



Department of Energy
Washington, DC 20585

September 20, 2011

Ms. Leslie Jones
ENERGY STAR Program
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Room 62023
Washington, DC 20460

Dear Ms. Jones:

On March 7, 2011, the United States Department of Energy (DOE) notified Haier America Trading, L.L.C. (Haier) that DOE had completed testing of Haier refrigerator model PRTS21SAC* under the ENERGY STAR Verification Testing Pilot Program and confirmed that the model did not meet ENERGY STAR energy efficiency requirements. DOE gave Haier until March 28, 2011, to provide conclusive manufacturing or design evidence or quality assurance information to rebut DOE testing results, which showed that this product did not meet the ENERGY STAR Program's energy efficiency requirement.

Haier responded to DOE in a letter dated March 22, 2011, contending that the results of testing of this model in its lab and by an independent third-party lab indicate that the model is ENERGY STAR compliant. Haier questioned the accuracy of DOE's testing on the ground that it was not allowed to observe the set-up or conduct of DOE testing (a right not provided under the program). Finally, Haier characterized one of the units tested by DOE, which tested at 18.1% over the maximum annual energy usage (AEU) allowed under the ENERGY STAR program, as an "extremely anomalous result." Haier asserts that the unit was an outlier, defective, and otherwise not representative of the model.¹ (Haier states that this unit was produced in September 2009 and concludes it is not representative of the model.) Haier states that if the test results from this unit were removed from the calculus, under some scenarios the model would test compliant with ENERGY STAR; yet it also agrees that, under other scenarios, the unit would not be ENERGY STAR compliant.

¹ DOE tested eight model PRTS21SAC* refrigerators. Seven of the eight models exceeded the maximum annual energy usage (AEU) by the following percentages: 3.0%, 18.1%, 6.8%, 6.7%, 8.3%, 5.6%, and 4.7%. One unit tested 2.1% under the maximum AEU allowed under ENERGY STAR.



On April 7, 2011, representatives from Haier met with DOE officials to discuss the Stage II test results, which demonstrated that seven of the eight units of model PRTS21SAC* exceeded the maximum AEU allowed under the ENERGY STAR Program. After this meeting, Haier performed testing to simulate various common failure modes that, in its view, could result in a unit to test at or near 18.1% over the maximum AEU allowed under ENERGY STAR. Haier compared the results of this testing with the results from DOE's Stage II testing and presented the results to DOE in a letter dated June 8, 2011. Haier determined that several failure modes could result in a unit testing at 18.1% over maximum AEU. These failure modes are (1) a unit undercharged with refrigerant below 90 grams; (2) a unit with an open door seal in combination with a high-side restriction; and (3) a unit with an open door seal in combination with a non-seated evaporator fan blade. Haier stated that these failure modes could have been instigated by extensive handling at the retail level, given that the unit was manufactured in 2009.

DOE does not accept Haier's position that the test results for the unit testing at 18.1% over the maximum AEU should be discounted on a theory that this unit was defective. DOE performed an examination of the unit claimed by Haier to be defective.² The examination revealed no open door seals or high-side restrictions. Also, the evaporator and condenser fans exhibited easy rotation, and the fans were securely mounted and well positioned in their orifices. Finally, operating conditions of the unit suggested no significant loss of refrigerant—the evaporator inlet and outlet tube temperatures and the ability of the refrigerator to attain and maintain low freezer temperature argued against any significant refrigerant loss. DOE concludes that the unit, while performing significantly worse than other units tested, was not defective.

For these reasons, DOE has determined that Haier refrigerator model PRTS21SAC* does not meet the ENERGY STAR requirements. Accordingly, DOE is referring this matter to EPA, the brand manager for ENERGY STAR, for appropriate action. Please feel free to contact Laura Barhydt, Assistant General Counsel for Enforcement, at 202-287-5772 should you require any further information.

Sincerely,



Timothy G. Lynch
Deputy General Counsel for
Litigation and Enforcement

cc: John A. Hodges, Esquire, Counsel for Haier

² Haier provided DOE with a comprehensive list of examinations and tests that, in Haier's view, if performed, would identify the defect Haier presumes exists in the unit. DOE performed the entire list to Haier's specifications, and the results indicated that the unit is not defective.