



## **Ecobee Inc comments to Draft 1 version 1.0 of the EnergyStar Program Requirements for Residential Climate Controls**

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The following are comments in regards to Draft 1 of the EnergyStar requirement for Residential Climate Controls. Each comment references the line number and representative text of the document itself.

**Line #470-Setting of time and date.** Although I believe I understand the intent of this requirement the language makes it such that it would be impossible to comply. Under any scenario some user input would be required to make the connection to any external source for time synchronization. Also if there is no connection to a synchronized source, user input would be required to first establish the correct time. Otherwise it would be impractical for a manufacturer to preprogram the correct time for all customers throughout Canada and US prior to delivery of the product to the end user. Unless it is implied, that a contractor/installer would be the one making these connections and this limitation does not apply to them.

**Recommendation:** Modify the requirement such that no user inputs is required to maintain the time, however some user input should be allowed to set the time and date.

**Line # 539 Single Button Push to change set point** – Is the requirement for a “single button push” literal or representative. In the case of ecobee temperature can be adjusted by sliding movement (similar to a traditional slider/dial thermostat)? If not we suggest the wording be changed to “single action”

**Line # 549 Colour coded LEDs** – Does displaying the actually text in lieu of LED qualify as an equivalent implementation? It’s arguable that plain English text

(i.e. On peak, off peak) is far more intuitive than colored LED. If text is not allowed, this requirement should be expanded to broaden the methods to alert consumers of pricing level.

**Line #563: Minimum display size.** With regards to the minimum font size, we recommend a minimum of 5mm for both primary and secondary characters on QVGA or better technology. 5mm represents a font size of 14pt which is larger than any standard publication within North America. Arguably this is a reasonable reference point for overall readability.

**Line 604: Power Consumption.** Specifying a maximum that does not include the full functionality of the product (i.e. communicating devices) is misleading to installers and to consumers. EPA only has to look toward the LG/ Refrigerator issue brought to light by Consumer Reports back in October 2008 (<http://www.consumerreports.org/cro/home-garden/resource-center/energy-star-has-lost-some-luster/overview/energy-star-ov.htm>). This type of fine print rating under minds the credibility of this process.

It is suggested again that the requirement be for manufactures to list the typical and maximum power consumption of their products. These rating can then be audited as part of the verification/ validation process.

Furthermore as products are submitted for testing, future revisions of this standard can include ratings that represent best practices based on previously approved product.

**Line 652: Recorded data:** With regards to the recommended interval of recording data every 60 seconds and transmitted every 5 minutes is excessive. This represents a large amount of data per thermostat that needs to be stored. Multiply that by how long the data is expected to be stored (i.e. 1 month, 1 year, the life of the product?) as well as the thousands of thermostats sold will represent a huge burden in terms of data storage.

**Recommendation:** Change requirement to a minimum of 5 minute intervals of data, transmitted every 30 minutes. Also this detailed data should be available for a maximum of 1 year per thermostat after which the data can be aggregated to some larger interval (i.e. daily averages)

Lastly one point we wish EPA to clarify and/or consider, specifically in terms of usability, is if this standard applies to the overall solution (i.e. thermostat, web interface, mobile device) as a whole system or for each component individually. And if individually how do you plan to handle scenarios where one component meets the requirements, but the other does not? We recommend that a system level approach be taken and if one component meet the requirement, then the system as a whole meets the requirements.