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California Energy Commission
Dockets Office
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Subject: Raypak Inc. Comments on Proposed 2013 Building Energy Efficiency Standards - Docket No. 12-BSTD-1

To Whom It May Concern,

Raypak Inc. is a wholly owned subsidiary of the Rheem Manufacturing Company. We are located in Oxnard, CA and we are manufacturers of boilers, water heaters and pool heaters. Please accept the following comments on the proposed 2013 Building Energy Efficiency standards, Title 24, Part 6.

On page 53 of the proposed standard, a definition for "HI" is provided as "the Hydronics Institute of the Gas Appliance Manufacturers Association (GAMA)". Please note that GAMA is no longer an existing/legal mark. The definition should be updated to reflect that "HI – the Hydronics Institute section of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI)."

On page 104 under Table 110.2-K, there are several discrepancies from the noted references of DOE 10 CFR Part 430 and 10 CFR Part 431 as noted below:

- Boiler, hot water, Gas-fired, <300,000 Btu/h – noted as 80% AFUE – should be 82% AFUE per DOE 10 CFR Part 430 which becomes effective 9/1/2012.
- Boiler, hot water, Gas-fired, ≥2,500,000 Btu/h – noted as 82 Thermal Efficiency – should be 82% Combustion Efficiency as noted in DOE 10 CFR Part 431 – Subpart E – Section 431.87
- Boiler, hot water, Oil-fired, <300,000 Btu/h – noted as 80% AFUE – should be 84% AFUE as noted in DOE 10 CFR Part 430 which becomes effective 9/1/2012.
- Boiler, hot water, Oil-fired, ≥300,000 Btu/h <2,500,000 Btu/h – noted as 80% Thermal Efficiency – should be 82% Thermal Efficiency as noted in DOE 10 CFR Part 431 – Subpart E – Section 431.87
- Boiler, hot water, Oil-fired, ≥2,500,000 Btu/h – noted as 84 Thermal Efficiency – should be 84% Combustion Efficiency as noted in DOE 10 CFR Part 431 – Subpart E – Section 431.87
- Boiler, steam, Gas-fired, <300,000 Btu/h – noted as 75% AFUE – should be 80% AFUE as noted in DOE 10 CFR Part 430 which becomes effective 9/1/2012.
- Boiler, steam, Oil-fired, <300,000 Btu/h – noted as 80% AFUE – should be 82% AFUE as noted in DOE 10 CFR Part 430 which becomes effective 9/1/2012.

On page 159 under Section 120.9 - Mandatory Requirements for Commercial Boilers, the requirement of combustion air positive shut-off means on boilers in 120.9(a) equipped with combustion air blowers or induced draft fans will not result in any reduction in energy. Requiring this on Atmospheric boilers MAY provide some slight energy savings by eliminating heated air from

around the boiler from going up the vent stack of an unfired boiler. Also the requirement for this combustion air positive shut-off on all boilers where one stack serves 2 or more boilers will yield no energy savings on boilers equipped with combustion air blowers or induced draft fans. Again, there might be some energy savings on Atmospheric boilers. We would recommend that this requirement be limited to Natural Draft, Atmospheric boilers – if maintained at all. Even Atmospheric boilers can be equipped with draft inducers to help overcome the back pressure of long vents and any energy reduction would be eliminated in such applications.

On Item 120.9(c), an exception is provided for boilers with steady-state full-load thermal efficiencies of 85% or higher. Since the requirements for efficiencies for boilers with inputs >2,500,000 Btu/h in Table 110.2-K have values based on BOTH Combustion Efficiency and Thermal Efficiency (depending on the type of product), we believe that this exemption should be based on 85% Combustion Efficiency where combustion efficiency is the descriptor used in Table 110.2-K and 85% Thermal Efficiency where thermal efficiency is the descriptor used in Table 110.2-K to be consistent.

Respectfully submitted,

Raypak, Inc.

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