



# ENERGY STAR® Program Requirements for Furnaces

## Eligibility Criteria Version 2.0

Below is the **Version 2.0** product specification for ENERGY STAR qualified furnaces. A product must meet all of the identified criteria to earn the ENERGY STAR. Please note that this specification is intended for furnaces installed and used in residences.

- 1) Definitions: Below are the definitions of the relevant terms in this document.
  - A. Furnace: A heating unit with a heat input rate of less than 225,000 Btu per hour whose function is the combustion of fossil fuel for space heating with forced hot air. Unit must include burner(s), heat exchanger(s), blower(s) and connections to heating ducts. A heating unit that meets this definition and also provides hot water for domestic or other use may be considered a furnace for purposes of this agreement.
  - B. 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 furnace. This is commonly expressed as a percentage. For purposes of this agreement, the efficiency of a furnace 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 Code of Federal Regulations (CFR) part 430, Appendix N.
  - C. Manufacturer Limited Warranty: For purposes of this agreement, a manufacturer limited warranty is an assurance by the Partner that purchased system equipment and components are warranted by the manufacturer for a period of time. The period of time is typically expressed in numbers of years.<sup>1</sup> The exact terms of the limited warranty shall be determined by the Partner.
- 2) Qualifying Products: Any furnace that meets the definition in Section 1A is eligible for ENERGY STAR qualification.
- 3) Energy-Efficiency Specifications: Only those products listed in Section 2 that meet the following Tier I and Tier II criteria may qualify as ENERGY STAR. Proposed effective dates for Tiers I and II are covered in Section 5 of this specification.

### Tier I

- A. Gas furnace models:  $\geq$  90% AFUE rating
- B. Oil furnace models:  $\geq$  83% AFUE rating

In addition Partner will:

- Include a manufacturer limited warranty with its qualified furnace models.
- Consider using high efficiency electric blower motors with its qualified furnace models.

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<sup>1</sup> At the time of writing, a manufacturer limited warranty is typically 20 years for the heat exchanger(s).

## Tier II

A. Gas furnace models:  $\geq$  90% AFUE rating and TBD requirement for electrical efficiency

B. Oil furnace models:  $\geq$  85% AFUE rating and TBD requirement for electrical efficiency

In addition Partner will:

- Include a manufacturer limited warranty with its qualified furnace models.
- 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 furnace model's energy-efficiency using the test conditions as specified in 10 CFR Part 430, Appendix N.
- 5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR, under this Version 2.0 specification, will be defined as the *effective date* of the agreement. Any previously executed agreement on the subject of ENERGY STAR qualified furnaces shall be terminated effective October 26, 2006.
- A. Qualifying Products Under Tier I of the Version 2.0 Specification: The first phase of this specification is proposed to commence on **October 27, 2006**. All products, including models originally qualified under Version 1.3, with a **date of manufacture** on or after **October 27, 2006**, must meet the new (Version 2.0) requirements in order to qualify for ENERGY STAR. The **date of manufacture** is specific to each unit and is the date (e.g., month and year) of which a unit is considered to be completely assembled.
- B. Qualifying Products Under Tier II of the Version 2.0 Specification: The second phase of this specification, Tier II, is proposed to commence on **October 1, 2008**. All products, including models originally qualified under Tier I, with a **date of manufacture** on or after **October 1, 2008**, must meet the Tier II requirements in order to qualify for ENERGY STAR.
- C. EPA will not allow grandfathering under this Version 2.0 ENERGY STAR specification. **ENERGY STAR qualification under previous Versions is not automatically granted for the life of the product model**. Therefore, any product sold, marketed, or identified by the manufacturing partner as ENERGY STAR must meet the current specification in effect at the time of manufacture of the product.
- 6) Future Specification Revisions: EPA reserves the right to revise the specification should technological and/or market changes affect its usefulness to consumers or industry or its impact on the environment. In keeping with current policy, revisions to the specification will be discussed with stakeholders.