Proposed Criteria
Ductless Split Air Conditioners and Heat Pumps

Scope

Included products: Residential mini-split and multiple-split non-ducted air conditioners and heat pumps, as defined below, are eligible for ENERGY STAR® Most Efficient recognition in 2019.

Mini-split Air Conditioners and Heat Pumps[1]**:** Systems that have a single outdoor section and one or more indoor sections. The indoor sections cycle on and off in unison in response to a single indoor thermostat.

Multiple-split Air Conditioners and Heat Pumps[1]**:** Systems that have two or more indoor sections. The indoor sections operate independently and can be used to condition multiple zones in response to multiple indoor thermostats.

Non-ducted Air Conditioner or Heat Pump[1]**:** A system that is designed to be permanently installed equipment and directly heats or cools air within the conditioned space using one or more indoor coils that are mounted on room walls and/or ceilings. The unit may be of a modular design that allows for combining multiple outdoor coils and compressors to create one overall system. Non-ducted systems eligible for ENERGY STAR Most Efficient are all split systems.

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

- Units that run on three-phase power.
- Units rated for more than 65,000 Btu/h of cooling.
- Ducted and packaged units are eligible for ENERGY STAR Most Efficient 2019 recognition with different requirements.

Recognition Criteria

1) Product must be ENERGY STAR certified consistent with applicable ENERGY STAR Partner Commitments and the requirements set forth in the latest version of the ENERGY STAR Program Requirements Product Specification for Residential Air Source Heat Pump and Central Air Conditioner, Version 5.0. Product performance must be certified by a certification body recognized by the U.S. Environmental Protection Agency (EPA).

2) Products must meet the following cooling and heating performance levels: 20 SEER, 12.5 EER and (for heat pumps) 10 HSPF.

3) Products must be able to provide cooling (and heating if applicable) at more than 3 capacity levels.

[1] 10 CFR Part 430, Subpart B, Appendix M - Uniform Test Method for Measuring the Energy Consumption of Central Air Conditioners and Heat Pumps.

4) Products must meet the system status and messaging requirements 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 non-ducted air conditioners and heat pumps 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.