

AD-A106 653

GENERAL ACCOUNTING OFFICE WASHINGTON DC HUMAN RESOUR--ETC F/G 5/3
CONSUMER PRODUCTS ADVERTISED TO SAVE ENERGY--LET THE BUYER BEWA--ETC(U)
JUL 81
GAO/HRD-81-85

UNCLASSIFIED

NL

1 of 1
AD-A
653 1

Microfilm

FTC series

END
DATE
FILMED
11-81
DTIC

AD A 106653

BY THE COMPTROLLER GENERAL

Report To The Congress OF THE UNITED STATES

Consumer Products Advertised To Save Energy-- Let The Buyer Beware

Consumers spend billions annually on products offering increased energy performance savings. Consumers face difficulties in assessing product claims that are potentially inaccurate, misleading, and difficult to compare.

The government can help consumers evaluate the reliability of energy-saving claims, but Federal, State, and local government efforts have not kept pace with the growing sales of energy-saving products and related consumer problems. Thus, consumers must be alert in making decisions to purchase products claiming energy savings.

GAO is making recommendations to the Federal Trade Commission and the Department of Energy to improve their consumer protection efforts.

① LEVEL II

11 24 Jul 81

1977

DTIC ELECTE
NOV 4 1981
S D
B

DTIC FILE COPY



DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

HRD-81-85
JULY 24, 1981

81 11 04 107
411752



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-203843

To the President of the Senate and the
Speaker of the House of Representatives

This report points out problems experienced by Federal, State, and local agencies in protecting consumers from potentially inaccurate or misleading energy-saving claims. We made this review because the Government encourages consumers to buy energy-saving products, and therefore it is important that consumers are not misled about the products' ability to save energy.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Energy; and the Acting Chairman, Federal Trade Commission.

Milton J. Fowler

Acting Comptroller General
of the United States

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	

D I G E S T

In efforts to reduce energy costs--and in response to government encouragement, including tax credits--consumers spend billions of dollars each year on energy-saving products. However, consumers face problems with advertisements designed to induce them to purchase such products. Accordingly, GAO conducted a review to look at the types of products and claims in the marketplace, evaluate the potential of energy-saving claims to mislead consumers, and assess the effectiveness of Federal and State efforts to protect consumers from inaccurate or misleading claims.

GAO noted hundreds of advertisements having questionable energy-saving claims. The ads (1) appeared to exaggerate a product's capabilities, (2) did not disclose material facts affecting the product's performance, or (3) made performance claims which consumers could not compare with competing brands because of the lack of standard, generally accepted measures of energy savings. (See p. 7.)

Consumers cannot easily determine the accuracy of energy-saving claims because

- sellers generally are not responsive to consumers' requests for information to support the claims;
- the data that sellers provide consumers to support claims are often inaccurate, not relevant, or highly technical and therefore difficult for most consumers to understand or evaluate; and
- consumers often cannot learn through experience and switch to more effective products because (1) the energy savings are not always measurable even after purchase and (2) the purchases are often costly and are made infrequently. (See p. 17.)

FEDERAL CONSUMER PROTECTION EFFORTS

The Congress mandated that the Federal Trade Commission (FTC), the primary Federal consumer protection agency, take specific actions to prevent unfair and deceptive acts and practices relating to energy conservation. During fiscal years 1978 through 1980, FTC spent about \$1 million annually on a program designed to determine whether energy-saving claims were accurate, sufficiently informative, and based on standard, generally accepted measures of energy savings so that product brands can be compared.

Among FTC's accomplishments are two regulations aimed to make sure that sellers of home insulation and appliances provide consumers with comparable and accurate information on their products' energy efficiency or annual operating cost. In addition, FTC has, to varying degrees, acted to stop questionable claims being made by obtaining consent orders, requiring sellers to substantiate questionable claims, and conducting investigations. FTC also attempted to minimize some consumer problems by publishing guides and distributing factsheets to consumers and consumer groups alerting them about energy-saving claims for some products. (See p. 24.)

While FTC has made progress in accomplishing its objectives, it was not able to rapidly reduce consumers' problems with energy-saving claims because

- staff assigned to energy cases also worked on higher priority, nonenergy cases;
- staff was unable to give attention to all the many small, widely dispersed companies making inaccurate or misleading claims; and
- FTC had to rely on existing test reports and no-cost or low-cost technical support which was not always readily available.

Furthermore, FTC experienced difficulties assuring that claims were comparable and meaningful to consumers, because testing or advertising standards that would provide a common base for the claims had not been developed. FTC was working with several industry groups to develop voluntary standards. (See p. 27.)

Through enforcement of its mail fraud statutes, in fiscal year 1980 the Postal Inspection Service established a priority program to take action against sellers misrepresenting energy-saving products through the mails; however, it has limited its efforts primarily to stopping inaccurate claims for automotive retrofit devices. (See p. 33.)

STATE AND LOCAL CONSUMER PROTECTION AGENCIES' EFFORTS

Numerous State and local agencies also try to protect consumers from unfair or deceptive trade practices. The primary law enforcement agency for preventing inaccurate or misleading claims is the State attorney general's office. The district attorney's office is also involved, but to a more limited extent.

Both the State attorney general's and district attorney's offices have eliminated some inaccurate or misleading energy claims, but those efforts have generally been limited.

Lack of resources, limited coordination, and the need for testing and expert testimony are the main factors limiting State and local consumer protection agencies' efforts regarding inaccurate or misleading energy-saving claims. As a result, State and local consumer protection agencies have not been able to significantly or rapidly reduce such claims. (See p. 34.)

FTC and the Department of Energy (DOE) have promoted various activities to foster information sharing among Federal, State, and local consumer protection agencies. The most substantial is a DOE-funded, 2-year, \$200,000 clearinghouse to promote the exchange of needed technical and product information. (See p. 38.)

CONCLUSIONS AND RECOMMENDATIONS

Consumers can contribute to the Nation's interest to conserve energy by investing in products that reduce energy use. GAO believes that continued government efforts are needed to protect consumers from being misled by advertisements making energy-saving claims. Therefore, FTC should continue to

work with industry groups to develop guidelines for performance testing and advertising. In the meantime, GAO recommends that FTC alert consumers by publishing additional factsheets about some of the difficulties with claims and ads.

GAO also recommends that the Secretary, DOE, work with the information clearinghouse to improve the sharing of technical and product information. Until these agencies take the recommended actions and energy-saving claims become more accurate, meaningful, and comparable, GAO believes that the best advice for consumers is "let the buyer beware." (See p. 42.)

FTC'S COMMENTS

FTC said that GAO overstates the problems consumers are having in evaluating energy-saving claims for products because GAO failed to distinguish between "fraudulent" and "legitimate" products. GAO believes that any products' claims having questionable accuracy, being potentially misleading, or lacking comparability may cause consumer problems. FTC did not specifically comment on GAO's recommendation. (See p. 43 and app. I.)

DOE'S COMMENTS

DOE acknowledged that its grantee is extending its outreach efforts and will be working with FTC staff to overcome their concerns about public disclosure of information they provide to the information clearinghouse. DOE also commented that industry and supporting government efforts, designed to improve the availability and accuracy of information on energy-related products, are important supplements to Federal consumer protection efforts. (See p. 45 and app. II.)

C o n t e n t s

		<u>Page</u>
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Consumers spend billions on energy-saving products and sales are increasing	1
	Why we made our review	3
2	CONSUMERS FACE PROBLEMS WHEN PURCHASING PRODUCTS ADVERTISED TO SAVE ENERGY	4
	Consumers may purchase the wrong product due to questionable energy-saving claims	7
	Consumers have difficulty in evaluating a claim's meaningfulness	17
3	FEDERAL CONSUMER PROTECTION AGENCIES ARE MAKING PROGRESS BUT FACE DIFFICULTIES IN SOLVING CONSUMER PROBLEMS	23
	FTC's program	23
	FTC accomplishments in protecting consumers from inaccurate and misleading claims	24
	Difficulties FTC had in protecting consumers from potentially inaccurate or misleading claims	27
	Postal Inspection Service's activities are limited	33
4	STATE AND LOCAL AGENCIES HAVE PROBLEMS SIGNIFICANTLY OR RAPIDLY REDUCING INACCURATE AND MISLEADING ENERGY-SAVING CLAIMS	34
	State and local consumer protection efforts and problems	34
	Energy-saving device clearinghouse	38
5	CONCLUSIONS, RECOMMENDATIONS, AGENCY COMMENTS, AND OUR EVALUATION	42
	Conclusions	42
	Recommendations	43
	Agency comments and our evaluation	43
6	OBJECTIVES, SCOPE, AND METHODOLOGY	47

Page

APPENDIX

I	Letter dated June 5, 1981, from the Director, Bureau of Consumer Protection, FTC	50
II	Letter dated June 15, 1981, from the Controller, DOE	54
III	Federal agencies testing and evaluating consumer products advertised to save energy	57
IV	Reprint of excerpts from consumer alerts published by Metropolitan Denver District Attorneys' Office of Consumer Fraud and Economic Crime	61
V	Consumer alerts published by FTC--gas-saving devices, sun reflective film, and loose-fill home insulation	62

ABBREVIATIONS

Btu	British thermal unit
DOE	Department of Energy
EPA	Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
FTC	Federal Trade Commission
GAO	General Accounting Office
NBS	National Bureau of Standards
SEIA	Solar Energy Industries Association
TVSS	Transient voltage surge suppressors

CHAPTER 1

INTRODUCTION

In today's energy conscious society, many consumer products are sold to reduce use of fossil fuels and electricity, and accordingly are advertised emphasizing their energy-saving ability.

Advertisements for these products often appeal to consumers to save money by reducing energy costs with such claims as "save up to 50 percent on your heating bill" or "up to 20 percent better gas mileage." Products sold to reduce use of home heating fuel are often advertised to provide a specific level of energy performance. For example, advertisements for solar or wood heating products make such claims as "provides 65 percent of annual hot water requirements," "efficiency rated at 80 percent," or "will heat up to 2,000 square feet."

Consumers are bombarded with energy-saving claims in all media--periodicals, newspapers, television, and radio. For example, in 1980, 25 national periodicals and 25 major newspapers had an average of 10 advertisements for products claiming to save energy in each issue. Advertisements using an energy-saving sales pitch increased in these publications about 400 percent between 1975 and 1980. This inundation also occurs through product brochures and at point of sale, where salespersons extol the energy-saving virtues of products.

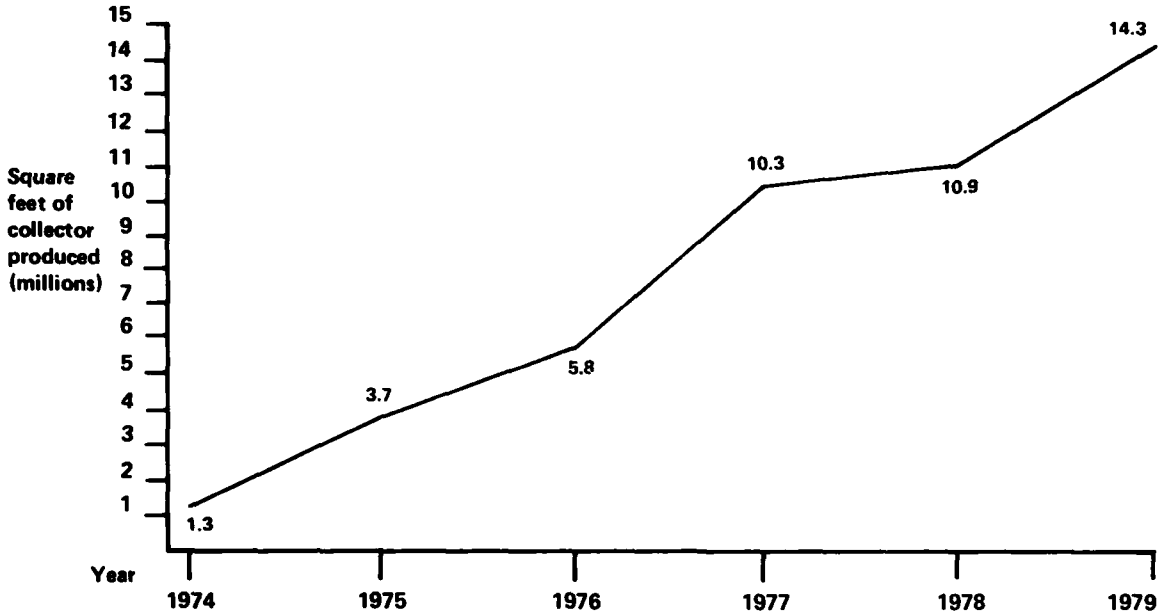
CONSUMERS SPEND BILLIONS ON ENERGY-SAVING PRODUCTS AND SALES ARE INCREASING

Where sales data were available for manufacturers or industries marketing energy-saving products, we noted sales had increased significantly in recent years. For example, a manufacturer of a new type of space heater, advertised to be more energy efficient than conventional heaters, had sales increases from \$63,000 in 1978 to \$7,170,000 in 1979. Production of solar collectors has increased tenfold since 1974. Sales of wood heating products have also increased substantially. The graphs on page 2 show substantial sales increases for solar and wood burning products. Industry officials expected these sales to continue to increase because of the growing demand for products which save energy.

By providing tax credits, Federal and State governments also encourage consumers to purchase some types of energy-saving products. In 1978 and 1979, 10.8 million tax returns claimed tax credits for purchasing \$7.6 billion in energy-saving products.

In addition, the Department of Energy (DOE) has encouraged homeowners to install energy conservation products in their homes. It does so by issuing pamphlets, sponsoring mass media campaigns,

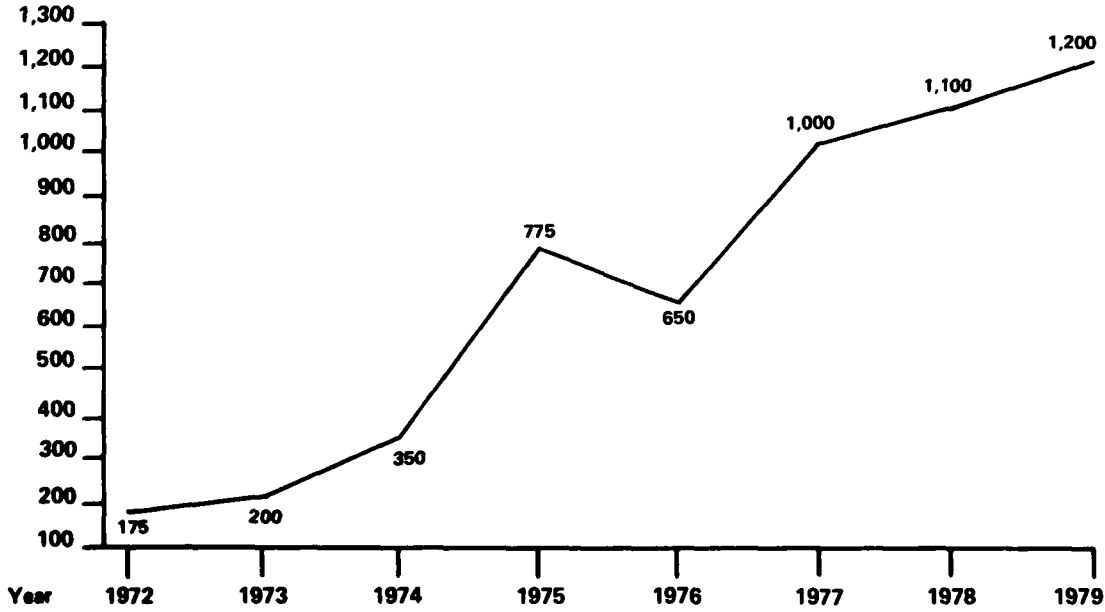
Annual Solar Collector Production



Source: "Solar Collector Manufacturing Activity," Department of Energy, September 1980.

Wood Stove and Fireplace Insert Sales

Thousands of units sold



Source: Wood Heating Alliance

funding demonstration projects, and administering programs providing both personalized and general energy conservation information to consumers.

WHY WE MADE OUR REVIEW

Because the Government encourages consumers to buy energy-saving products, it is important that consumers are not misled by advertisements designed to induce them to purchase specific products. Accordingly, we undertook a review to look at the types of products and claims in the marketplace, evaluate their potential to mislead consumers, and identify any additional Federal and State efforts needed to protect the consumer from inaccurate or misleading ads.

- - - -

The next chapter discusses the extent of consumer problems related to energy-saving claims. Chapter 3 discusses which Federal agencies were involved in helping the consumer, what they have done, and what problems they were having. Chapter 4 discusses the role of State and local consumer protection agencies. Chapter 5 contains our conclusions, recommendations, agency comments, and our evaluation of those comments. Chapter 6 details our objectives, scope, and methodology.

CHAPTER 2

CONSUMERS FACE PROBLEMS WHEN PURCHASING PRODUCTS

ADVERTISED TO SAVE ENERGY

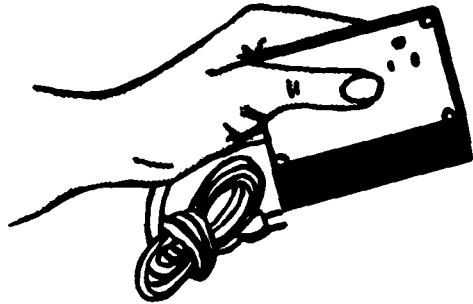
In October 1973 certain oil exporting countries embargoed shipments of oil to the United States, touching off an "energy crisis." Since then, the Government has vigorously encouraged the American public to conserve energy--establishing DOE, setting national speed limits, and providing tax credits for purchasing many energy-saving products, among other things. During this period the cost of energy has taken an increasing share of family income. Current trends indicate energy costs will continue to increase and conservation measures may become more important in the future. Thus, consumers find themselves in an arena where economic, emotional, and patriotic pressures encourage them to purchase products that are advertised to reduce costs and save energy--and such products are numerous on today's market. These products range from such simple things as fuel additives costing a few dollars to such complex products as solar heating systems costing thousands of dollars. Some products advertised to save energy are pictured on pages 5 and 6.

Given the emphasis placed on conserving energy, consumers must decide which product type and brand will make the best use of their limited resources. Each family's particular needs should determine which product will work best for it. For example, of four families trying to improve their homes' energy efficiency, one may fare best to install storm windows, another to install more insulation, a third to add a solar heating system, while a fourth might fare best to buy a wood stove. The energy claims for each product are one important basis in deciding which product to buy.

We found hundreds of advertisements having questionable energy-saving claims. These ads appeared to exaggerate the products' capabilities, did not disclose material facts affecting the products' performance, or made performance claims which consumers could not compare with competing brands because of the lack of standard, generally accepted measures of energy savings (lacked comparability). Further, consumers may find that evaluating energy-saving claims is difficult because (1) the sellers generally do not provide consumers with information to support product claims, (2) even when obtainable the supporting information may be inaccurate or highly technical, and (3) the consumers often do not have the opportunity to learn through experience and then switch to more useful products.

Illustrations of Consumer Products Advertised to Save Energy

COSTING UP TO \$50

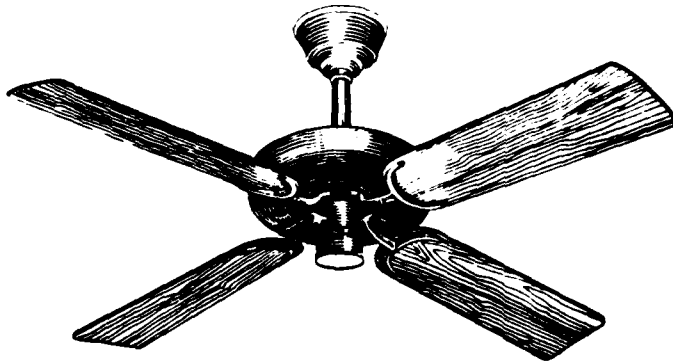


POWER FACTOR CONTROLLER--Attaches to an appliance's electrical plug

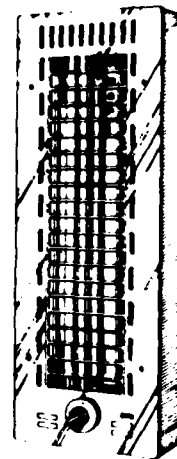


WATER VAPOR INJECTOR--Attaches to automobile carburetor

COSTING FROM \$50 TO \$300



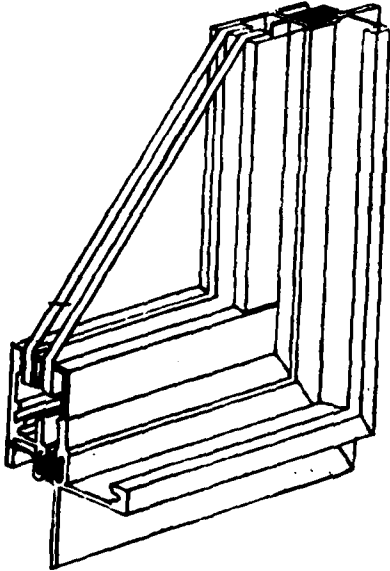
CEILING FAN



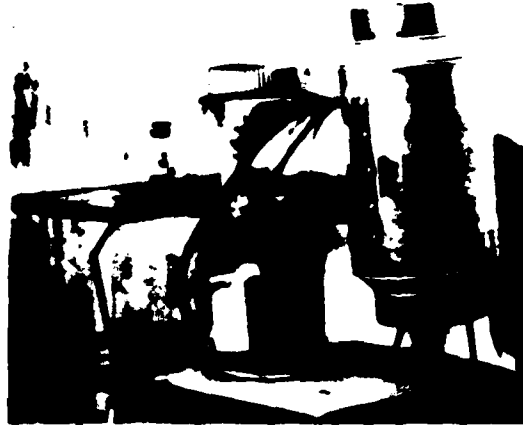
QUARTZ HEATER

Illustrations of Consumer Products Advertised to Save Energy

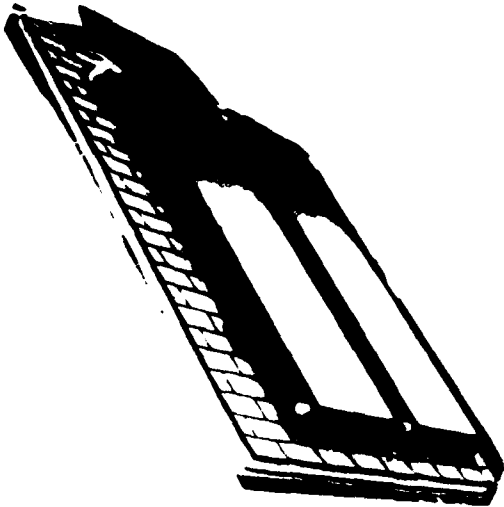
CAN COST BETWEEN \$300 AND THOUSANDS OF DOLLARS



CROSS SECTION VIEW OF AN INSULATED
GLASS WINDOW



FURNACE HEAT RECLAIMING PRODUCT--
Attaches to furnace vent pipe



SOLAR COLLECTOR



WATER VAPOR INJECTOR FOR FURNACE

CONSUMERS MAY PURCHASE THE
WRONG PRODUCT DUE TO QUESTIONABLE
ENERGY-SAVING CLAIMS

Without complete and accurate information on the performance of products advertised to save energy, consumers cannot make optimum use of their dollars. Many energy-saving claims can mislead the consumer. For example, one vendor told us that installing his double-pane windows (costing about \$1,560) would save about 30 percent on the heating cost of a specific house, while three other dealers told us that installing their insulated siding (costing \$3,000 to \$5,000) on the same house would result in between 15 and 40 percent energy savings. Calculations by a DOE engineer, however, showed that either of these measures would probably achieve only about a 5-percent savings for this house. Without accurate and meaningful information, the consumer may decide to purchase one of these products, rather than to add 6 inches of ceiling insulation. According to the DOE engineer, the additional insulation would provide about 50 percent more energy savings at far less cost (total cost about \$300).

Table I contains other examples of claims which, according to the Federal Trade Commission's (FTC's) criteria, could mislead consumers in making decisions. We classified these claims as (1) having questionable accuracy, (2) being potentially misleading, or (3) lacking comparability. However, we did not attempt to prove that the claims were untrue or were improper from a legal standpoint. Rather, we tried to identify claims that would cause decisionmaking problems from a consumer's perspective.

Claims with questionable accuracy

In general we questioned a claim's accuracy if reliable evidence showed that the product could not be expected to deliver the advertised performance. Whenever possible, we used a test report for a specific product as the basis for questioning a claim's accuracy. We relied on the Environmental Protection Agency's (EPA's) tests of automotive devices or tests done by national laboratories under DOE contracts. Other sources of test reports included the Department of Defense, State agencies, and private consumer organizations. FTC relies on such independent tests as the best evidence of a claim's accuracy.

However, specific tests were not the only means used to question a claim. When specific tests were unavailable, we relied on expert opinions and reports applicable to all similar products as general performance indicators. We assumed that testing experts know enough about the products they test to say what range of performance is possible. Appendix III shows the Federal testing organizations on which we relied and discusses their activities and expertise.

Advertised claims

Vent dampers

- Fuel savings of up to 23% in tests for DOE.
- Saves 10 to 30% of home heating costs.
- Fuel savings up to 23% and more.
- Saves up to 30%.
- Save up to 24% on heating fuel consumption.

Ceiling fans

- Save up to 50% on your heating bills.
- Saves up to 35% of your energy dollar 365 days a year.

Ceramic insulation

- Guaranteed to save 30% more energy at 3-inch thickness than fiberglass or cellulose at 12 inches. In manufacturer's comparison test, R factor for 3 inches of this all-ceramic insulation is 70.9 (eight times better than fiberglass).
- The ceramic insulation will reflect almost all infrared radiation and will produce an "almost '0' heat loss" through the ceiling.

Automotive devices

- Can give up to 50 extra miles for every tankful. U.S. Government-certified laboratory proves 4.4 to 18% fuel savings on cars tested.
- SAVES GAS, has been completely tested by EPA standards.
- Save up to 2 gallons of gas for every hour you drive.
- Increase your recreational vehicle's mileage by 3 to 5 miles per gallon.
- Can save as much as 3 gallons of gas out of every 10 used.
- Reduce gas consumption by up to 26.6%.
- Up to 35% better mileage.

Table I

Questionable Energy-Saving Claims That Could
Mislead Consumers In Making Decisions

Reasons for questioning claims

Research for the National Bureau of Standards (NBS) shows that the average fuel savings with this product for oil furnaces is 8.2%, with a maximum of 10% while tests for the American Gas Association showed a savings of about 5% for oil furnaces. The ads are also potentially misleading because they do not cite conditions under which savings are possible. For example, according to a study sponsored by DOE, vent dampers are generally not useful for furnaces located in small spaces (e.g., basements, garages, and attics).

A nationally recognized energy consultant's analysis of the support for one of the claim showed that there were several errors in the assumptions and procedures used to calculate its savings claims. His analysis stated that a 5 to 10% savings claim is more realistic. In addition, he told us that for a normal home with 7-1/2 foot ceilings, the use of a ceiling fan would provide little, if any, winter fuel savings but might increase comfort and provide some energy savings in the summer.

According to officials at both NBS and the National Aeronautics and Space Administration, the documentation for one such product does not substantiate its R-value claim. They agree that the arguments about why this product performs differently from other insulation products do not hold up, unless they have discovered some new laws of physics. The R-value of this product using standard test procedures is 6 and 12 for 3 inches.

Tests or evaluations by EPA showed that, except in one case, these devices do not improve gas mileage and in some cases tended to actually cause small reductions.

The Government has not certified the laboratory cited in the claim.

Questioning claims

ards (NBS) shows that the average possible
rnaces is 8.2%, with a maximum of about 16%,
ion showed a savings of about 5% for gas
isleading because they do not cite the con-

For example, according to a study spon-
not useful for furnaces located in unheated
(ics).

's analysis of the support for one product's
rs in the assumptions and procedures used
lysis stated that a 5 to 10% savings was
that for a normal home with 7-1/2 to 8 foot
provide little, if any, winter fuel savings,
ne energy savings in the summer.

e National Aeronautics and Space Administra-
ct does not substantiate its R-value claim.
his product performs differently than other
s they have discovered some new principle
using standard test procedures is between

except in one case, these devices did not improve
ctually cause small reductions.

ratory cited in the claim.

3 1

9/10

Advertised claims

Siding

--15 to 40% energy savings.

Light buttons

- Save an average of 50% in electricity consumption-- there is a reduction in light output by the same amount.
- Use half as much electricity and save money there. (Cites a reduction in light output, but does not say by how much.)

Furnace burners

- Cut your oil bill by 30, 40, or even 50%.
- These are the oil consumption cuts you can expect: 25 to 65% if you own a moderately efficient conventional furnace; about 40% for the average home; up to 55% if your old furnace is sub par.

Double pane and storm windows

- Up to 40% fuel saved.
- Can cut your heat loss up to 50%.
- Save 30% on heating costs.
- Double pane glass with a 1/4-inch air space will increase the R-value three to four times that of single pane glass.

Wood burning appliances

- Tested by a leading university at over 68% efficiency. This is 36% better than the average airtight stove.
- Efficiency ranges from 76% to 83% at rated heat output, and is as high as 83% even when heat output exceeds the rated output by 42%.
- Utilizes 100% of heating energy from your wood.
- Creates unusually high efficiencies (generally over 80%).

Reasons for questioning claims

These claims had questionable accuracy because a DOE analysis of the house for which the claim was made showed that the installation of foam-backed aluminum siding would save less than 5% of annual heating costs for that house.

A study done for DOE showed that this type of product reduced the power to a 100-watt bulb by 42% rather than 50%. It also showed that the product reduced the light output by 74%. A consumer could get almost the same amount of light using a 40-watt bulb instead of a 100-watt bulb and this product, and could do so for about two-thirds of the energy cost.

These claims are potentially misleading because consumers could not normally expect to achieve these savings. According to test reports for Brookhaven National Laboratory, such burners could improve efficiency from about 12 to 25% over a conventional burner, depending on the type of burner installed, the condition of the furnace, and a variety of other factors.

These statements may be misleading because there is no established test procedure to make claims comparable. In addition, the claims imply that these savings apply to the whole house, not just to the glass area. For instance, a DOE engineer determined that one product would really save only about 5% of the total heating cost for the specific house for which its claim was made. In another case, the claim appears to be inaccurate because the standard engineering table shows that only about twice the R-value is possible where a 1/4-inch air space is used.

The test was done under a nonstandard procedure, according to the testing official. He said that the procedure he used will give a higher efficiency value than the test established by the trade association and should not be compared to stoves tested by that method.

According to an official involved with the wood stove testing program at Auburn University, air-tight stoves generally are 40 to 60% efficient. He said that he has yet to test a stove that was 70% efficient, and that he would be very skeptical of any claim over that amount.

Advertised claims

Solar products

- The curvature of the dome is such that it will decrease the effect of the insolent angle modifier, bringing the collector on line about an hour earlier and keeping it working an hour later each day. Test results show that approximately 6,000 Btu/hour will be delivered as usable heat from each panel on a typical sunny day with a free air temperature of -40 degrees Fahrenheit.
- Provides 65% of annual hot water requirements.
- Can provide up to 90% of hot water.
- It will produce enough hot water for a typical family of four.
- Systems will provide up to 80% of the hot water used in your home.
- These systems can provide up to 100% of the energy needed to heat your water, even in low sun areas.
- Save up to 80% of your energy costs.
- 90% reduction in heating costs.
- Your hot water will be virtually free.
- Plug into "free energy."
- Actual tests show this collector having up to 127% efficiency.
- Assuming modest increases in electric rates, you can save \$30,000 in 20 years.

Flue heat recovery

- Save your 40% wasted fuel.
- Realize a 40% heat savings that might otherwise go up the chimney.
- Save enough in 1 year to pay for the product (\$475 installed).

Power factor controller

- Cuts the cost of running electrical appliances by as much as 50%--and you can even see the savings!

Reasons for questioning the claim

According to staff at one federally funded regional solar center, the first claim is not true, because it is physically impossible. The second claim is also questionable because the manufacturer's test report showed that the unit produced only about half the amount of energy claimed.

These claims have comparability problems, because no standard exists for determining possible savings and the ads did not disclose what variables were used for making the claims. Variables such as climate, house design and orientation, system and collector efficiency, and lifestyle can all affect performance. Achieving the performance by adding additional collectors may be possible; however, the ads give the impression that only one or two collectors will be needed to do so. In one case, we were able to determine that at least five or six collectors would be needed in the winter. In another case, the manufacturer admitted that its claim was misleading because it was true only in the summer.

Although the fuel (sunlight) is free, the equipment to collect it is not. These claims are potentially misleading because they ignore the capital cost of the equipment, which can cost several thousand dollars.

The accuracy of this claim is questionable because it implies that more energy is gained than is available. According to experts, that is not possible.

This claim is based on an electricity rate greater than the national average and ignores the effect of inflation except for electricity rates. Also, the claim is calculated using simple compounding which ignores the time value of money. The savings properly should be expressed in current (present value) dollars to make it comparable to costs.

A test for NBS showed a 6.6% average seasonal energy savings, while a leading consumer group found that these products do not recover more than 6% of the energy in the fuel burned (less than 20% of the wasted heat from an average furnace). At that rate, a consumer would have to use over \$7,000 of fuel a year for the product to pay for itself in 1 year as claimed.

According to an official at Oakridge National Laboratory, such a saving may be possible for a motor running with no load; however, his tentative test results showed savings to be less than 15%, and in some cases even more energy was used with a power factor controller than without one. Both he and the inventor told us that this product was not cost effective in most residential situations.

In a few cases we questioned a claim's accuracy after analyzing the sellers' supporting material, particularly when it involved such economic analyses as payback periods.

Potentially misleading advertisements

FTC has determined that, although an ad may be technically accurate, it may still have the potential to mislead the consumer if it fails to disclose material information which the consumer needs to make an informed judgment about a product's performance. By offering an element of truth, but failing to disclose how the seller obtained such performance or that each consumer's performance may vary, the ad may lead consumers to believe that they too can expect such results. Sometimes, the claims may be based on conditions which are highly favorable to the product.

For example, the manufacturer of one brand of storm windows based his savings claim on test results for windows which had much larger than average air gaps, thus letting in greater-than-average amounts of cold air. The savings which resulted from stopping cold air from coming into the house by adding storm windows was, therefore, greater than the average homeowner could expect.

Since such variables as house design, location, and lifestyle affect the performance of many energy-saving products, it is important that the consumer know under what conditions the product was tested. Unfortunately, many energy-saving claims neither make those conditions known nor advise consumers that their savings could be less.

Comparability problems

One of FTC's goals is to see that product claims are based on comparable information. One means of promoting comparability is to establish standards for measuring performance. Such standards are valuable, because they provide rules, conditions, or requirements for evaluating product performance. Properly administered, standards provide accurate shorthand information facilitating comparative costs and quality shopping by consumers--in short, they make claims meaningful. Therefore, we were concerned about claims for which standard procedures for measuring performance had not been established or were not generally used as a basis for comparing products--a situation prevalent in the solar and wood heating industries.

The solar industry has a generally accepted performance test only for flat plate collectors. It also has an interim standard for testing solar domestic hot water systems, but it is not generally used. No standards exist for measuring performance of other types of collectors or for domestic solar heating systems. Since consumers are primarily interested in an entire system's

performance, they are left with little basis for comparing performances. For example, one manufacturer claimed that its system would provide a 90-percent reduction in heating costs, while another claimed an 80-percent reduction was possible. However, consumers cannot tell from the ads if these manufacturers used the same method for determining their claims. Consumers have no way to know if the performances of these systems are really 10 percent different, much less whether such heating cost reductions would be possible in their homes.

The wood heating industry (stoves and fireplace inserts) is another area in which performance standards are not generally used. Although the Wood Heating Alliance (a trade association for firms selling wood burning stoves, inserts, and appliances) has established a standard performance test, as of February 1981 only eight of the several hundred brands being manufactured are being labeled as having been tested under its certification program. Other stoves may have been tested to the same standard, but it is difficult to tell from the ads which stoves were tested and which were not. For example, to check one manufacturer's claim of 68 percent efficiency, we called the university that did the test. The testing official told us that this value came from a test he had made on the unit several years earlier using his own procedure, because the industry had not yet developed procedures. He said that comparing his results to results from other tests was inappropriate, but that the manufacturer had ignored his warning that the efficiency level he found should not be used in advertising.

Another comparability problem occurs anytime an advertiser claims that his product can heat a particular size area or reduce cost by a certain percentage without disclosing the conditions because no standard house exists for comparison. According to an American Society of Heating, Refrigeration, and Air Conditioning Engineers official, a company is grossly misleading the public anytime it says that its product will heat a given area without citing the conditions under which it will do so. The extent of this problem can be seen by comparing the claimed output in Btus for several wood burning products with the area which these units are supposed to heat. As can be seen on table II on the following page, it is difficult to compare claims among wood burning products.

Table II

Comparison of Wood Burning Product Claims

<u>Product</u>	<u>Btu output (note a)</u>	<u>Square feet heated</u>	<u>Btus per square foot (note b)</u>
A	30,000	3,500	8.6
B	30,000	1,800	16.7
C	30,000	1,000	30.0
D	120,000	3,250	36.9
E	65,000	1,200	54.2
F	147,000	1,800	81.7
G	104,000	1,000	104.0

a/The Btu (British thermal unit) is a standard measure of energy which is technically defined as the amount of energy needed to raise the temperature of 1 pound of water 1 degree Fahrenheit. Put into everyday perspective, a gallon of heating oil is generally assumed to contain 140,000 Btus, and a 100-watt light bulb uses 340 Btus per hour.

b/GAO calculation: Claimed Btu output divided by claimed square footage heated.

Although the seller may have a performance test upon which the claim is based, evaluating the significance of the results is difficult unless the consumer can make a meaningful comparison. In none of these cases did the seller provide information in the ad which the consumer could use to see what the claims were based on.

CONSUMERS HAVE DIFFICULTY IN
EVALUATING A CLAIM'S MEANINGFULNESS

Consumers cannot easily determine the accuracy of the types of claims described in tables I and II. Our review showed the following reasons why even relatively conscientious consumers could have problems evaluating the reliability of energy-saving claims.

--Sellers generally are unresponsive to consumers' requests for information to support claims.

--The data that sellers provide consumers to support a claim are often inaccurate, not relevant, or highly technical and therefore difficult for most consumers to understand.

--Consumers often cannot learn through experience and switch to more effective products because (1) the energy savings are not always measurable even after purchase and (2) the purchases are often costly and are made infrequently.

We did note, however, that some independent analyses of certain energy-saving products were available to consumers. For example, Consumer Reports has published articles on several energy-saving products.

Firms are not responsive to requests to support claims

FTC has determined that any product performance claim, such as energy savings, must be supported by a reasonable basis at the time such claim is made. Therefore, one way for consumers to evaluate the reliability of claims would be to obtain information from the manufacturer or dealer on how the claim was determined. Although consumers would have to spend time and energy to obtain this information, the impact of inaccurate claims should be less in cases where they are able to do so. Unfortunately, the evidence suggests that most advertisers will not furnish consumers with adequate material to substantiate advertised claims.

We noted two studies where researchers tried to obtain substantiation for various product performance claims. One study 1/ showed that only 8 percent of advertisers provided clear and convincing evidence in response to consumers' substantiation requests. The other 92 percent either made no response or provided inadequate support. A later report 2/ showed some improvement, but still only 20 percent of firms queried provided meaningful information. The authors of that report concluded that many advertisers seem unwilling or unable to provide consumers with the type and amount of information that will (1) clarify vague, unclear information, (2) substantiate claims about product performance, or (3) provide facts from which informed choices can be made.

These studies dealt with all manner of products, not just those for which sellers made energy-saving claims. To find out how responsive the firms advertising energy-saving claims for their products are, we wrote, as consumers, to 97 firms asking for

1/Arch G. Woodside, "Advertisers' Willingness to Substantiate Their Claims," Journal of Consumer Affairs, Summer 1977.

2/Kenneth A. Coney and Charles H. Pott, "Advertisers' Responses to Requests for Substantiation of Product Claims: Differences by Product Category, Type of Claim and Advertising Medium," Journal of Consumer Affairs, Winter 1979.

the information they use to support their claims. ^{1/} Their responses, which are similar to those received by previous researchers, are summarized below:

Substantiation letters sent:	97
No reply	18 (19%)
Reply was not responsive to request	50 (51%)
Reply told what information was used to support the claim	29 (30%)

Overall, more than two-thirds of the firms queried did not provide us, as consumers, with any basis for their claims. The most common type of nonresponsive reply contained only additional promotional literature, rather than information that supported the claim. For example, one company sent us only promotional material, even though we later learned that it had a test report to support its claim.

The data sellers provide to consumers to support a claim are often inaccurate, not relevant, or highly technical

The analysis just described was done to learn the degree to which advertisers would furnish information describing the basis for their performance claim. Our analysis does not, however, mean that the 29 firms provided us with adequate support. While we did not try to analyze the adequacy of all responses, many were as difficult to understand and use for comparing products as the original advertisements.

For example, one manufacturer advertised that its fireplace insert would heat about 2,000 square feet, but the reply to our request for support said only that, "We measured 6 gallon per minute flow through X amount pound of wood and time of burning." We could not understand what this meant, but classified it as an

^{1/}Products represented in this analysis included solar collectors and heating systems, automotive additives and retrofit devices, wood burning products, electricity-saving products, insulation, storm windows, space heaters, ceiling fans, and an assortment of miscellaneous products (a log house, oil burners, and heat reclaiming products, etc.). We selected these products on a judgmental, rather than a scientific, basis because we did not have a known universe of products to choose from. In most cases the firms queried had quantified performance claims, such as "reduce your heat bill by 60 percent." These claims came primarily from magazine and newspaper advertisements. Because we did not believe that most consumers would send more than one request, we sent only one request letter.

attempt to respond to our request. Another manufacturer claimed to have put hundreds of hours of research into its product; however, its reply did not cite a performance test, only a safety test. It said simply, "Our product will heat what we say * * *."

In other cases, firms sent us testimonials or merely stated that their claims were supported by tests, but did not send us the test results. We counted such replies as being responsive to our requests, even though such evidence is inconclusive and cannot be relied upon as proof of a product's performance. In some cases, we credited a firm with being responsive to our request even though we believed its support was not accurate. For example, in one instance a solar equipment manufacturer advertised that its collector had 127 percent efficiency according to its own expert and a test by an approved laboratory. An official at that laboratory told us, however, that the laboratory did not support this claim because it is impossible for solar collectors to be over 100 percent efficient. Another company sent us the "[5] most important pages" from what its president said was an 80-page report. An official from the laboratory that tested this company's product, however, told us that his report was only eight pages long and that only the first three pages we received were from his report. The other two pages--which the company apparently inserted to show that this product was better than any other--were from an entirely different report, which did not pertain to this product.

Many consumers also have difficulty understanding the information received, because it is often presented in highly technical terms. Most consumers cannot be expected to be familiar with the terminology and testing procedures or to have the knowledge needed to understand technical explanations and use them for comparing products. For example, we requested that a solar heating system manufacturer furnish us support for an advertising claim that its system would provide about 75 percent of the yearly hot water requirements for only the cost of running the circulation pump. The response from the manufacturer included such terminology as "overall energy loss coefficient," "solar flux," and "solar transmittance of transparent covers." The manufacturer showed the annual performance estimate by presenting several formulas using these and other terms. In our opinion, such a presentation would be of little value to anyone who had not extensively studied this subject. It would not assist the average consumer to compare this solar heating system with competing systems.

Consumers do not have the opportunity
to learn through experience and
switch to better products

One way consumers can evaluate a claim's truthfulness is to actually use the product and compare its performance to expectations. When a product is relatively inexpensive and frequently

purchased, and its performance is readily measurable, consumers can try several alternatives and pick the ones which best suit their needs. As consumers learn through experience, market pressures should eventually force out poorer products in favor of those which are most effective.

However, when products are expensive and infrequently purchased, and performance is difficult to measure, consumers do not have the same opportunity to compare products through actual use. This occurs frequently for products advertised to save energy.

Performance is difficult for consumers to measure

Even if consumers could try several products, in many cases they could not easily determine if any energy was actually saved. Many variables affecting home energy consumption--climate, type of dwelling, lifestyle, etc.--make it very difficult for consumers to assess whether the product is affecting the home's energy consumption. For example, most homes today use many electrically powered products--lights, refrigerators, washing machines, toasters, ovens, hot water heaters, space heaters, etc. However, consumers cannot readily tell how much energy each product uses because a single meter records all the electricity used. Consequently, consumers would have to keep track of how long each appliance was used to determine whether such a product as a power factor controller, which claimed to reduce the electricity consumption of a given product, actually worked.

Two studies dealing with consumers' experiences with solar systems provide examples of the consumers' inability to evaluate performance. A study done for the Arizona Solar Energy Commission found that consumer expectations exceeded actual benefits, sometimes by a considerable margin. According to the study report, a large percentage of the solar system owners interviewed were convinced that their savings were \$20 to \$30 a month although the study group estimated that the savings were considerably less. According to this study, on the average, sellers claimed that the consumers would save \$27.50 a month by installing solar equipment, and they thought they were saving about \$24.00 a month. But, the study team estimated that the average actual savings was less than \$10.00 a month. The study reported that the system's design would not allow for savings of more than \$15.68 a month. However, actual savings were estimated to be less than \$10.00 because of installation and operational problems.

In another study, the Florida Solar Energy Center inspected 60 solar installations to assess the quality of those systems. The Center concluded that user satisfaction was not a good measure of the adequacy of solar systems because most of the owners did not know how well their systems were performing. For example, in

two cases owners who had classified their experience with solar systems as satisfactory were unaware that the systems were completely inoperable, because the backup heating elements were providing all of their hot water needs.

Purchases are relatively permanent

If a consumer's laundry detergent did not perform as advertised, the consumer could easily switch brands. But many energy-saving products are relatively expensive and purchased infrequently. For instance, solar hot water systems typically cost about \$1,500, even after applying the 40 percent Federal tax credit. Solar space heating systems are even more expensive. Permanent outside storm windows or insulated glass can also cost well over \$1,000, plastic or vinyl inside storm windows about \$200, insulation \$50 to \$1,400, and vent dampers about \$300, just to list a few examples. Once installed, these items tend to become a permanent part of a dwelling and are not readily removed. Their high cost may not only prevent consumers from trying various products to see which work best for them, but also discourage switching to a more effective product.

- - - -

This chapter discussed the significance and extent of consumers' problems with energy-saving claims. The following chapter discusses the role that Federal consumer protection efforts are playing in reducing them.

CHAPTER 3

FEDERAL CONSUMER PROTECTION AGENCIES ARE MAKING

PROGRESS BUT FACE DIFFICULTIES IN SOLVING

CONSUMER PROBLEMS

The Energy Policy and Conservation Act (EPCA), 42 U.S.C. 6201, et seq., mandated that FTC, the primary Federal consumer protection agency, take specific actions to prevent unfair and deceptive acts and practices relating to energy conservation. During fiscal years 1978 through 1980 FTC spent about \$1 million annually to determine that energy-saving claims were accurate, sufficiently informative, and based on standard, generally accepted measures of energy savings so that product brands can be compared.

FTC has made progress in accomplishing these objectives. However, FTC's limited resources--accompanied by the competing priorities, the hundreds of small companies involved, the need to rely on outside testing and experts, and the lack of generally accepted testing procedures--have restricted FTC's ability to keep pace with consumer problems. Because of these factors, FTC cannot rapidly reduce consumer problems with energy-saving claims.

In fiscal year 1980, through enforcing its mail fraud statutes, the Postal Inspection Service established a priority program to act against sellers that misrepresent energy-saving products through the mails. Its efforts have been limited primarily to automotive retrofit devices.

FTC'S PROGRAM

The Federal Trade Commission Act (15 U.S.C. 41, et seq.) gave FTC the general authority to define and stop "unfair or deceptive acts or practices in or affecting commerce." In certain areas, the Congress may define a specific unfair trade practice.

Regarding energy-saving claims, the Congress mandated in EPCA and its amendment 1/ that FTC start a program to prevent unfair and deceptive practices, cooperate with and assist State consumer protection agencies with similar programs, monitor claims for automotive retrofit devices, and promulgate rules to require energy efficiency labeling of major home appliances and labeling of recycled oil. The Petroleum Marketing Practices Act (15 U.S.C. 2801 et seq.) also required FTC to promulgate rules regarding the disclosure of motor vehicle octane requirements.

1/Energy Conservation and Production Act (42 U.S.C. 6801 et seq.).

Responding to the EPCA mandates, FTC began an energy program in 1976. The program goal has been to insure that energy savings and efficiency claims are nondeceptive, fully substantiated by either scientific tests or other objective proof, sufficiently informative, and comparable.

FTC ACCOMPLISHMENTS IN PROTECTING
CONSUMERS FROM INACCURATE AND
MISLEADING CLAIMS

During fiscal years 1978 through 1980, FTC's two most resource-intensive activities were directed at assuring that sellers of home insulation and appliances provide consumers with comparable and accurate information on their products' energy-saving capability. These efforts have the potential to minimize consumer problems with energy-saving claims for thermal insulation and major home appliances. In addition, FTC has to varying degrees taken action to stop companies from making questionable claims by requesting sellers to substantiate such claims, conducting investigations, and obtaining consent orders. FTC also attempted to minimize some consumer problems by publishing advertising guides and distributing factsheets to inquiring consumers and consumer groups warning them about energy-saving claims for automotive retrofit devices and sun-control window film.

Thermal insulation

The performance of home insulation can be measured only by its R-value, which signifies an insulation's degree of resistance to the flow of heat. No other piece of information can tell the consumer how insulation is likely to perform. In 1977 FTC recognized that sellers of home insulation materials frequently were not providing potential buyers with this essential performance information and were often exaggerating.

Accordingly, FTC spent a significant portion of its energy program resources to correct this problem. First, it notified hundreds of insulation sellers that making exaggerated energy-saving claims was unlawful. FTC then developed a trade regulation rule designed to ensure that promotional claims would be fair and nondeceptive and would enable consumers to evaluate any insulation's performance.

The rule was promulgated in September 1980 and requires sellers of home insulation to disclose specific R-value information in ads and at point of sale. It also requires that sellers give consumers a factsheet that explains the meaning of R-values and gives them further information so they can assess their likely fuel savings. Also, to ensure that consumers are provided with accurate

and comparable information, the rule requires that the R-values be determined scientifically in accordance with published standard test methods.

According to FTC and other consumer protection officials, FTC's efforts have substantially reduced problems consumers have had with exaggerated performance claims for home insulation.

Appliance labeling

EPCA requires FTC to issue energy efficiency labeling rules that would disclose the estimated annual cost or "another useful measure of energy consumption" for selected categories of consumer appliances. ^{1/} EPCA also required that advertisers of these products use only data derived from standard DOE tests in their representation about the products' energy consumption or efficiency.

In response to this mandate, FTC promulgated a trade regulation rule which required that after May 1980, manufacturers of seven appliance categories (refrigerators and refrigerator-freezers, freezers, dishwashers, water heaters, room air conditioners, clothes washers, and furnaces) affix labels to their products. As the sample label on page 26 shows, the label discloses the product's energy cost or efficiency to permit consumers to compare the products to competing brands. In addition, it includes a chart that permits consumers to estimate the annual cost of using the appliance.

The primary purpose of this rule is to encourage consumers to comparison shop for energy-efficient household appliances. The Congress and FTC's position was that, by mandating a uniform disclosure scheme, the labels will permit consumers to compare the energy efficiency of competing products and to use this information in deciding which product to buy.

Since the appliance labeling rule has been in effect for only a short time, we had no opportunity to evaluate its effectiveness. However, both FTC and trade associations believe that labels were accurate because manufacturers were testing each other's products to verify label accuracy and would notify FTC if they found inaccurate labels.

^{1/}As originally passed, the act designated 13 categories of consumer appliances to be labeled. Under the act's provisions, FTC did not require labels for five products because it determined labeling was not cost effective, and it is still considering labeling requirements for central air conditioners (including heat pumps). Furthermore, the Secretary of DOE may designate other consumer products to be covered by the act; however, as of February 1981, DOE was not considering any additional products.

Clothes Washer
Capacity: Compact

(Name of Corporation)
Model(s) SL301, SL309

ENERGYGUIDE

Estimates on the scale are based on a national average electric rate of 4.97¢ per kilowatt hour and a natural gas rate of 36.7¢ per therm.

Only compact size clothes washers are used in the scale.



Electric Water Heater

Gas Water Heater

Model with lowest energy cost **\$22**

\$58

Model with highest energy cost **\$67**

THIS MODEL

Estimated yearly energy cost

Model with lowest energy cost **\$20**

\$22

Model with highest energy cost **\$24**

THIS MODEL

Estimated yearly energy cost

Your cost will vary depending on your local energy rate and how you use the product. This energy cost is based on U.S. Government standard tests.

How much will this model cost you to run yearly?

with an electric water heater

with a gas water heater

Loads of clothes per week	2	4	6	8	12
Estimated yearly \$ cost shown below					
Cost per kilowatt hour 2¢	\$7	\$14	\$21	\$29	\$42
4¢	\$14	\$29	\$43	\$57	\$85
6¢	\$21	\$43	\$64	\$86	\$129
8¢	\$29	\$57	\$86	\$114	\$172
10¢	\$36	\$71	\$107	\$143	\$214
12¢	\$43	\$85	\$128	\$172	\$256

Loads of clothes per week	2	4	6	8	12
Estimated yearly \$ cost shown below					
Cost per therm 10¢	\$2	\$4	\$6	\$8	\$12
20¢	\$4	\$8	\$12	\$16	\$24
30¢	\$6	\$11	\$17	\$22	\$34
40¢	\$8	\$15	\$23	\$30	\$46
50¢	\$10	\$19	\$29	\$48	\$58
80¢	\$12	\$22	\$34	\$44	\$68

Ask your salesperson or local utility for the energy rate (cost per kilowatt hour or therm) in your area, and for estimated costs if you have a propane or oil water heater.

Important: Removal of this label before consumer purchase is a violation of federal law (42 U.S.C. 6302).

SAMPLE LABEL

(Part No. 8399601)

FTC efforts to alert consumers

FTC has attempted to alert consumers to potential problems. In this connection FTC has issued factsheets on energy-saving claims for sun reflective films, automotive retrofit devices, insulation, and octane ratings. (See app. V.) FTC distributes these factsheets to consumer groups, State attorneys general, legal aid offices, trade associations, consumer journalists, news reporters, and upon request, to consumers.

Other accomplishments

During fiscal years 1978 through 1980, FTC staff monitored ads, informally wrote to advertisers asking them to substantiate claims or to revise potentially misleading or deceptive claims, and notified businesses of established case law regarding energy-saving claims. In response to the Petroleum Marketing Practices Act, FTC promulgated a rule setting standards for disclosing automotive gasoline octane ratings on gas pumps. In addition, FTC (1) amended its guide requiring fuel economy disclosures when advertising new automobiles, (2) obtained consent orders from sellers of two automotive retrofit devices and a quartz heater who agreed to stop making claims that led to FTC's investigations, and (3) issued a complaint against the manufacturer of a solar heating system for not having a reasonable basis for making certain energy- and money-saving claims.

As of February 1981, FTC was investigating more than 20 companies for questionable energy-saving claims. Its investigations have covered a broad range of products, including solar products, home insulation, motor oils, furnace burners, vent dampers, ceiling fans, wood burning appliances, surge suppressors, storm windows, and other insulating window materials. The following section discusses some of the difficulties FTC was experiencing in these investigations.

DIFFICULTIES FTC HAD IN
PROTECTING CONSUMERS
FROM POTENTIALLY INACCURATE
OR MISLEADING CLAIMS

Limited resources restricted FTC's ability to rapidly reduce consumers' problems with energy-saving claims because

- staff often had to respond to higher priority nonenergy related cases;
- staff was unavailable to respond to numerous small, widely dispersed companies involved in making questionable claims; and

--FTC had to rely on existing test reports and no-cost or low-cost technical support, which was not always readily available.

Furthermore, FTC experienced difficulties assuring that claims were comparable and meaningful to consumers because testing and advertising standards that provide a common basis for the claim did not exist. Without such standards, FTC must demonstrate that the basis for each suspect claim is unreasonable and advertisers do not know beforehand what FTC holds to be unreasonable.

FTC has competing priorities
for its limited resources

During fiscal years 1978 through 1980, FTC spent about \$2.9 million on its energy program, 91 percent of which went for staff salaries, and the remainder for other operating costs. In fiscal year 1980, the energy program represented about 6 percent of FTC's total consumer protection resources.

Internal budget documents supporting FTC's fiscal year 1979 request to the Congress showed that the energy program planned to deal with false or misleading energy-saving claims on a case-by-case basis in addition to promulgating rules. However, the cost of issuing rules, including some that the Congress mandated, left little for investigating individual cases.

In fiscal year 1980, the energy program resources which previously had been spent on rulemaking became available to pursue individual cases. However, FTC diverted some of these resources to other higher priority nonenergy-related programs and spent only 83 percent of the funds budgeted for its energy program.

Many of the staff assigned to FTC's energy program said that they were also assigned to nonenergy cases that sometimes had higher priority and received more of their attention. This slowed or disrupted the progress of energy cases. For example, in late 1979 FTC began an investigation into the energy-saving claims made by a manufacturer of oil-fired furnaces and boilers. FTC consulted with a DOE expert and in June 1980 reached a preliminary conclusion that, because they were not based on standard DOE tests, the claims were highly exaggerated and unsubstantiated. However, the seller (the manufacturer) did not stop making the claims until January 1981, 1 year after FTC started its investigation. The FTC staff attorney assigned to the case told us that during this investigation he was also working on three or four other nonenergy, higher priority cases, which consumed 70 to 80 percent of his time.

Numerous small companies
making claims

According to FTC officials, many companies making inaccurate or misleading claims were small (generally less than a few million dollars in sales), and had many distributors and retailers. FTC generally has not proceeded against these companies because they were often out of business before FTC could act, or FTC officials said it was impractical to commit scarce resources to chasing down hundreds of regionalized or localized dealers. FTC officials told us that State and local consumer protection agencies were in a better position to curtail these sellers from making inaccurate or misleading claims.

Sellers of automotive retrofit devices are usually small companies with numerous distributors. These devices range in cost from a few dollars to a few hundred dollars and are represented as providing higher fuel economy than would have resulted with the originally equipped automobile. In 1975 EPCA required FTC to establish a program for systematically examining fuel economy claims made with respect to automotive retrofit devices, including fuel additives, and gave EPA responsibility for establishing procedures to test products upon FTC's request. While FTC has identified over 250 automotive retrofit devices for which ads made potentially inaccurate or misleading claims, as of January 1981, it had issued orders to stop the claims for only 2 and was investigating claims made for 5 other devices. The following example illustrates the problems FTC has had in trying to stop claims being made by numerous distributors and retailers.

In April 1979 FTC started an investigation of a manufacturer's energy-saving claims for an oil additive. The manufacturer claimed that the additive reduced gas consumption by 26 percent and that EPA had approved it. FTC's investigation disclosed that EPA tests showed the additive did not decrease fuel use and EPA had not approved it. In March 1981 FTC was negotiating a consent order with the manufacturer that would require it to cease making these claims unless supported by EPA or similar test results.

FTC officials told us that the proposed consent order was an agreement between FTC and the manufacturer and, as such, would not be binding on the company's 151 distributors and retailers throughout the Nation. The consent order would not restrict these distributors and retailers from using previously supplied manufacturer's promotional material containing similar energy-saving claims.

FTC officials said it was impractical for FTC to use its scarce resources to seek consent orders with any of the 151 small localized distributors and retailers spread over 39 States, even though this would have to be done to assure that potentially

inaccurate claims for the product were no longer made. The order would require the manufacturer to notify the distributors and retailers about its agreement with FTC. FTC officials believe this notification will deter unsubstantiated claims. As of May 1981, the commissioners had not accepted the proposed agreement between its staff and the manufacturer.

To try to minimize consumer problems with automotive retrofit devices, the FTC staff prepared a letter explaining its two consent orders with known manufacturers of retrofit devices, ad agencies, endorsers, and mail-order firms. The letter, which FTC sent to about 5,000 firms and individuals, discussed several legal principles and contained suggestions to help firms avoid advertising practices that led to the consent orders. FTC officials told us, however, that because of the "fly-by-night" nature of many sellers of these devices and because the names of devices are constantly changing, FTC has not been able to reduce the number of firms making potentially inaccurate or misleading claims.

FTC needs to rely on outside experts and tests

FTC often needs to obtain technical expertise and test reports to evaluate the basis for energy-saving claims. Since FTC has spent only about 1 percent of its energy program budget to hire consultants or to pay for product testing, and does not have this capability in-house, it must often rely on existing tests and Federal experts who are willing to provide low-cost or no-cost services to FTC. This process can be time consuming, particularly if conflicting test reports or opinions exist. In the example provided below, FTC's ability to react quickly to potentially inaccurate energy-saving advertisements was restricted by a lack of resources to pay for independent testing.

In early 1977 FTC began to accumulate information on energy-saving claims made by sellers of transient voltage surge suppressors (TVSSs). TVSSs cost between \$150 and \$750 each, and sellers have claimed that this product levels off the excess rush of electricity that occurs when electrical appliances are turned on or off, supposedly saving 10 to 30 percent on electric bills. The Edison Electric Institute, a trade association of 190 investor-owned electric companies, estimated that, in 1978 alone, 100,000 TVSSs were sold as energy-saving products.

In 1979, FTC stepped up its investigation and found that several tests and studies showed that TVSSs do not save energy. However, some sellers making energy-saving claims were basing their claims on tests and expert opinions that were contrary to FTC's evidence. According to the FTC attorney handling the case, because of these differences in expert opinions and test reports and the lack of resources to evaluate these technical results on its own,

FTC could not resolve this perceived controversy. Rather, in mid-1980 FTC decided not to take further action to resolve the controversy until a TVSS study being conducted by the Electric Power Research Institute, the research arm of power companies in the United States, was completed.

The study, completed in February 1981, stated that studies and opinions indicating that TVSSs saved energy were procedurally flawed, or in error. When FTC became aware of the results of this study, the FTC attorney in charge of the investigation concluded that sales of TVSSs as energy-saving products had almost run their course. He told us that while some small companies were still selling the product, many companies under investigation had gone or were going into bankruptcy. Accordingly in April 1981, over 4 years after FTC began looking into TVSSs, he recommended that FTC close the TVSS investigation.

Lack of standard, generally accepted measures of energy savings

FTC holds that advertisers must have a reasonable basis for making product performance claims. In the case of energy-saving advertisements, FTC takes the position that claims must be based on generally accepted scientific tests. For some types of products, such as solar systems, wood heating products, and energy-efficient motor oils, neither industry nor government has yet firmly established generally accepted testing procedures.

While creating problems for consumers as discussed in chapter 2, the lack of generally accepted testing procedures also creates problems for both FTC and the industry. First, without a generally accepted standard on which to base advertised energy savings, FTC must demonstrate that the basis for each questioned advertisement is unreasonable. Further, advertisers do not know, prior to making a claim, what FTC holds to be a reasonable basis. To overcome this problem, over the last few years FTC has been working with solar, wood heating, and other industry groups to obtain voluntary agreement on what is a reasonable basis for an energy-saving claim; these efforts, however, have not yet been completed. FTC officials believe that their involvement, which has included speaking at conferences about problems with certain types of claims, has resulted in fewer questionable claims.

Solar systems

In the first half of 1978, FTC staff became concerned that advertising claims for a particular solar product were exaggerated. They subpoenaed supporting data from the manufacturer and asked NBS to evaluate them. In its October 1978 report to FTC, NBS concluded that the advertised thermal performance and economic claims were inaccurate. NBS suggested that, based on its computations,

buying the advertised product would actually result in a long-term economic loss to the consumer, rather than the economic gain claimed.

In 1979, to alert this company as to what claims were acceptable, FTC developed a package of previous FTC cases to show the basic legal requirements in the energy advertising area. In January 1980 FTC concluded that the law, as it applied to solar energy advertising, was not firmly established; that is, FTC had not previously determined what constituted a reasonable basis for solar energy claims, nor had it defined unfair or deceptive acts or practices in the solar energy area.

FTC believed that many solar ads were making similar potentially exaggerated claims. However, it reasoned that, until specific test methods or computer simulated models were generally accepted by industry or some government agency, it would be difficult and time consuming for FTC or an advertiser to determine, on a case-by-case basis, whether each advertised claim was reasonable. Consequently, FTC decided to work with the Solar Energy Industries Association (SEIA) to develop guidelines establishing the parameters of what firms could say about product performance when advertising. In August 1980 FTC staff noted that SEIA's internal problems (lack of financing and change in leadership) were hampering FTC's ability to proceed. The staff recommended that FTC take a more active role by developing solar advertising guidelines and submitting them to SEIA and other representative groups or issuing an official FTC guide. However, according to FTC's energy program director, resources were unavailable to do this, and therefore, FTC staff turned to DOE, which had a \$300,000 grant to support SEIA. In May 1981, DOE funded SEIA to use part of that grant for developing voluntary advertising guidelines for its members.

Standards for wood burning products and energy-efficient motor oils

FTC has encouraged industry associations to adopt testing and advertising standards for wood burning products and energy-efficient motor oils. These standards are in varying stages of development and must evolve into generally accepted standards before FTC can use them to evaluate energy-saving claims for these products.

Concerning energy-efficient motor oils, a professional engineers' standard setting group, 1/ recognizing the need to have a common method of measuring the energy efficiency of new motor oils, began working on a standard test procedure in 1978. The standard should be ready in late 1981, when it will become the generally accepted, but voluntary, standard for the industry.

1/The American Society for Testing and Materials.

Concerning wood burning products, the Wood Heating Alliance 1/ has developed a proposed standard for testing and labeling the energy efficiency of wood burning products. However, the standard is voluntary and is not yet being widely used by industry members to support their energy-saving claims. According to an Alliance official, as of February 1981, only 8 of the Alliance's 347 manufacturing members were using its testing and labeling program designed to provide comparable energy efficiency information to consumers.

POSTAL INSPECTION SERVICE'S
ACTIVITIES ARE LIMITED

In fiscal year 1980, the Postal Inspection Service, through enforcing its mail fraud statutes, established a priority program to act against sellers using the mails as a means of misrepresenting energy-saving products. The Postal Inspection Service has primarily restricted its efforts to pursuing claims that sellers of automotive retrofit devices are making because (1) these types of devices are most commonly advertised and sold through the mails and (2) tests are available to show that they do not save any energy. According to the Postal Inspection Service estimates, in fiscal year 1980 it took actions to stop about 50 local or regionalized sellers of energy-saving products from making inaccurate or misleading claims.

- - - - -

This chapter discussed the accomplishments and problems experienced by Federal consumer protection programs. The next chapter relates their role to State agency efforts in removing inaccurate or misleading claims from the marketplace.

1/An association of 347 wood heating product manufacturers.

CHAPTER 4

STATE AND LOCAL AGENCIES HAVE PROBLEMS

SIGNIFICANTLY OR RAPIDLY REDUCING

INACCURATE AND MISLEADING ENERGY-SAVING CLAIMS

According to FTC, State, and local officials, many energy-related problems are localized and would be better resolved at the State or local level. However, we found that while State and local consumer protection agencies have eliminated some problems, their efforts are generally limited and are only a minor part of their consumer protection activities. State and local consumer protection agencies' primary problems in assuring the accuracy of energy-saving claims are the lack of technical expertise and resources. As a result, most agencies do not have the ability to significantly or rapidly reduce inaccurate or misleading energy claims.

The Federal Government is aware of the States' problems, and has tried to resolve the technical expertise problem by funding an energy-saving device clearinghouse. The clearinghouse has helped, but limited Federal and State participation and technical information have limited its effectiveness to coordinate and exchange technical data.

STATE AND LOCAL CONSUMER PROTECTION EFFORTS AND PROBLEMS

Most States have enacted consumer protection laws that are aimed at eliminating unfair and deceptive trade practices. At the State level, the primary responsibility for enforcing these laws is usually vested in the State attorney general's office. Some States have established separate offices to deal with consumer problems. However, when they cannot negotiate settlements with the company making the claim, they generally refer the case to the attorney general's office for possible litigation. At the local level, the district attorney's office is often used to deal with consumer problems. The attorneys general's and district attorneys' offices have used their authority to eliminate some inaccurate or misleading energy claims within their jurisdiction. For example:

- The Alaska attorney general investigated a company selling a product that claimed to reduce electrical consumption and save energy, and then brought litigation against the company. The court found the energy claims to be inaccurate and ordered the company to provide restitution to its customers.
- The California attorney general sued a solar window screen manufacturer which claimed that its screens would save up to

50 percent of a home's air-conditioning cost and up to 20 percent of a home's heating loss. The court found that the company could not substantiate its energy-saving claims, ordered \$2,000 in civil penalties, and enjoined the company from using these claims until it could substantiate them.

--The Sacramento district attorney's office investigated an oil additive that claimed from 20 to 30 percent gasoline savings. As a result of its investigation, the district attorney obtained an injunction eliminating the use of this claim in California, and the advertiser was ordered to pay \$5,000 in civil penalties.

While States have taken some actions to curtail inaccurate or misleading claims, their efforts generally were limited and were a small part of their consumer protection programs. For example, in a 3-year period ended October 1980, the Vermont attorney general's office had only one case of a potentially inaccurate or misleading energy-saving claim, Colorado had five, and Washington had two. In a survey of 50 State attorneys general's offices, FTC concluded in August 1980 that State attorneys general's energy cases or investigations currently represent a small percentage of all consumer protection cases. According to the survey, only eight States had over 10 percent of their consumer protection cases related to energy. We noted that district attorneys' efforts also generally were limited and were a small part of their consumer protection programs.

State and local consumer protection agencies' problems

State and local consumer protection agencies' primary problems in assuring the accuracy of energy-saving claims are their lack of technical expertise and a lack of resources to monitor claims and to obtain technical expertise and test information--the same problems which Federal agencies encounter. Due to these problems, State and local consumer protection agencies do not have the ability to significantly or rapidly reduce inaccurate or misleading energy-saving claims.

Technical expertise is needed to evaluate claims

Generally, the State and local consumer protection staffs lack expertise in energy-related matters, and few have had any energy-related training. For example:

--An energy product performance specialist in Atlanta, Georgia, told us that it is very difficult to tell what performance is reasonable without a good deal of technical knowledge.

--The chief investigator for the Michigan attorney general's office told us that the staff in his office are just not able to substantiate energy-saving claims on their own, and that they get confused just looking at the technical information on solar products.

--The Metropolitan Denver district attorney's staff stated

"* * * attorneys are not engineers and the razzle-dazzle of scientific terms and claims often make action by local and State agencies a task they feel is beyond their resources to tackle in an isolated fashion."

Without adequate expertise, State attorneys general must turn to experts and test results to evaluate energy-saving claims. Also, when negotiations with the company have not resolved the inaccurate or misleading claim, they need experts and test results for litigation. However, attorneys general have had difficulties locating experts and obtaining resources to pay for experts and product testing. In FTC's survey of the 50 State attorneys general's offices, one of their conclusions was that

"a substantial percentage of respondents indicated that their states needed the greatest assistance in product testing of energy devices and in finding experts who are willing to help investigations or testify during litigation. * * * These two areas will likely determine the success or failure of state efforts to rid their locality of marketers who sell faulty products or make unsubstantiated claims about the energy-saving ability of others."

More resources are needed to
monitor claims or test products

Most State and local consumer protection officials told us that limited resources prevent them from routinely monitoring advertisements and requesting manufacturers to substantiate their claims. Rather, they have had to concentrate primarily on resolving consumer complaints. We do not believe that relying on consumer complaints is an effective way to find and eliminate these claims, since, as explained in chapter 2, consumers have difficulty evaluating the performance of energy-saving products. As a result, they are unlikely to recognize and complain about inaccurate or misleading claims. According to an official from the Georgia Office of Consumer Affairs:

"We've found that, particularly in a technically oriented field such as energy, complaints are not necessarily an accurate barometer of real problems.

For instance, of 20 companies we found to be engaged in some sort of advertising deception, we have had complaints from consumers against only two."

An official in the Michigan attorney general's office for consumer affairs told us of a similar example. He said that it had received only one complaint against a company making blatantly questionable claims for its solar system, even though thousands of the State's residents must have seen the advertisement. Although he realized, as shown by this example, that people are not able to evaluate claims or performance on their own, he said that he did not have the resources to run an ad monitoring program.

A second problem caused by State and local agencies' limited resources is paying for product tests. A Metropolitan Denver district attorney's survey of attorneys general, district attorneys, and other agencies investigating energy-related cases showed that costs for product testing ranged from \$300 to \$10,000 and costs for expert fees were about \$600, some of which were beyond the capabilities of most agencies surveyed. For example, the Washington attorney general's office became aware of a solar product advertisement that, according to a federally funded regional solar energy center, contained exaggerated claims. The assistant attorney general stated that his office did not have the technical expertise to evaluate the claim and did not have available funds to pay an expert to evaluate the product's claim. Without an evaluation, the Washington attorney general's office decided not to investigate this company.

We found no Federal program which provides financial support to State or local governments to protect consumers from inaccurate or misleading advertisements on a continuing basis. We noted only one instance in which Federal funding directly supported State efforts--a \$70,000 Community Services Administration demonstration project that the Georgia Office of Consumer Affairs administered. During the project's 2-year period, the Office of Consumer Affairs regularly monitored advertisements of energy-related products, requested companies to substantiate their energy-saving claims, obtained agreements from 30 companies to correct energy-saving claims, and informed the public about products sold in the State. However, when the project's 2-year period expired on June 30, 1980, the Community Services Administration did not provide additional funds, and the Georgia Office of Consumer Affairs had to significantly decrease its energy program.

Federal legislation designed to increase the States' energy-related consumer protection activities has not been implemented by DOE. EPCA, as amended, gave the Secretary of Energy discretionary authority to require that the States, as a condition to receiving DOE funding, develop adequate plans for protecting consumers from unfair selling practices for energy conservation products. Implementing this provision could result in the States redirecting DOE

funds currently being used to implement EPCA's mandatory requirements. However, the Secretary has not used this authority because, according to a DOE official, priority was given instead to funding State efforts to promote energy conservation.

During our review, we were aware of only one ongoing project to assist State and local agencies in their efforts to eliminate inaccurate and misleading energy-saving claims. This project--an information clearinghouse--is discussed in the remainder of this chapter.

ENERGY-SAVING DEVICE CLEARINGHOUSE

On July 22, 1980, the Metropolitan Denver district attorney's office and the National Association of Attorneys General were awarded a \$200,000, 2-year grant from DOE for an energy-saving device fraud prevention project. ^{1/} The primary function of the project is to operate an information clearinghouse which would obtain and provide technical and legal support to Federal consumer protection agencies, State attorneys general, district attorneys, and other State consumer protection agencies in their efforts to reduce inaccurate and misleading energy-saving claims. The clearinghouse has performed the following activities:

- Manually maintained a data bank of names of products or companies making energy-saving claims. On January 22, 1981, there were 277 entries on file. The data bank is developed by monitoring ads in national and local periodicals to identify companies making energy-saving claims and obtaining information from Federal, State, and local consumer protection agencies.
- Communicated with consumer protection agencies by issuing bimonthly newsletters, responding to their inquiries, and conducting conferences.
- Administered a \$50,000 fund to be used to support States' testing and litigation needs.

The clearinghouse has been operating since August 1980. It has provided valuable assistance to consumer protection agencies. For example, the Montana Consumer Affairs Division contacted the clearinghouse about testing a furnace retrofit product that claimed

^{1/}The National Association of Attorneys General represents 50 State attorneys general's offices. Also, the National District Attorneys Association, which represents 70 district attorneys' offices, endorsed the project. However, these two associations could not provide additional funds to the project.

to save 20 to 30 percent or more in fuel consumption. The clearinghouse's consultant told the Division that sufficient evidence already existed to show that the product could not meet its energy-saving claims. A Montana consumer affairs official told us that the clearinghouse's information strengthened its case and alleviated its need to test the product. He added that his office did not have enough funds to test the product.

Although the clearinghouse has assisted some State and local consumer protection agencies, it has not been able to take advantage of other opportunities to improve the coordination and distribution of technical information to these consumer protection agencies because

- Federal participation has been limited,
- State participation has been limited, and
- a complete data bank of test results on energy-saving products has not yet been developed.

Limited Federal participation

EPCA, as amended, mandates FTC to cooperate with and assist State agencies' consumer protection efforts relating to energy conservation. FTC has done so by exchanging correspondence, giving technical advice regarding specific products and claims, providing a list of names of FTC staff involved in energy cases, and mailing factsheets on gas-saving devices. This exchange of information is helpful because it prevents the duplication of effort which can occur when agencies do not coordinate their work. For example, we noted one case where State law required that the attorney general inform FTC of its consumer protection investigations. In this case, the State was investigating a gasoline additive claiming to improve fuel economy by up to 15 percent. Coordination between these agencies resulted in the State's finding that FTC was also investigating the gasoline additive, and the State consequently deferred action pending completion of FTC's investigation.

Although FTC has occasionally provided information and assistance to State and local officials, it has not been able to routinely share valuable data on its activities regarding energy-saving claims through the clearinghouse. As a result, the clearinghouse is missing a chance to keep State and local officials better informed of FTC cases.

For example, in March 1980 an FTC regional office started an investigation of an automotive retrofit device which claimed to reduce fuel costs by up to 27 percent. In December 1980, the regional staff stated that, even though its investigation disclosed that the company did not adequately substantiate the claim and the

president of the company had agreed to control future advertising, it was closing the case because of insufficient public interest. We noted that several months later, the device was still being marketed in the local area with its 27-percent energy-saving claim.

Federal, State, and local consumer protection officials in other areas of the country where the device was being marketed with the same unsubstantiated claims were unaware of the existence or results of FTC's investigation. If they had been informed, they could have acted to stop similar claims. According to the investigator handling the case, FTC did not inform the clearinghouse of its findings in the case because it was concerned that its investigative information would not be properly safeguarded.

FTC's policy is to prevent public disclosure of its investigations. However, according to FTC's policy manual, staff may disclose to State and local law enforcement officials the existence of investigations, the identity of the parties under investigation, and the practices being investigated.

The Postal Inspection Service has also been hesitant to provide the clearinghouse with investigative information because of concerns with the clearinghouse's safeguards for this type of information.

We believe that safeguards against public disclosure of FTC's and the Postal Service's investigations are important. However, we also believe that, although the clearinghouse is not a law enforcement agency, FTC and the Postal Service could, if appropriate safeguards existed, provide some information, such as the name of the company or product and claim under investigation to the clearinghouse. The clearinghouse could pass this on to State and local agencies through its newsletter and the agencies could request detailed information directly from FTC or the Postal Service.

Limited State participation

Before establishing the clearinghouse, the Metropolitan Denver district attorney's staff mailed a questionnaire to 120 attorneys general and district attorneys and asked if they would participate in a clearinghouse. These agencies overwhelmingly endorsed the information-sharing concept of the clearinghouse and stated that they would participate. However, according to the clearinghouse coordinator, the actual participation level during the first 6 months of operation was disappointingly low. For example, several State and local consumer protection officials we talked to were unaware that the clearinghouse existed. In one case, however, they had received the clearinghouse's newsletters, but were too busy with other matters to read them.

According to the director of the clearinghouse, the participation of State and local agencies could expand as they become more aware of the clearinghouse through its newsletter. She told us that the clearinghouse does not have the resources to personally contact each month all consumer organizations to ascertain whether they are monitoring ads and to ask what new energy-saving claims they might have encountered. However, she said that the clearinghouse continues its efforts to increase State energy awareness of the project and to urge continued cooperation.

Test information not yet compiled

Several Federal agencies occasionally test energy-related products for various purposes and some test results could be useful to State and local consumer protection agencies. For example, DOE has tested heat pump water heaters, window insulation, and vent dampers. DOE has conducted product tests for research, development and demonstration projects, to develop testing procedures and, on a limited basis, to respond to specific requests to test products. NBS has performed product tests to develop test procedures or standards. DOD has performed product testing and evaluations to find products that are energy efficient or more cost effective than products currently in use. Appendix III describes in greater detail the agency, the program used to test products, and products tested.

However, these Federal testing agencies do not normally distribute their reports to State and local agencies and the clearinghouse. As a result, State and local agencies will not receive valuable information that would facilitate their investigations. For example, in 1980 a DOE contractor completed a report on the energy-saving characteristics of light bulb extenders, a product about the size of a quarter inserted into the light bulb socket. This report, however, was not circulated to the clearinghouse or other consumer protection agencies because the contractor preparing the report, while acknowledging that it may be useful to them, stated he was uncertain where to send it. When we made officials from three States aware of the report, they all told us it would be useful to them in evaluating the energy-saving claims made by some sellers of these products. After becoming aware of these test results, one State was considering reopening a previously closed investigation.

Although the clearinghouse is not required to establish a data bank of test results, a clearinghouse official told us that it was in the process of doing so. For example, the clearinghouse's technical consultant told us that he is preparing a listing of testing facilities and stated that, as part of this work, he will obtain information about the tests completed by each facility. He added that these lists should be completed in late 1981.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, AGENCY COMMENTS, AND OUR EVALUATION

CONCLUSIONS

Consumers buying energy-saving products are responding to special economic, governmental, and patriotic pressures. But in choosing among products with varying performance, consumers are confronted with hundreds of energy performance and savings claims.

According to experts, many of these claims are inaccurate, do not tell the whole story, or are not comparable to claims of competing products. In addition, consumers have difficulty assessing the accuracy of these claims on their own. Because of these conditions, we believe that continued government efforts are needed to assist consumers in evaluating the reliability of energy-saving claims.

FTC, the primary Federal agency assisting consumers in evaluating energy-saving claims, has taken some effective actions. FTC's rules regarding standardized testing and disclosure for insulation, certain home appliances, and gasoline octane ratings have been effective in reducing consumer problems. The agency's efforts to alert consumers to potential problems in claims for several products (see app. V) and to work with industry groups to develop testing and advertising standards are commendable and should eventually reduce consumer problems. We believe these efforts should be continued.

Nevertheless, FTC can do more with existing resources and authority. The development, acceptance, and use of these standards often takes years. In the meantime, since the number of products claiming to save energy is large, many inaccurate or misleading claims will continue to be made. For example, we noted that FTC was aware of several ads for solar and wood burning products with questionable claims. FTC decided not to fully investigate these claims but to work with industry groups to develop standards. We believe that FTC should, in addition, alert consumers to these types of claims and why they are questionable.

Neither FTC nor its counterparts at other Federal, State, and local agencies have determined the accuracy of most specific claims. Further, the effectiveness of the actions these agencies have taken has been limited because they take so long and are limited in scope, either not including all levels of the marketing chain (manufacturer, distributor, and retailer) or being confined to a small geographic area.

Federal, State, and local agencies could be more effective in assuring the accuracy of energy-saving claims if they work together to share needed technical and product information. The energy-saving device clearinghouse, being funded with a DOE grant, offers an opportunity for all levels of government to work together and share this information. However, for the clearinghouse to do an effective job, it must overcome the problems we discussed in chapter 4--mainly limited Federal and State participation.

When the testing and advertising standards are generally accepted and used and the information clearinghouse improves its ability to assist Federal, State, and local agencies, energy-saving claims should be more accurate, meaningful, and comparable. At that time, government agencies should be better able to investigate and evaluate questionable energy-saving claims. Until then, we believe the best advice for consumers is "let the buyer beware."

RECOMMENDATIONS

We recommend that the Chairman of FTC direct the Bureau of Consumer Protection to alert consumers by publishing additional consumer factsheets about some of the difficulties with claims and ads, particularly for solar and wood burning products.

We recommend that the Secretary of DOE direct the Office of Consumer Affairs to work with its energy-saving device fraud prevention grantee to

- establish formal, written procedures, including adequate safeguards to protect the confidentiality of the material it handles;

- increase its outreach activities to encourage more consumer protection agencies to participate; and

- reach an agreement with FTC and the Postal Inspection Service to enable them to participate by sharing their data.

AGENCY COMMENTS AND OUR EVALUATION

In a letter dated June 5, 1981, FTC commented that it has devoted substantial resources to the problems discussed in this report and continues to fund a large-scale consumer protection effort designed to ensure that advertising claims for energy-saving products are accurate. (See app. I.) FTC did not comment on our recommendation.

FTC said that consumer problems with false and misleading claims are not as bad as our report indicates because we failed to distinguish between "fraudulent" products--which FTC defines as having no benefit for consumers--and "legitimate" products which have some energy-saving potential that can be claimed for them. We recognize this difference in products. However, we are more concerned that energy-saving claims for these products, if false or misleading, have the potential to cause consumer problems.

An exaggerated claim for a "legitimate" product may cause more consumer harm than a false claim for a "fraudulent" product. For example, a consumer who spends \$10 for a "fraudulent" automotive retrofit device claiming to improve mileage by 15 percent but actually having no effect on mileage has lost \$10. As shown in a few examples on pages 21 and 31, owners of "legitimate" solar systems (which may cost thousands of dollars) can be misled by exaggerated energy-saving claims. In the first example, the owner of a solar system claiming to save \$27.50 a month was actually saving less than \$10.00. In the second example, NBS evaluated for FTC a solar product's advertising claims and found that the performance and economic claims were inaccurate. NBS also suggested that buying the product would actually result in a long-term economic loss to the consumer, rather than the economic gain claimed. Thus, whether energy-saving claims are for "fraudulent" or "legitimate" products as defined by FTC, we believe that such claims having questionable accuracy, being potentially misleading, or lacking comparability can cause consumer harm.

FTC acknowledged that there are numerous companies marketing fraudulent products. It stated that, because of its law enforcement actions and consumer information actions by itself and others, the public is more aware of such schemes and that fewer people are being defrauded.

We have seen a marked increase in energy-saving claims between 1975 and 1980. In addition, an internal FTC memorandum dated April 16, 1981, stated that its monitoring indicates that problems with deceptive mileage claims may be worsening as more products continue to come on the market.

FTC also stated that it is not always cost effective for Federal agencies to track down these companies and that State and local law enforcement agencies are often in a much better position to act. In an internal memorandum on a case involving one of these companies, however, the FTC staff defended its involvement:

"Although state law enforcement officials have attempted to address the problem of fraudulent claims for these devices, our discussions with them have led us to conclude that this problem can be addressed

most effectively by the Commission. State enforcement efforts have been necessarily limited due to a lack of resources for testing and expert testimony. In light of their limited resources, the states have focused their efforts on chasing perpetrators out of their states. This results in more problems for neighboring states and, of course, fails to address the overall problem."

We believe that agencies at all levels of government have difficulty trying to resolve the problem on their own. We also believe that, as discussed on page 48, the clearinghouse offers an excellent opportunity to make the most of the available resources at all levels by sharing technical and product information.

Regarding legitimate energy-saving products, FTC stated that the majority of manufacturers of these products are not misrepresenting their products' performance or energy-saving potential. While we do not know the percentage of manufacturers who may be misrepresenting their products' energy savings, we identified hundreds of questionable claims (as discussed in ch. 2) and thus consider this situation a problem.

DOE, in a letter dated June 15, 1981, commented on our draft report. (See app. II.) Regarding FTC's and Postal Inspection Service's concerns about public disclosure of information provided to the clearinghouse, DOE said that the clearinghouse has determined, based on preliminary research, that it is bound by the Colorado Public Records Act (C.R.S. 1973, 24-72-101, et seq.) and cannot provide an "iron-clad" guarantee regarding the public's nonaccess to clearinghouse information. However, DOE further stated that the clearinghouse is conducting additional research and will be working with the FTC staff in an effort to overcome their concerns. If Colorado State law does not protect information supplied by FTC to the clearinghouse from public disclosure, two alternatives might be transferring the clearinghouse function to another State at the end of the current grant or having FTC or DOE operate the clearinghouse themselves. DOE said that, in the meantime, the clearinghouse is initiating an effort to keep FTC and the Postal Inspector informed of firms and products that were the subject of State and local consumer offices' inquiries.

Regarding our recommendation that the energy-saving device fraud prevention grantee increase its outreach activities to encourage more consumer protection agencies to participate, DOE said that the grantee is extending its outreach activities. This is being done by discussing the project at various conferences involving consumer protection agencies, expanding the distribution of its newsletter, and obtaining additional publicity on the project through publications.

DOE said that our report should give greater weight to the role of private industry and supporting government efforts which are designed to improve the availability and accuracy of information on energy-related products. DOE commented on several efforts in which it has, over the past several years, worked with utilities, State agencies, and the private sector to improve the accuracy of such information. As a result, DOE believes that private industry and the States are now in the best position to assure the accuracy of information on energy-related products.

As discussed in chapter 4, we believe that consumers cannot expect State and local consumer protection agencies to assure the accuracy of most energy-saving claims. While we believe that industry groups can play a significant role in making energy-saving claims accurate, complete, and comparable, we recognize that these efforts will probably take some time. For that reason, we believe that FTC should continue to work with industry groups to achieve that goal.

CHAPTER 6

OBJECTIVES, SCOPE, AND METHODOLOGY

Our overall objectives were to determine

- the types of products for which energy-saving claims were being made;
- to what extent these claims were inaccurate or misleading to consumers; and
- what Federal and State efforts existed to protect consumers from inaccurate or misleading energy-saving claims, how these efforts were working, and what, if anything, Federal agencies could do to make these efforts more effective.

To determine what types of energy-saving products and claims consumers were facing, we obtained advertisements in nationally and locally circulated periodicals, sales brochures, and catalogs. We observed claims made at point of sale and, to a lesser extent, in advertisements in other media, such as radio and television. Since the universe of products advertised to save energy is unknown, using statistical sampling techniques was impractical. Accordingly, we did not try to find out how many products claimed to save energy or how many ads were run; we merely wanted to learn the type and frequency of claims being made designed to induce the consumer to buy.

To determine the extent that energy-saving claims were inaccurate or misleading to consumers and what Federal and State agencies were doing about the claims, we used the following method:

- To learn whether energy-saving claims for similar products were comparable, we determined if there were generally accepted test standards serving as a basis for products' energy-saving claims.
- Although we did not try to evaluate the technical accuracy of each ad on our own, in many cases we compared the claims' test results or other technical information to technical support, information, and opinions from DOE, EPA, NBS, DOD, and other Federal and State agencies involved in or knowledgeable about testing to evaluate the energy performance of various consumer products. (A detailed list of these agencies is included in app. III.) Because most of the test reports and data obtained were based on highly technical testing procedures, we did not attempt to verify their findings; however, we did identify the testing limitations and assumptions that they used.

--By sending letters, as consumers, to advertisers, we evaluated the consumers' ability to obtain information supporting the claims.

--We discussed with officials from Federal, State, and local agencies and private consumer groups the nature and extent of the consumer problems with energy-saving claims and what they were doing about them. Also, we reviewed some of their case files.

At the Federal level, we concentrated on FTC, which the Congress had mandated to initiate a program to protect consumers from unfair and deceptive acts and practices relating to energy conservation. We visited FTC headquarters and its Boston, Atlanta, Seattle, San Francisco, and Denver regional offices. Since the Postal Inspection Service has a program to prevent energy fraud through the mails, we performed work at the Postal Inspection Service headquarters and at the Seattle, San Francisco, Boston, Detroit, Washington, D.C., and Atlanta field offices. We also conducted work at DOE, EPA, NBS, and DOD headquarters to determine their activities relating to testing and evaluating consumer products claiming to save energy. We also held discussions with government-owned, contractor-operated national laboratories that test consumer products for DOE. At DOE, we also met with officials within the Office of Consumer Affairs to discuss their energy-related consumer protection activities. Further, we met with officials of EPA's laboratory in Ann Arbor, Michigan, responsible for testing and evaluating automotive retrofit devices.

We visited the State attorneys general, or consumer protection offices in Georgia, Vermont, Colorado, California, Massachusetts, Michigan, and Washington. In addition, we visited some local consumer protection agencies, including district attorneys' offices in Denver, Colorado; Sacramento, California; Fulton County, Georgia; and King County, Washington.

Field locations were selected to provide a mixture of geographical coverage and varying degrees of consumer protection activity. We held discussions with officials from the National Advertising Division of the Council of Better Business Bureaus and Consumers Union.

We reviewed an FTC study on a survey of 50 State attorneys general's activities relating to energy. Also, we attended a national conference sponsored by the National Association of Attorneys General on consumer protection issues with energy-saving products. In addition, we reviewed several studies that compared advertised energy-saving claims and resulting consumer expectations with actual level of product performance.

We did not review various Federal programs designed to encourage consumers to purchase energy conservation products. While these programs may provide some energy conservation information to consumers, a recent GAO report found that these programs' influences on consumer behavior were much more limited than product advertising. 1/

1/"Residential Energy Conservation Outreach Activities--A New Federal Approach Needed" (EMD-81-8, Feb. 11, 1981, p. 8).

FEDERAL TRADE COMMISSION
WASHINGTON, D. C. 20580

BUREAU OF
CONSUMER PROTECTION

5 JUN 1981

Gregory J. Ahart, Director
Human Resources Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

This letter is in response to the U.S. General Accounting Office's draft report to the Congress concerning energy-related consumer products, as transmitted to the Federal Trade Commission by cover letter dated May 8, 1981. We appreciate the opportunity to review and comment on the report before it is issued in final form, and we also would appreciate if these comments could be included in the final report.

The Commission, like GAO, is and has been concerned with the energy crisis and its impact upon consumers. Indeed, the Commission has devoted substantial resources to the problems noted by GAO, and we continue to fund a large-scale consumer protection effort designed to ensure that advertising claims for energy-saving products are accurate. We believe we are making significant progress in those areas which are amenable to strong remedial efforts on the part of the Commission.

In its draft report, GAO has examined a great many advertisements for alleged energy-savings products and has concluded that consumers are inundated by false and misleading claims amounting to widespread fraud and deception. Furthermore, the report states that consumers are virtually helpless in confronting this situation and that they should be warned about all such products. We do not believe that the picture is so bleak, however, because in our opinion the GAO report does not adequately distinguish two different types of products which are marketed as being "energy-saving": those which are truly fraudulent--and therefore of no benefit to consumers--and those legitimate products which have some energy savings potential that can properly be claimed for them. Although the Commission staff knows of numerous outright frauds being advertised, we are also aware of a great many products

on the market which help conserve energy, reduce fuel bills, and are economical purchases.

In general, we have found that the fraudulent products (often fairly inexpensive devices or gadgets of some sort) are heavily advertised for relatively short periods of time, with banner headlines proclaiming their ability to save energy or gasoline. They tend to be sold door-to-door or through the mail by unknown small manufacturers or independent local distributors. Although there are a large number of companies marketing such products in this way, we believe that it is not always cost-effective for a federal agency to spend considerable resources tracking down such small and elusive perpetrators; rather, we believe that state and local law enforcement agencies are often in a much better position to curtail such sellers from making egregiously false claims.

While the Commission staff has worked with state and local law enforcement agencies concerning these products, the Commission itself has in fact become involved with the two leading consumer products in this category--alleged gas-saving devices and electricity-saving devices. The Commission has taken formal action against several marketers of gas-saving devices in the past, and is currently considering additional action. Furthermore, we have worked with the Environmental Protection Agency to establish and enforce testing guidelines and procedures, and have alerted the public to EPA test results as well as our own law enforcement activities. (See, for example, FTC publications appended to the draft report which serve to warn consumers and deter further unlawful activities.) With respect to alleged electricity-saving devices, we are continuing to investigate the advertising for a number of such products, and we have issued a news release warning consumers of problems they may encounter with these products. (See attached news release dated April 8, 1980.) Although marketing of such types of products persists, we believe that the public is more aware of such schemes than ever before and that fewer people are being defrauded. Of course, credit for the public's awareness must be shared with others, including many informative newspaper and magazine writers who have written about the subject over the past few years.

With respect to alleged energy-saving products that are not fraudulent and which can in fact save energy dollars, the Commission staff has over the past

few years scrutinized advertising claims for many such products discussed in the GAO report, including vent dampers, ceiling fans, certain types of residential siding systems, furnaces, storm windows, woodburning appliances and solar energy products. In our opinion, the majority of manufacturers of these products are not misrepresenting their products' performance or energy savings potential, which ranges from minimal to substantial. However, the Commission staff is investigating individual companies in each of these product areas, and is also communicating its concern to industry trade associations when several manufacturers appear to be violating the law. In addition, the staff is working with other government agencies and testing organizations to establish standardized test procedures and acceptable advertising guidelines which should be of benefit to both consumers and the affected industries.

In regard to specific actions that the Commission has recently taken in these areas, I would note that on February 5, 1981, the Commission issued a complaint against Champion Home Builders, Inc., charging that the company had made numerous false and unsubstantiated performance and energy savings claims about its solar energy equipment. (In the Matter of Champion Home Builders, Inc., Docket No. 9151.) In addition, on December 2, 1980, the Commission entered into a consent agreement with Boekamp, Inc., the nation's leading producer of portable electric quartz heaters. Boekamp agreed, inter alia, to stop claiming that its quartz heaters were more efficient or produced more heat than other electric heaters of the same wattage. (In the Matter of Boekamp, Inc., et al., Docket No. C-3063.) It is worth noting that the Commission's action with respect to Boekamp tended to ensure that during the past heating season, virtually all quartz heaters on the market were advertised on the basis of accurate and more limited claims.

Again, we appreciate the opportunity to comment on the draft report.

Very truly yours,



James H. Sneed
Director

Attachment

FTC news

Federal Trade Commission Washington, D.C. 20580

HOLD FOR RELEASE UNTIL: Tuesday, April 8, 1980

FTC TO INVESTIGATE CLAIMS ABOUT ELECTRIC ENERGY SAVING DEVICES

The Federal Trade Commission today announced it will investigate advertising claims made by manufacturers and distributors of a device that purportedly saves electricity.

The device, a transient voltage surge suppressor, levels off the excess rush of electricity that occurs when an appliance is turned on or off, supposedly saving energy.

These products cost from \$150 to \$750 and are marketed either by door-to-door sales or by direct mail advertising, followed by sales visits, according to the FTC's Atlanta Regional Office, which is handling the investigation.

A leading professional organization, the Institute of Electrical and Electronic Engineers (IEEE) in 1976 warned of misleading claims about these products, pointing out that claims of 10, 20 and 30 percent energy savings were unsubstantiated. Various universities, government agencies and utility companies supported IEEE claims that the devices neither reduced power consumption nor lowered electricity bills, according to FTC staff.

The Commission has notified selected marketers of previous rulings that it is illegal to run ads overstating expected energy savings or reductions in fuel bills resulting from use of a product or to make claims for products without a reasonable basis. The marketers were also told of the Commission's authority to seek civil penalties for violations of prior FTC orders barring illegal practices and of their potential liability for civil penalties if they employ these practices.

###

MEDIA CONTACT: Linda Singer, Office of Public Information, 202-202-523-3830

STAFF CONTACT: W. Roland Campbell or Gordon S. Brown, Atlanta Regional Office, 404-881-4836



Department of Energy
Washington, D.C. 20585

JUN 15 1981

Mr. Gregory J. Ahart
Director
Human Resources Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Department of Energy (DOE) appreciates the opportunity to review and comment on the GAO draft report entitled "Consumer Products Advertised to Save Energy - Still a Case of 'Let the Buyer Beware'."

Energy Saving Device--Fraud Prevention Project

DOE, in July of 1980, awarded a two-year, \$200,000 grant to the Metropolitan Denver District Attorney's Office and the National Association of Attorneys General for an Energy Saving Device--Fraud Prevention Project. The draft report concentrates mostly on the clearinghouse function of the Fraud Prevention Project. Although they are noted, it is important to emphasize that project activities also include:

1. An Energy Saving Device Newsletter which is distributed bi-monthly to 366 law enforcement agencies, 194 consumer agencies and 1600 offices and businesses from the Solar Energy Research Institute (SERI) mailing list.
2. Training sessions for attorneys and investigators from across the country on how to obtain technical information to evaluate energy-saving claims, investigation techniques, litigation strategy, and tactics for handling specific kinds of cases and out of court settlement. There are plans to prepare a training manual based on these sessions for future use by consumer agency officials.
3. A revolving fund to pay expenses related to expert witness' testimony. As the draft report recognizes, the high cost of testing and obtaining expert witnesses has been a major roadblock to effective consumer protection against fraudulent energy-saving claims.
4. A test facility data bank is being developed containing a list of recognized laboratories, the products each laboratory has tested and the kinds of tests used. This data bank will fill one of the biggest gaps identified by GAO--the lack of technical resource information.

The draft report recommends that DOE work with its Energy-Saving Device--Fraud Prevention Project grantee to increase its outreach activities to encourage more consumer protection agencies to participate. The grantee is extending its outreach activities by attending various conferences to talk about the project. Project staff participated in a training session for some 200 State and local consumer officials sponsored by the White House Office of Consumer Affairs on May 15, 1981.

The grantee will also be participating in the annual meeting of the National Association of Consumer Agency Administrators in June and in the National Association of Attorneys General Investigator Conference in August. The newsletter mailing list is being expanded to include branch and satellite offices of consumer agencies. Investigators as well as unit chiefs will be included on the newsletter mailing list. Finally, additional publicity on the project is planned, including an article scheduled to appear in the August issue of Changing Times and an article in Prosecutor (a National District Attorneys Association Publication) which will invite more local Prosecutor participation in the project.

It appears from the report that the FTC (and to a lesser degree, the Postal Inspection Service) have concerns about public disclosure of information they provide to the clearinghouse. Based on preliminary research the clearinghouse staff has determined it is bound by the Colorado Public Records Act (C.R.S. 1973, 24-72-101 et seq) and cannot provide an iron-clad guarantee regarding non-accessibility of FTC's documentary information. Despite this preliminary determination, the clearinghouse staff is conducting additional research and will be working with FTC staff in an effort to overcome their concerns.

In the meantime, the clearinghouse is initiating a technique for keeping the FTC and the Postal Inspector more involved. As a supplement to the "Law Enforcement/Confidential" section of the Energy Saving Device Newsletter, headquarters staff at FTC and the Postal Inspection Service will receive every four weeks a listing of all firms and products that were the subject of inquiries from State and local consumer offices. The FTC and Postal Inspector can review this list and call the clearinghouse if either wants more information on any of the firms or products. This will at least assure that these two Federal agencies are kept informed.

The report should give greater weight to the role of private industry and supporting government efforts which are designed to improve the availability and accuracy of information on energy-related products. The diversity of such products and the high variability of their costs and resulting savings underlies the important need for improving the information available to consumers.

DOE has, over the past several years, worked with utilities, State agencies, and the private sector to improve the accuracy of energy-related product information. These efforts include:

1. Expedited development through professional trade associations of industry consensus standards on such products as insulation materials, solar collectors and energy diagnostic equipment.
2. Development of home energy audit techniques capable of more accurately estimating the costs and likely cost savings of conservation and solar products.
3. Development of standardized test procedures for thirteen major residential appliance types to ensure, through the FTC Appliance Labeling Program, that accurate and consistent energy efficiency and cost of operation information is provided to the consumer in any advertisements made by the manufacturer, and on labels utilized for comparison shopping.

4. Distribution of technical reports and articles on the results from research and development programs which offer accurate information on energy conserving and solar energy products and techniques.

In part as a result of these past efforts, DOE believes that private industry and the States are now in the best position to assure the accuracy of information on energy related products. Further information should be obtained by GAO on the status and results of these and other industry and State efforts before developing recommendations confined entirely to Federal consumer protection enforcement approaches.

Comments of an editorial nature have been provided directly to members of the GAO audit staff. DOE appreciates the opportunity to comment on this draft report and trusts that GAO will consider the comments in preparing the final report.

Sincerely,


P. Marshall Ryan
Controller

FEDERAL AGENCIES TESTING AND EVALUATINGCONSUMER PRODUCTS ADVERTISED TO SAVE ENERGY

This appendix presents a list of Federal agencies we identified which test and evaluate consumer products advertised to save energy. Although it is not intended to be all inclusive, it represents the Federal agencies that are most knowledgeable about the energy-saving capability of consumer products.

DEPARTMENT OF ENERGY

DOE operates the Buildings and Community Systems Program to improve energy efficiency in buildings, building components and appliances, Federal programs, and community systems. Research and demonstration projects are part of this effort, and DOE conducts testing to ensure that products being developed can save energy. Government-owned, contractor-operated national laboratories direct this testing. Also, DOE conducts testing to develop, amend, or refine test procedures for consumer household appliances.

The Oak Ridge National Laboratory, in Oak Ridge, Tennessee, has the lead responsibility for testing heat pumps and residential and commercial appliances. The laboratory tests such products as heat pump water heaters and power factor controllers, which manufacturers claim will save energy by controlling the voltage supplied to the motor of an electrical appliance, such as a dishwasher or refrigerator.

The Brookhaven National Laboratory in Upton, New York, has the lead responsibility for supporting the development of high-efficiency gas and oil furnaces, boilers, and related heating equipment. Examples of projects that Brookhaven has supported and reports it has prepared include:

- Development of blue-flame burners and boilers.
- Report on the "Reduction of Residential Fuel Oil Consumption by Vent Dampers" (this report includes the results of laboratory and field tests).
- "Survey of Available Technology for the Improvement of Gas-Fired Residential Heating Equipment."
- Efficiency test reports on vent dampers, furnaces, and boilers.
- Report on "An Assessment of Thermal Insulation Materials and Systems for Building Applications."
- Investigation of conservation claims of TVSSs (report identifies various independent tests of the products).

The Lawrence Berkeley Laboratory in Berkeley, California, has the lead responsibility for supporting development of energy-efficient lighting systems. Examples of the types of products supported and tested by the laboratory include:

- Development of a solid-state ballast to operate a circline fluorescent lamp.
- Test report on the cost effectiveness of long-life incandescent lamps and energy buttons.

The laboratory also provides technical assistance to DOE by managing an energy-efficient window program. The program supports the building industry and Government efforts through research, development, and demonstration of new energy-efficient window products and design technologies. Examples of the types of window products the laboratory tests include double-hung windows, some with venetian blinds; windows with exterior louvres; various window shades; interior storm windows; plastic film; sun screens; and window quilts.

NATIONAL BUREAU OF STANDARDS

NBS functions include developing methods for testing and advising Government agencies on scientific and technical problems. NBS has done research (which includes testing) to evaluate the energy efficiency of consumer products and building materials. For example, NBS has done research to develop

- test procedures, performance criteria, and performance standards for solar products;
- test procedures to establish the effectiveness, durability, and safety of insulation; and
- test procedures for major energy-consuming household products for DOE.

NBS also evaluates energy-related inventions and recommends promising proposals or inventions to DOE for funding or technical support. While NBS does not normally test inventions, it assesses the validity of the technical assumptions behind them, accuracy of their claims, their uniqueness, and nature of the energy savings from using them. As of February 1981, NBS had accepted 8,129 inventions for evaluation and recommended 172 for DOE support.

DEPARTMENT OF DEFENSE

The three branches of the military--Army, Navy, and Air Force--conduct limited testing or evaluations of specific products claimed to save energy. The types of products tested cover a broad range.

- The purpose of testing products is to determine if they would
- operate more energy efficiently than products or equipment being used in the same military application;
 - be life-cycle cost effective, considering acquisition cost, operation, maintenance, and disposal; and
 - perform as reliably or more reliably than current equipment.

Army

The U.S. Army Facilities Engineering Support Agency, Fort Belvoir, Virginia, monitors new technology and products in the facility equipment category and produces many energy-related studies and reports to Army facility engineers located throughout the country. The Facilities Engineering Support Agency conducts limited tests at various Army installations. In addition, the Facilities Engineering Support Agency has a contract with a firm to evaluate new products and methods for reducing energy consumption that may have potential application for the Army. These evaluations consist of market and literature surveys pulling together information on testing and evaluations conducted by other agencies. Examples of such reports include:

- "State of the Art Devices for Reducing Energy Losses from Flue Stack Gases."
- "Performance and Evaluation of Concepts and Devices for Heat Reclamation from Air Conditioners, Heat Pumps, and Refrigeration Equipment."
- "Performance Evaluation of Solar Films and Screens."
- "Energy Saving Devices for Gas Furnaces."

In addition, examples of other products on which the Facilities Engineering Support Agency has test and evaluation information include: fuel additives, vinyl windows, ceiling fans, electrical lighting devices, point-of-use water heaters, and heat pump water heaters.

Navy

The Navy Facilities Engineering Command, Alexandria, Virginia, has conducted some testing of consumer products claimed to save energy. Types of products that the Navy's Civil Engineering Laboratory, Naval Construction Battalion Center, Port Hueneme, California, has tested include: TVSSs, power factor controllers, efficient electric motors, insulating shades, and water-saving shower heads.

Air Force

The Warner Robins Air Logistics Center, Robins Air Force Base, Georgia, conducts limited testing on a few gas-saving devices and oil additives.

ENVIRONMENTAL PROTECTION AGENCY

EPA's Emission Control Technology Division, at Ann Arbor, Michigan, evaluates fuel economy of automobiles and automotive retrofit devices. Retrofit devices that EPA has tested include air-bleed devices, fuel additives, lubricants, ignition control devices, and intake system devices.

REPRINT OF EXCERPTS FROM CONSUMER ALERTS PUBLISHEDBY METROPOLITAN DENVER DISTRICT ATTORNEYS'OFFICE OF CONSUMER FRAUD AND ECONOMIC CRIME

While not giving consumer advice on specific products, we can give the following basic directions to anyone who may be considering an investment based on the promise: "If it saves energy, it will pay for itself."

What makes me think I will save money by investing money in this product? Am I relying on ad or other promotional claims solely? How much time will it take for a pay-back to be realized?

Am I relying on documented, independent tests? Do I really understand what the tests say or am I relying solely on a salesperson's interpretations?

Am I relying on a personal testimonial, and do I understand the problems with such statements? Have I considered all the variables that make testimonial claims not necessarily true for me and my house or comfort, living and driving habits, etc.?

Have I considered costs above and beyond price--such as the cost of wood for a stove, the cost of a tune-up with a gas-saving device, the cost of financing a solar system?

Do I understand the Federal and State tax credits on energy conservation devices? Have I been swayed by the amount of credit rather than overall price? (If anticipating tax credit, check with the Internal Revenue Service and State Department of Revenue. A salesperson is not a qualified tax advisor.)

Have I taken the time to investigate before investing? Have I checked references and reputation of the sales company with the Better Business Bureau or local consumer protection agencies? Have I asked for names of other customers and checked to see if they are satisfied with the product, installation, service, etc.?

CONSUMER ALERTS PUBLISHED BY FTC--
GAS-SAVING DEVICES, SUN REFLECTIVE
FILM, AND LOOSE-FILL HOME INSULATION

Immediate
Release
10/23/79

Facts for Consumers from the Federal Trade Commission

BUREAU OF CONSUMER PROTECTION · OFFICE OF CONSUMER EDUCATION · WASHINGTON, D.C. 20680

"Gas-Saving" Devices

Low-cost gas-saving products are being heavily advertised as a boon to consumers. But you should be wary of them. Of those tested or evaluated by the Environmental Protection Agency (EPA), only three saved measurable amounts of gas, and two of those caused substantial increases in exhaust emissions.

Watch Out For
Consumer
Testimonials

The Federal Trade Commission (FTC) is aware of over a hundred "gas-saving" products now on the market. They are often advertised with testimonials by consumers who bought the products and echo the gas-saving claims. However, few consumers have the ability or equipment to accurately test for a change in gas mileage after the installation of a gas-saving product. Such variables as traffic, road and weather conditions, as well as the condition of the car itself, will affect fuel consumption and are usually beyond the consumer's control. But some testimonials are even more deceptive.

One consumer sent a company a letter praising its "gas-saving" product. However, at the time the product was installed, the consumer also received a complete engine tune-up -- a fact not mentioned in the letter. The entire increase in gas mileage claimed by the consumer may have been the result of the tune-up alone. But other consumers would not have known that.

Consumers should be very careful in evaluating gas-saving claims and should try to get substantiation for them from the seller. Remember that no government agency endorses gas-saving products for cars. The most that can be claimed is that EPA has tested the product and reached certain conclusions about possible gas savings.

A Product Might
Cause Engine
Damage

EPA has not conducted any durability tests of "gas-saving" products. The agency doesn't know, therefore, what effect the use of these products may have upon a vehicle over a long period of time. It is possible that some products may harm the car or otherwise adversely affect its performance. For example, if a product actually does add significant amounts of air to the air-and-fuel mixture (as some advertisers claim), it may cause an engine to misfire. This is especially likely to happen on cars manufactured after 1974. These autos have their carburetors pre-set for a maximum amount of air to be burned with the fuel. The addition of more air, through a so-called "gas-saver," may change the mixture enough to cause engine misfiring, a condition which greatly increases the potential for engine damage or other mechanical failure.

**Some Products
Can't Work On
New Cars**

Some products, such as "air-bleed" devices, don't work on many new cars because these cars have "feedback" carburetors that adjust the air-and-fuel mixture in the engine in response to electrical signals from the exhaust system. In these cars, if the air-bleed device works as claimed by its manufacturer and admits additional air into the engine, the carburetor will simply make an adjustment to compensate for the additional air. Thus, the device will have no impact on the vehicle's fuel economy.

**What If It
Doesn't Work?**

What if you buy a gas-saving product and it doesn't work? First, contact the manufacturer and ask for a refund. Most companies do offer money-back guarantees. Even if the guarantee period has expired, contact the company first.

If you get no satisfaction from the company, contact your local and/or state consumer protection agency and ask for assistance. If the company itself is located in another state, send a copy of your letter to the consumer protection agency in that state, also. Send additional copies to your local Better Business Bureau and to the Federal Trade Commission.

The FTC's Role

The FTC cannot handle complaints of individual consumers; however, knowledge of such problems helps the FTC identify certain patterns of abuse in the marketplace and even pinpoint those companies that are the worst offenders.

The FTC is conducting a number of investigations of companies marketing "gas-saving" products. In addition, final orders have been issued against companies making and selling the Air-Jet (or Mini-Turbo Charger) and the GR Valve (or Turbo-Dyne Energy Chamber). The FTC has also taken action against the marketer of a motor additive known as Moto-Nu.

**It May Come
Tomorrow**

Scientists and engineers around the country are carrying on research to find solutions to our heavy dependence on foreign oil. If the American past is any indicator of the future, we've got the ingenuity to come up with a system -- someday -- that may considerably ease the current gas crunch. And when that day comes, the product will go into the marketplace with solid test experience behind it, a fact that we hope will be mentioned in all its ads. But until then, be careful.

EPA Tests

The EPA has a program to evaluate gas-saving products in order to determine whether their use will result in any measurable improvement in fuel economy. The gas-saving products on the market seem to fall into clearly defined categories or groupings; EPA has not tested every product, but has tried to test at least one product in each category. (The names of the products tested or evaluated by EPA are listed on the next page.) Information about the EPA test procedures can be obtained from: Mr. Merrill Korth, Environmental Protection Agency, 2526 Plymouth Road, Ann Arbor, Michigan 48105.

<p>Test Results: Positive</p>	<p>Only three of the products tested by EPA had test results indicating that they may measurably improve fuel economy. One of these products is the <u>Pass Master</u>, an air conditioner compressor cut-off device. This device cuts off the air conditioner's compressor when a vehicle accelerates. The EPA tests show fuel economy improvements from the use of this device can be as much as 4%.</p> <p>The second device found by EPA to improve fuel economy under certain circumstances is the <u>W/A WAAG-Injection System</u>. This device injects a water/alcohol solution into the carburetor air intake system under certain circumstances. The EPA tests show an average fuel economy improvement of 5.6% from the use of this device. However, the use of the device did result in increased exhaust emissions.</p> <p>The third device found by EPA to improve fuel economy is the <u>Automotive Cylinder Deactivator System (ACDS)</u>, which permits an 8 cylinder vehicle to be operated on 4 cylinders. The use of this product resulted in fuel economy improvements of from 5% to 16% on the EPA urban test cycle and from 3% to 20% on the EPA highway test cycle. However, the use of the product caused a substantial increase in exhaust emissions to levels exceeding emission standards. Therefore, EPA has ruled that the use of the ACDS violates the anti-tampering provisions of the Clean Air Act. (Because many states prohibit the operation or registration for use on public highways of a motor vehicle whose emission control devices have been removed or rendered inoperative, the ACDS may not be legal for use in some states.) In addition, the use of the ACDS resulted in a marked deterioration of vehicle driveability.</p>
<p>Test Results: Negative</p>	<p>The remaining products EPA has tested to date have not shown any fuel economy improvement. These products are:</p>
<p>Air Bleed</p>	<p>(These devices bleed air into the air/fuel mixture after it leaves the carburetor. They are usually installed in the PCV line or as a replacement for idle-mixture screws.)</p> <p>Pollution Master Air Bleed, ADAKS Vacuum Breaker Air Bleed, Berg Air Bleed, Econo Needle Air Bleed, Landrum Retrofit Air Bleed, Monocar HC Control Air Bleed, Air Jet Air Bleed, Aquablast Wyman Valve Air Bleed, Peterman Air Bleed, Mini Turbocharger Air Bleed, Ball-Matic Air Bleed, Landrum Mini-Carb, Econo-Jet Air Bleed Idle Screws, Turbo-Dyne GR Valve, Auto-Miser, and Ram-Jet.</p>
<p>Vapor Air Bleed</p>	<p>(Similar to the Air Bleed, except that induced air is bubbled through a water/anti-freeze mixture usually contained in a bottle or jar located in the engine compartment.)</p> <p>Frantz Vapor Injection System, Turbo Vapor Injector System, SCATPAC Vacuum Vapor Induction System, Econo-Mist Vapor Vacuum Induction System, Mark II Vapor Injection System.</p>
<p>Carburetor/ Intake Manifold</p>	<p>(These devices are mounted between the carburetor and intake manifold and supposedly mix or vaporize the air/fuel mixture.)</p> <p>Hydro-Catalyst Pre-Combustion Catalyst System, Environmental Fuel Saver.</p>

Intake System	(Devices which make some general modifications to the vehicle intake system.) Electro-Dyn Superchoke, Filtron Urethane Foam Air Filter, LanKin Fuel Metering Device, Smith Power and Deceleration Governor, Fuel Conservation Device.
Ignition Controls	(These devices are attached to the ignition system or they are used to replace original equipment or parts.) Paser Magnum, BIAP Electronic Ignition Unit, Magna Flash Ignition Control System, Special Formula Centrifugal Ignition Advance Springs.
EGR	(Devices different from the original equipment for exhaust gas recirculation systems.) Lee Exhaust and Fuel Gasification EGR.
Fuel Additives	(These materials are added to the gas tank.) Stargas Fuel Additive, Sta-Power Fuel Additive, Technol G Fuel Additive, Johnson Fuel Additive, Vareb 10 Fuel Additive, Rolfite Upgrade Fuel Additives, OEI 400 Fuel Additive, EI-5 Fuel Additive, NRG #1 Fuel Additive, XRG #1 Fuel Additive.
Lubricants	(These materials are usually poured into the crankcase.) Analube Synthetic Lubricant, Tephguard.
Fuel Preheater	(A device that heats the fuel before it enters the carburetor. The fuel is usually heated by the engine coolant, exhaust or electrically.) FuelXpander
Water/Water Alcohol Injection	(A device that injects a water or water-alcohol mixture into the airstream before the carburetor.) Goodman Engine System, Model 1800.

FEDERAL TRADE COMMISSION
 WASHINGTON, D. C. 20580
 OFFICIAL BUSINESS
 PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
 U. S. FEDERAL TRADE COMMISSION



Immediate
Release
7/16/80

Facts for Consumers from the Federal Trade Commission

BUREAU OF CONSUMER PROTECTION • FEDERAL TRADE COMMISSION • WASHINGTON, D.C. 20680

Sun Reflective Film

You have no doubt noticed mirrored windows on some of the buildings in your city. The mirrors are either reflective glass or reflective film added to existing glass. These products, as well as reflective shades and screens, are often advertised as energy-savings devices.

Some reflective film may be a good value, but you should be sure that you understand the advertised claims. For example, some advertisers claim that their film will reflect 80% of the sun's rays, but that does not mean 80% energy savings.

The film does repel the sun's rays, but actual energy savings depends on several factors, including:

- * the reflectivity of the film (the more "mirrored," the better).
- * the color of the film.
- * whether draperies, shades, venetian blinds, etc., are drawn to save energy. (If these devices are being used, the additional energy saved by the use of the film may be small; however, you may be able to keep your shades open.)
- * whether the sun hits the window directly. (Film on windows facing east, south or west reflect more sun. Film on windows shadowed by shrubs or surrounding buildings provide little benefit.)

Year-round
savings

Are energy savings year-round? It depends on the climate. The longer the warm weather lasts, obviously, the more the savings. But in colder areas with long winters, the film may provide little or no winter savings because it reflects potentially warming sun rays.

To counterbalance winter drawbacks when they exist, some firms are offering reflective shades, removable/reusable film, and new "winter" reflective film that reflects heat back into the room.

What is re-
flective film

Reflective sun control film is made by condensing vaporized metal (usually aluminum) on polyester or polypropylene film. Varieties of reflective film are based on the type of film, the density of the applied metal, and the color of the film. In general, the more densely the metal is applied, the more sun the film reflects.

How to shop
for film

The most effective film is silver-colored and has a highly mirrored finish. A view through a window having this film is similar to a view by someone wearing dark sunglasses. The more transparent, less reflective films are less effective in reducing solar heat. Therefore, you won't save as much from the more transparent film.

When you shop for film, compare cost, as well as other benefits and disadvantages of all energy savings devices, such as caulking, storm windows, reflective film, weatherstripping, screens, and other outside and inside window devices.

If you think reflective film is right for you:

- * Look at the film on a building similar to yours.
- * Compare the different types and colors of film with respect to energy savings and aesthetics.
- * Compare different brands of film. Quality control may vary among manufacturers. Problems, such as streaks, corrosion, pits, or wrinkles, caused by the manufacturing process may reduce effectiveness or aesthetics. These problems can be corrected only by replacing the film.
- * Know the reputation and work of the installer. Faulty installation may cause peeling, corrosion and blotches, shortening the life of a product.
- * Remember that windows with reflective film must be washed carefully to avoid scratching. Abrasive cleansers should not be used.
- * Compare the warranties offered by the installers and the manufacturers.

Additional
Information

FEDERAL TRADE COMMISSION
Washington, D.C. 20580

OFFICIAL BUSINESS
Penalty for Private Use: \$300

Postage and Fees
Paid By the
U. S. Federal
Trade
Commission



Facts for Consumers from the Federal Trade Commission

BUREAU OF CONSUMER PROTECTION · OFFICE OF CONSUMER EDUCATION · WASHINGTON, D.C. 20580

Loose-Fill Home Insulation

In the fall, thoughts of homeowners turn to insulation! It's no wonder. The Department of Energy says that insulation may be able to save you up to 30% of the energy you would otherwise need to heat your home this winter. In fact, insulation can often pay for itself through fuel savings in 3 to 5 years, depending on the condition of your house.

You may choose to use loose-fill insulation. That means the insulation fibers (cellulose, rock wool, or fiber glass) will be blown into the attic or into the space between the room wall and the outer wall of your house.

A company will either spread insulation in the attic, or it will cut small openings in the house wall, blow in the insulation, and seal up the holes--all in one day. The procedure is easy, painless, and effective -- if all goes well.

Last Year's Lessons

Many consumers added insulation last year and were treated fairly and honestly. Still, all did not go well. Consumers in the market for insulation now can learn from the mistakes of last year's insulation buyers. Here are some tips from the FTC for those who'll be insulating with loose-fill fiber this year.

Check the "R"-Value You Need

First, decide what R-value you need. The R-value measures a material's ability to resist (the "R") the flow of heat from a warm room to the cold outside. The R-value you need depends on the climate, the type of heating fuel you use, and the part of the house you insulate. You can get help with this decision from your state energy office or utility company. You can also write the U.S. Department of Energy, Washington, D.C. 20580, for their fact sheet (CS 0017) titled "Insulation."

When you buy your insulation, tell the seller that you need a certain R-value--not how many inches of insulation thickness. The thickness of loose-fill insulation will vary with the kind of insulating material used and the way it is installed.

**Cellulose
Insulation**

Manufacturers provide charts to contractors showing the number of bags of insulation they'll need to cover a certain size area to get the needed R-value. Ask the contractor to show you this chart. That way you can make sure you're getting the right number of bags for your home.

Be there the day the work is done. Then you'll know the contractor did the job properly, and you'll have peace of mind and safety for your family.

Every bag of cellulose insulation must say that its contents meet the safety standard set by the U.S. Consumer Product Safety Commission (CPSC). Look for this statement and any other indicating that the insulation was tested by some reputable testing laboratory. Do not allow anyone to put cellulose insulation in your home until you know it meets the CPSC safety standard.

Cellulose insulation is made of recycled newspapers mixed with chemicals to make it fire resistant. Look in the bag to make certain that the cellulose is finely ground. If you can make out the letters from the newspapers, the cellulose may not have been ground fine enough to mix properly with the fire retardant chemicals.

Check the bottom of a bag of cellulose for powder. A lot of fine powder in the bottom of the bag may mean that the fire retardant chemicals weren't mixed properly with the cellulose. If you have any doubts about the insulation, check with your local fire department or call the CPSC at 800-638-8326 (Maryland: 800-492-8363).

**Fiberglass
and Rock
Wool**

Fiberglass and rock wool are made of inorganic material (sand, rock, and slag) and need no treatment to make them fire resistant. Look on the bag for a claim that the insulation meets federal standards.

Count the bags to be sure you're getting what you ordered. Watch to see that the contractor uses them all.

**Watch the
Way It's
Installed**

In the attic, check to see that the fiber is evenly distributed. Make sure it doesn't cover recessed light fixtures or other heat sources. Covering these heat sources can cause fires. The insulation shouldn't come close to fireplace and furnace flues. Look for and follow the manufacturer's recommendations for the amount of space needed around the flues. Check your local building inspection office or fire marshall to see what they'd recommend.

What About
Walls?

Make sure the insulation doesn't block the attic air vents. If it does, you'll have a moisture build-up that can cause wood to rot and insulation to lose its effectiveness. In the northernmost states, poor attic ventilation can even cause flooded ceilings in the spring.

Insulating walls is a tricky business. Home walls will have horizontal fire stops or other obstacles, such as pipes or electrical wiring, that create hard-to-fill spaces. A good contractor will look for these spaces and know how to get maximum insulation effect.

If your contractor uses only one row of holes to blow insulation into the wall of a building, ask questions. There are undoubtedly obstacles in that wall creating pockets where insulation is not going. Have the wall done properly.

Check the
Clean-Up

Contractors should leave your house and yard in as good condition as they found it. A contractor is responsible for damages done by the crew. Any sawdust, dirt, or other mess should be cleaned up before the crew leaves. Any holes cut to blow insulation into the walls should be correctly plugged, waterproofed, and made to look like the rest of the wall. Inspect your home before the crew leaves. If there are damages or a lot of dirt and grime, make a written list and ask the contractor to return and fix up your home.

These tips should help put you on your way to a warm, safe winter. For more information, the following useful publications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402:

In the Bank...Or Up the Chimney?
Stock No. 023-000-00411-9
Price \$1.75

Home Energy Savers Workbook
Stock No. 041-018-00116-6
Price \$1.00

Retrofitting Existing Housing for Energy Conservation
Stock No. 003-003-00193-7
Price \$1.35

Questions & Answers on Home Insulation
Stock No. 052-011-00193-7
Price \$1.10

**DA
FIL**