



December 9, 2013

Amanda Stevens
U.S. Environmental Protection Agency
Energy Star Appliance Program
appliances@energystar.gov

RE: Energy Star Room Air Conditioner Framework Document

Dear Ms. Stevens,

Haier America respectfully submits the following comments on the EPA's Energy Star Room Air Conditioner Framework Document. Haier America is an active member of the Association of Home Appliance Manufacturers (AHAM) and we fully support the comments made on this subject by AHAM. Our comments herein are a supplement to those comments.

Improved Installation Material

Many consumers use Room Air Conditioner products on a seasonal basis and the convenience of easily putting them into a window and removing them at seasons end is of key importance. The current accordion style design helps product fit into many size and type windows. A rigid type material could potentially hamper an easy installation for many consumers. In addition there are potential issues with this idea regarding the proper and safe installation of the unit per UL/CSA safety requirements.

Component Improvements

While there are higher EER compressors available on the market, there is an issue Haier has experienced showing reduced dehumidification with higher EER compressors. To achieve higher energy efficiency levels, there will be performance tradeoffs specifically with dehumidification of the area consumers are trying to cool. As the EER increases, the evaporator temperatures will also increase causing a smaller difference in temperatures' which would mean less dehumidification. We strongly believe that suggestions such as using variable speed compressors be reviewed against the current and expected price points these products command in the market. We feel that this type of technology is not economically



feasible. In addition, some models may need to move into a bigger chassis size in order to achieve the higher EER's Energy Star is surely to command. This would ultimately add cost across the board rendering the smaller 5K BTU chassis no longer useable. This may have a negative impact on consumers living in older houses with smaller windows not to mention the added cost of having to buy a bigger product.

Evaporator Recirculation

EPA cited an NREL report which showed that evaporator air recirculation can reduce energy efficiency of installed products by as much as 10%. While we agree with the NREL's report, Haier believes this falls into a poor decorative front design. The front design that NREL evaluated is known to have a design flaw that allows the discharge air to be directed downward. Most manufacturers have designed this flaw out many years ago and do not believe this is a widespread industry issue.

Refrigerants

The charge amounts for even the smallest RAC on the market are substantially higher than what is currently available in other type products such as the smaller size refrigerators. Haier believes alternate refrigerants such as hydrocarbons/low GWP alternatives are not feasible at this time for this product category.

Connected Functionality

Haier fully supports EPA's decision to incorporate smart grid functionality for this product category and provide the 5% allowance for the products that fall in this category; however it is critical that EPA define what constitutes a "connected" device as early as possible to allow for the controller development and production lead times required for this product category.

Portable AC's

Haier fully supports EPA in developing an Energy Star program for this product category and suggest implementing CSA C370/AHAM PAC-1 as the test procedure ensuring harmonization between the US and Canada. We do however feel that any portable air conditioner program should be separate from the room air conditioner program as the products are different and have different needs in terms of energy efficiency and testing.



Haier America appreciates the opportunity to submit these comments and would be glad to discuss these matters in more detail should you so request.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Angelo Cacciatore".

Angelo Cacciatore
Regulatory Compliance Manager
Haier America