

SF CHRONICLE CARS

DOWN THE ROAD

American Le Mans Series accepts racing challenge to go green

By Herb Shuldiner

Racing suffers from an image as a fuel-wasting, environmentally unfriendly sport, despite enormous popularity with its fans. But at least one auto racing series has determined to present a green image to the public at large.

That's why the American Le Mans Series is teaming up with the EPA, Department of Energy and the Society of Automotive Engineers to create an all-green racing series in 2008.

"The ALMS stands alone in providing a platform of solutions for our nation's automotive, transportation and energy needs,"

ALMS states that the ethanol in the E85 its cars use must be created from a non-food source. In this case, the ethanol will be fermented from wood chips or sawdust.

claims Scott Atherton, president and CEO of the series.

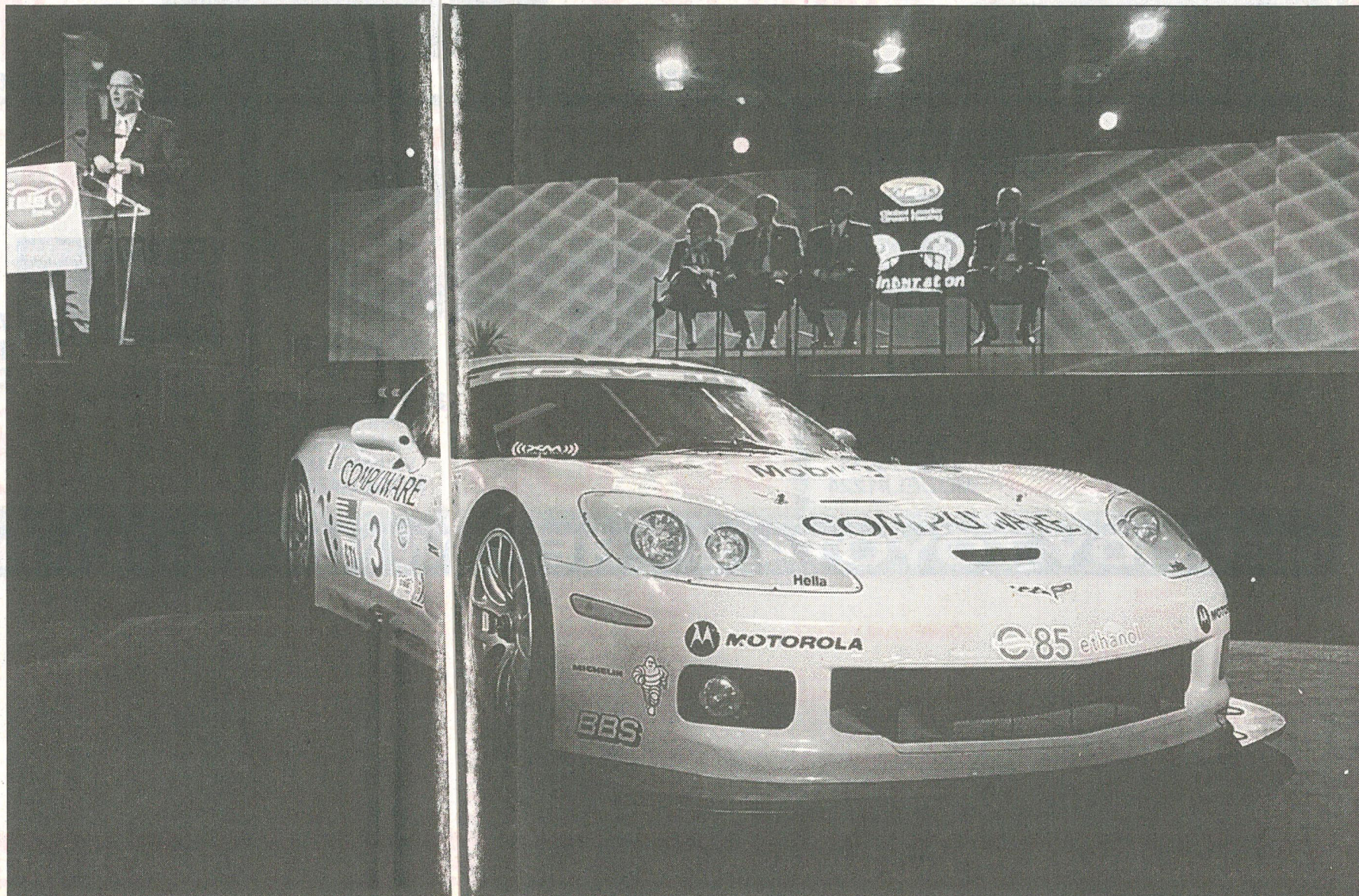
ALMS is the first racing series to partner with government agencies and the premier automotive engineering society in the country to advance alternate fuel technology that may eventually find its way into cars you can buy in the showroom.

"Auto manufacturers competing in ALMS have made it very clear that this is a direction and an overall initiative that is important to them," Atherton says.

There are eight auto manufacturers who participate in the ALMS. All cars participating in the series currently run on either E10 (10 percent ethanol/90 percent gasoline) or diesel fuel. Starting this season ALMS decreed that E85 (85 percent ethanol and 15 percent gasoline) would be allowed. Chevrolet immediately jumped on the E85 bandwagon and announced that its Corvette entry in the series will burn E85.

For the past two seasons, Audi has run its ALMS cars on diesel fuel exclusively, enjoying great success while using less fuel. All other ALMS cars run on E10, the same fuel most of us buy at the pump today.

ALMS states that the ethanol in the E85 its cars use must be created from a non-food source. In this case, the ethanol will be fermented from wood chips or sawdust. Most commercial ethanol available at retail pumps today is fermented from corn or soybeans.



Chevrolet General Manager Ed Peper announces at the Detroit auto show the Corvette will use E85 in the upcoming ALMS racing.

Using wood waste does not impact the supply or prices of corn and soy, so it should not affect the price of beef, milk and other products that are produced from animals fed on corn or soy.

The diesel fuel used in the ALMS events is a special low-sulfur variety that must be imported from Europe because it is not yet available in the United States. Eventually ALMS would like to use biodiesel in its events.

"The use of E85 by America's premier production sports car racing team in a high-profile, high-tech racing series like the ALMS shows that Chevy is continuing to lead by example," says Chevrolet General Manager

Ed Peper.

GM Racing's transition from E10 to E85 will be seamless, promises Steve Wesoloski, GM Road Racing group manager. "The [Corvette] race car's fuel systems were already 100 percent compatible with ethanol so our preparation for the change to E85 in 2008 comes down to recalibrating the engines," he says.

In addition to Chevrolet, carmakers Audi, Acura, Aston Martin, Dodge, Ferrari, Ford, Mazda, Panoz, Porsche and Saleen have also entered vehicles in the ALMS.

One of the chief technical difficulties that ALMS faces in allowing cars in the series to select their own fuel choice is the difference

in the energy content of each option. Diesel contains 135,000 Btu compared to 115,000 Btu in gasoline. This allows a car to travel about 30 percent further on a gallon of diesel.

Ethanol has about 34 percent less energy per gallon than gasoline, only about 76,000 Btu per gallon. But ethanol also allows engines to run at higher compression ratios and thus potentially generate higher horsepower output. Best of all, emissions from cellulosic ethanol are 94 percent less than from gasoline.

Atherton says that ALMS devised a protocol that mandates different size fuel cells for E85, E10 and diesel. This is designed to

prevent any manufacturer seizing an advantage simply by the selection of fuel its cars will run on.

Because the energy content of the three fuels differs so much, specified fuel cells will equalize the amount of energy each can burn. Theoretically, this means that every car should have to make the same number of pit stops to refuel during the course of a race, regardless of the fuel its engine burns.

The ALMS 2008 season begins on March 15 with the 56th running of the Mobil 1 Twelve Hours of Sebring race at Sebring International Raceway in Florida. You can access the rest of the ALMS schedule from www.americanlemans.com.