(For comparison purposes, physics tells us that the kinetic energy for any car traveling at 60 miles per hour represents an energy equivalent of lifting the same car about 121 feet – something like 10 stories or a bit more - directly upward, or driving it, with no energy losses to friction, up a hill to the same vertical height. Clearly this is not a trivial amount of energy to waste!)

Lo and behold, even though Mr. Kasmer was not a member of those classes, I am now glad to report that the most important energy saving attribute of the Hydristor is that it represents an efficient, yet compact method by which the braking process can capture the kinetic energy of the vehicle, store it while the vehicle is stopped (even overnight or for days!!) and then restore it (without even using the engine) at an efficiency estimated by Mr. Kasmer to be in the range of 93% to 95% recovery. This source alone will clearly increase efficiencies substantially, and as an additional benefit will reduce the air pollution of brake dust that conventional friction pads constantly release. This released dust likely ends up in suspension in the atmosphere, as part of smog, either directly, or after settling to the road and being stirred up again by passing traffic. In either case, at best it contributes to dust in people's lungs, or at worst, if the brake pads contained asbestos, as many do, it may contribute to asbestosis and possibly lung cancer. (For comparison, Hybrid electric cars can recover only approximately one third of the car's kinetic energy on average in the form of increased charge to the battery, in the process, providing braking forces that are comparably lower as well.)

Furthermore, it is significant that since the Hydristor represents only a new, but far-reaching twist on the older, well-accepted simple hydraulic pump developed by Vickers in 1925, the technology of the Hydristor is well understood, is less complicated, and is more basic and easier to implement than the increasingly complex and touchy modifications of automotive systems currently in use which even require the introduction of computers to work properly. Consequently, the adoption of the Hydristor will be especially accessible to current technical workers and mechanics "in the shop" so that the Hydristor will not suffer from the severe barriers to wider acceptance that were met by such innovations as the Wankel engine, or the Chrysler turbine. The Hydristor will even be more accessible to current mechanics than the new technologies involved with hybrid cars or electric cars.

In addition, Mr. Kasmer has invested much thought into a wide range of other applications across many fields ranging from energy production derived from sources such as the wind (an area where the Hydristor is a natural to play a major role); power transmission in mechanical systems such as autos, trucks and other machinery; long-distance energy transmission, and other areas even including thermodynamics and refrigeration. This list of potential applications only begins to scratch the surface of the possibilities. In addition, he has developed working prototypes (see video of prototype garden tractor referenced below) that clearly validate the Hydristor's functionality, versatility and potential for the future. With all of these developments, it is clear that the promise for the Hydristor is quickly taking concrete shape; all occurring at a time when the news is demonstrating almost daily that the need for it is rapidly increasing. Most of the conceptual and developmental work on the Hydristor has been done, so that it can be seen at this point to represent the best current opportunity available to us for the accomplishment of the crucial needs for energy efficiency and reduction of carbon dioxide production.

At the present time, as the critical need for energy efficiency and reduction of carbon emission may be becoming **even more urgent than we had thought** (See, e.g.: a recent research publication in the Proceedings of the National Academy of Sciences authored by Susan Solomon, et. al., which indicates that even if the carbon dioxide emission produced by human activity were to stop instantly, atmospheric levels would **not be likely to fall for 1000 years**: See