

Energy - Docket Optical System

From: Stanonik, Frank [FStanonik@ahrinet.org]
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Subject: 14-BSTD-01 Comments for July 21. 2014 Staff Workshop

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California Energy Commission

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To Whom It May Concern,

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association representing manufacturers of air conditioning, space heating, water heating and commercial refrigeration equipment. AHRI's 320 member companies include all the major manufacturers of residential and commercial water heaters doing business in the U.S. We have the following comments regarding the draft proposed revision to the Title 24 Building Energy Efficiency Standards concerning residential instantaneous water heaters and associated draft CASE report.

As currently drafted this proposal is preempted by Federal efficiency regulations and unenforceable. The inclusion of text that suggests that additional provisions will be developed to provide an option that does not require the installation of a instantaneous water heater is inadequate and renders this proposal incomplete. As such, it is inappropriate to ask stakeholders to invest their time in this draft proposal. It must first be established that the issue of Federal preemption can be clearly and properly resolved before this proposal can be considered.

We have the following concerns regarding the CASE report.

The cost of instantaneous water heaters (IWH) is underestimated. Information developed for the Super Efficient Gas Water heating Appliance Initiative (SEGWHAI) project, sponsored by the CEC, showed that the average installed cost of a residential gas water heater in California was \$1400 more than the installed cost of a gas storage water heater.

The baseline gas water heater should be a 40 gallon model with an Energy Factor of .62.

The adjustment that is specified in the Alternative Compliance Manuals to lower the IWH's energy factor by 8.8% is based on a study which showed that the unit operated less efficiently in the field due to the number of draws and time between draws. The CASE study includes an 8% decrease in the efficiency of the IWH on the premise that homes with such water heaters use more hot water. These are two distinct phenomenon which in the analysis should be addressed as additive reductions in the efficiency of the IWH.

The total daily hot water use is increased by a distribution loss multiplier. Yet the Title 24 standards include several water distribution system requirements that reduce distribution losses. Furthermore, applying that factor is appropriate only if the daily hot water usage is measured at the various points of use. To our knowledge, that is not the case for most field studies that measured residential hot water usage.

The aforementioned SEGWHAI report noted that the average gas water heater consumption for the major gas utilities in California ranged from about 180 to 220 therms per year with the state average being 201 therms. That is just under 17 therms per month.

Considering all these factors together we believe the cost /benefit analysis has underestimated the cost increase of installed IWHs and overestimated the resultant energy savings.

Sincerely,
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