

**TESTIMONY OF THEODORE LOUCKES, CHIEF OPERATING  
OFFICER, PAICE CORPORATION  
BEFORE THE:  
SENATE COMMERCE, SCIENCE,  
AND TRANSPORTATION COMMITTEE**

**DECEMBER 6, 2001**

Mr. Louckes. Mr. Chairman, thank you for the invitation to address this Committee regarding fuel economy issues.

I am Ted Louckes, Chief Operating Officer of the Paice Corporation. Paice is an American company. We have offices in Silver Spring, Maryland and Livonia, Michigan. Our management team and board of directors include engineers with more than 200 years of experience in the automotive industries.

My career has been in the automobile industry, including 40 years with General Motors where I served as Chief Engineer of the Oldsmobile division. We are here today to present an American technology that can meet the challenge of improving fuel economy in passenger cars and light trucks.

The Hyperdrive system, as we call it, is a unique power train that delivers a combination of fuel efficiency and vehicle performance that has not yet been achieved. Unlike hybrids in the market today, it is well suited for the wide range of vehicles that consumers choose to buy, including SUVs, minivans and light trucks.

The Hyperdrive will work in any climate, climb steep hills and haul big loads. Most significant, our studies indicate that Hyperdrive can be produced at costs competitive to today's conventional power trains, largely because it uses similar technologies and the materials are the same as used today--nothing new, nothing exotic or expensive. We are in the process of securing funding from automakers, automobile suppliers, financial investors and perhaps the U.S. Government to finalize the subsystem and component design, build demonstration vehicles and, therefore, accurately determine the cost of producing the hybrid system. We believe that ours is the only hybrid drive system available today that can be commercially produced in large volume and be successful in the marketplace.

Based on high voltage, and high powered semiconductors, high horsepower electric motors and downsized internal combustion engines, the Hyperdrive is unique and superior among hybrid power trains. Our patented method of control, the selective use of all the on-board power sources for maximum efficiency under all driving conditions, is the key to its success.

Our written testimony provides details of the system, our test data, and our engineering calculations of what Hyperdrive can achieve in terms of improving fuel economy through a complete range of vehicles. We have proven the concept of the Hyperdrive power train by testing a full size prototype system on a dynamometer.

The prototype was built to replicate a large passenger car and operated on the EPA test cycles. And the result was a combined fuel economy of 44 miles per gallon. This compares to 24 miles per gallon for the comparison car. Using this data, we are able to model and calculate the fuel economy and performance that can be expected from Hyperdrive and all sorts of vehicles.

Our modeling results indicate that we can, on average, increase the fuel efficiency of the complete vehicle subject to CAFE regulation by roughly 50 percent.

With potential fuel economy improvements of this magnitude, application of Hyperdrive and a large volume production vehicle would significantly reduce our Nation's total gasoline consumption.

For the matter of possible government support, we and the auto industry would benefit from support of the national laboratories. We suggest that Argonne National Laboratory, which has substantial experience in the simulation and analysis of hybrid electric vehicles, should model the Hyperdrive power train to corroborate our conclusions regarding fuel economy and vehicle performance.

We have been in contact with automakers in the United States, Europe, and Japan for more than a year. Several of these OEMs are evaluating the technology and its cost to justify the investment it will take to bring this to market.

Mr. Chairman, we thank you for the opportunity to tell you about our technology and we will be very happy to answer questions.