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STATEMENT OF
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BEFORE THE
SUBCOMMITTEE ON ENERGY CONSERVATION AND POWER
HOUSE COMMITTEE ON ENERGY AND COMMERCE
ON
ENERGY EFFICIENCY STANDARDS FOR
HOUSEHOLD APPLIANCES



Mr. Chairman and Members of the Subcommittee:

We welcome the opportunity to be here today to discuss our recent report on the Department of Energy's (DOE's) efforts to develop appliance energy efficiency standards. 1/ Our report primarily focuses on the basis for DOE's April 2, 1982, proposal to establish no standards for eight appliances, but also discusses DOE's June 1980 appliance standards proposal and subsequent revisions to it, the implications a final no standards decision has for existing and future State appliance standards, and aspects of the Federal appliance labeling program. We are furnishing a copy of our report for the record.

1/"Appliance Efficiency Standards: Issues Needing Resolution By DOE," GAO/EMD-82-78, May 14, 1982.

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As you are aware, the National Energy Conservation Policy Act (NECPA) directs the Secretary of Energy to prescribe efficiency standards, or make a no-standard determination, for each of 13 major household appliances. DOE's April 2, 1982, proposed rule-making represents nearly 3 1/2 years of analysis and review. The current proposal is the second DOE appliance standards proposal; the first, made on June 30, 1980, contained standard proposals for the same eight products included in the current proposal.

My statement today briefly discusses our findings with respect to (1) the analytical methodology supporting DOE's current proposal, (2) DOE's revisions to its June 1980 proposal, (3) pre-emption of State appliance standards, and (4) the Federal appliance labeling program. Our report Digest, which contains more detailed information, is attached and should be considered a part of my statement.

METHODOLOGY

Based on our work, DOE's basis for its April no standards proposal is highly questionable. First, the analysis in support of DOE's proposal relies heavily on an unvalidated key assumption that consumers will purchase substantially more efficient appliances in response to increases in real energy prices. We found that actual consumer purchases of appliances during the 1970s--a time of rising real energy prices--did not support DOE's key assumption. Moreover, DOE's assumption seems to ignore the fact that home builders, who purchase many of the major energy-using appliances, are more sensitive to first costs than energy efficiency.

Secondly, DOE was inconsistent in considering the impact of market forces in its analyses. In estimating energy savings from imposing appliance standards, DOE projected a base (or market forces) case and a standards case for the period 1978-2005. DOE concluded that the difference in energy consumption under these two cases was the effect of appliance standards. However, we are concerned about the comparability of these two cases since, in the base case, consumers were projected to purchase more energy efficient appliances because of increasing energy prices, but in the standards case, consumers' purchase decisions were not affected by changing energy prices.

DOE also inconsistently treated market forces in its energy savings analysis and its financial impact analysis. We found that DOE, in estimating energy savings from standards, projected that market forces would result in significant improvements in appliances produced and sold. However, in estimating the cost and risk of appliance standards on manufacturers, DOE assumed that all the cost and risks involved in upgrading the efficiency of appliances produced were attributable to the imposition of standards. By not consistently treating market forces, DOE undermined the comparability of its different cases and the reliability of its conclusions.

Finally, DOE used four markedly different future energy price projections during the standards development process, and for the analysis supporting its current proposal, used future energy price assumptions significantly higher than other available

estimates. When coupled with DOE's assumption about consumer responses to changes in real energy prices, these high energy price projections result in DOE forecasting that market forces would substantially improve the efficiency of appliances purchased by consumers without the imposition of standards.

Overall, DOE's analyses appeared to consider the impact of market forces only when such impact supported its no-standards proposal.

JUNE 1980 PROPOSAL

DOE significantly revised its June 1980 proposal to establish standards for eight products based on extensive comments from appliance manufacturers and the public. DOE's revisions addressed major concerns of the appliance industry as well as maintained standards for six appliances.

It appears as though the revised standard levels could have benefited consumers. In our view, the revised standards could have potentially saved about 10 percent of the energy consumed by these appliances in the year 2000. In addition, DOE's own analyses of the revised standard levels indicated that consumers would realize life-cycle cost benefits from purchasing appliances meeting the standards and, in most cases, would have recovered the higher initial cost of such appliances within 3 years.

These revisions, however, were never published for public comment because the administration decided to review the entire standards development process.

PREEMPTION AND LABELING

In our work, we looked at the implications a final no-standards decision would have for existing State appliance standards and the Federal appliance labeling program. We found that, because of the Federal preemption provisions of NECPA, a final no-standards determination would impact on energy conservation and utility load management efforts in many States.

Overall, 9 of 24 States we contacted told us they would likely petition DOE to exempt their programs from preemption. We also noted that efficiency standards for air-conditioning and water heating equipment have been incorporated into building codes in 49 States. Although the central air-conditioning standards are not very stringent, and their preemption would not significantly affect energy conservation efforts, preemption of the water heater standards would have an impact.

With respect to appliance labeling, we evaluated the extent that energy efficiency labels and fact sheets were being used in selling furnaces. We found that furnace customers were not requesting efficiency information, and heating contractors were not providing customers information required to be furnished to them under the appliance labeling program. Thus, at least with respect to furnaces, the major energy consuming appliance, labeling does not appear to be having any affect on consumer purchase decisions.

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That concludes my statement, Mr. Chairman. We will be happy to respond to questions.

D I G E S T

The National Energy Conservation Policy Act directs the Secretary of Energy to prescribe an energy efficiency standard for each of 13 major household appliances. No standard was to be prescribed which would not be economically justified, would not be technologically feasible, or would not result in significant conservation of energy. In assessing the economic justification of standards, the Secretary was directed to consider a standard's impact on, among other things, manufacturers, consumers, life-cycle costs, appliance usefulness, and national energy conservation. GAO undertook its review to provide information which would be useful to the Congress in deliberating a continued Federal involvement in energy conservation programs. (See pp. 1 and 2.)

The Department of Energy (DOE) published proposed rules on June 30, 1980, recommending standards for eight of the appliances. The proposal brought a strong reaction from manufacturers, who contended the standards would be too difficult to achieve and the proposed enforcement program would be unnecessarily burdensome. DOE revised its originally proposed standards and enforcement approach, but never published them for comment because the administration decided to review the entire standards development process.

DOE published new proposed rules April 2, 1982, concluding that no appliance standards be established. (See pp. 4 to 7.)

DOE'S ANALYTICAL BASIS FOR PROPOSING
NO APPLIANCE STANDARDS IS
HIGHLY QUESTIONABLE

DOE's no appliance standards proposal is based on economic analyses which were done using computer simulation models. GAO evaluated DOE's analytical efforts and concluded that the basis for DOE's proposal for no appliance standards is highly questionable. The analyses contain an unvalidated key assumption, are inconsistent in their treatment of the effects of market forces,

and use high energy price projections. The potential impact of this is to decrease the energy savings from, and increase the costs of, appliance standards.

Unvalidated key assumption

The analysis supporting DOE's proposal relies heavily on an unvalidated key assumption that consumers purchase substantially more efficient appliances in response to rising energy prices.

DOE's assumption is not supported by available historical evidence, particularly for furnaces, central air conditioners, and water heaters. For example, despite a 40-percent increase in real natural gas prices from 1975 to 1978, the average efficiency of gas furnaces sold over these years remained essentially the same. In addition, from 1972 to 1978, gas water heaters improved only 1.7 percent while real gas prices increased about 65 percent. Moreover, DOE's assumption is questionable since builders purchase many major appliances and are more sensitive to initial costs than energy efficiency in making such purchases. (See p. 12.)

Inconsistent projection of the effect of market forces on achieving appliance efficiency

DOE inconsistently treated market force effects in projecting future energy savings from standards as well as in establishing the cost and risk to manufacturers from standards. By not consistently treating market force effects throughout its analysis, DOE has undermined the comparability of its different cases and the reliability of its conclusions. (See p. 13.)

Varying projections of future energy prices

DOE projected future energy savings from standards using four markedly different assumptions about future energy prices. In particular, the April 2, 1982, proposal is based on energy price projections which are significantly higher than other available estimates--78 percent higher for electricity, 12 percent higher for natural gas, and 25 percent higher for heating oil than the average increase projected by others. (See p. 14.)

DOE'S REVISED 1980 STANDARDS IS
A POTENTIALLY VIABLE PROPOSAL

DOE revised its June 1980 standards proposal based on public comments. However, this revision was never published for comment because the administration decided to review the standards development process. The revision appeared to be a potentially viable standards proposal because it addressed major concerns of the appliance industry and contained standard levels which could benefit consumers. (See p. 18.)

GAO estimates that the revised efficiency standards could save about 10 percent of the energy consumed by six appliances in the year 2000. Essentially all of these savings would result from standards on furnaces, water heaters, central air conditioners, and refrigerators, major energy consuming appliances. Also, most of the revised standard levels would permit consumers to recover, in less than 3 years, the increased purchase price of appliances resulting from standards. (See p. 21.)

ISSUES RELATED TO A NO
STANDARDS DETERMINATION

Two issues related to a no standards decision by DOE are (1) the implications such a decision will have for existing State appliance standards programs and (2) the extent to which the Federal appliance labeling program will, through enhanced consumer awareness, increase the number of high efficiency appliances being purchased.

By law a no standards decision by DOE preempts existing State appliance standards programs. Such a situation could adversely affect States which have standards programs or have promoted increased appliance efficiency through building codes. In addition, since the law provides that States may petition DOE for exemption from the no standards determination, a proliferation of divergent State standards could follow. (See p. 25.)

DOE expects that increased consumer awareness of appliance efficiency will result from higher energy prices in combination with the Federal Trade Commission's appliance labeling program. GAO's work indicates that the labeling program

for furnaces--the largest single user of residential energy--is not likely to significantly affect consumers' purchase decisions and thus, increase appliance energy efficiency. GAO found that labeling was not working effectively for furnaces because the labels do not contain key data and few consumers have an opportunity to see comparative efficiency information before buying a new furnace. (See p. 27.)

RECOMMENDATION

GAO recommends that the Secretary of Energy make no decision on the need for appliance efficiency standards until he considers and resolves the issues raised in this report. In carrying out this recommendation, the Secretary should either demonstrate more conclusively for each appliance that a determination of no standard is justified or prescribe an appropriate energy efficiency standard.

AGENCY COMMENTS

To assure that information in this report would be available to the Congress and the public for DOE's May 1982 public hearings on its April 1982 no standards proposal, GAO did not obtain written agency comments. This action was consistent with a request by the Chairman, Subcommittee on Energy Conservation and Power, House Committee on Energy and Commerce. However, GAO gave DOE officials an opportunity to provide their views on the matters discussed in this report. DOE officials told GAO it would be inappropriate for them to discuss the report's contents since the report concerns a matter that is the subject of an ongoing rulemaking proceeding.