

GAO

Report to the Ranking Member,
Committee on Homeland Security and
Governmental Affairs, U.S. Senate

March 2010

ENERGY STAR PROGRAM

Covert Testing Shows the Energy Star Program Certification Process Is Vulnerable to Fraud and Abuse



GAO

Accountability * Integrity * Reliability



Highlights of [GAO-10-470](#), a report to the Ranking Member, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

American consumers, businesses, and federal agencies rely on the Energy Star program to identify products that decrease greenhouse emissions and lower energy costs. In addition, the federal government and various states offer tax credits and other incentives to encourage the use of energy-efficient products including Energy Star products. Specifically, approximately \$300 million from the American Recovery and Reinvestment Act will be used for state rebate programs on energy-efficient products. The Energy Star program, which began in 1992, is overseen jointly by the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA). Given the millions of dollars allocated to encourage use of Energy Star products and concerns that the Energy Star program is vulnerable to fraud and abuse, GAO was asked to conduct proactive testing to (1) obtain Energy Star partnership status for bogus companies and (2) submit fictitious products for Energy Star certification.

To perform this investigation, GAO used four bogus manufacturing firms and fictitious individuals to apply for Energy Star partnership and submitted 20 fictitious products with fake energy-savings claims for Energy Star certification. GAO also reviewed program documents and interviewed agency officials and officials from agency Inspector General (IG) offices.

[View GAO-10-470 or key components.](#)
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What GAO Found

GAO's investigation shows that Energy Star is for the most part a self-certification program vulnerable to fraud and abuse. GAO obtained Energy Star certifications for 15 bogus products, including a gas-powered alarm clock. Two bogus products were rejected by the program and 3 did not receive a response. In addition, two of the bogus Energy Star firms developed by GAO received requests from real companies to purchase products because the bogus firms were listed as Energy Star partners. This clearly shows how heavily American consumers rely on the Energy Star brand. The program is promoted through tax credits and appliance rebates, and federal agencies are required to purchase certain Energy Star certified products. In addition, companies use the Energy Star certification to market their products and consumers buy products relying on the certification by the government of reduced energy consumption and costs. For example, in 2008 Energy Star reported saving consumers \$19 billion dollars on utility costs. The table below details several fictitious GAO products certified by Energy Star.

Fictitious product	Product and certification details
Gas-Powered Alarm Clock	<ul style="list-style-type: none"> Product description indicated the clock is the size of a small generator and is powered by gasoline. Product was approved by Energy Star without a review of the company Web site or questions of the claimed efficiencies.
Geothermal Heat Pump	<ul style="list-style-type: none"> Energy use data reported was more efficient than any product listed as certified on the Energy Star Web site at the time of submission. High-energy efficiency data was not questioned by Energy Star. Product is eligible for federal tax credits and state rebate programs.
Computer Monitor	<ul style="list-style-type: none"> Product was approved by Energy Star within 30 minutes of submission. Private firms contacted GAO's fictitious firm to purchase products based on participation in the Energy Star program.
Refrigerator	<ul style="list-style-type: none"> Self-certified product was submitted, qualified, and listed on the Energy Star Web site within 24 hours. Product is eligible for federal tax credits and state rebates.

Source: GAO.

GAO found that for our bogus products, certification controls were ineffective primarily because Energy Star does not verify energy-savings data reported by manufacturers. Energy Star required only 4 of the 20 products GAO submitted for certification to be verified by an independent third party. For 2 of these cases GAO found that controls were effective because the program required an independent verification by a specific firm chosen by Energy Star. However, in another case because Energy Star failed to verify information provided, GAO was able to circumvent this control by certifying that a product met a specific safety standard for ozone emission.

At briefings on GAO's investigation, DOE and EPA officials agreed that the program is currently based on self-certifications by manufacturers. However, officials stated there are after-market tests and self-policing that ensure standards are maintained. GAO did not test or evaluate controls related to products that were already certified and available to the public. In addition, prior DOE IG, EPA IG, and GAO reports have found that current Energy Star controls do not ensure products meet efficiency guidelines.

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Abbreviations

ARRA	American Recovery and Reinvestment Act
CFL	Compact Fluorescent Light
CIGIE	Council of Inspectors General on Integrity and Efficiency
DLA	Defense Logistics Agency
DOE	Department of Energy
EF	Energy Factor
EPA	Environmental Protection Agency
FEMP	Federal Energy Management Program
FTC	Federal Trade Commission
GSA	General Services Administration
HVAC	Heating, Ventilation and Air Conditioning
HVI	Home Ventilating Institute
MESA	My Energy Star Account
NIST	National Institute of Standards and Technology
NVLAP	National Voluntary Laboratory Accreditation Program
OIG	Office of Inspector General
OPS	Online Product Submittal
QPI	Qualified Product Information

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United States Government Accountability Office
Washington, DC 20548

March 5, 2010

The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

Dear Senator Collins:

American consumers, businesses, and federal agencies rely on the Energy Star program to identify products that decrease greenhouse emissions and lower their energy costs. Energy Star, which is jointly managed by the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE), is a voluntary labeling program designed to promote energy-efficient products. It touts itself as a trustworthy means for letting consumers know which products deliver the same or better performance as comparable models while using less energy¹ and saving money. The Energy Star program reported in 2008 that it helped Americans prevent 43 million metric tons of greenhouse gas emissions and save more than \$19 billion in utility costs. Consumer interest in making households and buildings more energy efficient has become heightened given the increase in energy prices and expansion of federal tax credit and state rebate programs.

Energy Star was created in response to the Clean Air Act amendments of 1990² and the Energy Policy Act of 1992.³ In general, the program is designed to identify models for 60 categories of household and commercial products that are the most energy efficient (efficiency of up to 10 to 25 percent over the minimum federal standards⁴). Energy Star

¹The energy savings obtained from Energy Star products vary depending on the specific product's energy efficiency specifications in comparison to a non-Energy Star qualified product with similar performance.

²Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

³Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992).

⁴Minimum federal standards for energy efficiency were established by Congress in the Energy Policy and Conservation Act (EPCA) Pub. L. 94-163 (1975). The standards have been updated many times since being established, most recently by the Energy Policy Act of 2005 Pub. L. 109-58 (2005). These laws establish schedules for DOE to review and revise these minimum federal standards.

reported that in 2008 there were more than 40,000 qualified product models that are produced by more than 2,400 manufacturers. These products claim to offer consumers savings of as much as 75 percent relative to standard models.

This report responds to your request that we proactively test the effectiveness of the current Energy Star partnership and product certification process to determine whether manufacturers could obtain Energy Star partnership and product certification for products not meeting Energy Star efficiency requirements. To perform this investigation, we developed four bogus manufacturing companies, meaning that we conducted our work with fictitious names and contact information that could not be traced back to GAO. We also established a Web site related to each bogus company and rented domestic commercial mailboxes to use as the company addresses. We designed these proactive tests using publicly available information to assess the fraud-prevention controls in place for partnership and product certification. We submitted Energy Star Partnership Agreements for each company and submitted fictitious products with energy-efficiency specifications to the Energy Star program for product certification. We developed these fictitious products to ensure that they met Energy Star requirements and to ensure that most qualified under the Department of Energy's Federal Energy Management Program⁵ (FEMP). Federal buyers are required by the Energy Policy Act of 2005⁶ to purchase products that are Energy Star-qualified or FEMP-designated for energy efficiency.

We submitted products under selected categories such as appliances, building products, computers and electronics, heating and cooling products, and lighting. The products varied in levels of sophistication and energy efficiency to test the level of scrutiny throughout the Energy Star product certification process. Our investigation was designed to test controls over the process for becoming an Energy Star partner and controls over the product certification process. Our work was not designed to test other controls potentially in place over monitoring of

⁵The FEMP provides energy-efficiency requirements, guidance, and cost calculators that help federal agencies offset energy consumption costs through energy-efficient product implementations. Federal buyers are required to purchase products that are Energy Star qualified or FEMP designated for energy efficiency and low standby power. These products are in the upper 25 percent of energy efficiency in their category.

⁶Energy Policy Act of 2005, Pub. L. No. 109-58, § 104(a), 119 Stat. 594, 609 (2005) (codified as amended at 42 U.S.C. § 8295b).

Energy Star label use on retail shelves or industry self-enforcement efforts including energy-efficiency tests performed on products selected from actual retail locations.

We conducted the work for this investigation from June 2009 through March 2010 in accordance with the standards prescribed by the Council of Inspectors General on Integrity and Efficiency (CIGIE). Additional details on our scope and methodology are included in appendix I.

Background

The Energy Star program was introduced by the U.S. Environmental Protection Agency (EPA) in 1992, under the authority of the Clean Air Act,⁷ as a voluntary labeling program designed to promote—and allow consumers to identify—energy-efficient computers and monitors. Through 1995, EPA expanded the label to additional office equipment and residential heating, ventilation, and cooling (HVAC) equipment, and partnered with the U.S. Department of Energy (DOE) in 1996. The Energy Star label is now found on over 60 product categories, including major appliances, office equipment, lighting, home electronics, new homes, and commercial and industrial buildings, with a reported energy-efficiency savings of up to 10 to 25 percent over the minimum federal standards. As of 2009, over 40,000 individual product models were Energy Star-qualified by over 2,400 manufacturers.

Manufacturers who wish to use the Energy Star logo must enter into a Partnership Agreement⁸ with either the EPA or DOE, under which the manufacturer agrees to comply with Energy Star eligibility criteria and identity guidelines.⁹ Manufacturers apply to be a partner of the Energy Star program by identifying which product category or categories under which the company seeks to qualify products, completing a partnership

⁷Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 901(c), 104 Stat. 2399, 2703 (1990) (codified as amended at 42 U.S.C. § 7403(g)).

⁸The Partnership Agreement is a voluntary agreement between businesses and organizations and the federal government. As part of this partnership, businesses, and organizations can use the Energy Star name and marks, registered marks owned by the U.S. government, as part of their energy efficiency and environmental activities.

⁹The Energy Star guidelines outline how to use the Energy Star marks across a wide range of activities and applications. The guidelines provide specific information on the use of the mark in each category and recommendations for what words to use when writing or talking about the Energy Star program including how to reference the government source of authority.

agreement packet, certifying their agreement to the general program requirements, and submitting the packet to EPA or DOE contractors either online or via mail. The Energy Star program provides approved partners with usernames and passwords so that they may access logos and other marketing materials directly from the Energy Star Web site. The use of the logo on products and promotional materials must be consistent with the Energy Star identity guidelines. Figure 1 below shows the Energy Star partnership and product certification logos.

Figure 1: Energy Star Partnership and Product Certification Logos



Source: Energy Star.

Manufacturers who make products that meet Energy Star specifications must then report each product's specifications by submitting Qualified Product Information (QPI),¹⁰ using either the QPI forms available on the Energy Star site, or for certain products (home electronics and office equipment) by using the Online Product Submittal (OPS) Tool. Certain product categories require third-party independent testing results to be submitted in addition to the QPI forms. The criteria for Energy Star product qualification vary depending on the specific product category and whether the product is for residential or commercial use. Generally, qualified Energy Star products are 10 to 25 percent more efficient than required by the federal minimum standard while providing top performance and innovative features. For example, the Compact Fluorescent Light (CFL) bulb requires manufacturers to provide third-party test results from an accredited independent laboratory. In contrast, a refrigerator requires manufacturers to submit a QPI form stating minimal energy efficiency specifications without any third-party test results. Energy Star requires manufacturers to certify in their application that the

¹⁰QPI information is specific energy-efficiency specifications related to a product based on the product design and operation.

product meets energy-efficiency specifications for the product type. Energy Star, according to officials, largely relies on manufacturers or others to identify and report products claiming to meet Energy Star criteria that are violating the rules. In that regard, Energy Star officials stated that some companies test products of competitors.

The federal government has placed significant emphasis and allocated tax dollars to encourage the use of energy-efficient products. Specifically, federal agencies must procure Energy Star-qualified or DOE Federal Energy Management Program (FEMP)-designated products, unless the head of the agency determines in writing that a statutory exemption¹¹ applies. The General Services Administration (GSA) and Defense Logistics Agency (DLA) are also required, except in narrow circumstances, to supply only Energy Star or FEMP-designated products for all product categories covered by either program. In addition, the American Recovery and Reinvestment Act (ARRA) of 2009¹² increased and extended the energy tax credits for homeowners who make energy-efficient improvements to their existing homes. The new law extended the tax credits in place for 2009 to 2010, and increased the tax credit rate to 30 percent of the cost of all qualifying products placed in service in 2009 and 2010, up to a maximum aggregate credit limit of \$1,500.¹³ The Act also removed the cap on the tax credit, currently in place through 2016, of 30 percent of the cost of materials and installation for installing geothermal heat pumps and other renewable technologies. DOE also created a state rebate grant program, with nearly \$300 million in funding from the ARRA, for the purchase of new Energy Star-qualified appliances. Under the program, eligible consumers can receive rebates to purchase new energy-efficient appliances and are encouraged to replace used, less efficient appliances. Each state and U.S. territory was allowed to design its own rebate program and all 56 plans have been approved by DOE.

While not part of the Energy Star program, manufacturers may also receive federal tax credits for producing energy-efficient clothes washers, dishwashers, or refrigerators. Efficiency requirements for each particular product are statutorily defined and not reliant on Energy Star standards.¹⁴

¹¹42 U.S.C. § 8259b.

¹²American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) (codified at 26 U.S.C. § 25C).

¹³26 U.S.C. §§ 25C – 25D.

¹⁴26 U.S.C. § 45M.

However, products meeting Energy Star efficiency requirements frequently meet federal tax credit requirements. The Energy Improvement and Extension Act of 2008¹⁵ modified and extended the manufacturer's tax credit to eligible models produced in the United States during calendar years 2008, 2009, and 2010. The amount of the credit per unit produced varies according to the energy efficiency of the appliance, with higher energy-efficient models being eligible for larger credits. The aggregate amount of credit allowed with respect to a manufacturer for any taxable year shall not exceed \$75 million reduced by the amount of the credit allowed to the taxpayer (or any predecessor) for all prior taxable years beginning January 2008. Exempt from the \$75 million limit are the highest energy-efficient categories of refrigerators and clothes washers eligible for the highest per unit tax credits. Based on the Joint Committee on Taxation projections, billions of dollars in energy-efficiency tax credits will be claimed by individuals and corporations between 2009 and 2013.

Numerous investigations and reports have recently identified Energy Star program successes and weaknesses. As noted by the Consortium for Energy Efficiency,¹⁶ the EPA Office of the Inspector General (OIG)¹⁷, Consumer Reports,¹⁸ DOE OIG,¹⁹ and a prior GAO report²⁰ there is currently no requirement for independent third-party verification of energy performance reporting for most product categories prior to gaining access to Energy Star logos and promotional materials. Specifically, in 2007 the EPA OIG stated that there was no evidence that the self-certification

¹⁵Energy Improvement and Extension Act of 2008, Pub. L. No. 110-343, Division B § 305 (2008).

¹⁶The Consortium for Energy Efficiency (CEE) is a nonprofit public benefits corporation that develops initiatives for its North American members to promote the manufacture and purchase of energy-efficient products and services. CEE members include utilities, statewide and regional market transformation administrators, environmental groups, research organizations, and state energy offices in the United States and Canada. Also contributing to the process are CEE partners—manufacturers, retailers and government agencies. DOE and EPA both provide support through active participation as well as funding.

¹⁷EPA OIG Report No. 2007-P-00028 (Aug. 1, 2007), 09-P-0061 (Dec. 17, 2008), and 10-P-0040 (Nov. 30, 2009).

¹⁸*Consumer Reports Magazine* (Oct. 2008).

¹⁹DOE OIG Report No. DOE/IG-0827 (Oct. 14, 2009).

²⁰See GAO, *Energy Efficiency: Opportunities Exist for Federal Agencies to Better Inform Household Consumers*, [GAO-07-1162](#) (Washington, D.C.: Sept. 26, 2007).

process was effective and noted that the Energy Star program lacked in both quality assurance and sufficient oversight. Moreover, the EPA OIG identified that there was no methodology in place to verify manufacturers' claims of energy efficiency and that products may be labeled with the Energy Star logo and sold prior to submitting certification results to the agency. In addition, an October 2008 issue of *Consumer Reports* detailed further problems, including lax qualifying standards, federal testing procedures that were outpaced by current technology, and reliance on industry self-policing—manufacturers testing competitors' appliances and reporting misconduct—without evidence of the effectiveness of that approach. The GAO report mentioned above found that products may qualify for Energy Star status based on criteria other than the estimated total energy consumption. In addition, *Consumer Reports* and DOE OIG officials found that manufacturers may use computer controls to manipulate energy consumption testing results, and for some categories Energy Star no longer highlighted only the most energy-efficient products in those categories.

A recent settlement between DOE and an Energy Star partner has highlighted the potential for noncompliance of products in the program. In January 2010, DOE and Haier America entered into a Consent Decree over an investigation into whether Haier violated DOE's energy-efficiency standards and Energy Star program requirements for certain freezers. DOE's investigation led Haier to determine that a parts defect might have caused four standalone upright freezer models to consume more energy than the manufacturer had reported. Additionally, following complaints raised by competitors, LG Electronics and DOE entered into an agreement in 2008 to clarify appropriate energy-efficiency testing methods for certain LG refrigerators. The agreement has led to litigation in federal district court over whether both parties are complying with its terms regarding testing methods.

Undercover Tests Result in 15 Products Gaining Bogus Energy Star Certification

Our investigation found that companies can easily submit fictitious energy-efficiency claims in order to obtain Energy Star qualification for a broad range of consumer products. Based on our investigative results, we found that the current process for becoming an Energy Star partner and certifying specific products as Energy Star compliant provides little assurance that products with the Energy Star label are some of the most efficient on the market. Control weaknesses associated with the general lack of upfront validation of manufacturer self reported data allowed all of our bogus firms to become Energy Star partners, and allowed most of our products to be certified as Energy Star compliant.

Using four bogus manufacturing companies and fictitious identities, we obtained Energy Star partnership, facilitating the submission of bogus products for qualification. We conducted tests of the program by submitting qualified product information (QPI) forms and efficiency information via the Online Product Submittal (OPS) tool for 20 bogus products. Of the products submitted, 15 were approved, 2 were denied Energy Star qualification, and 3 products were voluntarily removed by GAO because we had not received an official qualification determination by the time our investigation was completed. Our proactive testing revealed that the Energy Star program is primarily a self-certification program relying on corporate honesty and industry self-policing to protect the integrity of the Energy Star label. Table 1 below summarizes the certification details of bogus products submitted for Energy Star qualification during the course of our investigation.

Table 1: Bogus Products Submitted for Energy Star Qualification

Product type—overseeing agency	Product and certification details
Approved	
Boiler—EPA	<ul style="list-style-type: none"> • Consumers who purchase product would be eligible for federal tax credit and some state rebate programs. • Product qualified by Energy Star within 1 business day of submission. Product was also listed on Energy Star Web site.
Clothes Washer—DOE	<ul style="list-style-type: none"> • Consumers who purchase product would be eligible for some state rebate programs. • Product would be eligible for manufacturer federal tax credits for production of energy-efficient models. • Qualified by Energy Star the same day as submission of QPI form and listed on the Energy Star Web site.
Computer Monitor—EPA	<ul style="list-style-type: none"> • Energy Star requested expedited submission of product information if product was to appear on Qualified Product list before 2009 holiday season. • Product was approved within 30 minutes of submission of QPI form and was listed on Energy Star Web site.
Dehumidifier—EPA	<ul style="list-style-type: none"> • Consumers who purchase product would be eligible for some state rebate programs. • Product energy-efficiency data exceeded the most efficient similar product approved by Energy Star by 20 percent. • Energy Star approved product accepting a follow-up e-mail confirmation from bogus manufacturer confirming efficiency data were correct and listed product on the Energy Star Web site.
Dishwasher—DOE	<ul style="list-style-type: none"> • Consumers who purchase product would be eligible for some state rebate programs. • Product would be eligible for manufacturer federal tax credits for production of energy-efficient models. • Qualified by Energy Star within 1 day of QPI submission and listed on the Energy Star Web site.

Product type—overseeing agency	Product and certification details
External Power Supply Adapter—EPA	<ul style="list-style-type: none"> Product listed on Energy Star Web site and the bogus company received purchase inquiries from private firms stating they located the firm on the Energy Star Web site.
Furnace—EPA	<ul style="list-style-type: none"> Consumers who purchase product would be eligible for federal tax credit and some state rebate programs. Product approved within week of QPI submission after five submission attempts and listed on the Energy Star Web site.
Gas-Powered Alarm Clock—EPA	<ul style="list-style-type: none"> Product description indicated that item is the size of a small generator and is powered by gasoline. Product approved by Energy Star without questioning product description.
Geothermal Heat Pump—EPA	<ul style="list-style-type: none"> Consumers who purchase product would be eligible for federal tax credit and some state rebate programs. QPI form indicated that product was at least 20 percent more efficient than similar qualified products and high energy-efficiency data were not questioned by Energy Star.
Light Commercial HVAC—EPA	<ul style="list-style-type: none"> Product approved within approximately 1 week of submission and listed on the Energy Star Web site.
Metal Roof Panel—EPA	<ul style="list-style-type: none"> Consumers who purchase product would be eligible for federal tax credit. Bogus manufacturer test results submitted were accepted by Energy Star. Product was approved in about a month and listed on the Energy Star Web site.
Printer—EPA	<ul style="list-style-type: none"> Product information submitted via the OPS tool without Energy Star required product literature. Product approved by Energy Star 1 month after submission.
Refrigerator—DOE	<ul style="list-style-type: none"> Consumers who purchase product would be eligible for some state rebate programs. Product would be eligible for manufacturer federal tax credits for production of energy-efficient models. Product submitted, qualified, and listed on Energy Star Web site within 24 hours.
Room Air Cleaner—EPA	<ul style="list-style-type: none"> Consumers who purchase product would be eligible for some state rebate programs. Product was not submitted with required UL safety standard file number. Web site did not include required product disclaimer. Product image on Web site was a space heater with a feather duster and fly strips attached. Product was approved in 11 days and listed on the Energy Star Web site.
Water Cooler—EPA	<ul style="list-style-type: none"> Manufacturer Web site made no reference to product line during Energy Star qualification process. Product was approved by Energy Star within 4 days and listed on the Energy Star Web site.
Rejected	
Compact Fluorescent Light Bulb—DOE	<ul style="list-style-type: none"> Product rejected due to third-party verification process requiring certification by designated laboratory.
Ventilating Fan—EPA	<ul style="list-style-type: none"> Product rejected because it did not appear on trade association registry assuring compliance with Energy Star standards.
No Determination Made	
Battery Charging System—EPA	<ul style="list-style-type: none"> Submitted bogus manufacturing testing results. Did not receive a response from Energy Star during investigation.
Decorative Light String — EPA	<ul style="list-style-type: none"> Submitted fictitious test results from a bogus accredited laboratory. Did not receive a response from Energy Star during investigation.

Product type—overseeing agency**Product and certification details**

End-Use Product — EPA

Product was described as “electric office hammer.”

Did not receive a response from Energy Star during investigation.

Source: GAO.

Energy Star Partnership Agreements

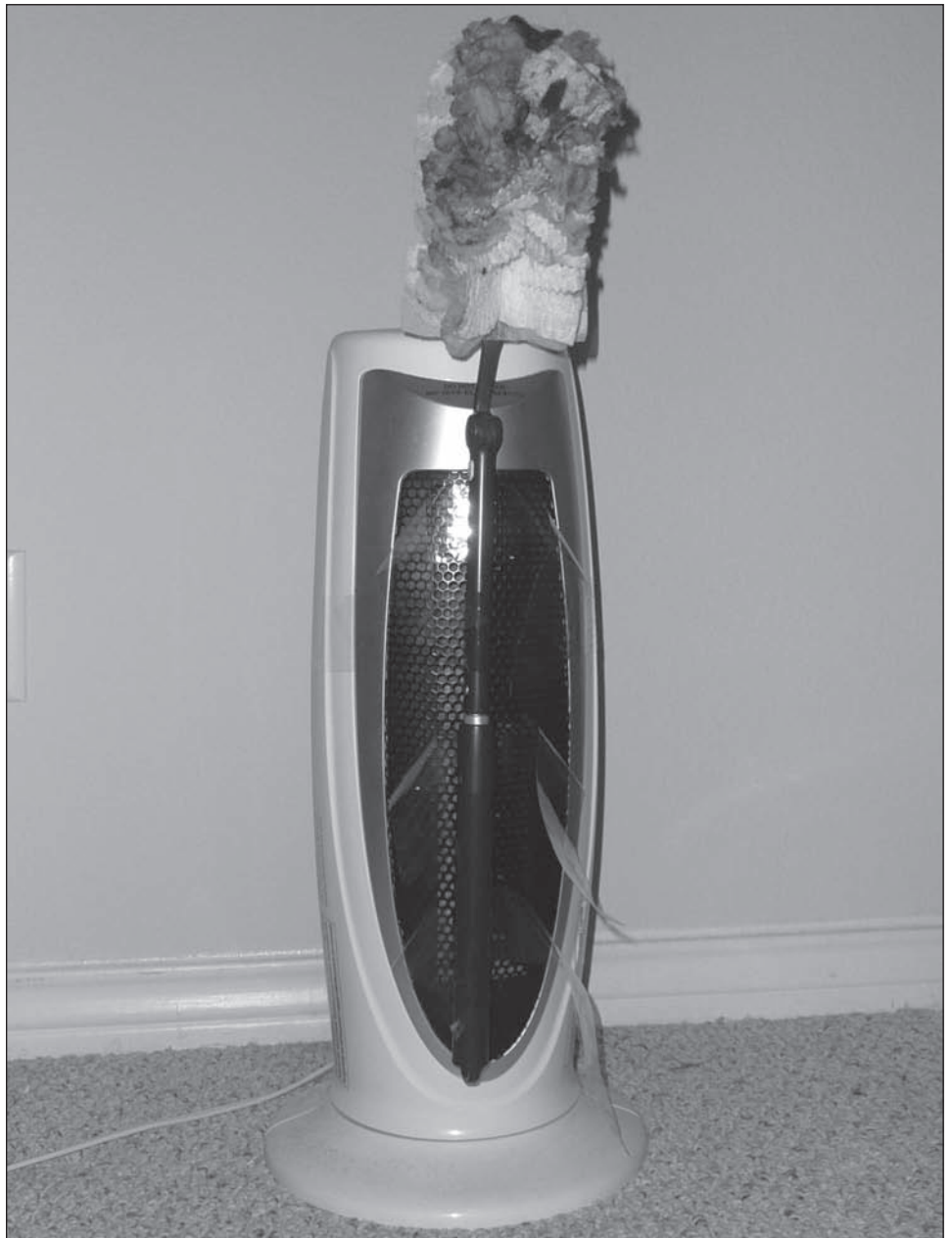
We found that companies can easily become an Energy Star manufacturing partner, and subsequently have unlimited access to Energy Star logos and other promotional resources. Using fictitious information, we were able to attain Energy Star partnership for four bogus manufacturing firms, using only Web sites, commercial mailboxes, and cell phones to serve as a backstop corporate presence. To become an Energy Star partner, we submitted an Energy Star partnership commitment form for each bogus company listing basic contact information, a fictitious point of contact, and pertinent manufacturing categories. All four bogus companies were granted Energy Star partnership by EPA and/or DOE within 2 weeks. The bogus companies were granted access to digital logo templates and other marketing materials, without first having any qualifying products. For two of the companies, Energy Star administrators did not review the Web site prior to granting Energy Star manufacturing partner status. For all cases, Energy Star did not call our bogus firms or visit our firm’s addresses. Further, our bogus manufacturing companies received product and service solicitations stemming from partner listing on the Energy Star Web site. For example, one company received requests for large recurring orders of an external power supply adapter, based on the company being listed on the Energy Star Web site. These solicitations are an example of the value placed on being an Energy Star partner, and emphasize why rigorous screening is necessary.

Energy Star Product Certifications

We successfully obtained Energy Star qualification for 15 bogus products, including a gas-powered alarm clock and a room cleaner represented by a photograph of a feather duster adhered to a space heater on our manufacturer’s Web site. Twenty products were created for proactive testing. Each product submitted met Energy Star guidelines and was selected based on FEMP designation, tax credit eligibility, and the presence of potential preventative controls. The EPA was the overseeing entity for 16 of the products submitted for Energy Star qualification, and the DOE was the overseeing agency for the other 4 products. Of the products submitted to the EPA, 12 were approved, 1 was rejected, and 3 never received a final determination from Energy Star. DOE qualified 3 bogus appliances and rejected a (CFL) bulb due to failure to provide third-

party test results from an accredited independent laboratory. Figure 2 below is a photograph displayed on one of our bogus company's Web site depicting the air room cleaner certified by the energy star program.

Figure 2: Air Room Cleaner Certified by Energy Star



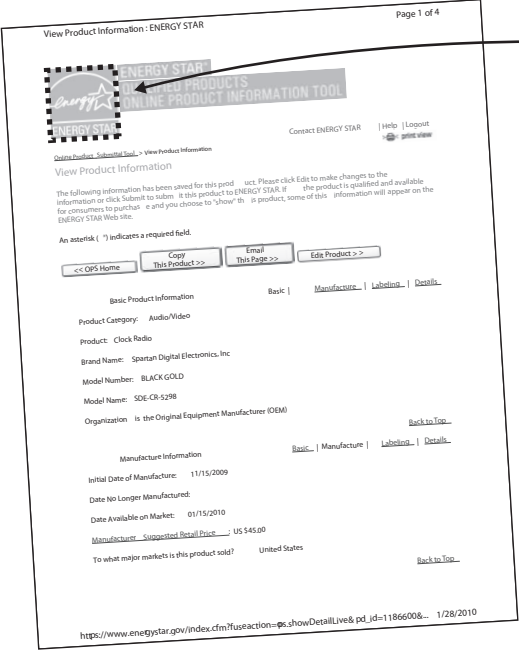
Source: GAO.

We found that the level and depth of administrative oversight varied by product category. Qualification response time, scrutiny of product


information, and mode of submission of qualifying data varied across products. The product qualification response time from Energy Star varied from minutes to months. For example, a computer monitor submitted for qualification was approved within 30 minutes of submission, whereas the bogus battery charging system and end-use product did not receive a response from officials by the conclusion of our investigative work, a period of over 3 months. Several other products, including a refrigerator, dishwasher, and clothes washer received Energy Star certification within 1 day of submission. We also attained qualification for products with exaggerated efficiency claims submitted via the QPI form with little scrutiny. For example, Energy Star officials approved a dehumidifier, geothermal heat pump, and room air cleaner that were each at least 20 percent of more efficient than all other similar products listed on the Energy Star Web site. We received a request for confirmation that the reported Energy Factor (EF) for our dehumidifier was accurate because it seemed excessive. However, after confirming the EF factor via e-mail without providing additional support, the dehumidifier was qualified. In addition, we were not contacted by Energy Star with questions regarding efficiency performance of the geothermal heat pump and the room air cleaner.

Our fictitious products were submitted two ways, via the OPS tool and e-mailed QPI forms to Energy Star administrative contractors. We found that the Energy Star OPS tool expedited the certification of bogus products. EPA officials confirmed that the OPS tool is an automated system designed to reduce administrative costs and a specific review only occurs if outlier data triggers programmed flags in the system. For example, we submitted and qualified a gas-powered alarm clock under the newly formed audio-video product category via the OPS tool. Although the efficiency information met Energy Star criteria, the product description section on the form clearly indicated that the clock radio was gas-powered, the dimensions were similar to those of a small portable generator, and the product model name was "Black-Gold". EPA officials confirmed that because the energy-efficiency information was plausible, it was likely that no one read the product description information. Figure 3 below shows the information we submitted via the OPS tool.

Figure 3: Request for Certification of Gas-Powered Alarm Clock



The screenshot shows the 'View Product Information' page for a gas-powered alarm clock. The product category is Audio/Video, and the product name is 'Spartan Digital Electronics, Inc'. The model number is 'BLACK GOLD' and the model name is 'SDE-CR-5298'. The organization is listed as 'Is the Original Equipment Manufacturer (OEM)'. The initial date of manufacture is 11/15/2009, and the date no longer manufactured is 01/15/2010. The manufacturer's suggested retail price is US \$45.00. The product is sold in the United States.



Product: Clock Radio
Model Number: BLACK GOLD
Spec Version: Audio Video Version 2.0 (CURRENT)
Effective Dates: 11/16/2008 through Present
Product Eligible for Qualification? Yes

Spec Details: Product meets all requirements
Product Type: Clock Radio
Product Marketing Description: Gas-powered clock radio is sleek, durable, easy on your electric bill, and surprisingly quiet.
Height: 18.00 inches
Width: 15.00 inches
Depth: 10.00 inches

Source: Energy Star OPS Tool.

Our investigation determined that when officials required independent third-party testing of products prior to certification, that control sometimes prevented our fictitious products from becoming certified. Specifically, for our ventilation fan, when submitting our product for certification, we indicated that we had tested our product with the specific third-party testing company designated by Energy Star. However, when officials reviewing the application attempted to validate that information with the third party, they found that the Home Ventilating Institute (HVI) had not tested our product. This control resulted in the fan being rejected. A similar control prevented our bogus firm from having its CFL bulb certified. However, our investigation found that Energy Star officials did not always verify testing results with third parties. Specifically, on the product application for our room air cleaner, we stated that we met the specific safety standard for ozone emission set forth by Underwriters Laboratories, an actual independent third-party laboratory designated by Energy Star. However, while Energy Star officials asked if we met this standard, they never verified our certification with the Underwriters

Laboratories or requested the specific testing file as required on the QPI form.

Undercover Tests Expose Weaknesses in Fraud Prevention Controls

We found that for most of the bogus products we submitted, the Energy Star program preventive controls were ineffective, rendering the program vulnerable to fraud and abuse. Our work was not designed to systematically test all controls within the Energy Star program, but approval of 15 fictitious products submitted with bogus energy-efficiency data shows weaknesses in the programs preventative controls. A lack of controls over the access to Energy Star product certification labels exposes the program to unauthorized use. Ineffective and nonexistent controls over validation of claimed energy efficiencies could also allow firms to fraudulently overstate product efficiencies. In addition, the overreliance on manufacturer integrity, industry self-policing, and after-market product testing ignores the potential for products to be put on the market and sold to consumers before fraudulent activity is identified. Despite the lack of up-front controls, there have been a few recent examples of successful identifications of fraudulent or inaccurate energy-efficiency claims by manufacturer's competitors that resulted in action from DOE.

Controls over Access to Energy Star Labels

Preventing unauthorized access to promotional material for the Energy Star program is the first step in maintaining consumer confidence in the label. However, our undercover tests showed that ineffective controls could allow firms to utilize Energy Star logo without ever having a product certified. Specifically, all four bogus manufacturing companies received user account information soon after achieving partnership. Account information is needed to access My Energy Star Account (MESA), a secure section of the Energy Star site containing all of the program labels, including product certification labels, for download and application by approved partners. Program protocols state that account information granting access to MESA should be restricted until a partner has successfully qualified a product designated in the Partnership Agreement package by submitting energy use data. However, we gained access to MESA prior to having any products approved by Energy Star. Additionally, we found that some Energy Star labels were publicly accessible. For example, the Energy Star linking label was found unrestricted on the QPI forms for three appliance products—the clothes washer, dishwasher, and refrigerator models—we submitted. Consequently, label access, a cornerstone in protecting the integrity of the Energy Star label, was found susceptible to fraud and misuse.

Product Certification Controls

The primary purpose of the Energy Star program is to help consumers identify the most energy-efficient products on the shelf. Therefore, controls that verify product energy-efficiency claims are key to the integrity of the overall program. However, we found that controls over specific product certifications were not effective in preventing firms from submitting bogus energy-efficiency data. We found that Energy Star is for the most part an online self-certification program. Only 4 of 20 products we tested required independent verification of energy use and other industry standards by a third party. This control was effective in two cases because Energy Star officials verified our test results with the third party instead of trusting our self-certification. For example, the ventilating fan product category required registry listing by the Home Ventilating Institute (HVI)—the industry-recognized independent laboratory for residential ventilating products sold in North America, and the CFL product category required certification by a designated laboratory accredited under the Department of Commerce National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP). The result was that both the fictitious ventilating fan and CFL bulb were effectively rejected due to follow-up on designated third-party verification requirements. However, for a third product, a room air cleaner, Energy Star officials failed to verify that our product met specific industry standards. We left the section requiring a UL file number blank on the QPI form, and when questioned by Energy Star officials we confirmed by e-mail that we met the standard, which was accepted as sufficient evidence and the product was approved. We did not receive a response from Energy Star by the end of our investigation for the fourth product, a decorative light string, and were unable to make any determination as to the effectiveness of the third-party verification related to this specific product.

Recent Examples of Self-Policing

A recent case of inaccurate energy-efficiency claims being identified by competitors shows that there is potential for noncompliance within the program. DOE recently entered into a Consent Decree with Haier America on January 7, 2010, resolving an investigation into Haier's adherence to DOE's energy-efficiency standards and Energy Star program requirements for four freezer models. Among other obligations outlined in the decree, Haier agreed to conduct on-site unit repairs at no cost to consumers and submit a report to DOE by July 9, 2010, summarizing efforts made toward fulfilling its obligations. The Haier Decree was the first entered into by DOE to enforce federal efficiency standards. LG Electronics and DOE entered into an agreement in November 2008 to resolve matters arising from DOE concerns regarding testing procedures for measuring energy consumption levels for purposes of LG's certification with the Energy Star

program. Subsequently, DOE ordered LG to remove the “Energy Star” energy-efficiency label from some of its refrigerators by January 20, 2010. DOE is currently involved in litigation in federal district court with LG Electronics over a dispute as to the methods that may be employed in testing for energy efficiency of some of its LG refrigerators.

Corrective Action Briefing

We briefed officials from DOE and EPA on the results of our investigation and control weaknesses identified based on our testing. Officials acknowledged that currently the Energy Star program relies on self-policing, manufacturer integrity, and after-market testing for high volume products in cases where there is not a third-party testing requirement for certification. Our ability to obtain product certifications with unverified test results illustrates the need for, at a minimum, some level of third-party testing for the program to be one of certification versus self-certification. Officials stated that based on a new Memorandum of Understanding between DOE and EPA, the program will be shifting toward a more rigorous up-front screening process. Specifically, according to EPA’s Enhanced Program Plan for Energy Star Products issued in December 2009, Energy Star is in the process of identifying and certifying testing labs and industry trade organizations that will begin to independently test products in most product categories prior to certification. It is important to note that the Energy Star program has been in place certifying products such as computer monitors since 1992. However, 18 years later we were able to obtain product certification for a computer monitor since third-party verification of manufacturer efficiency data had not been implemented by Energy Star. We support DOE and EPA plans to enhance testing prior to certification.

Officials also stated during our briefings that the program has a variety of other controls in place to prevent and detect fraudulent energy-efficiency claims and label misuse after a product is put onto retail shelves and Web sites. Specifically, officials cited recent cases of industry self-policing, annual after-market product verification testing, and semiannual product shelf inventory of label guideline compliance as substantive controls. Because all of these controls occur after a product has been certified by Energy Star and placed on the market, we were not able to test their effectiveness and did not validate agency representations. However, in our briefing, we reiterated the importance of preventing fraud before a product is on the shelf and before consumers are placed at risk. In

addition, recent IG reports have found that there is not a robust process in place at either DOE²¹ or EPA²² to proactively test Energy Star products on the market. In our briefings, EPA officials acknowledged that after-market product verification testing was not conducted for all product categories, but rather was limited to “high-volume” products. EPA officials stated that limited resources and other EPA priorities necessitated a select review of products for compliance. Furthermore, while EPA officials discussed their Web site follow-up as part of their efforts to ensure Energy Star labels are used appropriately, the officials agreed that in at least one case—the room air cleaner model depicted by a feather duster attached to a space heater on the manufacturer’s Web site—the Web site review was either ineffective or not performed.

Finally, during our briefings, EPA and DOE officials stated that they felt there was some deterrent value to their citation of United States Code Title 18, Section 1001—False Statement Act²³—listed on Energy Star QPI forms and the OPS tools. Officials stated that the potential legal costs associated with violations of the Act would deter manufacturers from submitting false energy-efficiency claims. However, in our corrective action briefing we noted the exact text on the certification documents during our investigation read “I understand that intentionally submitting false information to the U.S. government is a criminal violation of the False Statements Act, Title 19 U.S.C. section 1001.” We pointed out that the citation to Title 19, as noted, is inaccurate, is not found on Partnership Agreement forms, and is only found on some QPI forms. We suggested that the citation be updated to reflect the appropriate legal authority and consistently applied to all partnership documentation. Officials acknowledged the above issues associated with use of the incorrect citation, and agreed that documentation be updated to reflect the proper legal citation.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the date of this letter. We will then send copies of this report to interested congressional committees, the Administrator of EPA, the Secretary of

²¹DOE OIG, Report No. DOE/IG-0827 (Oct. 14, 2009).

²²EPA OIG, Report No. 10-P-0040 (Nov. 30, 2009).

²³18 U.S.C. § 1001.

DOE, the Chairman of FTC, and other interested parties. The report will also be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact me at (202) 512-6722 or kutzg@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in black ink that reads "Gregory D. Kutz". The signature is written in a cursive style with a large, stylized initial "G".

Gregory D. Kutz
Managing Director
Forensic Audits and Special Investigations

Appendix I: Scope and Methodology

To perform the undercover test of attaining Energy Star partnership and earning Energy Star qualification for fictitious products, we consulted publicly available audit reports by federal agencies and consumer advocacy publications to identify program vulnerabilities to inform our methodology. Using publicly available information, we designed proactive tests to assess the partnership and product certification controls in place to prevent fraud and ensure the integrity of the Energy Star label. The Energy Policy Act of 2005 mandates that federal buyers purchase products that are Energy Star qualified or otherwise designated by the Federal Energy Management Program (FEMP) as energy efficient. We used FEMP guidelines and the General Services Administration (GSA) schedule of federally designated products to select 20 Energy Star products for testing. Our investigation was designed to test controls over the process for becoming an Energy Star partner to certify products and acquire access to Energy Star product certification labels. Our work was not designed to test other potential controls in place for monitoring use of the Energy Star label on retail products or verifying energy efficiency through shelf tests of products selected from retail locations.

We used bogus front companies, using rented domestic personal mailboxes for business listings, and fictitious identities when submitting documentation to Energy Star, meaning that we conducted our work with fictitious names and contact information that could not be traced back to GAO. We developed Web sites for each of the four bogus manufacturing firms to establish an internet presence. Undercover cell phones used as company telephone numbers and out-of-service numbers used as fax numbers were listed as contact information on each of the four bogus manufacturer Web sites and Energy Star program documentation.

We submitted Energy Star Partnership Agreements for each of the four bogus manufacturing firms and fictitious product energy-efficiency specifications via e-mail to the Energy Star program to obtain partnership and certify products. After attaining Energy Star partnership status, we submitted a total of 20 products under selected categories, including appliances, home envelope products, computers and electronics, heating and cooling products, and lighting. The product specifications varied in sophistication and energy efficiency to test the level of scrutiny at each stage of the Energy Star product certification process. For example, at the beginning of testing, products mirroring efficiency standards of listed Energy Star products were submitted, whereas in the later stages of the proactive testing phase of this investigation, we submitted an implausible product for Energy Star certification. We briefed program officials with the Department of Energy, Environmental Protection Agency (EPA) and

EPA OIG as well as attorneys with the Consumer Protection division of the Federal Trade Commission (FTC) on the results of our work, and incorporated their comments concerning controls in place to protect the Energy Star label from fraud and abuse.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Gregory D. Kutz, Managing Director, 202-512-6722, kutzg@gao.gov

Acknowledgments

In addition to the individual named above, the following individuals made major contributions to this report: Julia DiPonio, Robert Fletcher, John Ledford, Barbara Lewis, Vicki McClure, Jonathan Meyer, James Murphy, Andrew O'Connell, Timothy Persons, April Van Cleef, Abby Volk, and John Wilbur.

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