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December 19, 2007

TO: Docket #07-BSTD-1, 2008 Building Energy Efficiency Standards

RE: Maximum Cooling Capacity (MCC) and related HVAC credits

Both the California Energy Commission (CEC) and the California Building Industry Association (CBIA) want to have properly sized HVAC equipment specified and installed. Under the 2005 Standards, however, there was a discrepancy between what the CEC and the market defined as “right sizing.” CBIA has been working with the CEC to review and revise the MCC credit in order to further promote proper sizing under the 2008 Standards. This has included revisions to the MCC calculations to better align with industry-acceptable methodologies and to ensure workable HVAC credits

CBIA, working with ConSol, has evaluated the proposed changes to the MCC calculations. This preliminary analysis has shown that equipment sized to the proposed 2008 MCC language should also be acceptable to the residential building industry. CBIA appreciates the changes made by the CEC. This will allow the industry to receive credit for properly sized systems, promoting the use of efficient construction practices.

According to the Appendix RA2.2 of the 45-Day Language, taking the MCC credit will now require the use of Adequate Airflow (now called Evaporator Fan Flow), Duct Sealing, Improved Refrigerant Charge and EER Verification credits. The duct sealing and EER credits are very common credits to take under the 2005 Standards and will continue to be so under the 2008 Standards.

The various Adequate Airflow methods were jointly reviewed. Currently the Flow Hood method is the most feasible method to use in the field; however, it has been shown to be the least reliable. Therefore the CEC proposed a change to the Pressure Matching method that would allow verification using a “duct blaster” hooked up to the return plenum and a pressure probe in the supply plenum. A survey of HVAC installers shows that they would be willing to provide access holes in the supply plenum, through which third party inspectors could use to take the required measurements. CBIA believes that the revised Pressure Matching approach should now provide a workable, reliable method for the Adequate Airflow credit.

Currently, the Improved Refrigerant Charge credit can be substituted for the TXV verification credit. However, the TXV credit is being removed from the 2008 Standards and replaced by a Charge Indicator Light (CIL) credit. The Refrigerant Charge credit isn't being utilized because it currently requires the HERS rater to

tap into the HVAC coolant system, which represents unacceptable liability. The CEC has provided a revision that would allow saturation temperature measurements to take the place of pressure measurements. Unfortunately, while it is a good idea, it has not been satisfactorily shown who would be willing to install the necessary permanent temperature sensors. Similarly, the industry will be relying on manufacturers to provide equipment pre-installed with the CIL systems. Questions as to whether or not the manufacturers would be ready, willing and able to provide the industry with such systems and at what cost have not been answered. Therefore both options for this Improved Refrigerant Charge credit represent new, unproven techniques. CBIA formally requests that this requirement be removed as a prerequisite for the MCC credit. However, these credits should still be offered as stand-alone measures. CBIA also suggests that, in order to promote the development and installation of CILs, the CEC should increase the credit received for utilizing this energy efficiency measure.

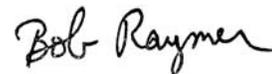
CBIA appreciates the time and effort that the CEC has put towards revising Maximum Cooling Capacity and its related credits. Residential air conditioning represents the largest contributor to peak load in California. Having workable Standards that encourage proper HVAC design and installation to reduce peak load is mutual goal of the CEC and CBIA. If these final HVAC changes are implemented, the MCC and CIL credits will improve the installation of properly sized and functioning HVAC equipment under the 2008 Standards.

On a related issue to HVAC systems CBIA opposes the request to change the default EER value from 10 to 11, as suggested by PG&E's consultant at the 45-Day Language workshop on December 17, 2007.

Sincerely,



Michael G. Hodgson
Chair, CBIA Energy Committee
CBIA



Robert E. Raymer
Technical Director,

cc: Jackalyne Pfannenstiel, Chair and Presiding Member, CEC
Arthur H. Rosenfeld, Commissioner and Associate Member, CEC
Bill Pennington, Buildings and Appliances Office, CEC
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