Dear Jason Fitzgerald:

We are a small manufacturer that have been building some of the most highly efficient refrigerators available for the past 20 plus years. Our sales are about 3 orders of magnitude below the sales of the larger manufacturers. As a result of our small sales volume the cost of testing per unit sold would be very high and perhaps prohibitive.

Twenty years ago our initial market was the first off grid homes built in the U.S. When these homes were built, the investment in a solar power system capable of producing 1 KWH per day was over $10,000. In these off grid homes it was not economically feasible to run a conventional refrigerator, which consumed about 3 KWH/day, on solar until the introduction of our product. The initial models we built ran on direct current provided by a battery bank. The first model sold was about 17 cubic feet and in use consumed 0.5 KWH/day. This was substantially below the energy consumption of any refrigerator available at that time.

Shortly after starting our company we testified before the California Energy Commission when they were first formulating their appliance efficiency standards. We feel we were influential in increasing the initial efficiency standards.

Since then we have sold our product all over the world primarily to remote locations where the availability of electricity is limited and efficiency is important. About half our sales are for domestic refrigerators in the U.S. Of these, about half have AC-powered compressors and half are DC-powered.

We are currently working with the Cold Housing Research Center in Fairbanks, AK on a model which will incorporate a heat pipe to passively cool the refrigerator during the winter. When the ambient temperature warms, the active cooling would take over.

Because of their high efficiency, our refrigerators have been chosen for use in the Solar Decathlon. Several years ago, when the efficiency of refrigerators was monitored separately from other appliances, we had the lowest energy consumption.

About 6 years ago, because of our lobbying, Energy Star had hearings to determine if the "Energy Star" label should be extended to smaller refrigerators. As you know, compact refrigerators are now eligible for Energy Star ratings.

We have also modified some of our models so that they will work on grid power when available and battery power during a brown out. These units have been used in locations where weather related interruptions periodically occur.

"Studies have shown that small companies are more effective in their research/development and they produce a disproportionate number of innovations"(1). Job creation in smaller firms is also very high. There are many examples where innovative products originated in the garage of a small company. Numerous examples

can be found in the computer and the electric car industry. If the cost of testing for a small firm could be minimized, it would make it easier for small firms to enter the market with an innovative product.

What we suggest is an incentive plan to help smaller companies pay for Energy Star testing. For each percent the product is below the Energy Star requirement, the company submitting the refrigerators would receive a rebate of 10% of the total test cost. If, for example, a refrigerator is 10% below the Energy Star level there would be no charge for testing the appliance. If the appliance is 20% below the "Energy Star level" the manufacture would receive free testing and a rebate equal to the cost of testing the refrigerator.

We think this system would give the "Energy Star" program a tremendous return in energy savings on a relatively small investment.

(1) – Relative Strengths and Weakness of Small Firms in Innovation. By R. Vosser Apr 1998, International Small Business Journal

Sincerely,

Sun Frost
Larry Schlussler, PhD