



September 28, 2001

Dear HVAC Manufacturers and Other Interested Parties:

EPA welcomes your input on the attached *Draft 2* specification for residential air-source heat pumps (ASHP) and central air conditioners. The five-page document outlines the main criteria that manufacturers' products will need to meet to qualify for the ENERGY STAR[®] label. All HVAC manufacturers and other interested parties are encouraged to review the draft specification and provide **comments by October 19, 2001**.

Please note, the document contains two sections. The first, titled "Partner Commitments" is uniform across all ENERGY STAR labeled products and is not subject to change. The second, titled "Eligibility Criteria" is specific to central air conditioners and ASHPs and is the section for which we are requesting review and comment.

All comments should be sent to me via e-mail at schmeltz.rachel@epa.gov. Questions may also be directed to me via e-mail or phone at 202-564-9124.

All stakeholder comments on Draft 1 of the revised specification were reviewed and considered carefully during the development of Draft 2. Based on these comments and suggestions, the latest draft of the specification incorporates the following major additions and revisions.

SUMMARY OF RESPONSES TO COMMENTS AND CHANGES FROM DRAFT 1 TO DRAFT 2:

- EER continues to be a component of this specification.
 - Issues raised that EER is not a certified rating are duly noted, however, ENERGY STAR has always been and will continue to be a self-certifying, self-policing program. The fact that the other HVAC metrics, SEER and HSPF, are certified by the Air Conditioning and Refrigeration Institute (ARI), is a welcome component of ENERGY STAR, however it does not preclude the addition of metrics that are not certified. It is more important to ENERGY STAR that an objective rating methodology currently exists for EER and therefore it would not add an additional burden to participating manufacturers to include this metric in the specification. In fact, EER is one of the conditions in DOE's test procedure used to arrive at the SEER rating.
 - EER is included so that ENERGY STAR goes beyond seasonal energy performance to also address peak load energy performance, an issue that is of increasing importance in light of the energy issues that face our nation.



- The EER levels were chosen based on the high correlation with SEER values as represented in the ARI database of model combinations: 11 EER for 13 SEER and 10.5 EER for 12 SEER. For example, 95 percent of the 13 SEER air conditioner model combinations listed in the ARI database also meet 11 EER. This correlation promises more than adequate product selection with currently available technology.
- Comments were made that EER should not be included in this specification because people do not know that EER is. With ENERGY STAR, they do not have to. All they need to know is that the product is ENERGY STAR labeled. This way energy performance at peak load times can be addressed without having to explain the technical details of SEER vs. EER, etc.
- Draft 2 of the specification distinguishes between split systems and single package units to account for current differences in energy efficiency performance among these two types of central air conditioning and ASHP products.
 - The specification for single package equipment is maintained at its previous level of 12 SEER and 7.6 HSPF. On a national basis, the current market for single package units is a small fraction of the total central air conditioner and ASHP market and the availability of 13 SEER products is very limited. According to the ARI database of model combinations, single package units of 13 SEER account for only four percent of the total number of available products. Therefore, ENERGY STAR has determined that product selection for the higher efficiency product is not adequate enough to warrant a change in the specification at this time.
 - An EER requirement of 10.5 was added to capture the energy performance of single package units at peak loads.
 - Upon review in January 2004 (see Section 6 of Eligibility Criteria), EPA anticipates raising ENERGY STAR levels for single package central air conditioners and ASHPs to 13 SEER with a corresponding 11 EER and 8.0 HSPF.
- Gas/Electric package units (single package units with gas heating and electric air conditioning) are eligible for the ENERGY STAR label provided that they meet the cooling portion of the single package specification (i.e., ≥ 12 SEER and ≥ 10.5 EER).
- Ductless or mini-split systems have been added as a separate category in order to address confusion regarding coverage of these products by ENERGY STAR.
 - Based on conversations with manufacturers of this equipment, it was determined that 12 SEER is the appropriate level for these products at this time. This specification level represents higher efficiency products (no 13 SEER products are currently available).
 - A change in this portion of the specification to 13 SEER/11 EER is anticipated upon review in January of 2004 to bring it in line with other systems with which they directly compete.



- Language was added outlining a specification review and potential revision in January 2004. Most of the issues listed were raised with manufacturers and others during meetings with EPA in June and July of this year.
- Certain data provided to EPA through the comment process (in contrast to the July 2001 publicly available ARI database of model combinations) suggest that current shipments do not reflect a high penetration of higher efficiency (e.g., 13 SEER) products. While EPA is sensitive to the fact that current shipment levels of products that might qualify under the new specification may be low, we believe, based on the totality of information received from stakeholders, that adequate product selection exists to justify going forward with a more aggressive specification in the interest of promoting an increase in shipments.
 - The current ARI database illustrates the adequate availability of these products to consumers by a variety of manufacturers at the higher efficiency levels listed in this draft specification. For example, over 13,000 model combinations of 13 SEER/11 EER split system air conditioners and over 4,500 model combinations of 13 SEER/11 EER/8.0 HSPF split system heat pumps are listed in the ARI database. EPA understands that some of these model combinations represent the same units marketed under different brand names.
 - ENERGY STAR is planning a national promotion in Spring of 2002 to boost sales of high-efficiency products. Questions regarding the planning and implementation of this promotion should be directed to Jill Vohr at vohr.jill@epa.gov.
 - Utilities around the country are offering incentive programs in 2002 to boost sales of high-efficiency products.
- ENERGY STAR agrees that there are cases where higher efficiency central air conditioners and ASHPs are not cost effective for consumers.
 - ENERGY STAR is continuing to work with manufacturers and financing institutions to offer lower interest loans for ENERGY STAR labeled equipment to reduce the payback periods for high-efficiency HVAC products.
 - Utility incentive programs in 2002 and beyond will also help reduce consumer payback periods for high-efficiency HVAC products.
 - Tools currently available through ENERGY STAR, such as the HVAC Investor, are explicit in representing consumer payback periods. These payback periods generally correspond to the ones described by manufacturers and ARI. However, these tools also explicitly represent how these payback periods can be reduced through the use of the financing mechanisms mentioned above.

Separately from the current draft of this specification, EPA would like manufacturer and other stakeholder reaction to the inclusion of an additional metric in future iterations of this specification (i.e., revisions in 2004). The metric, watts per cubic foot per minute (W/cfm), could be a way to



capture component fan efficiency within ENERGY STAR. This issue was brought to our attention too late in the process for incorporation at this time; however, it may be an important one to address in the future.

Thank you in advance for taking the time to review this latest draft specification. It was a pleasure meeting many of you during the summer and at the 2001 ENERGY STAR National HVAC Partner Meeting. I look forward to working with you in the months to come.

Regards,

A handwritten signature in black ink that reads "Rachel Schmeltz". The signature is written in a cursive style with a long, sweeping tail on the final letter.

Rachel Schmeltz
ENERGY STAR Program Manager