Most Efficient 2019
ENERGY STAR
www.energystar.gov

Proposed Criteria
Televisions

Scope

Included products: Televisions, as defined below, are eligible for ENERGY STAR® Most Efficient recognition in 2019.

Television: A commercially available electronic product designed primarily for the reception and display of audiovisual signals received from terrestrial, cable, satellite, Internet Protocol TV (IPTV), or other digital or analog sources. A TV consists of a tuner/receiver and a display encased in a single enclosure. Liquid crystal display (LCD) is the most common display technology, but other technologies, such as OLED, also exist.

Home Theater Display (HTD): A product with diagonal viewable screen size greater than 25 inches, that is designed to produce dynamic video, that does not contain an internal TV tuner encased within the product housing, that is primarily marketed for use in home theater applications, and that is capable of receiving dynamic visual content from wired or wireless sources including but not limited to:

a) Display-specific data connections, such as HDMI, Component video, S-video, Composite video; and/or
b) Media storage devices such as a USB flash drive, a memory card, or a DVD; and/or
c) Network connections, usually using Internet Protocol, typically carried over Ethernet or Wi-Fi.

Note: Home Theater Display does not include Computer Monitors or Signage Displays (defined in the ENERGY STAR Product Specification for Displays).

Excluded products: None.

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 Version 8.0 Program Requirements Product Specification for Televisions. Product performance must be certified by a certification body recognized by the U.S. Environmental Protection Agency (EPA).

2) Additional requirements:

$$P_{ON} \leq P_{ON_MAX} + P_{HR}$$

$$P_{ON_MAX} = 66 * \tanh[0.000412 \times (A - 140) + 0.014] + 14$$

$P_{HR} = 0.45 \times P_{ON_MAX}$

Where:

P_{ON} is the On Mode Power in watts;

P_{ON_MAX} is the maximum allowable On Mode Power consumption in watts;

P_{HR} is the high resolution On Mode Power Allowance in watts;

A is the viewable screen area of the product in square inches; and

tanh is the hyperbolic tangent function.

Recognition Period

EPA will add qualifying models to the ENERGY STAR Most Efficient 2019 product list for televisions 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.