



November 11, 2004

Ms. Rachel Schemltz
ENERGY STAR Product Manager
Environmental Protection Agency
Ariel Rios Building. SW, MS 6202J
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Schmeltz:

Xcel Energy appreciates the opportunity to provide input on options or revising the ENERGY STAR Central Air Conditioner and Air Source Heat Pump Specification. We also look forward to commenting on any revised draft proposal

We conducted stakeholder meetings with impacted distributors and dealers who provide product and services within our electric service territory. Some of the comments herein reflect their concerns. We feel their input is worthy, adds value and a perspective which was absent from the Oct 5-6 Conference, and warrants consideration and inclusion during this comment and review process.

Xcel Energy supports continued involvement of EPA and their role in supporting and maintaining a meaningful and differentiated product label to distinguish a higher efficient product line. The Energy Star label has become a recognizable and useful emblem associated with higher efficiency. We believe EPA and ENERGY STAR play critical roles in providing an over arching message that assists with educating and empowering consumers regarding the need and value of energy efficient equipment and quality installations.

Xcel Energy believes a minimum SEER rating of 14 is reasonable from a utility incentive perspective. It appears that the differential savings are small relative to the forthcoming SEER 13 standard and would not likely be sufficient for a program rebate on its own. However, when combined with the savings from improved installations, the basis for effective Energy Star and utility incentive programs are in place.

We do have three major areas of concern and share many with others in regards to the installation criteria and implementation, which are as follow:

- Will the added administrative costs, risks and complexities yield a cost effective program for Energy Efficiency Program Sponsors (EEPS) and implementers?

- Can the “industry” transition to new, different and more challenging installation criteria in the timeframe available, or will the new criteria need to be “staged” for implementation in a logical and predictable manner?
- Installation criteria that are appropriate and practical in new home construction may not be practical or economical in an existing home undergoing an air conditioner retrofit or replacement.

Equipment Criteria

Xcel Energy is in overall agreement with the proposed equipment criteria discussion regarding evaporator access for maintainability, the presence of on-board diagnostic indicators and evaporator access for measurement. We also support airtight measurement access ports and/or appropriate marking for safe drilling locations. With respect to diagnostic equipment, it is our understanding (from HVAC dealers) that manufacturers can provide diagnostic results/output with realistic costs. Self-diagnostic equipment will prompt contractors to recognize and deal with refrigeration and airflow issues. Although the results may be evolutionary, the diagnostics will support long-term improvements in HVAC in homes.

Product Testing Criteria

We support the criteria that manufacturers are required to test and certify models that meet Energy Star guidelines. We also support the flexibility of combining different coil/condenser units from different manufacturers if “acceptable performance modeling” indicates the combination will perform better than the factory-supplied components. Xcel Energy does not believe we (as a utility Partner) are appropriately equipped to or capable of performing the ARI 210-240 performance tests in the field. If this were a criterion, we would not be able to continue using the Energy Star program for residential air conditioners.

Installation Criteria

Xcel Energy, as with other utilities, is concerned with equipment sizing and installation. We find sizing is a critical factor to our electric distribution systems. Oversizing contributes to higher demand on our systems and may require us to expand. We support the criteria that require sizing calculations and selection guidelines for equipment. We feel that the EPA needs to address this matter absent code requirements for specific jurisdictions. Our experience, from customer feedback is that a lack of authoritative criteria may result in non-participation. Some installers will discourage customer participation from a pricing perspective (e.g. “it’ll cost customer an additional \$250 for a load calculation”) while others may cover the added expense of the utility sizing rebate, in lieu of conducting the proper cooling load calculation.

Verification

We support manufacture enforcement of verification of installation efficiencies, but realize the challenges of both selling product and potentially alienating dealers with enforcement actions. We understand that distributors of HVAC equipment provide support for new dealers, and are hopeful that voluntary retro inspections occur. We acknowledge the challenge of installation and the risk associated with selling and installing product and the implied guarantee and expectation confronting HVAC installers when the product does not deliver the implied guarantee or meet the customer’s expectations which leaves all parties in a precarious position.

With respect to installation and verification measurement criteria, we suggest that perhaps two

separate specifications are required, one for newly constructed homes and one for existing (retrofit) installations. This may be a compromise to the Energy Star theory but it recognizes the very different circumstances that are presented by the installations. SEER and HSPF should continue as equipment performance requirements.

Xcel Energy is not an expert on the effects of refrigerant charge and airflow on AC units but available information suggests higher efficiencies and energy savings when refrigerant and airflows are within manufacturer's specifications. We support activities that test and verify these outcomes. In most of our service areas, duct systems are installed within the shell of the home so the effects of leaks are somewhat mitigated. However, consistent with a "premium quality" home and the expected performance of that home, we support the use of duct sealing techniques. We also note that the State of Minnesota is actively considering duct sealing as an element of the updated residential energy code now in development.

Performance Analysis and Commissioning Reporting

Xcel Energy supports the Performance Analysis and Commissioning Reporting as proposed. This will provide a validation of conformance with manufacturer's specifications and a benchmark of performance for future reference. As physical conditions might change and operations may deteriorate, the reference data will be helpful to restoring a system to proper, efficient operation.

We also recommend requiring standardized ENERGY STAR labels/tags which would yield data that can be affixed to both the plenum and condenser, these would reveal the condenser model and serial number, along with the coil model and serial number, refrigerant and airflow. This could facilitate auditing for compliance.

We support the proposed six measures regarding installation (design, refrigerant/airflow, duct systems, performance analysis and reporting). Though we are perplexed as to how to balance the customer's need, the utility's energy efficient requirements and the contractors' needs to satisfy the customer and minimize callbacks. Some of the comments and concerns that have come to our attention include:

- Customers demand rapid heat/cool down which results in oversized equipment.
- The initial adjustments/settings on systems may be modified after the performance report in response to customer concerns;
- Airflow may be very challenging with existing systems because it is unreasonable to accommodate both customer need and energy efficiency specifications;
- Airflow and efficiency standards are more feasible for new construction applications.

Performance Verifications and Reporting

We agree with the need for performance verification and reporting. Some parties seem to be more appropriate to verify installations than others:

- Local building inspection officials (already performing HVAC inspections) could receive manufacturer training and receive utility funding (provided the availability of regulated cost recovery) and federal grants for pursuing extra verification testing;
- Manufacturers/distributors have the same interests as Energy Star in proper installation and performance for branding purposes and but their HVAC relationships (via dealers) pose a potential conflict of interest.

- EEPS appears likely and reasonable although the costs are likely to be higher than with other providers who would be making an inspection or test anyway.
- Self-certification is appealing since it does not involve additional site visits by another entity however it carries its own risks. We could support it if it included a random sampling procedure to ensure site installation accuracy and a self-managed quality control process with reportable results to be used for self-correction of faulty practices.
- We would not support certification by a sole or limited agency (NATE, BPI) but do support training and certification activities in general.
- We strongly support a standardized checklist negotiated by manufacturers and the EPA.

Xcel Energy recommends that the manufacturers adhere to an ENERGY STAR labeling protocol, which is decisive and affixed on the box. Also, Customers must know and understand that they are receiving an efficient product and “getting what they paid for,” to offer the ENERGY STAR afterward is unacceptable. Such measures present marketing challenges, introduces customer uncertainty and confusion, lead to regulatory complaints and dissatisfaction. We should at all cost avoid a tiered approach of “ENERGY STAR ELIGIBLE” which entertains a level of uncertainty if parameters are not met.

We support efforts to improve HVAC installation practices and recommend a gradual, planned, phased implementation to allow for adequate training and process development by affected parties. It should not be implemented by the proposed effective date of January 22, 2006. This will assist all impacted parties the opportunity to find cost effective solutions and to build consumer education efforts regarding improved installation efforts.

One implementation scheme might be –

- Adopt Energy Star A/C equipment efficiency label and on-board diagnostics by January 22, 2006;
- Add technician training and contractor commissioning reporting to homeowners by Jan 2007, and
- Add third party verification and quality control by Jan 2008.

The aforementioned comments and recommendations were provided to assist with the decision making process toward the next draft version and future policy efforts, and to provide our utility perspective. Thank you for providing us the opportunity to comment on the proposed specifications.

Sincerely,

J. L. (Bob) Zaragoza
 Product Portfolio Manager
 Xcel Energy