



GAMA-An Association of Appliance & Equipment Manufacturers

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Product Divisions and Groups

Burner
Controls
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Tubing
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Heater
Direct Heating
Food Service
Equipment
Fuel Cell
Furnace
Gas Air
Conditioning
Gas Appliance
Connector
Gas Detector
Gas Equipment
& Service
Gas Venting
Products
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Hydronics
Institute
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Motor & Blower
Power
Generation
Relief Valve
Vent Free Gas
Products
Water Heater

June 29, 2007

Mr. Chris Gekas
California Energy Commission
1516 Ninth Street, MS 25
Sacramento, CA 95814-5512

Dear Mr. Gekas:

Re: 2008 Building Energy Efficiency Standards Comments

The Gas Appliance Manufacturers Association (GAMA) is pleased to provide the following comments on materials presented at or related to the June 13, 2007 and June 15, 2007 California Energy Commission (CEC) Staff Workshops on the 2008 Building Energy Efficiency Standards.

Water Heating Calculation Method

We object to the proposed RE 4.2 and proposed equation RE 25. The essence of this proposal is that the calculation for hourly energy use of a gas instantaneous (i.e. tankless) water heater in the ACM should be modified to incorporate an "Adjusted Energy Factor" which effectively lowers the efficiency of this equipment and increases the estimated energy use. Last July we submitted comments documenting the shortcomings of the report cited as the basis for this proposal. Nothing has occurred since then to change that situation. The fact remains that the supporting information and data provided is minimal and technically inconclusive to legitimately justify this proposal. While this work may have raised some interesting questions, field data on one unit in a two person household and some limited laboratory testing on a second unit is in no way sufficient to support any conclusions or justify any change to the ACM calculations at this time.

Furthermore, there are several designs of tankless gas water heaters currently available in the U.S. market. Models are offered with input ratings from 50,000 Btu/h to 200,000 Btu/h. No information has been provided to validate that the proposed adjustment factor universally applies to all these models. The Commission should not be considering this proposal until more work is done to develop data on how the different designs and different input models responded to changes in the hot water draws. Additional research is needed to study the hot water usage pattern in households that have tankless gas water heaters.

We had previously noted that the template for this proposal referenced a 1987 study conducted by the National Bureau of Standards (known today as the National Institute for Standards and Technology). That study does not show significant change in the Energy

Factor based on different gallons per minute (GPM) flow rates. No explanation has been provided as to why the Commission is ignoring this study. We believe that this NBS study is as least as valid as the study on which the CEC is basing this proposal.

The proposed equation continues the error of separately adding the input of the pilot where the unit is equipped with a continuously burning pilot. This is unnecessary. The gas consumption of the pilot is already factored into the determination of the Energy Factor. Consequently the Energy Factor of a residential gas instantaneous water heater with a pilot will be lower than a model with an electronic ignition system. Adding a separate, default pilot energy consumption value double counts that consumption.

In conjunction with this, the specification that the hot water delivery temperature is 135F must be reevaluated for all residential water heaters, whether a storage or instantaneous type. This appendix on Water Heater Calculation Method includes a number of adjustments to reflect conditions in California. To consistently apply this principle, the hot water delivery temperature should also be changed to reflect field conditions in California. The 135 F value is the nominal test temperature specified in the U.S. Department of Energy efficiency test procedures for residential water heaters. It is not necessarily the thermostat setting or delivery temperature of residential water heaters in the field. The recommended thermostat setting for residential storage water heaters is 120 F. Even if the thermostat is adjusted to the next higher setting, that represents a 130 F setting for most storage water heaters. This appendix specifically notes the different incoming water temperatures throughout the state based on ground water temperatures. Equal attention should be given to the average hot water delivery temperature of residential water heaters in the state.

Leaky Air Handlers

There is some confusion regarding the use of the term "air handler". We must point out that while most furnaces may perform the function of an "air handler", furnaces are not "air handlers". We request that CEC clearly identify the product which they intend to cover with this requirement, and not introduce new terms (or names) for existing products. To the extent that this requirement would apply to furnaces, we object to the proposal to reference the test specification defined in the Florida code as the appropriate method to test leakage in air handlers. Specifically, we are concerned that the Florida test definition is ambiguous and does not provide a consistent and repeatable method to assess leakage of air handlers. We must also point out that the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has formed a special project (SP) committee to develop a standard for determining the air leakage rate of HVAC equipment. This committee began its work this week in Long beach, California. We strongly urge you to delay the implementation of the air handler leakage requirement until the ASHRAE test method is developed.

Fan Watt Draw and Airflow

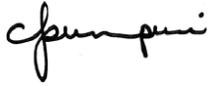
We support establishing air flow requirements. However, we believe the requirement should be achieved by proper duct and air filter system design, and static pressure measurement. Also, while we support static pressure measurement, we believe the

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installation of permanent static pressure probes should be considered part of the proper installation of the equipment, but should not be expected to be part of the equipment.

Please feel free to contact me if you have any questions regarding these comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gloria Pumpuni', written in a cursive style.

Gloria Pumpuni
Director, Technical Services and Regulatory Affairs