



# ENERGY STAR® Program Requirements for Residential Ceiling Fans

## Partner Commitments

Following are the terms of the ENERGY STAR Partnership Agreement as it pertains to the manufacture and labeling of ENERGY STAR qualified products. The ENERGY STAR Partner must adhere to the following partner commitments:

### Qualifying Products

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1. Comply with current ENERGY STAR Eligibility Criteria, which define performance requirements and test procedures for residential ceiling fans. A list of eligible products and their corresponding Eligibility Criteria can be found at [www.energystar.gov/specifications](http://www.energystar.gov/specifications).
2. **Prior to associating the ENERGY STAR name or mark with any product**, obtain written certification of ENERGY STAR qualification from a Certification Body recognized by EPA for residential ceiling fans. As part of this certification process, products must be tested in a laboratory recognized by EPA to perform residential ceiling fan testing. A list of EPA-recognized laboratories and Certification Bodies can be found at [www.energystar.gov/testingandverification](http://www.energystar.gov/testingandverification).

### Using the ENERGY STAR Name and Marks

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3. Comply with current ENERGY STAR Identity Guidelines, which define how the ENERGY STAR name and marks may be used. Partner is responsible for adhering to these guidelines and ensuring that its authorized representatives, such as advertising agencies, dealers, and distributors, are also in compliance. The ENERGY STAR Identity Guidelines are available at [www.energystar.gov/logouse](http://www.energystar.gov/logouse).
4. Use the ENERGY STAR name and marks only in association with qualified products. Partner may not refer to itself as an ENERGY STAR Partner unless at least one product is qualified and offered for sale in the U.S. and/or ENERGY STAR partner countries.
5. Provide clear and consistent labeling of ENERGY STAR qualified residential ceiling fans. The ENERGY STAR mark must be clearly displayed on the product packaging, 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.

### Verifying Ongoing Product Qualification

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6. Participate in third-party verification testing through a Certification Body recognized by EPA for residential ceiling fans, providing full cooperation and timely responses. EPA/DOE may also, 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 the government's request.

### Providing Information to EPA

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7. Provide unit shipment data or other market indicators to EPA annually to assist with creation of ENERGY STAR market penetration estimates, as follows:
  - 7.1. Partner must submit the total number of ENERGY STAR qualified residential ceiling fans shipped in the calendar year or an equivalent measurement as agreed to in advance by EPA and Partner. Partner shall exclude shipments to organizations that rebrand and resell the shipments (unaffiliated private labelers).

7.2. Partner must provide unit shipment data segmented by meaningful product characteristics (e.g., type, capacity, presence of additional functions) as prescribed by EPA.

7.3. Partner must submit unit shipment data for each calendar year to EPA or an EPA-authorized third party, preferably in electronic format, no later than March 1 of the following year.

Submitted unit shipment 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.

8. Report to EPA any attempts by recognized laboratories or Certification Bodies (CBs) to influence testing or certification results or to engage in discriminatory practices.

9. Notify EPA of a change in the designated responsible party or contacts within 30 days using the My ENERGY STAR Account tool (MESA) available at [www.energystar.gov/mesa](http://www.energystar.gov/mesa).

### **Performance for Special Distinction**

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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:

- 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.
- Consider energy efficiency improvements in company facilities and pursue benchmarking buildings through the ENERGY STAR Buildings program.
- Purchase ENERGY STAR qualified 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 qualified product information to employees for use when purchasing products for their homes.
- Feature the ENERGY STAR mark(s) on Partner website and other promotional materials. If information concerning ENERGY STAR is provided on the Partner website as specified by the ENERGY STAR Web Linking Policy (available in the Partner Resources section of the ENERGY STAR website), EPA may provide links where appropriate to the Partner website.
- Ensure the power management feature is enabled on all ENERGY STAR qualified displays and computers in use in company facilities, particularly upon installation and after service is performed.
- 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 qualified products.
- 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, and communicate Partner's activities, provide an EPA representative, or include news about the event in the ENERGY STAR newsletter, on the ENERGY STAR website, etc. The plan may be as simple as providing a list of planned activities or milestones of which Partner would like EPA to be aware. For example, activities may include: (1) increasing the availability of ENERGY STAR qualified products by converting the entire product line within two years to meet ENERGY STAR guidelines; (2) demonstrating the economic and environmental benefits of energy efficiency through special in-store displays twice a year; (3) providing information to users (via the website and user's manual) about energy-saving features and operating characteristics of ENERGY STAR qualified products; and (4) building awareness of the ENERGY STAR Partnership and brand identity by collaborating with EPA on one print advertorial and one live press event.
- Join EPA's SmartWay Transport Partnership to improve the environmental performance of the company's shipping operations. The SmartWay Transport Partnership works with freight carriers, shippers, and other stakeholders in the goods movement industry to reduce fuel consumption,

greenhouse gases, and air pollution. For more information on SmartWay, visit [www.epa.gov/smartway](http://www.epa.gov/smartway).

- Join EPA's Green Power Partnership. EPA's Green Power Partnership encourages organizations to buy green power as a way to reduce the environmental impacts associated with traditional fossil fuel-based electricity use. The partnership includes a diverse set of organizations including Fortune 500 companies, small and medium businesses, government institutions as well as a growing number of colleges and universities. For more information on Green Power, visit [www.epa.gov/greenpower](http://www.epa.gov/greenpower).



# ENERGY STAR® Program Requirements Product Specification for Residential Ceiling Fans

## Eligibility Criteria

### Version 3.0

**Note:** The effective date for this version 3.0 specification has been revised from October 1 2011 to April 1 2012. Lighting details such as directional versus non-directional have been removed as this information now resides in the Luminaires specification.

Following is the **Version 3.0** product specification for ENERGY STAR qualified residential ceiling fans. A product shall meet all of the identified criteria if it is to earn the ENERGY STAR.

**1) Definitions:** Below are the definitions of the relevant terms in this document.

- A. Residential Ceiling Fan: A non-portable device designed for home use that is suspended from the ceiling for circulating air via the rotation of fan blades. Some ceiling fans are sold with light kits.
- B. Light Kit: A complete lighting unit consisting of lamp(s) and ballasting (when applicable) or LED Light Engine(s), together with the parts designed to distribute the light, position and protect the light sources, and connect the sources to the mains.
- C. Controls: Controls enable the user to turn on/off or adjust the lighting and fan movement. Controls may be in the form of pull chain, slide switch, wall switch/panel, or remote control.
- D. Airflow: The rate of air movement at a specific fan setting expressed in cubic feet per minute (CFM).
- E. Airflow Efficiency: The ratio of airflow divided by power at a specific residential ceiling fan setting expressed in CFM per watt (CFM/watt).
- F. Power Consumption: Defined as the active power and expressed in watts.
- G. Hugger Fan: A fan style where the motor mounts directly to the ceiling. Hugger fans are most commonly used in rooms with low ceilings. Hugger fans are manufactured and marketed as such and should not be confused with multi-mount (traditional) fans that can be hung without the down rod, giving the same effect as a hugger fan. Hugger fans are designed to allow installations on 7'6" – 8' height ceilings when using a fan light kit in a location where walking under the fan will occur.
- H. Product Family: Ceiling fan models are identical in every respect, with the exception of finish. Differences that would require separate testing include, but may not be limited to: motor type or size; rotational speed; control type; blade weight, number, size, or pitch; and housing (i.e., size, design, ventilation). Light kits are required to meet the product family definition provided in the ENERGY STAR Luminaires specification.

**2) Scope:**

- A. Included Products: Products that meet the definitions of a Residential Ceiling Fan as specified herein are eligible for ENERGY STAR qualification, with the exception of products listed in Section 2.B. Ceiling fan light kits sold separately are eligible under the ENERGY STAR Luminaires specification.

B. Excluded Products: Hugger fans, as defined above, are not eligible for ENERGY STAR.

3) **Qualification Criteria:**

A. Airflow Efficiency Requirements:

<b>Fan Speed</b>	<b>Minimum Airflow</b>	<b>Minimum Efficiency Requirement</b>
Low	1,250 CFM	155 CFM/watt
Medium	3,000 CFM	100 CFM/watt
High	5,000 CFM	75 CFM/watt

- a. Qualifying products shall meet or exceed the minimum requirements presented in Table 1, above, when operating in a downward-blowing direction.
- b. Efficiency shall be measured on each of three fan speeds (i.e., low, medium, high). For those ceiling fan models that offer more than three speeds manufacturer may choose the three individual speed settings (representative of low, medium, and high) that should be used to comply with the performance levels set forth in Table 1, above.

B. Lighting Requirements: To qualify for ENERGY STAR, all light kits shipped with ceiling fans shall meet the requirements found in the *ENERGY STAR Program Requirements, Product Specification for Luminaires – Eligibility Criteria* in effect at the time of qualification. Ballast or driver case temperature testing shall be conducted with the ceiling fan turned off.

Qualifying residential ceiling fans sold without light kits shall provide information on product packaging or with product instructions regarding ENERGY STAR qualifying light kits that may be used with that particular residential ceiling fan.

C. Controls: Qualifying products shall permit convenient consumer adjustment of fan speed. This may be accomplished by means of one or more wall-mounted switch(es), a remote control, or readily accessible pull chains. For purposes of this specification, “readily accessible” shall be defined as a length sufficient to reach a height of no more than 80 inches (203 cm) above the floor when the residential ceiling fan is mounted according to the residential ceiling fan’s installation instructions. For those residential ceiling fans that can accommodate light kits, the lights and the fans shall be able to be controlled separately, allowing users to switch off lights during fan operation or operate the lights without using the residential ceiling fan.

Qualifying products shall also provide for consumer adjustment of airflow direction (upward or downward) by one of the following means:

- A vertically or horizontally mounted slide switch on the motor housing. For vertically mounted switches, the downward position shall correspond to downward airflow. For horizontally mounted switches, airflow direction shall be clearly identified on the switch housing or within the product literature.
- A wall-mounted switch
- A remote control
- A readily accessible pull chain

D. Minimum Warranty: Qualifying products shall provide a warranty of at least 30 years for the motor and at least one year for all other components of qualifying residential ceiling fans. Light kit warranty requirements are provided in the ENERGY STAR Luminaires specification.

E. Significant Digits and Rounding:

- a. All calculations shall be carried out with directly measured (unrounded) values.
- b. Unless otherwise specified, compliance with specification limits shall be evaluated using directly measured or calculated values without any benefit from rounding.
- c. Directly measured or calculated values that are submitted for reporting on the ENERGY STAR website shall be rounded to the nearest significant digit as expressed in the corresponding specification limit.

4) **Test Requirements:**

- A. Representative Models shall be selected for testing per the following requirements:
  - a. For qualification of an individual product model, the representative model shall be equivalent to that which is intended to be marketed and labeled as ENERGY STAR.
  - b. For qualification of a product family, any model within that product family can be tested and serve as the representative model.
- B. When testing residential ceiling fans, the following test methods shall be used to determine ENERGY STAR qualification:

<b>ENERGY STAR Requirement</b>	<b>Test Method Reference</b>
Airflow and Airflow Efficiency	ENERGY STAR Testing Facility Guidance Manual Version 1.2: <i>Building a Testing Facility and Performing the Solid State Test Method for ENERGY STAR Qualified Ceiling Fans</i>
Lighting Requirements	See <i>ENERGY STAR® Program Requirements, Product Specification for Luminaires - Eligibility Criteria</i>

- a. At time of testing, measurements shall be taken at all discrete operating speeds.
  - b. Products shipped with light kits shall be tested with those light sources mounted in their intended position and switched off.
- 5) **Effective Date:** The ENERGY STAR Residential Ceiling Fan Version 3.0 specification shall take effect on **April 1, 2012**. To qualify for ENERGY STAR, a product model shall meet the ENERGY STAR specification in effect on the model's date of manufacture. The date of manufacture is specific to each unit and is the date (e.g., month and year) on which a unit is considered to be completely assembled.
- 6) **Future Specification Revisions:** EPA reserves the right to change this 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. In the event of a specification revision, please note that the ENERGY STAR qualification is not automatically granted for the life of a product model.