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February 23, 2009

Hon. Barack H. Obama,  
President, United States of America  
1600 Pennsylvania Ave., NW  
Washington, D.C.

Dear President Obama:

On 22 January of this year, Mr. Thomas E. Kasmer sent your office a letter briefly outlining his invention of a device he has named the **Hydristor**. He also enclosed a letter I wrote to Vice President Gore on June 29, 2006 in which I outlined the extraordinarily critical potential which I believe the Hydristor holds for the future of the United States and, indeed, of the world. I enclose copies of both his letter of January 22, 2009, and my letter of June 29, 2006.

This present letter is to reaffirm and reinforce the support expressed in my earlier letter as well as to provide you with more information about the Hydristor and its potential. I believe that it is critical that the development and implementation of the Hydristor must be expedited as rapidly as possible; I further believe that the need will only increase with the passage of time. Not only will the adoption of the Hydristor increase the efficiency of fuel usage in current autos using internal combustion engines (Mr. Kasmer estimates by a factor of approximately two), but it will even more dramatically reduce the CO<sub>2</sub> emission arising from our present vehicles (Mr. Kasmer estimates that it will produce a **reduction to between 1/4 to 1/3 of present emissions**). In addition, even when we convert from hydro-carbon fueled internal combustion engines, the flexibility, versatility and energy efficiency of the Hydristor will continue to make it an essential component that will be a superior match when used in conjunction with a whole range of power sources. Any alternate power source will require an energy input and have costs and wastes involved in the production of that energy, so that the energy conservation inherent in the storage and recovery system of the Hydristor, along with its flexibility of applications will continue to be indispensable no matter what power alternatives are developed in the future.

As a physicist who introduced a new course on energy utilization and conservation at Binghamton University at the time of the "original" energy crisis in the 1970's, I made much of the fact that one of the greatest sources of energy waste in automotive transportation arises from friction braking, going into nothing more than heat energy in the friction brake, particularly in stop-and-go city driving especially for larger vehicles, which necessarily have greater kinetic (or "motional") energies. I pointed out that this waste was inevitable as long as we had no usable braking process to re-capture the car's kinetic energy so that it could be restored to kinetic energy after a stop. Whenever we re-accelerate the car back into motion, we **have** to use **more** gasoline to do so, but at the next stop sign, when we step on the brake, all of the energy from the gasoline that just went into its motional energy again goes into **unusable heat**, so that when we start up again we have to burn **even more** gas to give the vehicle more kinetic energy all over again, **repeating that process - and its waste - over and over!** In fact I promised that anyone in the class who would be able to develop such a brake that could capture, store and recover the kinetic energy would garner all sorts of awards. I may even have strayed into the poetic by likening it to the elusive Holy Grail (not without good reason!!).