



## ENERGY STAR® Program Requirements for Residential Ventilating Fans

### Final Draft – Eligibility Criteria (Version 2.0)

Below is the **FINAL DRAFT** product specification (Version 2.0) for ENERGY STAR qualified residential ventilating fans. A product must meet all of the identified criteria to earn the ENERGY STAR.

1) **Definitions:** Below is a brief description of a residential ventilating fan and other terms as relevant to ENERGY STAR.

- A. **Residential Ventilating Fan:** A ceiling, wall-mounted, or remotely mounted in-line fan designed to be used in a bathroom or utility room, or a kitchen range hood, whose purpose is to move objectionable air from inside the building to the outdoors. Residential ventilating fans used for cooling (e.g., whole-house fans) or air circulation are excluded. Heat/energy recovery ventilation fans ducted to the ventilated space and powered attic ventilators (e.g., gable fans) are excluded, but may be considered in a future version of this specification. Residential ventilating fans with heat lamps are excluded from this specification. This specification does not address passive ventilation of any kind.

**Note:** In the previous Draft 2 specification, EPA proposed to exclude ventilating fan models that incorporate electric resistance heating elements. It continues to be EPA's intention to exclude electric resistance heating technologies to encourage the development of more energy-efficient technologies. However, EPA also recognizes that for those ventilating fan models that currently qualify as ENERGY STAR under Version 1.0, additional time will be needed to research new energy-efficient technologies and redesign products. Therefore, ventilating fan models with electric resistance heating elements may continue to qualify through December 31, 2004 under this Version 2.0 specification (see Section 5). It is equally important that the manufacturer clarify that this heat source is NOT ENERGY STAR qualified (see Section 3.C for packaging instructions).

Due to continued manufacturer interest in labeling remote (single- and multi-port) in-line ventilating fans and additional review of single-port product performance data, EPA has decided to include in-line ventilating fan products in this Version 2.0 specification. Although these products are not rated for sound, manufacturers of these products must include additional installation instructions for these products to ensure optimum performance and quiet operation. These requirements are presented in Sections 3.C and 4.D of this Version 2.0 specification. Although EPA has not reviewed specific performance data for multi-port in-line fans, these products are included due to their known similarity to single-port in-line fans, in both efficiency and application, and the additional energy efficiency benefits derived from multi-port fan installation in the home (i.e., one fan performing the job that would otherwise have required multiple fans).

- B. **Combination Unit:** A residential ventilating fan that contains a light source for general lighting and/or a night light.
- C. **In-line Ventilating Fan:** A fan designed to be located within the building structure and requires ductwork on both intake and exhaust. Those in-line fans with only one intake are referred to as "single port" in-line fans, while those with multiple intake ports are referred to as "multi-port" in-line fans in this specification.

- D. HVI 915, "HVI (Home Ventilating Institute) Procedure for Loudness Rating of Residential Fan Products": Procedure used for testing and rating ventilation fan products for sound. This test procedure includes laboratory requirements and methods for obtaining sound pressure, sound power, and sone values.
  - E. HVI 916, "HVI Airflow Test Standards": Airflow test standard that establishes uniform methods for laboratory testing of powered residential ventilating equipment for airflow rate. This publication covers the test equipment, tests of specific HVI classification groups, test reports, and policies for maintaining the standard.
  - F. HVI 920, "HVI Product Performance Certification Procedure Including Verification and Challenge": Publication that defines and specifies certain aspects of the procedures, covering such points as the actual testing, the certification process, challenge procedures, and the use of HVI trademark and labels.
  - G. Inch of Water Gauge (w.g.): A traditional unit of pressure used to describe both water and gas pressures. The conventional equivalent of one inch of water is 249.0889 pascals, which is 2.490889 millibars, about 0.036127 pounds per square inch (psi) or about 0.073556 inches (1.86832 millimeters) of mercury. The word "gauge" after a pressure reading indicates that the pressure stated is actually the difference between the absolute, or total, pressure and the ambient air pressure at the time of the reading.
  - H. Light Source: The lighting portion of a combination unit or a range hood. For units using a compact fluorescent or fluorescent lamp, the light source includes the lamp and the ballast.
  - I. Power Consumption: The operation of the fan motor consumes electrical power measured in Watts (W). Under this specification, power used for lights, sensors, heaters, timers, or night lights is not included in the determination of power consumption.
  - J. Sone: An internationally recognized unit of loudness, which simplifies reporting of sound output by translating laboratory logarithmic decibel readings into a linear scale that corresponds to the way people sense loudness. A sone is equal in loudness to a pure tone of 1,000 cycles per second at 40 decibels above the listener's threshold of hearing.
  - K. Working Speed: The lowest speed above 100 CFM for a two speed fan and a low setting above 90 CFM for a multi-speed fan.
- 2) Qualifying Products: In order to qualify as ENERGY STAR, a residential ventilating fan must meet the definition in Section 1A and the specification and testing requirements provided in Sections 3 and 4, below. For the purposes of this specification, residential ventilating fans include the following product types: range hoods, in-line (single and multi-port), and bathroom and utility room; including ducted and direct-discharge models. Ventilating fans with sensors and timers may qualify under this specification. Residential ventilating fans qualifying under this specification can also be used in small commercial applications (e.g., bathroom of a restaurant).
  - 3) ENERGY STAR Specification Requirements for Qualifying Products: Only those products described in Section 2 that meet the energy-efficiency criteria outlined in Table 1, below, may qualify for the ENERGY STAR. In addition to these requirements, all qualifying residential ventilating fans must also meet those requirements listed in Sections A-C, as appropriate.

**Table 1**  
**Draft 2 Criteria for ENERGY STAR Qualified Residential Ventilating Fans – Minimum Efficacy Levels**

<b>Airflow (cfm)</b>	<b>Minimum Efficacy Level (cfm/W)*</b>
Range Hoods – up to 500 cfm (max)	2.8**
Bathroom and Utility Room Fans – 10 to 80 cfm	1.4
Bathroom and Utility Room Fans – 90 to 130 cfm	2.8
Bathroom and Utility Room Fans – 140 to 500 cfm (max)	2.8
In-Line (single-port & multi-port) Ventilating Fans	2.8

\*Based on measured airflow at 0.1 in. w.g. static pressure (0.2 w.g. static pressure for in-line fans).

\*\*Tested at working speed.

**Note:** There was some concern within industry that limiting the size of bathroom and utility fans would exclude larger fan models that would otherwise qualify as ENERGY STAR. EPA's initial goal in proposing the 250 cfm limitation in the Draft 2 specification, was to avoid over ventilation. However, it was recently brought to EPA's attention that there is demand in the housing market for bathroom and utility fans that are larger than 250 CFM; many that could meet the proposed Version 2.0 performance levels. Manufacturers should, however, ensure that proper sizing methods, based on HVI and ASHRAE recommendations, are included in product literature and packaging.

EPA has reviewed performance data on nearly 100 single-port in-line fan models representing seven different manufacturers. According to this data, a minimum efficacy requirement of 2.8 cfm/W would represent slightly more than 25% of products in the marketplace. Please note that this efficacy requirement is based on measured airflow at 0.20 in. w.g. static pressure; it is EPA's understanding that these products are inherently more efficient than the comparable ceiling bath fan. Multi-port in-line fans must meet the same requirements as single-port in-line fans to qualify as ENERGY STAR. **Stakeholders are encouraged to provide feedback on whether or not this performance level accurately represents the top energy performers available in this product market.**

In the Draft 2 specification, EPA proposed that manufacturers be allowed to test minimum efficacy and maximum sound ratings for Range Hoods at "Working Speed," instead of Maximum speed, since it is widely recognized in the industry that working speed is the more common operating condition. EPA received a comment that using working speed to measure range hood performance would be confusing to consumers and that it is not a true indicator of product performance. To clarify, the working speed test results are for qualification purposes only; partners are not required to market this information to the consumer. Furthermore, based on discussions with HVI, EPA continues to believe that working speed is the better indicator based on the following two reasons: (1) range hoods are currently tested at HVI at low speed (typically 100 CFM), based on the ASHRAE ventilation standard for range hoods (Standard 62-1982); and (2) consumer surveys by manufacturers over the last 10+ years indicate that range hoods are most often used at lower speeds.

Finally, the CFM ranges provided for each product category have been revised in Table 1 for the following reasons:

1. Current HVI Certification requires manufacturers to list certified ventilating fans rounded down to the nearest 10 CFM. Since EPA is requiring HVI Certification, the CFM ranges in this specification were set to match this HVI convention.
2. Increasing the small fan category CFM limit from 75 to 80 will allow more products to qualify, increasing total market penetration and providing manufacturers with more opportunities to list qualifying products in the currently underserved small fan category.

A. Lighting Requirements:

1. Starting October 1, 2003, the following products may qualify as ENERGY STAR:
  - a. Residential ventilating fans with no light source
  - b. Combination unit residential bath and utility ventilating fans having a light source that is an ENERGY STAR qualified light fixture or meeting performance criteria listed in Table 2, below. Residential bath and utility ventilating fans that have lamp sockets that can accept incandescent lamps are excluded.
  - c. Range hoods with incandescent light sources or sockets may qualify through December 31, 2004.

Table 2 – Light Source Criteria	
Performance Characteristic	ENERGY STAR Specification
System Efficacy per lamp ballast combination, Lumens Per Watt (LPW) – see notes at end of this table	<p>≥ 46 LPW for all lamp types below 30 total listed lamp Watts.</p> <p>≥ 60 LPW for all lamp types that are ≤ 24 inches and ≥ 30 listed lamp Watts.</p> <p>≥ 70 LPW for all lamp types that are ≥ 24 inches and ≥ 30 listed lamp Watts.</p>
Lamp Start Time	<p>The time needed after switching on the lamp to start continuously and remain lighted must be an average of one second or less.</p> <p>For manufacturers using magnetic ballasts and lamps with integrated electronic starting chips, lamps <u>must</u> be included with the residential ventilating fan when shipped from the factory.</p>
Lamp Life	<p>For residential ventilating fans that are shipped with a lamp, the average rated life of the lamp must be ≥ 10,000 hours.</p> <p>For residential ventilating fans that are not shipped with lamps, a list of lamp types must be provided that would result in the lighting source complying with this specification requirement. This list must be clearly visible to the consumer on the residential ventilating fan packaging. Manufacturers are not required to provide specific lamp manufacturer names and model numbers on the packaging. Rather, generic lamp listings, such as the NEMA or ANSI generic descriptions will suffice.</p>
Color Rendering Index	<p>≥ 80 for compact fluorescent lamps.</p> <p>≥ 75 for linear lamps.</p>

Correlated Color Temperature	<p>For residential ventilating fans that are shipped with a lamp and do not have a <i>rated</i> color temperature of 2,700 Kelvin (K) or 3,000 K (actual measured CCT of 2,700 to 3,000K <math>\pm</math> 200K), the packaging should clearly describe the color of the product (cool or warm) and state its intended use.</p> <p>For residential ventilating fans that are not shipped with a lamp, a list of lamp types must be provided that would result in the light source complying with this specification requirement. This list must be clearly visible to the consumer on the residential ventilating fan packaging. Manufacturers are not required to provide specific lamp manufacturer names and model numbers on the packaging. Rather, generic lamp listings such as the NEMA or ANSI generic descriptions will suffice.</p>
Noise	Class A sound rating for electromagnetic and electronic ballasts, outside the fixture. Not to exceed a measured level of 24 dBA when measured in a room with ambient noise no greater than 20 dBA.
Maximum Total Lamp Wattage (excluding night lights)	$\leq$ 50 Watts.
Maximum Night Light Wattage	$\leq$ 4 Watts.

**Notes:**

- Light Source efficacy shall be determined by the following equation:

$$\text{Light Source efficacy [Lumens per Watt]} = \frac{\text{Measured Lamp Lumens [Lumens]}}{\text{Measured Input Power [Watts]}}$$

- Lamp Lumens: Lamp lumens must be measured using the lamp and ballast that are shipped with the residential ventilating fan.
- Light Source Input Power: Light Source input power must be measured using the lamp and ballast that are shipped with the residential ventilating fan.
- For residential ventilating fans shipped without lamps, efficacy shall be determined by testing at least one of the lamp types listed on the product packaging.

**Note:** EPA's intention of excluding models that can accept incandescent lamps for general lighting under this Version 2.0 specification is to ensure the long-term energy savings associated with using compact fluorescent and other energy-efficient light sources. This requirement also ensures that the consumer cannot replace the original energy-efficient lamp with an inefficient incandescent lamp, thus guaranteeing these long-term savings. As with many ENERGY STAR products, EPA may allow for incandescent products to initially qualify as ENERGY STAR while allowing partners time to develop more energy-efficient technologies. As such, the Version 1.0 specification gave manufacturers one year from the July 1, 2001 effective date to develop ENERGY STAR qualified lighting. Implementation of this requirement has been delayed by the specification revision process; however, ENERGY STAR partners are already qualifying ventilating fan models with fluorescent lighting, further supporting the movement toward, and interest in, energy-efficient light sources.

However, there continues to be industry concern with the proposed exclusion of all incandescent range hood products. EPA has received industry feedback that manufacturers of this product category may need additional time to research and develop new energy-efficient lighting technologies. Therefore, EPA is allowing incandescent range hood products to continue to qualify as ENERGY STAR **through December 31, 2004**. As of January 1, 2005, range hoods must comply with the lighting requirements described in Sub-Sections 3.A.1.a. or b., above. In the short term, EPA is addressing energy consumption of these product types by: (1) limiting the total lamp wattage to 50 watts, similar to the fluorescent lighting requirements for bath and utility fans; and (2) requiring a consumer recommendation on product packaging (Section 3.C, below).

- B. Quality Assurance Requirements: To assure the quality of ENERGY STAR qualified residential ventilating fans, the following quality assurance requirements must be met for a fan to earn the ENERGY STAR:

**Note:** In developing ENERGY STAR specifications, EPA strives to set energy efficiency performance levels that achieve energy savings without sacrificing performance and quality. The Draft 1 specification identified three primary attributes that affect perceived and actual product quality for residential ventilating fans: early product failure rate, fan sound levels, and installed fan performance. By specifying minimum requirements in these three specific areas, EPA believes that actual and perceived product quality will be assured for residential ventilating fans that earn the ENERGY STAR, without undue burden to participating manufacturers.

EPA continues to receive conflicting feedback from stakeholders on this approach to assuring quality of ENERGY STAR qualified fan models. In particular, minimum product warranty period continues to be a divisive issue. While EPA appreciates the arguments for longer minimum product warranties, it must also balance the goal of achieving high product quality with the equally important goal of reaching a significant portion of the market.

ENERGY STAR product specifications are typically set to target 25% of the current market. EPA has made some significant changes between the first Draft and this Final Draft specification in an attempt to reach a larger market share. However, in some cases, EPA must also balance initial market penetration with other considerations, resulting in a target lower than a 25% market share. It is EPA's hope that over time, ENERGY STAR market share will increase as the demand for energy-efficient products grows. As a result of revisions proposed in this Version 2.0 specification, EPA believes that while it may not represent 25% of the market share, it does represent a larger market penetration of ENERGY STAR compared to the existing (Version 1.0) specification, while continuing to ensure the performance and quality of the products.

## 1. Early Product Failure Rate

Partner shall provide a minimum one-year warranty for a product to qualify for the ENERGY STAR.

**Note:** The Tier I warranty requirement in the existing (Version 1.0) specification is two years. A three-year warranty was scheduled to go into effect in July 2002 under Tier II; however, this effective date was delayed due to this specification revision process.

Initial or early product failure due to faulty workmanship is the first indicator of poor product quality. Such failures should be rare in ENERGY STAR qualified products and backed by a minimum warranty. EPA still believes that a one-year minimum warranty is sufficient to protect consumers from these early failures and has not yet come across any information in the industry that proves otherwise. Furthermore, in previous drafts of this Version 2.0 draft specification, EPA requested feedback on expanding the one-year warranty to a comprehensive one-year warranty. EPA has not received any feedback on what this comprehensive warranty should cover. It is not EPA's intention to delay the revision of this specification to conduct the research needed to determine the appropriate definition of "comprehensive." Furthermore, it is EPA's hope that by tightening up the sound and efficacy requirements and including new installed performance requirements, this will ensure the qualification of only high quality, long lasting products. If over time, EPA receives information that supports the need for a longer warranty, it may consider revisiting the current one-year warranty at that time.

## 2. Fan Sound Levels:

For most ventilating fan products, fan noise is the most obvious indicator of product quality to the consumer. Table 3, below, provides maximum noise levels allowed for residential ventilating fans to earn the ENERGY STAR.

<b>Table 3</b> <b>Draft 2 Criteria for ENERGY STAR Qualified Residential Ventilating Fans – Maximum Allowable Sound Levels</b>	
<b>Airflow (cfm)</b>	<b>Maximum Allowable Sound Level (Sones)*</b>
Range Hoods – up to 500 cfm (max)	2.0**
Bathroom and Utility Room Fans – 10 to 80 cfm	2.0
Bathroom and Utility Room Fans – 90 to 130 cfm	2.0
Bathroom and Utility Room Fans – 140 to 500 cfm (max)	3.0

\*Based on rated airflow, measured at 0.1 in. w.g. static pressure

\*\* Tested at working speed.

**Note:** Following the release of the Draft 2 specification, EPA continued to receive comments on the proposed maximum sound levels. Some manufacturers felt that the proposed levels were too stringent while others felt that these levels were not challenging enough. After additional research and discussions with industry, EPA found that by leaving the smaller fan category (10-80 CFM) maximum sound level at the existing Version 1.0 specification requirement of 2.0 sones, this will open up the market share to a few more models getting EPA closer to its' 25% goal without compromising the quality associated with the ENERGY STAR mark.

In this Final Draft Version 2.0 specification, EPA requires product testing of range hood performance at working speed (approximately 100 CFM), instead of maximum speed. To be consistent with bathroom and utility fan sound level requirements in Table 3, tested at similar airflows, EPA is proposing a lower maximum sound level requirement for range hoods, specifically from 3.0 to 2.0 sones.

EPA has taken into consideration all stakeholder suggestions received to date on these performance levels and believes that the sound requirements proposed in this Final Version 2.0 specification represents the top performers in the marketplace. It continues to be EPA's hope that this specification will encourage manufacturers to produce more models that meet both efficacy and sound requirements and open up the market availability of ENERGY STAR qualified products.

### 3. Installed Fan Performance

All qualifying ventilating fan models, with the exception of in-line models, when measured by industry standard testing procedures at 0.25 in. w.g. static pressure, shall deliver a rated airflow (cfm) of equal or greater than the following percentages of the rated airflow delivered at 0.1 in. w.g. static pressure for that particular model:

<b>Product Category</b>	<b>Rated Airflow (0.25 in. w.g.)</b>
Bathroom and Utility Room Fans – 10 to 80 cfm	60%
Bathroom and Utility Room Fans – 90 to 130 cfm	70%
Bathroom and Utility Room Fans – 140 to 500 cfm	70%
Range Hoods – up to 500 cfm	70%



**Note:** It is important that an ENERGY STAR qualified ventilating fan meet consumer's performance expectations. The inability of a fan to deliver close to its rated airflow when installed can raise quality concerns. In the Draft 2 specification EPA proposed that ENERGY STAR qualified ventilating fans be required to have a measured airflow at 0.25 in. w.g. static pressure that is no less than 70% of the minimum rated airflow for the fan at 0.1 in. w.g. static pressure. While industry members have voiced their support of including this requirement as a measurement of product quality, EPA has also received comments indicating that 70% is too aggressive for smaller fans and ENERGY STAR could lose a large part of the new construction market (e.g., 50, 60, and 70 cfm models). It is also EPA's understanding that larger fans often perform better at maintaining their airflow under increasing static pressures compared to smaller fans. Therefore, based on a review of product performance data, EPA has lowered the airflow performance requirement for smaller fans (10 – 80 cfm) to 60% of the minimum rated airflow at 0.1 in. w.g. static pressure when tested at 0.25 in. w.g. static pressure. This will ensure ENERGY STAR qualified product availability in the bathroom/utility room fan categories providing the builder with more energy-efficient choices based on application and room size. Since in-line fans are already tested and evaluated under this specification at .20 in. w.g. static pressure, there are no additional requirements for installed performance.

C. **Inclusion of Installation Instruction and Consumer Recommendations:** Picture diagram-type installation instructions shall be included with each qualified ventilating fan. The instructions shall indicate the following:

1. How to properly seal the fan with caulk or other similar material to inhibit air leakage to the exterior of the thermal envelope of the building.
2. Recommended ductwork types, elbows (including radii), terminations, sealants, and lengths that will minimize static pressure losses and promote adequate airflow.
3. Proper installation of vibration deadening materials such as short pieces of flexible duct.
4. Proper installation of insulation around the fan to minimize building heat loss and gain.

**In-Line Fan (Additional) Installation Instructions:** Manufacturers must include the following information on the in-line product or in product literature:

To ensure quiet operation of ENERGY STAR qualified in-line and remote fans, each fan should be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct must be installed between the exhaust or supply grille(s) and the fan. For kitchen range hood remote ventilation applications, where metal duct is generally required by code, a metal sound attenuator must be installed between the range hood and the fan.

**Range Hoods with Incandescent Light Sources:** Manufacturers must recommend the use of an ENERGY STAR qualified CFL light bulb or incandescent bulb that uses no more than 50 watts total. This recommendation must be provided in product literature, on product packaging, and on Partner's Web site.

**Ventilating Fan Models with Electric Resistance Heating:** Qualified products with electric resistance heating elements must include information on the product packaging, in product literature, and on partner's Web site explaining that the heating element is designed to be used for supplemental heating only and does not contribute to the ENERGY STAR qualification of the product.

**Note:** There is no minimum sound requirement for in-line fans to qualify as ENERGY STAR, since there is no available test procedure for this fan category; however, EPA does recognize the importance of installation of these products to ensure quiet operation. **As such, specific instruction regarding the installation of in-line fans is provided above for stakeholder review and comment.** It is EPA's intention that manufacturers include these instructions either in product literature or directly on the qualifying model so that the contractor can review the information prior to installation.

In this section, EPA also provides direction on the required recommendations that the manufacturer must make to the consumer regarding range hoods with incandescent light source sockets and fan models with electric resistance heating.

4) **Product Testing:** Manufacturers are required to perform tests, according to the requirements included in this Version 2.0 specification, then submit qualifying model information to EPA for approval. **Each qualifying model must be tested and certified by HVI in accordance with HVI Standards 915, 916, and 920.** The test results must be reported using the Residential Ventilating Fan Qualified Product Information (QPI) Form. Manufacturers are required to report fan performance information on the QPI Form using the following units of measure:

**Note:** EPA received several comments from manufacturers suggesting that ENERGY STAR qualified ventilation fans be required to have HVI certification, in accordance with HVI Standard 920. Including this requirement will ensure third-party verification and accurate reporting of product performance. **It is EPA's understanding that while testing must be done in an HVI certified laboratory, manufacturers do not have to be HVI members to participate in the certification program.**

- A. **Airflow Rating (cfm):** The airflow of a residential ventilating fan shall be measured in cubic feet per minute (cfm). The cfm values shall be certified by HVI and measured by the method described in HVI Standard 916.
- B. **Efficacy (cfm/W):** The efficacy of the residential ventilating fan shall be expressed in cubic feet per minute per Watt (cfm/W). Manufacturers shall calculate efficacy by using the airflow and fan motor electrical power values certified by HVI and described in HVI Standard 916. Fan motor electrical usage will be the only energy consumption considered for the efficacy calculation. Energy used for other fan auxiliaries, such as lights, is not included in the determination of fan efficacy.
- C. **Sound Rating (sone):** The sound output of a residential ventilating fan is measured in sones. The sound ratings shall be certified by HVI and measured by the method described in HVI Standard 915.
- D. **Static Pressure Measurements:** Ventilating fan performance characteristics such as motor wattage, cfm, and sones must be reported to EPA at specific static pressures. These measurements vary depending upon the fan type and follow HVI 920 rating points. Measurements shall be certified by HVI and conducted in accordance with HVI Standard 920. The static pressure measurements are listed below.
  - 1. Ducted products (products with one duct such as bathroom fans, utility fans, and kitchen range hoods): 0.1 in. w.g. static pressure
    - a. Partner must also test and report products at 0.25 in. w.g. static pressure for airflow (cfm)

- b. Partner is not required to test sound levels or wattage at 0.25 in. w.g. static pressure
- 2. Direct discharge (non-ducted) products: 0.03 in. w.g. static pressure
- 3. In-line ventilating fans: 0.20 in. w.g. static pressure (Wattage and cfm only)

**Note:** Per standard industry practice and HVI certification requirements, in-line fans must be tested at 0.20 in. w.g. static pressure under this Version 2.0 specification. In-line fans are not required to be tested for sound under this specification; however, EPA understands the importance proper installation of these products and as a result, installation instructions are proposed in Section 3C of this specification.

- 5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR under the Version 2.0 specification will be defined as the *effective date* of this agreement. The ENERGY STAR Residential Ventilating Fans (Version 2.0) specification shall go into effect on **October 1, 2003**. Any previously executed agreement on the subject of ENERGY STAR qualified vent fans, shall be terminated effective October 1, 2003.

**Note:** In the Draft 2 specification, EPA proposed an effective date of October 1, 2003. Based on manufacturer feedback received by EPA, manufacturers feel that this is an appropriate effective date for this Version 2.0 specification.

- A. Qualifying and Labeling Products under the Version 2.0 Specification: All products, including models originally qualified under Version 1.0 with a **date of manufacture** on or after **October 1, 2003**, must meet the new Version 2.0 requirements in order to use the ENERGY STAR on the product or in product literature. 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. Elimination of Automatic Grandfathering: EPA does not allow grandfathering under this Version 2.0 specification. **ENERGY STAR qualification under Version 1.0 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 that time.
- C. Phase-Out of Ventilating Fan Models with Resistance Heating: Starting January 1, 2005, ventilating fans with electric resistance heaters will no longer qualify as ENERGY STAR.
- D. Phase-Out of Range Hood Models with Incandescent Lighting: Starting January 1, 2005, range hoods with incandescent light sources or sockets that accept incandescent lamps, will no longer qualify as ENERGY STAR. Any range hood qualifying with lighting must meet the requirements of Table 2 in this Version 2.0 specification.

**Note:** As of October 1, 2003, models that qualified under the Version 1.0 specification must meet the requirements of the new Version 2.0 specification to remain qualified as ENERGY STAR. Products that do not meet new Version 2.0 requirements will be removed from the ENERGY STAR Web site. These models may continue to bear the ENERGY STAR mark as it is sold through the retail distribution channel; however, only those models that meet the new Version 2.0 specification will be able to be manufactured and sold by the manufacturer as ENERGY STAR.

Effective dates for the phase-out of range hood models with incandescent lighting and bath/utility fan models with electric resistance heating are included in this section for reference.

- 6) Future Specification Revisions: ENERGY STAR reserves the right to revise the 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.