

June 22, 2005

Rachel Schmeltz  
Energy Star Product Manager

Dear Rachel:

Thank you for the opportunity to provide comments on the DRAFT 2 specification for *ENERGY STAR*<sup>®</sup> qualified Residential Air-Source Heat Pumps and Central Air Conditioners.

Enalays is an information and verification services provider enabling HVAC contractors, HVAC Equipment Manufacturers, Insurance Companies, Electric Utilities, Builders, and local and State Governments with leading, state of the art, accurate instrumentation and remote data collecting technologies and procedures. We provide comprehensive training and certification of HVAC technicians who use our equipment to do a comprehensive “test-in” to analyze the performance of HVAC equipment and the distribution system. This is accomplished by the technician deploying a number of wireless sensors to measure all of the necessary indices required to measure the performance of the HVAC system. A laptop computer receives, processes, and stores the data. It provides graphs showing the real-time performance of the system, as well as providing recommended corrections/adjustments to optimize the performance of the HVAC system. This provides a rapid (on the site) feedback learning process to the technicians as they perform the necessary remediation to correct discovered deficiencies in the HVAC system. Once the deficiencies have been corrected, the technicians do a “test-out” to verify optimized performance of the HVAC system, as well as quantifying the improvement of the system. Upon returning to their office, the technicians upload this data from each job to a central database which provides this information to the “sponsoring entity” which could be a utility, builder, or local, state or federal agency.

We currently have over 450 Honeywell Enalays Alliance members (HVAC contracting firms) nationwide and have either been involved or are involved in over 25 utility and state projects including currently Pacific Gas & Electric’s CPUC funded charge and airflow program.

We are also in the approval process at the California Energy Commission for becoming a *Third Party Quality Control* Program (in conjunction with a HERS Provider) that will serve the function of HERS raters for field verification purposes of the California’s Building Energy Efficiency Standards Title 24 measures that require field verification and diagnostic testing. These measures include Duct Measures (Duct Sealing and Supply Duct Location, Surface Area and R-Factor); Air Conditioner Measures (Improved Refrigerant Charge, Installation of TXV, Adequate Air Flow, Air Handler Fan Watt Draw, High Energy Efficiency Ratio, and Maximum Cooling Capacity); and Building Envelope Measures (Building Envelope Sealing, and High Quality Insulation Installation.)

Here are our comments:

### Field Verification of Proper Installations

We are sorry to see that you have decided to delay the implementation of proper installation specification until January 1, 2007. However, this delay may allow you additional time to gather information and results on the implementation of the installation requirements and field verification of California's Title 24 Building Energy Efficiency Standards.

*Please note that the California Energy Commission is the first state agency in the country to address the cause of some of the most important energy related (efficiency and peak demand) issues the country faces today! The improper installation of forced air systems. This is a very important initiative that will go into effect October 1<sup>st</sup> of 2005 in the State of California that will solve and break through many of the market barriers of concern expressed by some of the industry respondents of draft one.*

Additional information and results may also be available from many other similar programs be conducted by Utilities and other sponsoring entities throughout the nation. Furthermore there is an active growing market, beyond Title 24 Building Standards, being developed in the state of California to offer verification services.

We would ask you again to please consider adding language for your installation guidelines for another option:

*EPA will allow certified contractors who are trained to use Energy Star Approved and Registered diagnostic methodologies and data collection processes to do test in and test outs that use an electronically collected and analyzed process.*

The consequence of this option will provide a system that effectively minimizes or eliminates the probability of "gaming" the system.

We feel that there is a significant and major advantage in using this type of electronic data acquisition in that it completely removes the large expenditure and logistical coordination of independent 3<sup>rd</sup> party of checking systems. This is one of the largest barriers being experienced in the field verification processes today.

The use of electronic data acquisition will help the rapid adoption nationally of the use of diagnostic testing systems in the HVAC industry. The use of these types of systems that process verifications economically also allow for 100% tested verification. This process also provides additional value to the HVAC contractors business with rapid data collection and immediate feed-back as they make tuning adjustments. This continuous feed back loop will improve the skill and knowledge level of the technician. We feel that the use of electronic data acquisition and feed-back process will result in a sustainable technology transformation in the HVAC repair and installation industry.

The above option can be augmented for additional auditing processes by requiring a random selection of 30 tested systems by the verification service provider. Contractors caught seeking to game the system and/or providing fraudulent results can be red-flag for decertification by the verification service provider.

By including the electronically collected and analyzed process option, as described above, you will help create a market in which HVAC contractors, HVAC manufactures, builders, and utilities will have a choice to choose a Verification Service Provider that will not infringe upon their core business while also allowing them to provide an important value added service to their customers.

#### HVAC Equipment Manufacturer's Additional Disclaimer

We support the required disclaimer statement from the manufacturer of CAC/ASHP equipment using the ENERGY STAR certification mark.

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