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Ms. Rachel Schmeltz
Energy Star Program Manager
U.S. Environmental Protection Agency
Washington, D.C.

Sent by email

Energy Star Draft Specification for Residential Air-Source Heat Pumps and Central Air Conditioners

Dear Rachel,

I am responding with comments to your proposals of September 29, 2004.

Overall, NRCan believes that the Energy Star technical specification for CAC and HP should be upgraded when the higher minimum regulations come into force in 2006.

Equipment specifications

NRCan has recently completed a study to amending Canada's Energy Efficiency Regulations, and found that equipment is available having SEER ratings much higher than 13. As manufacturers prepare for SEER 13, we expect the number of units exceeding SEER 13 to increase as well. Because SEER is the rating promoted to consumers, Energy Star definitely should adopt a rating greater than 13. Otherwise, consumers may be confused as to the significance of Energy Star. The Energy Star program should support those manufacturers that are pushing for higher efficiency. Therefore, NRCan supports the proposal to increase the minimum SEER to 14 and higher.

We agree that the economics to the consumer are becoming less compelling with higher SEER. However, the cost of creating generation to supply electricity for air conditioning is very high and results in higher rates for all utility customers in certain areas. Air conditioning is directly on peak for many electrical utilities. If the cost of new generating capacity is included, our analysis shows very short paybacks for CAC with higher EER at 35C (95F). Therefore NRCan also supports higher EER values in the Energy Star specification. NRCan and Canadian utilities may do further analysis, but it would be safe to indicate that we support the proposed EER of 12 for split systems.

NRCan's study also shows there is not a good correlation between SEER and EER. At SEER 13, there is a wide range of EER ratings, and the spread increases as SEER increases. We support your proposal to include both values in the Energy Star specification.

In Ontario, where 60% of air conditioners are sold in Canada, there will be a serious shortfall in electrical generating capacity shortly. As in certain areas in the US, it is expected that utilities will promote higher air conditioners with higher EER ratings.

For heat pumps, the amount of energy used in heating, greatly exceeds the cooling energy. The market for heat pumps has increased recently, especially in Quebec and other areas where natural gas is not supplied. HSPF of 8.5, as proposed, is approximately the level of the upper decile of models in our study, and would therefore appear to be appropriate.

For package units, NRCan disagrees with accepting efficiency levels below 90% for gas heating, as in the present Energy Star specification. The efficiency should be consistent with gas furnaces. This is especially important in colder climates where heating dominates the energy use.

Because the installation and quality mechanisms proposed are relatively complex, we suggest that the equipment levels be finalized separately to ensure they are in place for 2006.

Installation Requirements

We are not confident that the installation and quality aspects of your proposal are applicable to Canada without assessing the present situation and before gathering input from stakeholders in Canada.

The proposal for access to maintain equipment, metering devices, commissioning, and field verification contains great information which can be used as a basis for those discussions.

Regards,

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