



Mysa Smart Thermostats
34 Harvey Road, Suite 402
St. John's, NL, Canada
A1C 2G1

August 19, 2022

Attn: Abigail Daken

Company: United States Environmental Protection Agency

Re: ENERGY STAR Smart Thermostat Products Method to Demonstrate Field Savings Draft 1 Version 2.0 and Method to Demonstrate Field Savings Draft 1 Version 2.0

Ms. Daken,

This letter comprises the comments of Mysa Smart Thermostats in response to the United States Environmental Protection Agency (U.S. EPA) request for comments on the Program Requirements Product Specification for Smart Thermostat Products Eligibility Criteria Draft 1 Version 2.0 and the Method to Demonstrate Field Savings Draft 1 Version 2.0. Mysa appreciates the opportunity to work with EPA and provide feedback on these standard drafts.

Mysa Smart Thermostats was founded to fight climate change through energy efficiency and conservation. We understand the potential of energy efficiency to reduce both customer consumption costs, and greenhouse gas emissions. Line-voltage heating consumes a high amount of electricity, and therefore optimizing the control of this heating offers significant energy savings potential. This is why Mysa has been advocating for line-voltage heating to be included in the ENERGY STAR Smart Thermostat standards.

The first section of comments below are in reference to ENERGY STAR Program Requirements Product Specification for Smart Thermostat Products Eligibility Criteria Draft 1 Version 2.0.

- 1) Mysa had noted that ENERGY STAR has modified the majority of the new draft to allow for line-voltage thermostats that control heating loads only. However, there are still several references that require the thermostat to control both heating and cooling. Mysa recommends that the following lines are updated as follows.
 - All members of a product family shall share one score on the field savings metrics for heating and/or cooling. (Line 78-79)

- switch between off, heating and/or cooling. (Line 116)
- 2) Mysa wishes to confirm that when defining “heating stage”, line-voltage thermostats would be considered a “single stage”. If so, Mysa recommends additional clarification be added to include line voltage thermostats. If not, Mysa recommends the addition of a “none” option. (Line 144)
- 3) Mysa notes that the standby power consumption in Table 1 has been changed from 3W in Version 1.0 to 1W in Version 2.0 (Line 120). Mysa recommends that the standby power value stays at 3W. The main contributors to standby power are the WiFi radio and screen. Mysa predicts that several vendors will struggle to meet a 1W standby requirement. Line 123-124 outlines that for Zigbee devices that require a hub, the combined standby power consumption of the thermostat and hub must still be 1W. In addition, the device energy consumption is a small fraction of the total electrical load under control, especially for line-voltage thermostats. Mysa suggests that technical effort should be focused on strategies that offer the potential to make substantial energy savings gains versus optimizing the small power levels consumed by the device itself.
- 4) Table 3 references further clarification in section 4) H for line-voltage thermostat products. However, there is no section 4) H. Mysa recommends that this reference be removed or that this section be added (Line 297).

The second section of comments are in reference to ENERGY STAR Program Requirements Product Specification for Smart Thermostat Products Method to Demonstrate Field Savings Draft 1 Version 2.0.

- 5) Similar to comment 2 outlined above. Mysa would like to confirm that line voltage thermostats are considered a “single stage” for heat_stage. If so, Mysa recommends additional clarification be added to include line-voltage thermostats. If not, Mysa recommends the addition of a “none” option. (Line 50-58)
- 6) Mysa suggests the addition of a “none” option for cooling_stage, as line-voltage thermostats do not control cooling. (Line 65-72)
- 7) Mysa recommends that EPA clarify if there can be more than one thermostat included per home. (Line 116-120)

In conclusion, Mysa appreciates the U.S. EPA’s efforts to update the ENERGY STAR Smart Thermostat standard. We thank the U.S. EPA for the opportunity to be involved in this process. We also encourage the U.S. EPA to consider the recommendations outlined in this letter. We look forward to continuing working together, and reviewing the next drafts of these standards.

Sincerely,

A handwritten signature in black ink that reads "Natasha Reid". The signature is written in a cursive, flowing style.

Natasha Reid

Product Manager, Utility Initiatives, Empowered Homes Inc.