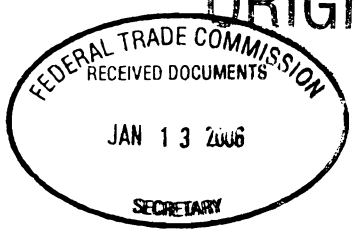
BEFORE THE
UNITED STATES
FEDERAL TRADE COMMISSION
WASHINGTON, D. C.

ORIGINAL



Energy Labeling,	)
Project No. R511994	)
Comment	)

COMMENTS OF THE AMERICAN GAS ASSOCIATION

The American Gas Association (AGA) represents 191 local energy utility companies that deliver natural gas to more than 53 million homes, businesses and industries throughout the United States. Natural gas meets one-fourth of the United States' energy needs and is the fastest growing major energy source. AGA collects, analyzes, and disseminates information and data on the natural gas industry, promotes the safe and efficient delivery and use of energy, and serves as a national voice for the gas utility industry. Our member companies are affected by the decisions consumers make when they purchase appliances. The Federal Trade Commission's ("the Commission") Appliance Labeling Rule influences those consumer choices.

AGA respectfully submits these comments in response to the Commission's *Advance Notice of Proposed Rulemaking; Request for Comment* as published in the Federal Register on November 2, 2005.

Specific Comments

AGA supports the use of additional information on EnergyGuide labels to assist consumers in making purchasing decisions. Congress intended for the labeling program to provide better information to consumers. AGA supports the Commission's goal of providing consumers with information useful for purchase decisions in an effective, efficient, and clearly understandable way. However, some of the EnergyGuide label approaches and data used today provide information that is incomplete and misleading to consumers on energy efficiency.

Unless and until the Commission requires information on both energy consumption over the full fuel cycle (i.e., total energy efficiency) and externalities such as emissions of criteria air pollutants and carbon dioxide over the full fuel cycle along in addition to information on estimated consumer energy cost, consumers cannot make truly informed choices. As a result, the Commission's objective of assessing the effectiveness of the labeling program as required under Section 137 of the Energy Policy Act of 2005 cannot be completed with meaningful results. EnergyGuide labels are of little practical value if consumers recognize or even use the labels to make purchase decisions when the information provided is incomplete and misleading.

The Commission has requested responses to specific questions on EnergyGuide labels. AGA will comment on the following questions and issue.

> *Question A3. How effective is the EnergyGuide label in providing consumers with useful, accurate information about energy consumption or energy efficiency of covered products?...Can appliance energy labels be modified to increase the net benefits of consumer energy labeling programs in the United States?*

While energy cost information provided on the EnergyGuide labels is very useful to consumers both for estimating costs and comparing products, the site-based energy consumption estimates currently provided on the labels are misleading and provide, at best, redundant information. Site-based energy consumption estimates may be inconsistent with energy consumption over the full fuel cycle, as will be shown in the discussion below. It is unclear that site-based energy consumption estimates, in of themselves, provides any useful information to consumers. Adding to this the potential for inconsistency with full fuel cycle consumption, the use of site-based energy consumption estimates on the EnergyGuide labels provides misleading information and is inappropriate.

Consumers have independent utility functions for minimizing cost and minimizing energy consumption. Reasonable information on both energy cost and energy consumption needs to be included on the EnergyGuide label. However, site energy consumption directly correlates with consumer energy cost and is, therefore, redundant with energy cost. At best, it is unclear what additional useful information site energy consumption estimates provide.

More importantly, site energy consumption estimates may not reasonably represent energy consumption to those consumers that have specific utility for energy efficiency. These socially conscious consumers need energy consumption estimates that cover the full fuel cycle. Site energy consumption, particularly for electric appliances, does not account for the full fuel cycle consumption and may significantly underestimate energy consumption due to a consumer's purchase decision. Furthermore, comparison of appliance by these consumers across end use fuels would be distorted by comparison based on site energy consumption and misleading.

Table 1[1] illustrates potential differences between site energy consumption estimates and full fuel cycle (labeled "real energy use") estimates. Since electric appliances on a national basis consume roughly three times their site energy consumption when the full fuel cycle is considered, energy consumption of electric appliances and equipment (HVAC technologies in this example) is grossly under estimated when only site energy consumption is considered. In Table 1, site energy consumption for minimum efficiency heat pumps is approximately one-half that of minimum efficiency gas furnaces (37.1 million Btus per year - MMBtu/year - versus 75.4 MMBtu/year). However, full fuel cycle energy consumption from the same heat pump is greater for the same heat pump compared to the gas furnace when compared on a fuel cycle basis (100.2 MMBtu/year versus 95.9 MMBtu/year). Consumers

[1] From, Public Policy and Real Energy Efficiency: Assessing the Effects of Federal Policies on Energy Consumption and The Environment, American Gas Foundation, October 2005.

would be misled that the heat pump is more energy efficient based on site energy efficiency estimates when, in fact, the gas furnace is more efficient on a full fuel cycle basis.

Figure 1 provides a similar example for residential water heaters. Site efficiency rating based on Energy Factor (EF), the energy descriptor required under the National Appliance Energy Conservation Act (NAECA) for minimum efficiency standards and ratings of residential water heaters and currently used in on the EnergyGuide labels, are inconsistent with full fuel cycle efficiency. In this example, an electric water heaters with an EF of 0.92 (92% site efficient) consumes an estimated 60.3 MMBtu/year of energy over the full fuel cycle on a national average basis while the gas water heater with an EF of 0.59 (59% site efficient) consumes and estimated 28.1 MMBtu/year). The difference in operating energy costs shown is a function of site consumption and associated with full fuel cycle efficiency. In this example, consumers with high utility for conserving energy would receive misleading information that the electric water heater is more efficient and inappropriately weight this higher efficiency estimate against the electric water heater's higher operating cost.

Calculation of full fuel cycle efficiency is not unmanageable since the Energy Information Administration (EIA), U. S. Department of Energy and other organizations publish information on national average fuel cycle losses. Use of these national average numbers is no more unreasonable than use of national average energy prices as currently done by the Commission. Figure 2 shows energy flows as summaries by EIA, which include relevant sources of inefficiency in end use do to generation losses, transmission losses, and other sources for both electricity and natural gas end use.[2]

Use of full fuel cycle efficiency in EnergyGuide labels would be a more fuel neutral policy by the Commission since the current use of site energy consumption estimates unfairly favors electric appliances and equipment by ignoring fuel cycle losses and, therefore, underestimating energy consumption. The current use of site energy consumption is a distortion of public information, which may mislead public perception about the true energy efficiency of products. Accurate representation of energy consumption over the full fuel cycle would not distort markets. Consumers using sensitive to cost estimates would still have the ability to compare across fuel types on a reasonable basis of operating cost.

In addition to better estimating societal energy consumption, full fuel cycle atmospheric emissions from the consumption of primary fuel would increase the net benefits of the EnergyGuide label program. Consumer also have utility for reducing environmental emissions associated with criteria air pollutants controlled by National Ambient Air Quality Standards (e.g., nitrogen oxides, carbon monoxide, hydrocarbons, sulfur dioxide, lead, and particulate matter).

More recently, consumers are interested in reducing atmospheric emissions of unregulated atmospheric emissions for greenhouse gases, particularly carbon dioxide. Table 1 illustrates how site based emissions numbers would not capture total emissions of carbon dioxide. Electric appliance and equipment produce essentially no carbon dioxide at the site of use, but the mix of U. S. electricity generation does. Complete information to consumers needs to include emissions over the full fuel cycle for the air emissions of concern. These externalities of energy use should be documented in the EnergyGuide labels for the use of

[2] From 2004 Annual Energy Review, Energy Information Administration, U. S. Department of Energy.

consumers. It should be noted that motives for energy efficiency (e.g., managing energy resources and scarcity), in many cases, may be unique from motives for reducing air emissions (e.g., public health and climate change). Thus, information on EnergyGuide labels for energy efficiency and air emissions would not redundant.

The Energy Policy and Conservation Act (EPCA), as amended through promulgation of the Energy Policy Act of 2005, expressly allows disclosure of additional information about energy consumption on EnergyGuide labels if such information would assist consumers in making purchase decisions.

Question A4: What is the effectiveness of the current EnergyGuide label in providing energy efficiency?

While a number of studies have attempted to address this question, AGA finds that the current EnergyGuide label, in providing misleading information through the use of site-based energy consumption, cannot be properly addressed. The question presumes that EnergyGuide label provides correct information on energy efficiency and that the issue at hand is whether the label is effective in communicating this information to consumers. As discussed above, AGA does not find that this is the case, and as a result, the presumption of the question is incorrect.

Question A7: What changes, if any, should be made to the current appearance of the EnergyGuide label (content, size, format, color, graphical presentation, etc.)?

Based on the discussion above and the need to replace site based energy efficiency estimates with estimates reflecting efficiency over the full fuel cycle, AGA recommends that the Commission consider the revisions in the EnergyGuide label shown in Figure 3. This example for a residential electric water heater replaces the site-based energy consumption estimates with full fuel cycle consumption estimates and includes full fuel cycle atmospheric emissions for two criteria air pollutants (nitrogen oxides and sulfur dioxide) and carbon dioxide). Other air pollutants could be considered to fully communicate the externalities of the associated consumption of energy.

By replacing the site-based consumption estimates with source energy efficiency, the redundancy of the site-based estimates with operating cost is eliminated, and the inconsistency of site efficiency numbers reflected in the EF rating with full fuel cycle efficiency is avoided.

Most other features of EnergyGuide label are maintained. AGA finds that current format of the label in not generally problematic or difficult to understand. The most confusing aspect of the current label is the site energy consumption estimates, which have no intuitive value, per se. Consumers do not widely account for household activity in terms of kilowatt-hours.

Question A10: Would a categorical label design significantly improve energy efficiency?

The question presumes that the label, or any label, can improve "energy efficiency," which is a disputable presumption. Also presumed is that the perceived lack of effectiveness of the current label is due to the format, not the information content. AGA disputes this in the discussion above. Misleading and redundant information is not helpful to consumers. A move to a categorical label design based on the same misleading and redundant information would exacerbate these problems.

Question A12: Would a categorical label require the FTC to make judgments about the relative energy efficiency of products in the market?

Any categorical scheme, including a star system as addressed in Question A13, would require the Commission to make ad hoc decisions about the limits of the categories on what is otherwise a continuum of relative efficiencies. While such an approach may be easily implemented, it may be unfair a create biases in order to justify a higher categorical position. In addition, it is questionable whether consumers would keep track of whether an appliance was a four or five star appliance in process of shopping and, perhaps, ignore real efficiency and operating cost differences within a specific category. A result of the latter outcome might be a net increase in energy consumption (e.g., picking the lowest first cost, and possibly the highest energy consumption within the category). Of course, if the categories are based on misleading criteria such as site-based energy efficiency, the categorical system will further distort information on the true energy efficiency of appliances.

Question B1: Are the current energy descriptors understandable to consumers?

As discussed above, AGA views information provided on site-based on energy consumption as redundant with estimates of energy cost. Energy cost remains a major concern of consumers, but descriptors involving site-based energy consumption provide essential no additional information. Consumers who are motivated to save energy, possibly in exchange for increased operating cost, have distinct utility for energy conservation and deserve information that better approximates energy savings over the full fuel cycle. Site-based energy consumption estimates generally fail to accomplish this and may mislead consumers in purchase decisions.

Question B2: Should the FTC consider requiring estimated annual operating costs as the primary descriptor on EnergyGuide labels in lieu of energy consumption or energy efficiency information?

Operating cost is easily understandable to consumers and should remain a key descriptor on the EnergyGuide label. However, the Energy Policy and Conservation Act (EPCA), as amended, has four goals: (1) maximize domestic production of energy; (2) minimize the impact of disruptions in energy supplies; (3) encourage the domestic production of crude oil; and (4) reduce domestic energy consumption through specific voluntary and mandatory energy conservation programs. To achieve this fourth goal, EPCA included provisions for improving the efficiency of major appliances. Within these provisions lie the flexibility and discretion for the Commission to provide additional information on EnergyGuide labels. Nevertheless, energy efficiency, not conservation of operating costs, represents the

principal driver in the statutory authority for the EnergyGuide label program. Energy descriptors should remain an equal focus of the label, but as AGA argues above, the use of full fuel cycle efficiency should replace current site-based estimates used on the EnergyGuide label.

Question B3: Should the Commission consider different energy descriptors for existing products?

As argued above, the Commission should modify the current EnergyGuide label format to include the following: (1) estimated annual energy operating cost, (2) estimated full fuel cycle efficiency ("source efficiency" shown in Figure 3 as a percentage), (3) estimated full fuel cycle consumption (shown in Figure 3 as full fuel cycle consumption in MMBtu/year and kWh/y) and comparability within the range of similar product models, and (4) air emissions for criteria pollutions and carbon dioxide, the primary greenhouse gas (shown in Figure 3 as annual emissions in pounds of nitrogen oxides, sulfur dioxide, and carbon dioxide over the full fuel cycle). These descriptors serve consumer interests in estimating costs of ownership, separate interests in energy efficiency addressing concerns over resource scarcity and security, and concerns over externalities of energy consumption, specifically air pollution.

It should be pointed out change to full fuel cycle energy descriptors in not inconsistent with use of energy descriptors defined in EPCA and NAECA. Full fuel cycle energy descriptors would use these site-based descriptors to calculate energy consumption in conjunction with losses over the full fuel cycle documented by EIA and other sources. Furthermore, emissions associated with these source energy factors are available from the U. S. Environmental Protection Agenda (EPA) and are directly associated with energy production and transport to the point of end use. AGA, for its part, has documented fuel cycle losses and related air emissions based on available government sources.[3] The technical challenges of doing such calculations on a national average basis are not difficult and can be readily accomplished.

The Energy Policy and Conservation Act (EPCA), as amended, expressly allows disclosure of additional information about energy consumption on EnergyGuide labels if such information would assist consumers in making purchasing decisions. Therefore, if disclosure of full fuel cycle data is helpful to consumers, it is authorized by statute. It is the position of AGA that EnergyGuide labels disclosing full fuel cycle energy efficiency would assist consumers in making purchasing decisions. Again, EPCA focused on four goals: (1) maximize domestic production of energy; (2) minimize the impact of disruptions in energy supplies; (3) encourage the domestic production of crude oil; and (4) reduce domestic energy consumption through specific voluntary and mandatory energy conservation programs.

To achieve this fourth goal, EPCA included provisions for improving the efficiency of major appliances. Within these provisions lie the flexibility and discretion for the Commission to provide additional information on EnergyGuide labels. The statute is unambiguous -- there is sufficient flexibility and discretion within the labeling provisions for the Commission to use

[3] From Source Energy and Emission Factors for Residential Energy Consumption, American Gas Association, August 2000.

full fuel cycle information on EnergyGuides. The Commission should disclose full fuel cycle information on EnergyGuides in order to allow consumers to translate a concern for the environment and a finite supply of fossil fuels into positive action when making purchasing decisions. In addition to promoting sound public policy goals, using full fuel cycle data provides Congress, the Commission, DOE and the public with a more accurate measurement of (1) energy consumption, (2) associated emissions, and (3) conservation potential.

Conclusion

AGA strongly supports the use of additional information on the EnergyGuide labels when that information will assist consumers in making purchasing decisions that are in their economic self-interest and promotes the larger national interest. However, the Commission is currently limited in its EnergyGuide labeling program to use energy descriptors that provide narrow and misleading views of energy efficiency. In some cases, these descriptors may distort how consumers view the overall cost and environmental impacts of operating appliances.

Use of categorical descriptors and ranges may exacerbate flaws of using site-based descriptors. Furthermore, the Commission faces difficulties in assessing the effectiveness of the EnergyGuide label program and options for modifying the labels when the current labels already present misleading and redundant information and fails to address consumer concerns about true energy efficiency and externalities of energy consumption.

Common sense dictates that an effective labeling program should result in similar ratings when comparable appliances have the same energy consumption, emissions and operating costs. The operating cost is one descriptor that is easily understood. AGA research has indicated that consumers have no problem recognizing which appliances are less expensive to operate. However, the Commission should not further consider eliminating descriptors for energy efficiency in favor of displaying operation cost only.

Adding a full fuel cycle based descriptor as well as air pollutant emissions information for the full fuel cycle to the EnergyGuide labels will help to achieve the policy goals of EPCA and amended through the Energy Policy Act of 2005 and would work to conserve finite supplies of fossil fuels and reduce emissions.

Respectfully submitted,
THE AMERICAN GAS ASSOCIATION
January 10, 2006

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Table 1: Site-Based and Full Fuel Cycle Energy Consumption for HVAC Applications

HVAC System	Energy Savings	Site Energy Use (MMBtu/yr)	Real Energy Use (MMBtu/yr)	Greenhouse Gas Emissions (lbs/yr)	
				Site	Source
Electric furnace	Baseline (IECC2000)[1,2]	62.3	167.2	0	24,455
	30% (HVAC Only)[5]	43.6	117.6	0	19,383
	50% (HVAC Only)[6]	31.2	83.9	0	15,153
Heat pump	Baseline (IECC2000)[1,3]	37.1	100.2	0	14,585
	30% (HVAC Only)[5]	26.0	70.1	0	11,260
	50% (HVAC Only)[6]	18.5	49.8	0	8,381
Gas furnace	Baseline (IECC2000)[1,4]	75.4	95.9	10,542[7]	11,649
	30% (HVAC Only)[5]	52.3	67.0	8,230[7]	9,094
	50% (HVAC Only)[6]	37.2	47.6	6,423[7]	7,097

Notes to Table 2.2:

1. Economy class residence where materials and workmanship are sufficient to satisfy applicable building codes.

2. Electric resistance space heating (100% Eff.), electric split-system air conditioning (10SEER), and electric resistance water heating (0.92EF).

3. Electric air-source heat pump space heating (6.8HSPF) and cooling (10SEER), and electric resistance water heating (0.92EF).

4. Gas furnace space heating (78AFUE), electric split system air conditioning (10SEER), and gas water heating (0.59EF).

5. Baseline building modified to achieve a 30% annual heating and cooling energy cost reduction through a combination of envelope upgrades (10% min.) and space heating and cooling upgrades.

6. Baseline building modified to achieve a 50% annual heating and cooling energy cost reduction through a combination of envelope upgrades (17% min.) and space heating and cooling upgrades.

7. Based on 90.5% of the energy used to produce natural gas reaching the home (AGA 2000).

Figure 1: Residential Energy Efficiency Ratings
Water Heaters

DOE site-specific energy ratings are misleading.
While DOE rates an electric appliance with a more efficient energy rating than a similar gas appliance, in reality that electric appliance consumes more source energy, pollutes more, and costs the consumer more to operate.

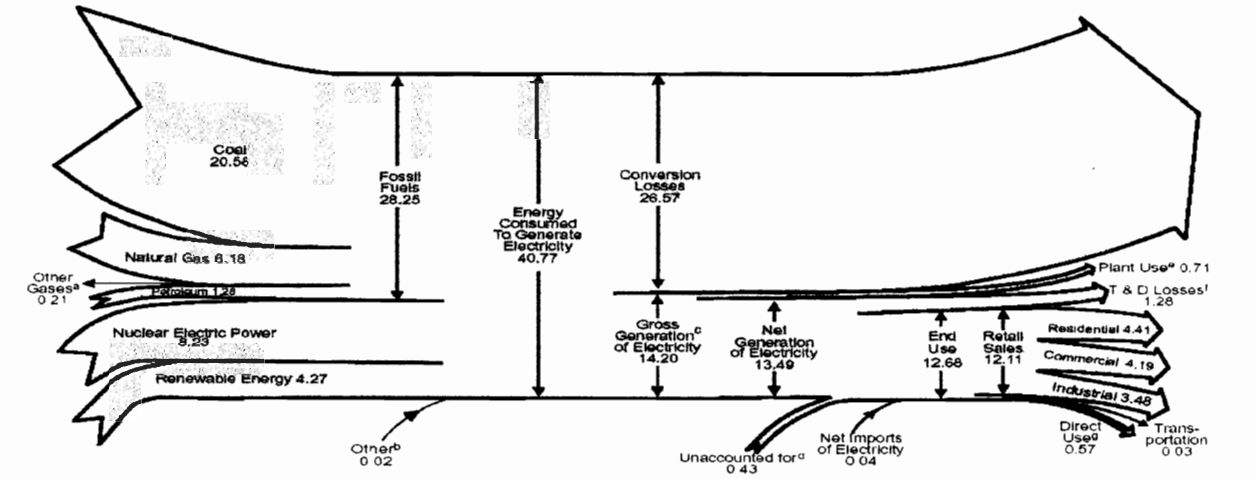
Environmental Impact: 1.1 million tons of CO_2
A 10% market shift in shipments/sales would reduce CO_2 emissions by 1.1 million tons per year.

	Electric Heat Pump	Electric Resistance	Natural Gas
			
DOE NAECA Efficiency Rating[1]:	**1.7 EF**	**.92 EF**	**.59 EF**
Source Energy Consumption (MMBtu/yr):	**28.2**	**60.3**	**28.1**
Energy Cost[2]/yr :	**$201**	**$432**	**$277**
CO_2 Emissions (lbs/unit/yr)[3]:	**4,855**	**10,382**	**3,329**
SO_2 Emissions (lbs/unit/yr):	**27.3**	**59**	**0**
NO_x Emissions (lbs/unit/yr):	**17.1**	**37**	**3.5**
2004 Shipments (Sales):	**2,000[5]**	**4,573,000[4]**	**5,054,000[4]**

[1]Energy factors based on a 40-gallon storage water heater
[2]Energy Cost is based on 2005 DOE representative average unit costs for energy where electric rate is 9.06 cent/kWh; gas rate is 10.92 $/MMBtu
[3]Emission estimates are based on DOE's 1993 Technical Support Document: Energy Efficiency Standards for Consumer Products
[4]GAMA – An Association of Appliance and Equipment Manufacturers, Statistical Highlights, Ten Year Summary, 1995-2004
[5]Estimated
EF=Energy Factor

Figure 2: Energy Flows, 2004 (Annual Energy Review, Energy Information Administration, U. S. Department of Energy)

Electricity (Quadrillion



Natural Gas (Quadrillion

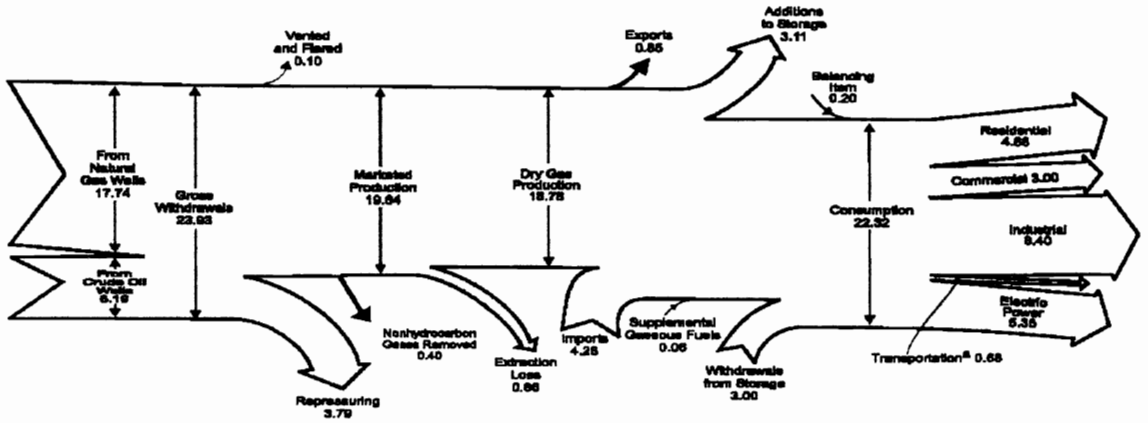


Figure 3. EnergyGuide Label Revisions: Electric Residential Water Heaters