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STATEMENT OF

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ENERGY AND MINERALS DIVISION

BEFORE THE

SUBCOMMITTEE ON ENERGY REGULATION

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to be here today to discuss our review of the implementation of the Federal coal conversion program under the authority of the Energy Supply and Environmental Coordination Act of 1974 (ESECA) and the Powerplant and Industrial Fuel Use Act of 1978 (FUA). These laws were enacted to increase coal use and decrease the use of oil and natural gas in large utility and industrial boilers.

Over the past several years, we have reported on both coal conversion programs and proposed coal conversion legislation. Our ongoing work in this area was requested by the former Chairman and now Ranking Minority Member of the Senate Committee on Energy and Natural Resources. This work is now nearing completion and we expect to issue a report in the near future.

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My statement will provide background information on the Department of Energy's (DOE) coal conversion program, and highlight our tentative findings and conclusions regarding the progress of the Federal program to convert existing boilers, utility efforts to make conversions voluntarily, and the implications of these efforts for a reduced level of regulatory activity.

In general, we believe that the developing trend toward voluntary conversion by electric utilities should lessen the regulatory effort needed to achieve existing Federal coal conversion goals.

We also are reviewing the potential effects of FUA's prohibitions on natural gas use starting in 1990 by analyzing questionnaires that we sent to the utilities which must comply with the prohibitions.

We have also followed the development of the FUA regulations, and reviewed the consistency of major FUA provisions with Congressional intent. Our work identified several matters included in DOE's final regulations which we have referred to our Office of General Counsel for an opinion on their consistency with congressional intent. These include DOE claims that (1) FUA provides the authority to impose environmental control measures beyond those required by other Federal laws, (2) FUA provides the authority to regulate units which are not the subject of an exemption petition, and (3) it does not necessarily consider any exemption to be permanent. We expect a decision within the next few weeks

and will provide the Subcommittee with a report at that time.

BACKGROUND

Before discussing the details of our work, some background information may be helpful. The Powerplant and Industrial Fuel Use Act was designed to accelerate industrial coal use in place of oil and gas. This Federal policy was first implemented through the Energy Supply and Environmental Coordination Act. These statutes direct that a regulatory approach be used to require the large scale conversion of existing industrial boilers to coal if they are equipped to do so, and are intended to limit the use of oil and gas in new boilers. Much of the new utility electric generating capacity and large industrial boilers installed since World War II have been fueled by low cost, relatively clean burning oil or natural gas. In addition, about 400 powerplant boilers, mostly along the East Coast, were switched from coal to oil between 1968 and 1972.

Although oil and gas use was to be reduced by the ESECA program, no existing powerplants had converted to coal under this program by the time Congress began considering further legislation in 1977. In reviewing the ESECA program, Congressional Committees noted that there had been deficiencies in program management and that the program was not easy to implement. Our review of the program disclosed that the site specific economic and environmental analyses which were required prior to issuing conversion orders were time consuming and

expensive; and that better coordination was required between the Federal Energy Administration (the Department of Energy's predecessor agency) and the Environmental Protection Agency.

Congress passed FUA to improve the regulatory program started under ESECA, by providing the Department of Energy with revised authority to order the conversion of existing powerplants, and with additional authority to

--prohibit the use of petroleum and natural gas in new electric powerplants and industrial installations;

--limit increases in the amounts of oil or gas used in existing boilers, and to

--prohibit the use of natural gas in existing boilers starting in 1990.

Exemptions from these provisions are available but owners of boilers that request exemptions must, in general, document their eligibility. The coal conversion program is now administered by the DOE's Economic Regulatory Administration (ERA).

ERA'S CONVERSION PROGRAM PROCEEDING SLOWLY

ERA's program for converting existing boilers includes 33 utility powerplant sites, 5 industrial sites and 3 Federal facility sites. Proposed prohibition orders, which could lead to conversion, were issued for all of these sites. Since the conversion program started, it has been focused on the conversion of the country's largest boilers, those owned by electric utility companies. Industrial boiler conversions have received little attention in comparison.

Because of the increasing number of voluntary utility conversion efforts and ERA's policy focus on attaining early accomplishments, the conversion program has evolved from one of enforcement to regulatory assistance. For example, ERA helps utilities speed their own conversion plans by providing a method to attain air quality compliance at an earlier date than otherwise possible. Early air quality compliance approval can be provided by EPA once ERA has issued a proposed prohibition order, and after the company has shown it is likely to comply with air quality standards when coal burning starts. No conversions have been accomplished through enforcement efforts.

One of the most troublesome and time-consuming problems in the conversion program--which generally must precede any enforcement action--involves the completion of regulatory analyses. Generally, these analyses, which are contracted out, are performed for each powerplant to determine that coal can be burned without a major power reduction, and that the conversion is financially feasible and environmentally acceptable. These analyses must be completed before ERA can issue a final conversion order. Historically, ERA has experienced difficulty in finding contractors who can perform these types of analyses. Moreover, even when contracts have been awarded, ERA has had difficulties in obtaining quality work in a timely manner.

ERA has projected that most analyses would be completed by fiscal year 1982; however the record of delays in this

program leaves us to believe these case completion projections are optimistic. The extent of any desired enforcement actions will hinge largely on the timely completion of these analyses.

On the other hand, I should point out that, in some instances, completion of the analyses appear unnecessary because of the substantial progress companies have made toward meeting conversion requirements. For example, studies of powerplants which are already burning coal, or where conversion appears to be assured do not appear necessary.

Voluntary conversions by utilities

We have identified 14 utilities which are attempting or planning to convert 46 existing boilers at 21 powerplants (See Attachment I). Proposed prohibition orders have been issued on 18 of these 21 powerplants, and the remaining three powerplants are converting outside the program. These companies have taken a variety of actions to initiate the conversion process, and the conversions are scheduled to be completed by 1988. If completed, these conversions are projected to save about 224,000 barrels of oil per day, or about 64 percent of all the savings which could be achieved by conversion of all 41 powerplants now in ERA's conversion program.

Some of these companies are further along than others and, while these are positive signs overall, the conversion process is lengthy and delays in completing some of the conversions can be expected, particularly those which

face strong environmental challenges.

Current Trends In
Fuel Choices For
New Boiler Purchases

At this time, it would be speculative to estimate to what extent industry would choose to purchase oil and gas fired boilers absent the Fuel Use Act prohibitions. Many non-regulatory factors influence boiler fuel decisions which are subject to a variety of local conditions and individual company situations. For example, security of fuel supply, maintenance and operating costs, and physical space requirements are all relative considerations.

It is evident, however, that the price of fuel is a controlling factor. Since the Fuel Use Act became law in 1978, the average cost of oil delivered to electric utilities has increased about 94 percent, natural gas prices increased about 66 percent, while the price of coal increased about 20 percent (See Attachment II). At the present time, such price changes favor coal use relative to oil or natural gas.

The electric utility industry projections reported to DOE in 1980 indicate that about 97 percent of the additional generating capacity to be added between 1980 and 1989 will use energy sources other than oil or natural gas (See Attachment III).

For the non-utility segment, which purchases much smaller boilers, the available data is inadequate to

provide a reasonable indication of expected trends. Unlike utilities, there are no regular reports of planned boiler additions. Although some indication of fuel choice can be gleaned from industrial boiler sales data, the data is inconclusive. Industrial boiler sales have been depressed for several years, hitting a low during 1980 of just 24 boilers with a capacity of 100 million Btu's or more. Given that caveat, sales do show a preference for coal or other alternatives to oil or natural gas. During the last 2 years, only 11 percent of the 33.4 billion Btu's of industrial boiler capacity sold was oil or gas fired.

As I indicated earlier, companies can apply for exemptions to the Act's prohibition against the use of oil or gas in new boilers. The level of activity to date has been relatively light in terms of numbers of exemptions filed, but could increase depending on future demand for new oil and gas fired boilers.

CONCLUSIONS

In summary, Mr. Chairman, our work to date shows that:

--Utilities are making significant efforts to voluntarily convert existing boilers to coal. This developing trend should lessen the regulatory effort needed to achieve existing Federal coal conversion goals.

--The Department of Energy's enforcement actions to reach those companies who do not intend to convert

has been minimal. No final enforcement actions have been initiated since the Fuel Use Act was passed in 1978. The extent of desired enforcement efforts to satisfy the intent of existing legislation will hinge largely on the completion of regulatory analyses which have been delayed.

--There is some evidence, primarily concerning utilities, that the fuel choice for new boiler purchases will favor coal and other alternatives over oil and gas--the historically preferred choices. The relative price advantage which coal now has over oil and gas is a principal reason for this change in fuel choices.

--Requests for exemptions to the Act's prohibition against purchase of new oil and gas boilers have been relatively light. Because of the generally depressed boiler sales, however, this level of activity is not necessarily indicative of future request levels, or the regulatory workload which will be required to administer existing exemption provisions under the Fuel Use Act.

This concludes my prepared statement, Mr. Chairman. We will be pleased to answer any questions you might have.

ATTACHMENT I

LIST OF POWERPLANTS WHICH UTILITIES ARE ATTEMPTING TO CONVERT

Company	Powerplant
New England Electric Power	Brayton Point 1/
Virginia Electric and Power	Chesterfield 1/ Portsmouth 1/ Possum Point Yorktown
Consolidated Edison	Ravenswood Arthur Kill
Public Service Electric and Gas	Burlington Bergen Hudson
Savannah Electric and Power	Effingham
Baltimore Gas and Electric	C.P. Crane Brandon Shores
Delmarva Power and Light	Edge Moor
St. Joseph Power and Light	Lake Road
Holyoke Water Power (a subsidiary of Northeast Utilities Company)	Mt. Tom
Central Maine Power	Mason
Atlantic City Electric	Deepwater
Orange and Rockland Utilities, Inc.	Lovett
Public Service Company of New Hampshire	Schiller
Tampa Electric	F.J. Gannon

1/ Coal burning commenced at these powerplants before October 1980. ERA issued a final ESECA prohibition order on Brayton Point during 1980.

ATTACHMENT II

COST OF FOSSIL FUELS DELIVERED TO STEAM-ELECTRIC UTILITY PLANTS 1/

Average Fuel Prices in Cents per million Btu

	Coal	Residual Oil	Natural Gas
1973	40.5	78.8	33.8
1974	71.0	191.0	48.1
1975	81.4	201.4	75.4
1976	84.8	195.9	103.4
1977	94.7	220.4	130.0
1978	111.6	212.3	143.8
1979	122.4	299.7	175.4
1980 2/	138.9	411	238.7

1/ Source: Monthly Energy Review, U.S. Department of Energy, Energy Information Adminstration, January 1981.

2/ As of September, 1980.

ATTACHMENT III

PRIMARY ENERGY SOURCES FOR NEW ELECTRIC UTILITY GENERATING UNITS, 1980-89 1/

	Megawatts of capacity 2/	Percent
Coal	136,319	53.4
Nuclear	92,743	36.3
Hydro	15,050	5.9
Oil	6,531	2.6
Wood or Refuse	1,836	.7
Geothermal	1,582	.6
Natural Gas	1,154	.5
Wind	38	-
Total	255,253	100.0

1/ Based on a report of the National Electric Reliability Council to DOE, and adjusted to note the use of coal in the Brandon Shores powerplant of the Baltimore Gas of Electric Company rather than oil or gas as originally reported.

2/ This table does not include 4,237 megawatts of capacity for which the specific primary energy source was not identified.