Proposed Criteria
Furnaces

Scope

Included products: Non-weatherized residential gas furnaces, as defined below, are eligible for ENERGY STAR® Most Efficient recognition in 2019.

Residential 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 (natural gas, propane) for space heating with forced hot air. Unit must include burner(s), heat exchanger(s), blower(s) and connections to heating ducts. Unit may also provide hot water for domestic or other use.

Excluded product: The following products are not eligible for ENERGY STAR Most Efficient recognition in 2019:

- Furnaces intended for commercial installation and/or with a rating of 225,000 Btu/h or higher
- Mobile home furnaces
- Weatherized gas furnaces
- Oil furnaces

Recognition Criteria

1) Product must be ENERGY STAR certified consistent with applicable ENERGY STAR Partner Commitments and the requirements set forth in the ENERGY STAR Program Requirements Product Specification for Furnaces, Version 4. Product performance must be certified by a certification body recognized by the U.S. Environmental Protection Agency (EPA).

2) AFUE 97% or higher.

3) Furnaces must work as part of a system that provides system status and messaging capabilities as specified below.

A. **Unit setup information**: Units shall be able to send to and receive information from at least one system controller to automatically configure settings appropriate to the controlled equipment, such as airflow for heating and cooling. This may include prompting an installer through configuration of HVAC system settings and desired comfort settings, and a test sequence at turn-on. The controller may be a thermostat, mobile application, or an on-board controller designed to coordinate operation of an entire HVAC system.

B. **Fault History:** Service personnel shall be able to access a log displaying fault history on an alphanumeric display, which may show plain text or error codes. The product may enable access through any mechanism, for example: 1) a text-based display (e.g. LED) permanently incorporated into the unit, 2) at least one thermostat available on the

market, 3) a diagnostic tool available on the market which can be brought to the work site by the service personnel. Other equivalent mechanisms are also acceptable.

C. **Resident Alerts in Plain Text:** Units shall facilitate display, in plain text, of messages to residents, without assuming that the resident knows much about their system. At a minimum, these messages shall clearly recommend a specific action for the resident to take if the air filter needs to be checked, changed, or cleaned, and if the unit needs professional service. This may be through display on the thermostat or other control device in occupied space in the home, or through any other system that can reach residents directly (e.g., mobile application). Displays on a unit inside a closet, basement or attic, or outside of conditioned space, will not be sufficient. An LED on a remote or thermostat, with static text beside it, is acceptable.

Recognition Period

Upon review and approval of applications received from ENERGY STAR Partners, EPA will add qualifying models to the ENERGY STAR Most Efficient 2019 product list for furnaces from January 1, 2019 through December 31, 2019. The ENERGY STAR Most Efficient 2019 designation may be used in association with models recognized during this period for as long as the model remains on the market.