacts are clearly significant, a formal environmental impact statement (EIS) will be prepared. Where the impacts are not clearly significant, an environmental assessment (EA) will be prepared. If the

**FIGURE A-2
EXEMPTION PETITION PROCESSING FLOW**

LEGEND:

- 1] FOLLOWED BY A 30-DAY PERIOD FOR ERA TO DETERMINE ACCEPTABLE.
- 2] FOLLOWED BY A 45-DAY PUBLIC COMMENT PERIOD AND PUBLIC HEARING (IF REQUESTED).
- 3] INCLUDES ANALYSIS OF PUBLIC COMMENTS.
- 4] PUBLICATION OF EIS FOLLOWED BY A 30-DAY PUBLIC COMMENT PERIOD AND PUBLIC HEARING (IF REQUESTED).
- 5] FOLLOWED BY A 14-DAY PUBLIC COMMENT PERIOD AND PUBLIC HEARING (IF REQUESTED).

TABLE A-1

PROHIBITION ORDER ACTIVITIES

Hold Preproposed Prohibition Order Conference
Conduct Site Visit
Meet with Federal, State, and Local Officials
Make Technical Capability Recommendation
Issue Proposed Prohibition Order/Obtain Voluntary Commitment
Issue Letter of Authorization to Laboratories/Contractor
Conduct Analysis Kickoff Meeting
Formal Request for Information
Issue Notice of Intent (NOI) to Prepare EIS
Issue Draft Analysis Task Orders to Laboratories/Contractors
Issue Fuel Scoping Letter to Laboratories/Contractors
Close First Comment Period
Issue NOI to Proceed with Prohibition Order
Close Second Comment Period
Receive Draft Analysis Workplan from Laboratories/Contractors
Finalize Workplan and Task Orders
Conduct Public EIS Scoping Meeting
Laboratory/Contractor Deliverables:
-- Draft Fuel Scenario Identification Report (DFSIR)
-- Revised Draft Fuel Scenario Identification Report (RDFSIR)
-- Final Fuel Scenario Identification Report (FFSIR)
-- Preliminary Draft EIS Implementation Plan
-- Draft EIS Implementation Plan
-- Revised Draft EIS Implementation Plan
-- Final Draft EIS Implementation Plan
-- Preliminary Draft Environmental Impact Report (EIR)
-- Draft Environmental Impact Report (EIR)
-- Revised Draft Environment Impact Report (EIR)
-- Final Draft Environmental Impact Report (EIR)
-- Preliminary Draft Environmental Regulations Technical Report (ERTR)
-- Draft Environmental Regulations Technical Report (ERTR)
-- Revised Draft Environmental Regulations Technical Report (ERTR)
-- Draft Engineering Analysis Technical Report (EATR)

TABLE A-1 (Continued)

PROHIBITION ORDER ACTIVITIES

- Final Draft Engineering Analysis Technical Report (EATR)
- Draft Fuel Supply and Transportation Analysis Technical Report (FSTATR)
- Final Draft Fuel Supply and Transportation Analysis Technical report (FSTATR)

Complete Draft Preliminary Functional Analyses (FA):

- Environmental Regulations FA
- Financial Feasibility FA
- Financial Environmental FA
- Engineering FA
- Engineering Environmental FA
- Fuel Supply and Transportation FA

Conduct Functional Analysis Synthesis Conferences

Complete Draft Preliminary Integrated Analytical Regulatory Reports (RR):
Prohibition Order Findings

- Technical Capability RR
- Financial Feasibility RR

Complete Draft Preliminary Integrated Analytical Regulatory Reports (RR):
Exemptions

- Environmental RR
- State and Local RR
- Capital Availability RR
- On-Site Limitations RR
- Off-Site Limitations RR

Conduct Regulatory Report Synthesis Conferences

Complete Preliminary Integrated Analytical Regulatory Reports and
Preliminary Functional Analyses

Publish Draft EIS

Issue Tentative Staff Analysis

Conduct FUA Public Hearing

Close FUA Comment Period

Conduct EIS Public Hearing

Close EIS Comment Period

Laboratory/Contractor Deliverables:

- Draft Final Environmental Impact Report (EIR)
- Final Environmental Impact Report (EIR)

TABLE A-1 (Continued)
PROHIBITION ORDER ACTIVITIES

- Draft Final Engineering Analysis Technical Report (EATR)
- Final Engineering Analysis Technical Report (EATR)
- Draft Final Fuel Supply and Transportation Analysis Technical Report (FSTATR)
- Final Fuel Supply and transportation Analysis Technical Report (FSTATR)
- Complete Draft Final Integrated Analytical Regulatory Reports and Functional Analyses
- Conduct Final Synthesis Conference
- Complete Final Integrated Analytical Regulatory Reports and Final Functional Analyses
- Publish Final EIS
- Publish Final Decision (Prohibition Order, Exemption, Rescission)
- Issue NEPA Record of Decision
- Estimated Date of Plant Conversion

EA shows that the impacts are insignificant, a finding of no significant impact (FONSI) will be issued; if they are judged significant, an EIS will be required.

FUA/ESECA COMPARISON

The primary differences between FUA and ESECA are:

- o FUA does not require EPA certification prior to finalization of an order by DOE.
- o FUA places more emphasis than ESECA on the use of alternate fuels (e.g., wood or municipal waste) other than coal as acceptable alternatives to oil and gas.
- o ESECA, unlike FUA, contains no statutory prohibitions against the use of oil and natural gas. ESECA does not contain the exemption provisions embodied in FUA.

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REGULATORY SUMMARY

REGULATIONS

FUA authorizes the Secretary of Energy to issue rules to implement the legislation.

Key rules include the following:

Administrative Rules	The administrative rules establish procedures: for the conduct of conferences and public hearings and for submission of written comments; and for the filing of petitions for exemption from rules, orders, or statutory prohibitions.
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New Facilities Rules	The rules governing new facilities set forth eligibility and evidentiary requirements to qualify for either a temporary or permanent exemption from FUA prohibitions.
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Existing Facilities Rules	The existing facilities rules detail the regulatory findings that must be made and the procedures for the proposal and finalization of prohibition orders and rules under FUA. The existing facilities rules, like those for new facilities, set forth eligibility and evidentiary requirements for exemptions.
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Transitional Facilities Rule	<p>Under FUA, any powerplant or installation not operational before April 20, 1977, but for which construction or acquisition began before the enactment of FUA on November 9, 1978, is considered "new" unless the owner or operator claims and the Secretary finds that as of November 9, 1978 the construction or acquisition could not be cancelled, rescheduled, or modified without</p> <ol style="list-style-type: none">(1) imposing a substantial financial penalty;(2) incurring significant operational detriment in the case of an MFBI; or(3) adversely affecting electric system reliability in the case of a powerplant.
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Where the Secretary makes any of the foregoing findings, a powerplant or MFBI may be classified as "existing," and would then be subject to Title III of FUA, rather than Title II prohibitions related to new facilities. The transitional facilities rule details the definitions, procedures, eligibility, and evidentiary requirements for classification of transitional facilities as existing under FUA.

Special Public
Interest Gas
Rule

Utilities may petition for a special temporary public interest exemption to burn natural gas in place of petroleum in existing oil-fired powerplants. This rule sets forth criteria and expedited procedures by which owners and operators of existing powerplants may petition for this exemption.

System
Compliance
Option Rule

The system compliance option permits utility companies to phase out natural gas use on a systemwide basis in lieu of meeting the 1990 gas prohibition applicable to existing powerplants. This rule establishes the procedures for preparation and submission of a system compliance plan as well as outlining the commitments required to carry out the plan.

Prohibition
Against Increased
Use of Petroleum
Rule

The rule prohibits any existing powerplant, that used coal or other alternate fuel as a primary energy source during 1977 from using petroleum as a primary energy source in any calendar year in excess of the quantities used during 1977, unless ERA issues a permit authorizing such increased use. Such permits are to be issued only where EPA or the state air pollution control agency has certified that the powerplant cannot otherwise comply with requirements of the Clean Air Act, and the appropriate state regulatory authority has certified that the use of petroleum is necessary to maintain electric service reliability.

Cost Test
Rule

On June 23, 1980 ERA issued proposed cost calculation rules governing exemptions from the prohibitions of FUA in the case of new and existing facilities where it is demonstrated that the cost of using an alternate fuel would "substantially exceed" the cost of using imported petroleum.

In addition, the proposed rule provides cost calculation methodologies applicable to the financial feasibility finding required for issuance of a final prohibition order to an existing facility.

The interim rules governing cost calculations pertaining to new facilities were revoked on June 6, 1980 and those pertaining to existing facilities were revoked on August 12, 1980. ERA's cost calculation was adopted in final form on December 17, 1980.

Cogeneration
Exemption Rule

On August 11, 1980, ERA issued proposed rules governing cogeneration exemptions under FUA. These rules propose establishment of statewide

energy limits as a means of encouraging cogeneration in those regions of the country where there is a potential for oil and natural gas displacement while ensuring that new alternate fuel-fired capacity would not be deferred. This proposed rule, if adopted, would amend interim rules adopted by ERA on May 17 and July 23, 1979.

ESECA Rescission
Rule

A major regulatory action taken by ERA in 1980 was the revision of ESECA to reflect the termination of certain ESECA authority. This effort was completed in accordance with DOE's regulatory reform program for fiscal year 1980. The revised ESECA regulations were published in the Federal Register on October 10, 1980.

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APPENDIX B

TABLES

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TABLE B-1
VOLUNTARY COMMITMENTS RECEIVED IN 1980

<u>Date of Commitment</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts or MMBtu/hr)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
5/30/80	Central Maine Power	Mason (3, 4, 5)	Wiscasset, ME	99	2,700	252,000
5/30/80	Department of Defense	Fairchild Air Force Base (1, 2, 3)	Airway Heights, WA	300*	400	27,000
6/2/80	Department of Defense	Little Creek Naval Amphibious Base (1, 2, 3)	Little Creek, VA	270*	400	38,000
7/18/80	Virginia Electric and Power Co.	Yorktown (2)	Hornsbyville, VA	188	5,300	480,000
8/22/80	University of Illinois	Abbott Powerplant (5, 6, 7)	Champaign, IL	616*	600	50,000
Total Number of Units = 13				287 (Plus 1,186 MMBtu/hr.)	9,400	847,000

*MMBtu/hr.

TABLE B-2

PROPOSED PROHIBITION ORDERS ISSUED UNDER FUA IN 1980

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
1/17/80	Virginia Electric and Power Co.	Possum Point (4)	Dumfries, VA	239	6,700	622,000
3/28/80	New England Electric System	Salem Harbor (1, 2, 3)	Salem, MA	334	8,900	812,000
3/28/80	Department of Defense	Naval Ordnance Station (1, 2, 3)	Indian Head, MD	561*	700	61,000
5/16/80	Virginia Electric and Power Co.	Possum Point (3)	Dumfries, VA	114	3,000	277,000
5/16/80	Public Service Electric and Gas	Burlington (7)	Burlington, NJ	195	5,500	498,000
6/23/80	Tampa Electric Company	F.J. Gannon (1, 2, 3, 4)	Tampa, FL	616	8,000	1,088,000
6/24/80	General Services Administration	West Heating Plant (3, 5)	Washington, D.C.	550*	600	25,000
7/11/80	J. P. Stevens	Delta Finishing Plant (1, 2)	Wallace, SC	196*	100	10,000

*MMBTU/hr.

TABLE B-2 (Continued)

PROPOSED PROHIBITION ORDERS ISSUED UNDER FUA IN 1980

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
7/24/80	General Public Utilities	Sayreville (4, 5)	Sayreville, NJ	263	6,100	583,000
7/24/80	Public Service Electric and Gas	Bergen (1, 2)	Ridgefield, NJ	650	18,600	1,660,000
7/24/80	Long Island Lighting Company	E. F. Barrett (1, 2)	Island Park, NY	376	10,600	958,000
7/24/80	New England Gas and Electric Association	Canal (1)	Sandwich, MA	543	15,200	1,390,000
9/11/80	Department of Defense	Griffiss AFB Central Heating Plant (1, 2, 3, 4)	Rome, NY	500*	400	51,000
12/31/80	Tucson Electric	Irvington (1, 2, 3, 4)	Tucson, AZ	505	5,300**	480,000**
Total Number of Units = 32				3,835 (Plus 1,807 MMBtu/hr.)	89,700	8,515,000

*MMBTU/hr.

**Potential coal use and oil displacement will be dependent on the amount of derating of each of the units and the extent of oil/natural gas in the mixture.

TABLE B-3

PROPOSED PROHIBITION ORDERS ISSUED UNDER FUA IN 1979

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
8/22/79	Consolidated Edison Company	Arthur Kill (20, 30)	Staten Island, NY	911	17,800	1,600,000
8/22/79	Consolidated Edison Company	Ravenswood (30N & 30S)	Queens, NY	1,028	21,100	1,900,000
9/12/79	Department of Energy	Argonne Lab (5)	Argonne, IL	212*	400	40,000
10/09/79	Baltimore Gas and Electric Co.	Brandon Shores (1, 2)	Anne Arundel County, MD	1,220	27,000	2,400,000
10/24/79	Orange and Rockland Utilities, Inc.	Lovett (4, 5)	Tomkins Cove, NY	399	7,700	710,000
11/13/79	Public Service Co. of New Hampshire	Schiller (4, 5, 6)	Portsmouth, NH	150	4,800	432,000
11/14/79	Savannah Electric and Power Company	Effingham (1)	Effingham, GA	163	3,100	420,000
11/21/79	United Illuminating Company	Bridgeport Harbor (3)	Bridgeport, CT	400	11,200	1,022,000
12/21/79	Commonwealth Edison Company	Collins (4, 5)	Morris, IL	1,040	13,000	1,776,000

TABLE B-3 (Continued)

PROPOSED PROHIBITION ORDERS ISSUED UNDER FUA IN 1979

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
12/21/79	Long Island Edison Company	Northport (1, 2, 3, 4)	Huntington, NY	1,548	43,200	3,956,000
12/21/79	Atlantic City Electric Company	Deepwater (8)	Deepwater, NJ	75	1,900	185,000
Total Number of Units = 20				6,934 (Plus 212 MMBtu/hr)	151,200	14,441,000

*MMBtu/hr.

TABLE B-4

OUTSTANDING POWERPLANT ORDERS ISSUED UNDER ESECA
(As of December 31, 1980)

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
6/30/75	Delmarva Power and Light Co.	Edgemoor (1, 2, 3, 4)*	Wilmington, DE	392	11,100	1,002,000
6/30/75	Georgia Power Co.	McManus (1, 2)*	Brunswick, GA	115	3,200	294,000
6/30/75	Baltimore Gas and Electric Co.	C. P. Crane (1, 2)*	Baltimore, MD	399	11,200	1,019,000
6/30/75	Baltimore Gas and Electric Co.	Riverside (4, 5)*	Baltimore, MD	153	4,300	391,000
6/30/75	Baltimore Gas and Electric Co.	H. A. Wagner (1, 2)*	Baltimore, MD	268	7,500	684,000
6/30/75	Detroit Edison Company	St. Clair (5)*	Baltimore, MI	358	10,000	915,000
6/30/75	Central Hudson Gas and Electric Corporation	Danskammer (3, 4)	Roseton, NY	386	10,800	987,000
6/30/75	Niagara Mohawk Power Company	Albany (1, 2, 3, 4)*	Bethlehem, NY	400	11,200	1,020,000

*Units certified by EPA for conversion.

TABLE B-4 (Continued)

OUTSTANDING POWERPLANT ORDERS ISSUED UNDER ESECA
(As of December 31, 1980)

<u>Date Issued</u>	<u>Owner</u>	<u>Generating Station (and Unit Number)</u>	<u>Location</u>	<u>Capacity (Megawatts)</u>	<u>Potential Oil Displacement (Barrels/Day)</u>	<u>Potential Coal Utilization (Tons/Year)</u>
6/30/75	Virginia Electric and Power Company	Chesterfield (3, 4, 5, 6)*	Chester, VA	1,354	37,900	6,227,000
6/30/75	Virginia Electric and Power Company	Portsmouth (1, 2, 3, 4)*	Chesapeake, VA	650	18,500	1,686,000
6/30/77	Northern Utilities	Mt. Tom (1)	Holyoke, MA	136	3,800	346,000
6/30/77	St. Joseph Power and Light	Lake Road (5, 6)*	St. Joseph, MO	130	3,600	333,000
6/30/77	Long Island Lighting Co.	Port Jefferson (3, 4)	Port Jefferson, NY	376	10,600	960,000
6/30/77	Philadelphia Electric, Co.	Cromby (2)*	Phoenix, PA	230	6,400	588,000
Total Number of Units = 33				5,347	150,100	16,452,000

*Units certified by EPA for conversion.

TABLE B-5
OUTSTANDING INDUSTRIAL ORDERS ISSUED
UNDER ESECA THROUGH FY 1980

Facility	Unit Number
Martin Marietta Cement Company Atlanta, Georgia	1, 2*
Ash Grove Cement Company Chanute, Kansas	1, 2*
Weyerhaeuser Company Plymouth, North Carolina	3*
Allied Chemical Corporation Hopewell, Virginia	1, 2
Avtex Fibers, Incorporated Front Royal, Virginia	1, 2, 3, 4, 5*
Chesapeake Corporation West Point, Virginia	8*
E.I. DuPont de Nemours Company Seaford, Delaware	2, 3*

*Units certified by EPA for conversion.

TABLE B-6
 DELAYED COMPLIANCE ORDERS ISSUED BY EPA

<u>Facility</u>	<u>Unit Number</u>
Kansas City Board of Public Utilities Kaw River Station	1
Iowa Public Service George Neal Station	1
Iowa Electric Light & Power Sutherland Station	1, 2, 3
New England Electric System Brayton Point Station	1, 2, 3
E.T. DuPont de Nemours Company Seaford Plant	2, 3
Avtex Fibers, Incorporated Front Royal Plant	1, 2, 3
Chesapeake Corporation West Point Mill	8
VEPCO Portsmouth Station	4
Savannah Electric Port Wentworth Station	1, 2, 3
Carolina Power & Light Sutton Station	3
Florida Power Company Crystal River Station	2
Kansas Power & Light Lawrence Station	3, 4, 5
City of Springfield, Missouri James River Station	3, 4
Kansas City Power and Light Company Hawthorne Station	3
Kansas Power and Light Tecumseh Station	9, 10

TABLE B-7
EXEMPTION PETITION STATUS - EXISTING POWERPLANTS

Utility	Facility Location	Number of Powerplants	Status
Greenwood Utilities*	Greenwood, MS	1	Accepted for Analysis
Jacksonville Electric Authority	Jacksonville, FL	7	Under Review for Acceptance
Jersey Central Power & Light	Morristown, NJ	4	Under Review for Acceptance
Orlando Utilities Commission	Orlando, FL	6	Under Review for Acceptance
Utilities Commission City of Smyrna	Smyrna Beach, FL	1	Under Review for Acceptance

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TABLE B-8

EXEMPTION PETITION STATUS - NEW POWERPLANTS
(As of December 31, 1980)

<u>Company</u>	<u>Facility Location</u>	<u>Number of Petitions</u>	<u>Status</u>
<u>Received 1979</u>			
Company			
Imperial Irrigation District	Imperial, CA	1	Accepted for Analysis
Modesto Irrigation District	Modesto, CA	1	Granted
Puget Sound Power and Light Company	Bellevue, WA	2	Granted
Florida Power Corporation	St. Petersburg, FL	4	Granted
Georgia Power Company	Atlanta, GA	1	Granted
<u>Received 1980</u>			
Great Western Malting	Vancouver, WA	1	Accepted for Analysis
Modesto Irrigation District	Modesto, CA	1	Granted
Southern Indiana Gas and Electric Company	Evansville, IN	1	Granted
Nevada Power Company	Las Vegas, NV	2	Accepted for Analysis
Owatonna Public Utilities	Owatonna, MN	1	Accepted for Analysis
Puget Sound Power and Light Company	Bellevue, WA	2	Accepted for Analysis
Southern California Edison Company	Rosemead, CA	20	Accepted for Analysis
Missouri Public Service Company	Kansas City, MO	1	Under Review for Acceptance
Gulf States Utilities Company	Beaumont, TX	1	Under Review for Acceptance
Soyland Power Cooperative	Decatur, IL	1	Under Review for Acceptance

TABLE B-9
EXEMPTION PETITION STATUS - NEW MFBI'S

<u>Company</u>	<u>Facility Location</u>	<u>Number of Petitions</u>	<u>Status</u>
<u>Received in 1979</u>			
Air Products	Calvert City, KY	1	Accepted for Analysis
Central Illinois Public Service Company	Corteen, IL	1	Accepted for Analysis
Consolidated Rail	Cos Cob, CT	3	Granted
General Motors	Oklahoma City, OK	3	Granted
Pennsylvania Electric Company	New Florence, PA	2	Rejected
<u>Received in 1980</u>			
Republic Steel	Warren, OH	1	Granted
Minnegasco	Minneapolis, MN	1	Accepted for Analysis
Hoffman La Roche	Belvedere, NJ	1	Accepted for Analysis
St. Regis	Pensacola, FL	1	Granted
Olin	Pisgah Forest, NC	10	Accepted for Analysis
Upjohn	Kalamazoo, MI	1	Accepted for Analysis
Stone Container	Coshocton, OH	1	Accepted for Analysis
Hooker Chemical	Niagara, NY	2	Granted

TABLE B-9 (Continued)
EXEMPTION PETITION STATUS - NEW MFBI'S

<u>Company</u>	<u>Facility Location</u>	<u>Number of Petitions</u>	<u>Status</u>
<u>Received in 1980</u>			
Atlantic Richfield	Philadelphia, PA	3	Accepted for Analysis
Gulf Oil	Belle Chasse, LA	1	Accepted for Analysis
Shell Oil	Norco, LA	3	Accepted for Analysis
General Motors	Shreveport, LA	1	Under Review for Acceptance
Phillips Petroleum	Borger, TX	2	Rejected
Exxon	Baytown, TX	1	Granted
<u>Received in 1979</u>			
BASF Wyandotte	Wyandotte, MI	1	In Process
Brown Company	Berlin, NH	1	Accepted for Analysis
Brunswick Pulp & Paper	Brunswick, GA	1	Accepted for Analysis
General Electric	Lynn, MA	1	Accepted for Analysis
Convent Chemical Company	Convent, LA	3	Granted
Convent Chemical Company	Convent, LA	3	Rejected

TABLE B-10

UTILITY SYSTEMS SUBMITTING SYSTEM COMPLIANCE PLANS

<u>Name of Petitioner</u>	<u>Location</u>
Arizona Public Service Company	Phoenix, Arizona
City of Austin	Austin, Texas
City of Bryan, Texas	Bryan, Texas
Public Utilities Board	Brownsville, Texas
Southern Colorado Power, a division of Central Telephone and Utilities Corporation	Pueblo, Colorado
City of Clarksdale	Clarksdale, Mississippi
City of Farmington, New Mexico	Farmington, New Mexico
Fort Pierce Utilities Authority	Fort Pierce, Florida
Gainesville Regional Utilities	Gainesville, Florida
City of Grand Island, Nebraska Electric Department	Grand Island, Nebraska
Western Power, a division of Central Telephone and Utilities Corporation	Great Bend, Kansas
City of Denton, Texas	Denton, Texas
El Paso Electric Company	El Paso, Texas
Florida Power Corporation	St. Petersburg, Florida
Florida Power and Light Company	Miami, Florida
City of Garland	Garland, Texas
City of Greenville	Greenville, Texas
City of Lafayette	Lafayette, Louisiana
Plains Electric Generation & Transmission Coop., Inc.	Albuquerque, New Mexico
City Public Service	San Antonio, Texas

TABLE B-10(Continued)

UTILITY SYSTEMS SUBMITTING SYSTEM COMPLIANCE PLANS

<u>Name of Petitioner</u>	<u>Location</u>
Greenwood Utilities	Greenwood, Mississippi
Gulf States Utilities Company	Beaumont, Texas
City of Lakeland	Lakeland, Florida
Lake Worth Utilities Authority	Lake Worth, Florida
Lea County Electric Cooperative, Inc.	Lovington, New Mexico
Mississippi Power & Light Company	Jackson, Mississippi
Montana-Dakota Utilities Company	Bismarck, North Dakota
Nebraska Public Power District	Columbus, Nebraska
The Central Nebraska Public Power & Irrigation District	Holdrege, Nebraska
Utilities Commission City of New Smyrna Beach	New Smyrna Beach, Florida
Oklahoma Gas & Electric Company	Oklahoma City, Oklahoma
Orlando Utilities Commission	Orlando, Florida
Pacific Gas & Electric Company	San Francisco, California
St. Joseph Light & Power Company	St. Joseph, Missouri
Sebring Utilities Commission	Sebring, Florida
Southwestern Public Service Company	Amarillo, Texas
Sunflower Electric Cooperative, Inc.	Hays, Kansas
City of Tallahassee, Florida	Tallahassee, Florida
City of Vero Beach Municipal Electric System	Vero Beach, Florida

TABLE B-11

FACILITIES INCLUDED IN THE REGIONAL STUDY

<u>GENERATING STATION</u>	<u>UNITS</u>
<u>Connecticut</u>	
Bridgeport Harbor	#3
Devon	#7,8
Norwalk Harbor	#1,2
Montville	#5
Middletown	#1,2,3
<u>Delaware</u>	
Edgemoor	#1,2,3,4
<u>Maine</u>	
Mason	#1,2,3,4,5
<u>Maryland</u>	
Brandon Shores	#1,2
Riverside	#4,5
Wagner	#1,2
Crane	#1,2
<u>Massachusetts</u>	
New Boston	#1,2
Mystic	#4,5,6
Canal	#1
Mt. Tom	#1
Salem Harbor	#1,2,3
Somerset	#6,
West Springfield	#3
<u>New Hampshire</u>	
Schiller	#4,5,6
<u>New Jersey</u>	
Deepwater	#7,8,9
Sayreville	#4,5
Bergen	#1,2
Kearney	#7,8
Sewaren	#1,2,3,4
Hudson	#1
Burlington	#7

EXHIBIT B-11 (Continued)

FACILITIES INCLUDED IN THE REGIONAL STUDY

<u>GENERATING STATION</u>	<u>UNITS</u>
<u>New York</u>	
Danskammer	#1,2,3,4
Arthur Kill	#2,3
Ravenswood	#3
Barrett	#1,2
Northport	#1,2,3,4
Far Rockaway	#4
Glenwood	#4,5
Port Jefferson	#1,2,3,4
Albany	#1,2,3,4
Lovett	#3,4,5
Oswego	#1,2,3,4
<u>Pennsylvania</u>	
Cromby	#2
Schuylkill	#1
Southwark	#1,2
Springdale	#7,9
<u>Rhode Island</u>	
South Street	#12