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REPORT BY THE U.S.



General Accounting Office

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Energy-Saving Strategies For Federal Procurement

This report discusses what Federal agencies have done to develop and implement procurement techniques which result in reduced energy consumption.

The Office of Federal Procurement Policy (OFPP) has issued a policy letter, and the Department of Defense and the General Services Administration have added a general policy statement to their procurement regulations. But Federal procuring agencies have not developed specific procedures for considering energy in the procurement process. This report identifies potential procurement practices for reducing energy use and suggests what OFPP could do to ensure that such practices are implemented.



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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ENERGY AND MINERALS
DIVISION

B-178205

The Honorable James T. McIntyre, Jr.
Director, Office of
Management and Budget

Dear Mr. McIntyre:

As part of our continuing work to evaluate Federal energy conservation measures, we reviewed what Federal agencies have done to develop and implement procurement techniques which result in reduced energy consumption. The sheer volume of Federal procurement makes it an important process through which energy conservation can be effected. We believe, however, that the Office of Federal Procurement Policy (OFPP) has not provided satisfactory guidance to procuring agencies and has not assured that measures to achieve energy conservation through the procurement process have been implemented.

Several procurement strategies exist which can be aimed at reducing energy use, but Federal agencies are not using many of them which could be implemented under the law. We are recommending, therefore, that the Office of Management and Budget (OMB) have the Office of Federal Procurement Policy immediately strengthen its policy on saving energy through the procurement process by (1) explicitly identifying energy efficient procurement techniques that can be used and (2) requiring Federal procuring agencies to develop specific procedures and to issue guidelines on when and how to use those techniques. We are also recommending that OFPP follow up on agency actions to ensure that energy does indeed become a major consideration in the procurement process.

LEGISLATION REQUIRES ENERGY USE TO BE
CONSIDERED IN THE PROCUREMENT PROCESS

Section 381(a)(1) of the Energy Policy and Conservation Act (EPCA), Public Law 94-163, dated December 22, 1975,

requires that:

"The President shall, to the extent of his authority under other law, establish or coordinate Federal agency actions to develop mandatory standards with respect to energy conservation and energy efficiency to govern the procurement policies and decisions of the Federal Government and all Federal agencies, and shall take such steps as are necessary to cause such standards to be implemented."

The term "standards" as used in this section of EPCA is somewhat confusing. While it is clear that energy conservation and energy efficiency standards are to be established and integrated into the procurement process, the measures of such standards and how or when they are to be applied to the procurement process is not specified.

LITTLE HAS BEEN DONE TO IMPLEMENT
THE INTENT OF THE LEGISLATION

While over 3 years have gone by since EPCA was passed, OFPP and the procuring agencies have neglected to take meaningful action on section 381(a)(1). As discussed below, what has been done, to date, could be categorized as giving "lip service" to the intent of the law.

The President, by Executive Order 11912, delegated the responsibility for carrying out EPCA Section 381(a)(1) to OFPP. On August 6, 1976, OFPP issued Policy Letter No. 76-1, which requested Federal agencies "to ensure that the principles of energy conservation and efficiency are applied in the procurement of property and services * * *." In the policy letter, OFPP did not explain how to implement these principles, but stated that specific procedures for doing so were to be established in procurement regulations.

On April 29, 1977, the Department of Defense (DOD) responded to the OFPP policy letter by inserting in the Armed Services Procurement Regulations--now the Defense Acquisition Regulations--a general provision that "energy conservation and efficiency criteria shall be considered" in the procurement process. This statement is no more specific than the OFPP policy letter. The regulation does not define energy conservation and energy efficiency criteria, and does not explain how they are to be applied.

On April 5, 1978, the General Services Administration (GSA) amended the Federal Procurement Regulations to include the same energy conservation policy statement as was written by DOD. This amendment is in the form of general policy; and just as in the Defense Acquisition Regulations, it does not identify procedures for implementing energy conservation and efficiency principles.

We found no evidence during our review that further action has been taken beyond the OFPP policy letter and the resulting changes to the procurement regulations. As discussed below, however, we believe the Congress envisioned more than overall policy statements when it passed EPCA Section 381(a)(1).

The Senate report on EPCA indicates that GSA and other appropriate Federal agencies were expected to analyze the impact of including energy efficiency as one of the criteria for decisionmaking in the Federal procurement process. This analysis was to form the basis for the development of standards to increase the energy efficiency of equipment purchased by the Federal Government. We met with OFPP, GSA, and DOD officials, but no one could identify any such analysis which may have been made.

Predictably, the lack of specific guidance has led to confusion among implementing officials. For example, a GSA official in Chicago telephoned us to ask what we thought he ought to be doing. He was not aware that the Federal Procurement Regulations included an energy conservation policy statement. We interviewed an Air Force procurement official at Wright-Patterson Air Force Base who questioned why we were talking to him since he had not received any direction on energy conserving procurement practices. He was not aware of the general policy statement in the Defense Acquisition Regulations, and after checking, he said it had not been included in Air Force implementing procurement regulations.

We also found that energy conservation was not being given full recognition in the procurement policies and procedures being developed by the Department of Energy (DOE) for its operations. In this respect, in May 1978, the Director of DOE's office which administers the Federal Government's in-house conservation efforts, advised the Director of DOE Procurement and Contracts Management that it would be appropriate to revise the proposed DOE procurement regulations to

reflect the EPCA requirements pertaining to energy conservation and energy efficiency. No change, however, was made in the DOE procurement regulations as a result of these suggestions.

The OFPP policy letter and the resulting changes to the procurement regulations are important initial steps, but we believe further action is needed if the Federal Government is to take the initiative in energy conservation contemplated by EPCA. General policies will have to be followed by specific procedures and by enforcement of those procedures before the Federal procurement process can be made more energy conscious.

STRATEGIES FOR REDUCING
ENERGY USE ARE AVAILABLE

Several procurement strategies for reducing energy use are described below.

--Life cycle costing

Life cycle costing considers operating, maintenance, and other costs of ownership, as well as acquisition price. Because energy expenditures constitute an increasingly large portion of the operating costs of many items, life cycle costing represents significant energy conservation potential.

--Energy efficiency standards

Energy efficiency standards are simple, item-by-item requirements of minimal energy efficiency. The procurement of an energy-consuming product with less than the prescribed efficiency as set by the standard would be prohibited.

--Design versus performance specifications

Design specifications describe the way a product must be constructed. Performance specifications describe the way a product must perform; the product may be constructed in any way imaginable, and of any materials the contractor deems suitable. A greater emphasis on performance, rather than design, offers more opportunity for improving energy efficiency.

--Value incentive clause

The value incentive clause encourages contractors, during the life of the contract, to submit value change proposals. The change proposals are to result in savings to the Government by providing either (1) a decrease in the cost of performance of the contract or (2) a reduction in the cost of ownership (including operating costs). If a value change proposal is accepted, the contractor is entitled to share in the savings. Since energy is a main operating cost of many items, the value incentive clause could encourage manufacturers to improve the efficiency of their commodities.

--Purchasing items made from recycled materials

The use of recycled materials in fabricating products has substantial energy conservation potential. The percentage of energy saved by recycling is 87 percent for copper, 95 percent for aluminum, 63 percent for lead, and 63 percent for zinc. Specifications could be developed which require that certain products be made from the maximum content of recycled materials practicable.

--Transportation of Government purchases by energy efficient means

The Federal Government is such a large buyer that it should explore the means of contractually requiring the utilization of energy efficient modes of transportation for the goods and supplies it purchases.

--Requiring use of returnable beverage containers in Government installations

Using recyclable or refillable containers, and facilitating their return to the manufacturer, saves energy. Throwing away a single beverage bottle wastes as much energy as a 100 watt light bulb uses in four hours.

--Change in product

Switching from a product that takes a lot of energy to produce to one that takes less would result in less

energy consumption in the production of products the Government buys.

SOME PROGRESS HAS BEEN MADE
DESPITE OFPP'S INACTION

The Federal Government has made some progress in implementing some of the above procurement strategies. This progress, however, has not resulted from actions taken by OFPP in response to EPCA, Section 381(a)(1), but from actions which were being or would have been taken regardless of the OFPP policy letter. We believe that the progress being made could be sustained and enhanced if OFPP would clarify its policy to explicitly identify the procurement strategies that should be used to ensure that the most energy efficient products are purchased.

Life cycle costing

In 1974 GSA began to use life cycle costing to procure energy-consuming items. The Federal Supply Service has since awarded contracts on a life cycle cost basis for room air conditioners, water heaters, refrigerator/freezers, gas and electric ranges, and other items. These procurements have demonstrated significant cost and energy cost savings as shown below.

Selected GSA Federal Supply Service Contracts
Awarded Under Life Cycle Costing

<u>Item</u>	<u>Date</u>	<u>Net cost savings</u>	<u>Energy cost savings (percent)</u>
Air conditioners	Oct. 1974	\$428,350	21
Air conditioners	Nov. 1975	385,266	23
Air conditioners	Feb. 1977	230,000	26
Refrigerator/freezers	Feb. 1976	377,000	23
Water heaters	Feb. 1975	326,380	13
Water heaters	Mar. 1976	259,000	4
Electric ranges	June 1977	4,500	1
Electric ranges	June 1978	27,800	6

The above chart shows that GSA has had success in using life cycle costing, but the concept has still not been implemented as a standard Federal procurement practice.

Recent energy legislation recognizes the potential for life cycle costing as a Federal conservation initiative. The National Energy Conservation Policy Act (Public Law 95-619) of November 9, 1978, requires that methods for estimating and comparing life cycle costs for Federal buildings be established, and that these methods be used in evaluating costs for new Federal buildings.

In addition, we noted that Senate bill 5--which is currently being considered in the Congress and which, if passed, would replace the existing procurement statutory framework--includes policies consistent with life cycle costing. The bill would establish the policy that when acquiring property and services for the use of the Federal Government, the Government would, whenever practicable, act so as to best meet public needs at the lowest total cost. It then defines total cost to include all costs incurred, or estimated to be incurred, in the design, development, test, evaluation, production, operation, maintenance, disposal, training, and support of an acquisition over its useful life span.

Energy efficiency standards

Progress in applying quantitative energy efficiency standards is mixed. GSA has implemented a program to ensure that all passenger automobiles acquired by Federal executive agencies meet certain average fuel economy standards. The use of energy efficiency standards for other energy consuming products (refrigerators, freezers, dishwashers, clothes washers and dryers, water heaters, kitchen ranges and ovens, etc), however, has been hampered because DOE and the National Bureau of Standards have been slow in developing those standards, which are being developed for nationwide use.

Procurement of products containing recovered materials

Section 6002 of the Resource Conservation and Recovery Act of 1976 (Public Law 94-580) requires that after October 21, 1978, Federal agencies are to procure items composed of the highest percentage of recovered materials practicable. As of April 1979, however, Federal agencies have made little progress toward meeting that requirement.

Section 6002 requires the Environmental Protection Agency (EPA) to issue guidelines for the procuring agencies to use in complying with the requirements of the law. These guidelines were to set forth recommended practices for procuring recovered materials and items containing such materials and to provide information on the availability, sources of supply, and potential uses of such materials and items.

As of April 1979, EPA had not issued the required guidelines. It has been taking an approach that meaningful guidelines could only be written on a product-by-product basis. EPA contracted for studies on the potential for using recovered materials in the paper products area and in the construction materials area. In addition, EPA officials plan to take advantage of an in-house study on using sludge as a soil conditioner and a DOE study on using fly ash and blast furnace slag for concrete. EPA officials stated that each of these studies would provide data they could use in preparing guidelines.

GSA has attempted to meet the spirit of the law, even without EPA guidelines, by requesting prospective bidders to provide information on the amount of recovered materials which they could supply in particular items. GSA has been criticized by EPA, however, for prematurely changing specifications and for using percentages which support competition but are too low for causing a significant increase in materials recovery.

Both GSA and DOD have taken action to eliminate certain words or terms in specifications which may exclude the use of recovered materials or require items to be manufactured from virgin materials. Further, DOD has revised some specifications to require using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use of the item. According to a DOD official, DOD is requiring contractors to certify, for those specifications which have been revised, that they use the maximum recovered material possible.

Requiring the use of returnable beverage containers

Some progress has been made toward requiring the use of returnable containers for beverages sold at Federal facilities. In September 1976, EPA issued guidelines which require Federal agencies to establish returnable beverage

container programs. Federal agencies were to report to EPA by October 20, 1977, whether or not they would implement the guidelines. The status of the EPA beverage container guidelines as of April 1979 was as follows:

- Fourteen agencies had implemented the guidelines.
- Two agencies had decided not to implement the guidelines.
- Four agencies had partially (at some locations but not at others) implemented the guidelines.
- Twenty-eight agencies had determined that the guidelines did not apply since GSA or private contractors handled beverage sales at facilities they occupied.
- Three agencies had not decided whether to implement the guidelines fully, partially, or at all.
- One agency had filed an incomplete report.

GSA and DOD, which operate a substantial number of buildings and facilities, were two of the agencies which had not decided. Both had tested returnable beverage container programs and were analyzing the test results.

CONCLUSIONS AND RECOMMENDATIONS

Although it has been over 3 years since EPCA was passed, the Federal Government has not satisfactorily developed and implemented procurement strategies for reducing energy use as intended by section 381(a)(1). OFPP was delegated responsibility for that section of the law, but has not set strong enough policy to ensure that procuring agencies are applying specific procedures for considering energy in the procurement process.

In a previous report, 1/ we pointed out that the Federal Government's use of energy-saving products and

1/ "More Use Should be Made of Energy-Saving Products in Federal Buildings" (EMD-79-11, Jan. 23, 1979).

devices in buildings and facilities was being impeded partially because procurement policies were too vague. We recommended that OFPP, working with DOE, assist DOD and GSA in developing specific policies and procedures to be incorporated in the procurement regulations.

In commenting on our recommendations at that time, OFPP took the position that it was not practical to state energy conservation requirements more precisely in general procurement regulations. Conversely, DOD officials have stated that they would like to have more energy conservation requirements for procurement regulations, but that they are limited by the policy guidance issued by OFPP. We believe several procurement techniques for reducing energy use are available, as shown on pages 4 and 5 of this report, but Federal progress in using those techniques has been slow and more could be done.

We provided a draft of this report to OFPP, GSA, DOD, EPA and DOE for informal review and comment. The latter four agencies indicated that they had no substantive disagreements with the matters discussed in this report. OFPP, however, maintained its position that the policy requiring consideration of energy conservation and efficiency in the procurement process is simple, clear and understandable, and that no revision to the policy, as stated in the OFPP policy letter and in the procurement regulations, is necessary. OFPP did note, however, that it was working with executive agencies to ensure that management is aware of the consideration to be afforded energy-saving products and of their responsibility with respect thereto. OFPP stated that our draft report reinforces the need for such emphasis.

While working with the executive agencies in emphasizing the need to consider energy in the procurement process may be useful, we still believe that strengthening of the OFPP policy letter needs to be done first. This action would provide the basis for OFPP to work more closely with executive agencies to develop uniform and consistent procurement procedures as envisioned by EPCA.

We recommend, therefore, that the Director, OMB, have OFPP emphasize the potential for saving energy through the procurement process by immediately revising its policy letter to (1) explicitly identify the types of actions and

strategies that can be used and (2) require procuring agencies to

- determine which strategies (such as the ones suggested on pp. 4 and 5) should be implemented, based on the type of item to be procured;
- develop specific procedures and issue guidelines on when and how to apply energy efficient procurement techniques; and
- ensure that procurement officials are informed that they are to implement those techniques.

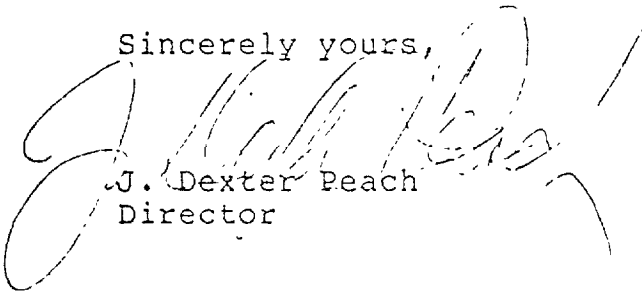
In addition, we recommend that OFPP actively follow up on agency actions to make certain that energy does indeed become a major consideration in the procurement process. In view of DOE's role in overall Federal energy management, we recommend that OFPP coordinate its energy related policies with DOE.

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As you know, Section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the four committees mentioned above and to the Chairmen of energy related congressional committees. We are also sending copies to the Secretaries of Energy and Defense and to the Administrators of the Environmental Protection Agency and the General Services Administration.

Sincerely yours,


J. Dexter Beach
Director

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