

November 4, 2004

Rachel Schmeltz

Energy Star Product Manager

Washington, D.C. 20460

Re: Draft document options for a new Energy Star specification for residential air source heat pump and central air-conditioners.

Dear Mrs. Schmeltz:

My name is Gary Heederik, President Energy Doctor, Inc. located in Lodi California. Energy Doctor is a residential energy efficient home improvement specialist specializing in the retrofit home improvement market. I was asked to respond to your meeting by Eric Taylor President of Enalasy Corporation.

Energy Doctor has been an advocate of performance verification for a number of years and is currently using the Honeywell Enalasy E-scan technology in my business to accurately identify issues with the HVAC system for my customers. My customers consist of homeowner's and am currently under contract with the Lodi Electric Utility (LEU, a California municipality) to provide House as a System home inspections (HAS) to there residential customers. The HAS inspection program is designed to accurately identify improvement opportunities specific to each home and provide the homeowner with the direction they need to make an educated decision on what improvements and the order they should be addressed based on their needs or concerns.

When we started our inspection program in 2003 using the Enalasy E-scan equipment we had no idea the magnitude of the problem we would uncover. We have tested about 450 homes in the past 15 months and found 80 + percent fail to meet design airflow by an average of 300 CFM, many well over that. When we confronted the HVAC contractors about this, they were not surprised and honestly admitted, that they knew airflow was not correct but no one was looking so there was no need to fix it. Consequently I recommended that the LEU suspend all rebates for high efficient equipment until we could get a handle on the airflow issue. It would be safe to assume that if the airflow is so grossly off that the charge would also be off.

Consequently, I strongly approve of any effort to improve the installation of HVAC systems, and the ability to performance verify those installations. Further more, having advanced self-

diagnostics that let either the customer or the installing contractor know its time for service or there is a problem would also be highly attractive to the consumer as well as the contractor.

In regards to leakage, It is my opinion that we have been missing the mark by addressing leakage and high efficiency equipment as stand alone items. Many utilities and municipalities like LEU have had tight duct programs along with high efficiency rebates. However, now that we are addressing the systems airflow and have tested homes that went through our Tight Duct Program, we have found systems with tight ducts and very bad airflow and incorrect coolant charge to boot. What have we really accomplished by tightening up the duct systems and or installing high efficiency systems? Of course we don't want systems installed with leaky air delivery & return systems for obvious reasons, but unless the system as a **whole** is addressed (charge, airflow, leakage & efficiency) we most likely will fall short of any projected savings and or performance calculations.

As for field labeling of HVAC systems, I have personal experience with some contractors installing 12 SEER stickers on equipment that was 10 SEER rated. I think the ratings verification should come from the factory with a section or sign off that the installing technician completes and affixes to the equipment upon performance verification by the Verification Service Provider.

I could go on and on but will stop here. I would have liked to had attended this meeting, but thank you for the opportunity to present my response and opinion on these matters. I am available should you have any questions. I can be reached at (209) 369-3916 office or 209-747-1897 cell.

Sincerely:

Gary Heederik
President, Energy Doctor, Inc.