

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



OFFICE OF
AIR AND RADIATION

October 29, 2009

Dear ENERGY STAR[®] Programmable Thermostat Stakeholder:

Some time ago, the Environmental Protection Agency (EPA) informed stakeholders of its intention to sunset the ENERGY STAR programmable thermostat program on December 31, 2009 due to widespread concerns regarding real savings being realized by ENERGY STAR qualified products. EPA has also articulated that the Agency believes that key concerns with the current program could be overcome if ENERGY STAR programmable thermostats (1) deliver the most energy savings, (2) are the best communicators, (3) are the easiest to use; and (4) satisfy consumer demand for electronic products manufactured with reduced toxic substances.

With the above in mind, EPA has worked with stakeholders to create the enclosed Draft 1 Version 2.0 Programmable Thermostat Specification for your review. EPA sees these Tier 1 requirements as a key step to fully realize the energy-saving potential of programmable thermostats. EPA believes that further enhancements to usability and communication capabilities are needed and achievable in the near future. As such, EPA is also working with the U.S. Department of Energy and other groups to develop metrics or benchmarks that will allow more refined comparison of products' usability. EPA sees this approach as a critical component for Tier 2 requirements. EPA welcomes stakeholder engagement in the benchmark and ENERGY STAR Tier 2 development process over the coming year.

EPA is aware of some thermostats that have all of the features proposed in the enclosed Draft 1 Version 2.0 specification and many others that have some of these features. EPA believes that these features are an essential stepping stone toward achieving the full energy-savings potential of programmable thermostats. EPA welcomes stakeholder feedback and **will consider all comments and data received on this specification by November 27, 2009. Please direct comments to Christina Chang, ICF International, at cchang@icfi.com.**

This Draft 1 specification includes the following important updates and modifications:

- Modified program requirements to target thermostat products capable of controlling the latest and most efficient multi-stage HVAC equipment. Proposed requirements include (1) default weekly program schedules; (2) compatibility with heat pump and 3-stage heat / 2-stage cool systems; (3) support for external temperature sensors and dual fuel heat pump systems; and (4) capability to be field-upgraded to be a programmable communicating thermostat (PCT) with the addition of a Home Area Network (HAN) communication module.
- New ease of use and installation requirements to help customers achieve maximum savings and encourage future user interface design innovation. EPA is proposing

minimum usability requirements to ensure a more intuitive interface for consumers of ENERGY STAR qualified thermostats. EPA has also proposed documentation requirements to ensure that installation and user documentation materials are easily accessible to users.

- New communication requirements to promote the adoption of thermostats that can interface with energy management systems.
- New technical requirements to ensure maximum efficiency of controlled HVAC systems, including: (1) a maximum cycle rate of 5 per hour; (2) capability to interface with an outdoor temperature sensor; (3) humidity control; (4) maximum power consumption limits in various operational modes; and (5) lead-free and mercury-RoHS compliance.
- Clarified definitions for programmable thermostats (to include PCT and HAN) and recovery systems.
- Proposed new definitions for line voltage and low voltage thermostats, home energy management systems, auxiliary heat, conventional HVAC, heat pumps, and dual fuel heat pumps.
- Proposed Tier 1 and Tier 2 effective dates of December 31, 2009 and July 1, 2011, respectively. Recognizing the very short time period between now and December 31, EPA seeks feedback on the benefit of the very near term implementation of the proposed Tier 1 requirements versus sunsetting the program on December 31, 2009 and allowing more time to transition to new requirements.

EPA invites stakeholders to participate in a Webinar to discuss this Draft 1 Version 2.0 specification on November 18, 2009, from 12 PM to 2 PM Eastern Time. Webinar details will follow this distribution.

Stakeholder participation is critical to the development of a meaningful programmable thermostat specification and to the overall success of ENERGY STAR. As such, we welcome your input and encourage you to periodically visit the ENERGY STAR Web site at www.energystar.gov/revisedspecs for important updates.

Please also feel free to contact me directly at (202) 343-9120 or kaplan.katharine@epa.gov or Christina Chang at (202) 862-1206 or cchang@icfi.com with any questions or comments.

Sincerely,



Katharine Kaplan, Acting Branch Chief
ENERGY STAR Product Labeling