



January 24, 2012

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-BSTD-01
1515 Ninth Street
Sacramento, CA 95814-5512
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DOCKET	
10-BSTD-01	
DATE	Jan 24 2012
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Subject: Building Energy Efficiency Standards
Docket No. 10-BSTD-01

These comments pertain to proposed changes to Section 110.2 – Mandatory Requirements for Space Conditioning Equipment, Subsection (c) – Thermostats.

Our primary objection to the proposed standard is the language contained in paragraph 2, which states “*USTs shall not include onboard communication devices and shall have at least one expansion port which will allow for the installation of a removable module containing a radio or physical connection port to enable communication.*” (emphasis added) This language is confusing and if taken literally is in opposition to current trends in thermostat communications.

Assuming the underlined word above is not a typo, the primary basis of our objection is that there are many thermostats for which having web connectivity is “on board” and is fundamental to their functionality. A short list of manufacturers producing web-enabled thermostats and controls includes:

Johnson Controls	Nest Labs
Trane	Ecobee
Schneider Electric	Proliphix
3M/Filtrete	ControlbyWeb

These products allow adjustment of thermostats remotely using smart phones or computers. This feature in itself has energy-saving potential. These products would also meet the requirement by providing WiFi (IEEE 802.11) capability without the need for the required expansion port.

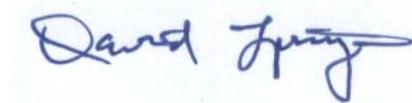
Our personal interest in this matter relates to the ventilation cooling system we developed with PIER funding support between 1998 and 2004. After many years of effort, ventilation cooling, including the NightBreeze system we developed, will be given credit under the proposed 2013 standards. Due to the very low volume of sales precipitated by the housing crisis, it will be a significant hardship to upgrade our controls to meet the requirements of the proposed standard.

A key element of the NightBreeze system is its ability to forecast how much pre-cooling will be needed the next day so as to eliminate excessive fan energy use. The control currently uses local temperature measurements and predictive algorithms, but we have plans to include providing for polling of web sites to obtain weather data to improve the accuracy of predictions. We are looking at similar forecasting control strategies that provide demand response under DOE Building America projects.

Title 24 language should not specify what demand reduction strategy should be applied by the UST, for example raising or lowering the setpoint by 4°, as this would prohibit other innovative, potentially more successful DR strategies. Pre-cooling is an alternative to raising thermostat setpoints during peak demand occurrences that would be much better received by the public. We evaluated this strategy with SMUD several years ago. Whether pre-cooling is accomplished using nighttime ventilation or vapor compression cooling during morning hours, it is effective and can save energy as well as reduce demand.

Thank you for the opportunity to submit comments.

Sincerely,

A handwritten signature in blue ink that reads "David Springer". The signature is fluid and cursive, with a long horizontal stroke at the end.

David Springer
President