



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

October 22, 2020

Dear ENERGY STAR® CAC/HP Brand Owner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is pleased to distribute the [Final Draft Version 6.0 ENERGY STAR® Central Air Conditioner and Heat Pump \(CAC/HP\) specification](#) and the [Final Draft ENERGY STAR Cold Climate Heat Pump Controls Verification Procedure \(CVP\)](#). Stakeholders may submit comments on the final draft to EPA no later than November 19, 2020. EPA plans to finalize this Version 6.0 CAC/HP specification before the end of 2020.

With the Version 6.0 revision, EPA seeks to recognize products that have both excellent efficiency and advanced design features, including those products with connected and installation capabilities as well as cold climate heat pumps. This draft has considered stakeholder feedback and incorporates some changes to ensure that the specification reflects an appropriate subset of the market in 2023. EPA is maintaining the proposed effective date of January 1, 2023 to allow manufacturers time to adjust to the regulatory changes that will occur on that date. However, EPA notes that as for all revisions, products may certify to the new version as soon as it is final. For CAC/HP, EPA has made specific provisions to allow products to certify immediately to the Cold Climate and Connected designations as they are able.

Final Draft Summary

The Final Draft Version 6.0 includes changes from the Draft 2 proposal that are in line with stakeholder feedback. In accordance with stakeholder concerns, EPA revised SEER2 criteria for all categories and the HSPF2 criteria in some cases to allow for a wider range of models to certify and reduce the cost of an ENERGY STAR certified unit. These changes are reflected in the revised Final Draft Version 6.0 ENERGY STAR CAC/HP Data Package, which contains updated savings and payback periods.

EPA continues to see the value in having climate specific criteria for heat pumps, but in line with comments received on both the Draft 2 specification and the CVP, seeks to reduce the burden of certification and clarify when tested data is needed. For currently available units that certify early, the low ambient performance criteria can be met, and the Cold Climate designation earned, through use of application data, and the CVP will not be required until January 1, 2023. Certification via Appendix M metrics will be allowed until twelve months before the specification effective date. As of January 1, 2022, certification must be made with Appendix M1 and the CVP will be required for units to gain the Cold Climate designation. Products that certify early to the Version 6.0 specification shall submit the appropriate metrics per Appendix M1 by January 1, 2023 to remain certified, including the low ambient performance criteria and CVP for Cold Climate heat pumps.

Additionally, EPA has removed the requirement that all products must have staged or variable capacities for the Version 6.0 specification. EPA remains confident there is value in having units

that offer two or more capacities for most installations and will continue to support those programs that are interested in promoting those units. However, the efficiency criteria will provide sufficient exclusivity for the Version 6.0 specification.

No major changes are proposed to the Connected Criteria or the Installation Capabilities, although some adjustments to the language and format of those sections have been made. More details regarding all changes described above are included in note boxes throughout the specification document.

Controls Verification Procedure

The final draft version of the CVP includes changes from the draft that are in line with stakeholder feedback. All references to the DOE Appendix M test procedure have been removed as the final draft specification proposes that the CVP not be required prior to January 1, 2022.

EPA has revised its definition for Native Controls to clarify the literature hierarchy for determining settings, as well as the type of indoor unit thermostat to be paired with the unit under test. EPA is aware of performance differences that may result from variable-speed systems being tested with a thermostat that is not specifically designed for use with that system. For this reason, EPA has specified that a lab-standardized thermostat control is only to be used for single and two-stage equipment. Units that are intended for use with a communicating thermostat shall be tested with the thermostat shipped with the system or that is specified by the manufacturer as the most common application for that unit.

Additionally, EPA has restructured the Test Procedure section of the CVP to more explicitly reference the defrost cycle and to clarify the application of steady-state tolerances vs dynamic equilibrium criteria. The adjustment procedure for units having a variable-speed compressor has been left unchanged, other than to clarify the optional nature of the procedure as an additional step for systems to obtain Energy Star Cold Climate Heat Pump certification.

Comment Submittal Process

Stakeholders may provide written comments for EPA consideration to CAC-ASHP@energystar.gov by November 19, 2020. All comments will be posted to the [ENERGY STAR CAC-ASHP Product Development](https://www.energystar.gov/products/energy_star_cac_ashp_product_development) website unless the submitter requests otherwise.

Please direct any specific questions to Abigail Daken, EPA, at daken.abigail@epa.gov or (202) 343-9375, and Julia Hegarty, ICF, at julia.hegarty@icf.com or (202) 862-1163. For test procedure inquiries, please contact Catherine Rivest, U.S. Department of Energy, at Catherine.Rivest@ee.doe.gov or 202-586-7335. Thank you for taking the time to review these Final Draft documents. I look forward to continuing working with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Abigail Daken". The signature is fluid and cursive, with the first name being more prominent than the last.

Abigail Daken, Product Manager
ENERGY STAR for HVAC

Enclosures:

[Final Draft Version 6.0 ENERGY STAR CAC-HP Specification](#)

[Final Draft Version 6.0 ENERGY STAR CAC-HP Data Package](#)

[Final Draft Controls Verification Procedure](#)

[Draft 2 Version 6.0 and CVP ENERGY STAR CAC-HP Comment Response Matrix](#)