# ENERGY STAR® Program Requirements for Boilers

## Partner Commitments

### Commitment

The following are the terms of the ENERGY STAR Partnership Agreement as it pertains to the manufacturing of ENERGY STAR qualified boilers. The ENERGY STAR Partner must adhere to the following program requirements:

X comply with current ENERGY STAR Eligibility Criteria, defining the performance criteria that must be met for use of the ENERGY STAR certification mark on boilers and specifying the testing criteria for boilers. EPA may, at its discretion, conduct tests on products that are referred to as ENERGY STAR qualified. These products may be obtained on the open market, or voluntarily supplied by Partner at EPA's request;

X comply with current ENERGY STAR Logo Use Guidelines, describing how the ENERGY STAR labels and name may be used. Partner is responsible for adhering to these guidelines and for ensuring that its authorized representatives, such as advertising agencies, dealers, and distributors, are also in compliance;

X qualify at least one ENERGY STAR labeled boiler or model within one year of activating the boilers and combination space-heating and water heating portion of the agreement. When Partner qualifies the product, it must meet the specification (e.g., Tier 1 or 2) in effect at that time;

X provide clear and consistent labeling of ENERGY STAR qualified boilers. The ENERGY STAR label must be clearly displayed in product literature (i.e., user manuals, spec sheets, etc.) and on the manufacturer's Internet site where information about ENERGY STAR qualified models is displayed. It is also recommended that the label appear on the top/front of the product and on the product packaging;

X offer and encourage training to distributors and/or contractors on the following issues: system venting, condensate removal, code compliance, and proper use of the Manual J calculation, or other equivalent calculation, in order to encourage proper sizing of equipment;

X provide to EPA, on an annual basis, an updated list of ENERGY STAR qualifying boiler models. Once the Partner submits its first list of ENERGY STAR labeled boiler models, the Partner will be listed as an ENERGY STAR Partner. Partner must provide annual updates in order to remain on the list of participating product manufacturers;

X provide to EPA, on an annual basis, unit shipment data or other market indicators to assist in determining the market penetration of ENERGY STAR. Specifically, Partner must submit the total number of ENERGY STAR qualified boilers shipped (in units by model) or an equivalent measurement as agreed to in advance by EPA and Partner. Partner is also encouraged to provide ENERGY STAR qualified unit shipment data segmented by meaningful product characteristics (e.g., capacity, size, speed, or other as relevant), total unit shipments for each model in its product line, and percent of total unit shipments that qualify as ENERGY STAR. The data for each calendar year should be submitted to EPA, preferably in electronic format, no later than the following March and may be provided directly from the Partner or through a third party. The data will be used by EPA only for program evaluation purposes and will be closely controlled.

If requested under the Freedom of Information Act (FOIA), EPA will argue that the data is exempt. Any information used will be masked by EPA so as to protect the confidentiality of the Partner;

X notify EPA of a change in the designated responsible party or contacts for boilers within 30 days.

## Performance for Special Distinction

In order to receive additional recognition and/or support from EPA for its efforts within the Partnership, the ENERGY STAR Partner may consider the following voluntary measures and should keep EPA informed on the progress of these efforts:

X consider energy efficiency improvements in company facilities and pursue the ENERGY STAR label for buildings;

X purchase ENERGY STAR labeled products. Revise the company purchasing or procurement specifications to include ENERGY STAR. Provide procurement officials' contact information to EPA for periodic updates and coordination. Circulate general ENERGY STAR labeled product information to employees for use when purchasing products for their homes;

X ensure the power management feature is enabled on all ENERGY STAR qualified monitors in use in company facilities, particularly upon installation and after service is performed;

X provide general information about the ENERGY STAR program to employees whose jobs are relevant to the development, marketing, sales, and service of current ENERGY STAR labeled product models;

X feature the ENERGY STAR label(s) on Partner Web site and in other promotional materials. If information concerning ENERGY STAR is provided on the Partner Web site as specified by the ENERGY STAR Web Linking Policy (this document can be found in the Partner Resources section on the ENERGY STAR Web site at www.energystar.gov). EPA may provide links where appropriate to the Partner Web site;

X provide a simple plan to EPA outlining specific measures Partner plans to undertake beyond the program requirements listed above. By doing so, EPA may be able to coordinate, communicate, and/or promote Partner's activities, provide an EPA representative, or include news about the event in the ENERGY STAR newsletter, on the ENERGY STAR Web pages, etc. The plan may be as simple as providing a list of planned activities or planned milestones that Partner would like EPA to be aware of. For example, activities may include: (1) increase the availability of ENERGY STAR labeled products by converting the entire product line within two years to meet ENERGY STAR guidelines; (2) demonstrate the economic and environmental benefits of energy efficiency through special in-store displays twice a year; (3) provide information to users (via the Web site and user's manual) about energy-saving features and operating characteristics of ENERGY STAR qualified products, and (4) build awareness of the ENERGY STAR Partnership and brand identity by collaborating with EPA on one print advertorial and one live press event;

X provide quarterly, written updates to EPA as to the efforts undertaken by Partner to increase availability of ENERGY STAR qualified products, and to promote awareness of ENERGY STAR and its message.

# ENERGY STAR® Program Requirements for Boilers

## Eligibility Criteria

Below is the product specification (Version 2.0) for ENERGY STAR qualified boilers. A product must meet all of the identified criteria if it is to be labeled as ENERGY STAR by its manufacturer.

1) Definitions: Below is a brief description of a boiler and other terms as relevant to ENERGY STAR.

   A. Residential Boiler: A self contained fuel burning appliance of less than 300,000 Btu per hour energy input, for supplying low pressure steam or hot water for space heating applications. A heating unit that meets this definition and also provides hot water for domestic or other use is considered a boiler for purposes of this agreement (see Combination Space-Heating and Water Heating Appliance below).

   B. Combination Space-Heating and Water Heating Appliance: Appliance that provides both space conditioning (boiler) and hot water heating with one appliance or energy source. The combination appliance circulates hot water from the water heater through a heat exchanger in the air handler. A blower will move the heated air through a standard duct system. In the summer, an air conditioner is connected to the exchanger and the system functions similarly, with cool air being pushed through the ductwork.

   C. AFUE: The Annual Fuel Utilization Efficiency ("AFUE") measures the amount of fuel converted to space heat in proportion to the amount of fuel entering the boiler. This is commonly expressed as a percentage. For purposes of this agreement, the efficiency of a boiler shall be measured using AFUE. Test procedures have been developed to test AFUE by the Department of Energy (DOE). These procedures are specified in 10 CFR part 430.

   D. CAafue: The Combined Appliance Annual Fuel Utilization Efficiency (“CAafue”) is the effective efficiency of the combined appliance in performing the function of space heating. When the primary heating source of the combined appliance is a residential boiler, the CAafue is the same as the AFUE of the boiler as determined by DOE test procedures specified in 10 CFR 430.

   E. Manual J Calculation: A calculation performed to determine the heating load for a residence or small commercial building. The calculation includes site-specific characteristics such as regional weather data, building framing materials, building insulation levels, building air infiltration levels and window area. The calculation follows procedures and protocols developed by the Air Conditioning Contractors of America.

2) Qualifying Products: Any boiler that meets the definition in Section 1A is eligible for the ENERGY STAR label.

3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet or exceed 85% AFUE (CAafue) energy-efficiency ratings may qualify as ENERGY STAR.

4) Test Criteria: Manufacturers are required to perform tests and self-certify those product models that meet the ENERGY STAR guidelines. Partner agrees to measure a boiler model's energy efficiency using the AFUE for space heating as determined by DOE using test procedures specified in 10 CFR part 430. Partner agrees to measure combination space-heater and water heater appliances based on ASHRAE Standard ANSI/ASHRAE 124-1991 “Methods of Testing for Rating Combination Space-

Heating and Water-Heating Appliances."

5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR will be defined as the *effective date* of the agreement. The ENERGY STAR Boiler specification is effective immediately.

6) Future Specification Revisions: ENERGY STAR reserves the right to change the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through industry discussions.