504 Liberty Street
Fremont, Ohio 43420
FAX (419) 332-6816
(419) 332-7373

November 1, 2005

David Conover
Director, U.S. Climate Change Technology Program
Office of Policy and International Affairs
U.S. Department of Energy
Washington , DC 20585
Re: USA: The Big Red Machine from the 60s adopts a leadership role to convert it to the big Green Machine for the next century

To whom it may concern:

At the urging of Richard A. Feely, Sr Scientist at NOAA, I have put together the following package in response to The Department of Energy's public plan for accelerating the development and reducing the cost of new and advanced technologies that avoid, reduce, or capture and store greenhouse gas emissions.

I believe that we are now at a point of energy needed vs. energy used. Our country needs to SHIFT its beliefs and thinking on the production, distribution and waste of energy. The Shift needs to be a simple plan that benefits everyone who uses it; everyone who is a steward of it; and everyone who perhaps doesn't want to address it.

We already have the important piece in this project in hand. This country is blessed with some of the best public servants in the entire world. Therefore, if given the right direction, we can implement this plan systematically and benefitall Americans during every critical phase of the process.

I have enclosed several documented strategies and successes that will demonstrate the fact that the technologies and systems are already in place to accomplish our goal. Our company has demonstrated these commercial successes. The next step would be to expand these systems to meet the demands and scope of a national initiative.

Our company has been a leader in the innovation, design and application of the most advanced heating, ventilating and energy systems in the world. You will note that we have developed many revolutionary patents that have changed the way industries integrate and utilize HVAC. For example, the "Kiser Concept" which was installed in the Ford Motor Company produced 15 million dollars in annual energy savings.

It's time to take a powerful stance and move forward with these successful strategies. I can provide the leadership, patents and discipline to enable our country to achieve the same energy output while only purchasing 50% of the energy we need today. It's time that we quit depending on exporting most of our industrial needs. It's time to be competitive.

It's time.

Sincerely,

Thomas E. Kiser
CEO

504 Liberty Street
Fremont, Ohio 43420
FAX (419) 332-6816
(419) 332-7373

New Energy Strategy Using 100 Percent Efficient Technology to Achieve 150 Percent Plus Operational Energy Efficiency Resulting in Reduced Greenhouse Gas Emissions

Tom Kiser (President, Professional Supply, Inc.; 504 Liberty Street, Fremont, OH 43420; 1-419-332-7373; e-mail: {tom.kiser@professionalsupplyinc.com})

Jeff White (Ford Motor Company; Facility Services Building, Rm 112B, 21500 Oakwood Blvd, Dearborn, 48124; 1-313-322-6558; e-mail: {jwhite11@ford.com})

Professional Supply, Inc. has developed a new strategy to provide building heat by replacing existing technologies with 100\% efficient direct gas-fired, dual-blower, ductless, no-chimney air-houses called ``Bigfoot.'' Bigfoot enhances overall efficiency by recovering internal industrial process reject heat and reusing it in the plant, greatly reducing energy demand and greenhouse gas emissions. Bigfoot recovers this heat in two ways. Firstly via a method called ``Cool Air Heating,'' which is the ductless introduction of outside make-up air into the truss space to recover airborne reject heat, and secondly via substitution of heat recovery coils within Bigfoot in place of rooftop cooling towers to reclaim reject heat directly from industrial processes in the winter months. The resulting positive pressure building environment, vastly improves the indoor environment without the use of general building exhaust fans, which are switched off, thus saving the electricity required to operate these units. Complimenting Bigfoot technology is a nearly 100\% efficient direct gas-fired, non-pressure vessel, liquid-chimney Hot Water Station which supplies hot water heat exchangers for building heat, domestic hot water, and manufacturing process loads. Similar to Bigfoot, the Hot Water Station may also be configured to recover reject heat from industrial processes. In total, introduction of these technologies at eight Ford Motor Company plants allowed the abandonment of 1,200 gas trains totaling three trillion BTUs, and electric general exhaust fans totaling 30,000 horsepower. For every BTU saved at Ford Motor Company manufacturing facilities, there is a corresponding 100\% efficient reduction of the environmental pollutants and greenhouse gasses which would have been generated by the consumption of the fossil fuels burned to produce these un-needed BTUs. Direct reduction of fossil fuel consumption at Ford Motor Company plants has resulted in an annual emissions reduction of 257,000 tonnes carbon dioxide, 124 tonnes nitrogen oxides and significant levels of other pollutants. In addition to the direct reduction in emissions at Ford plants, there is an additional reduction in power plant emissions as electricity demand is reduced. A conservative estimate of the energy-produced to energy-delivered ratio for power plants in the United States is 37 to 1. Therefore, every kilowatt reduction in energy demand by Ford reduces the demand at a power generation facilities by 37 kilowatts and effectively equates to a 3,700\% efficient reduction of associated emissions. These

technologies lend themselves well to any industry experiencing negative building air pressure and/or producing reject industrial process heat (i.e. large hotel laundries, university campuses, textile mills, etc.). At Ford Motor Company, PSI has implemented a Performance Contract arrangement. This strategy allows Ford to pay for the retrofit of each plant to PSI technology from actual savings via reduced energy expenditures with zero capital investment and a positive cash flow. At Ford, PSI financed the equipment and installations costs, in turn creating a situation where energy conservation becomes a formidable investment opportunity rather than a capital expenditure. The financial value of energy savings to Ford Motor Company is easy to appreciate, however, the positive public relations value of sparing the environment from unnecessary greenhouse gas emissions is incalculable.

504 Liberty Street
Fremont, Ohio 43420
FAX (419) 332-6816
(419) 332-7373

Steam Elimination & Pressurization ("Big Foot") Projects

Background

Steam distribution systems are a major contributor to energy losses. The heating and ventilation systems at most of Ford Motor Company's manufacturing facilities are a mixture of steam heating and indirect fired natural gas. The central boiler houses and much of the steam units and piping are generally over 40 years old and less than 50% efficient. Process changes in the plants and the addition of exhaust fans have reduced steam loads and caused negative air pressure in most buildings.

"Big Foot" Description

By applying an innovative approach to heating and ventilation, in an automotive environment, Ford Motor Company has significantly lowered its energy use and emissions in many of its US and Canadian Assembly Plants. The overall benefits of the Big Foot Program to date have been an annual energy savings of 3.2 Million MMBTU's and annual emissions reductions by 257,000 tons of CO_2 and 124 tons of NO_2, along with dollar savings having a net present valve of $36 Million.

The approach involves installing new direct fired heating units, and possibly chillers and air compressors as needed, retrofitting some of the existing units, decommissioning the boilers in the powerhouse, and installing natural gas fired hot water heaters for providing heated process water and heat to the facilities.

The "Big Foot" ductless distribution systems, with a global control/energy management system, are computer controlled heating and ventilating air houses with monitors inside and outside the plants that provide feedback to the new units and existing building exhaust fans to maintain the plant at a positive pressure throughout the year. Because of the size of the direct fired 200,000 cfm, 20 MMBTU/hr roof mounted heating and ventilation units (air houses) the Plants have nicknamed the units "Big Foot".

The ductless, positive pressure system works by supplying air across the plant ceiling, which causes the warm air up at the ceiling to be pushed down to the floor by the relatively cooler air from the AHUs. Also, waste heat from the processes, instead of being exhausted out, rises and is re-circulated to the floor. The positive pressurization and computer control also prevents cold air from leaking into the plant during the winter, and hot air into the plant during summer.

Plant Locations Implemented

The Big Foot projects are being implemented at individual plants, where a business case exists. Work is completed or in progress at the following (8) Assembly Plants, and contracts for other plants are being considered:

Chicago Assembly	Oakville Assembly (Canada)
Chicago Stamping	Ontario Truck (Canada)
Kansas City Assembly	St. Louis Assembly
Kentucky Truck	Wixom Assembly

Energy Savings

The "Big Foot" projects for the (8) plants will realize an annual energy savings of $15.3M. Equipment and energy audits are made before and after the project is commissioned to verify energy savings and that decommissioned equipment is not operated.

Non-Energy Benefits

Non-energy savings include: CO_2 emissions reduction by 257,000 tons, NO_2 emissions reduction by 124 tons, $1.25 Million savings from decommissioning of inefficient steam units, closure of existing powerhouse boilers, reduced maintenance requirements due to reduced number of H&V units, positive pressure prevents infiltration of cold air, existing exhaust fans operate more efficiently with the buildings at positive pressure, and more uniform building heating.

Investment Cost

Investment cost for the (8) plants is $89 Million. However, under a unique arrangement the supplier is paid from the energy savings. Also, both system performance and energy savings are guaranteed to Ford.

Conclusion

The "Big Foot" approach improves energy efficiency and reduces emissions. The control system allows for scheduling facility heating and ventilating and exhaust fans to coincide with production schedules. This allows for maximum savings to the plant while insuring improved work conditions. In addition, it upgrades the equipment, reduces assets and provides operating savings.