

Where do you stand on corn ethanol?

Corn ethanol is a petroleum-guzzling machine of its own. More than a gallon of petroleum or energy equivalents are required to produce a single gallon of corn ethanol because it cannot be transported through pipes, but must be shipped by gas-guzzling trucks. Government subsidies to oil companies for this kind of ethanol—some \$2 billion annually—need to be discontinued. This money should be used instead for the proliferation of other legitimate alternative fuels, such as CNG, sugar ethanol, and second-generation biofuels—meaning biofuels derived from non-edible plant and animal matter.

You speak of retrofitting. Is America prepared to retrofit vehicles?

Unfortunately, right now our nation is completely unprepared to do so. In fact, the U.S. government actually inhibits retrofitting by virtue of EPA standards guaranteed to make retrofitting expensive and impractical. It can cost \$50,000 to \$100,000 to gain approval to retrofit just a single engine. That has led to an underground CNG retrofitting movement in Utah, where CNG is 65 cents per gallon and no one wants to spend thousands of dollars to gain EPA permission to retrofit a car. So in a crisis, first off, EPA regulations will have to be suspended.

There is no technological reason why America couldn't launch a mass retrofitting program. Iran is way ahead of us, converting 20 percent of its vehicle fleet to compressed natural gas each year. From June 2007 to June 2008, Iran added about a half million CNG cars. More than 100 conversion centers throughout the country charge a subsidized fee equal to about \$50 per vehicle. Iran developed this retrofitting program in order to withstand international sanctions that threaten to terminate imports of refined gasoline; the CNG conversion program encourages Iran to continue developing a nuclear weapon to threaten Israel and the world. If Iran can mass retrofit, why can't we?

With such severe driving restrictions, how would people get to locales only accessible by automobiles?

I call for a mass switch to free or reduced-fare mass transit, as is called

for in international protocols. Shortages at the fare box would be replenished by a Green Fleet Superfund, to be funded in part by redirecting oil support tax expenditures and imposing a windfall profits tax on oil companies. Other ideas include shared taxi shuttles, such as the *Sherut* system in Israel; point-to-point neighborhood shuttles to and from shopping centers and mass transit stations, which would operate like jitneys or Good Samaritan shuttles during a debilitating snowstorm; and, of course, a massive uptick in carpooling and ride sharing. In all cases, local and state licensing for these services has to be quick and convenient.

Moreover, all vehicles on the road will need to adhere to re-imposed and strictly enforced 55 miles per hour speed limits. Reducing the speed limit will save us millions of gallons per day. Massive savings can also be achieved by prohibiting idling beyond five minutes, strictly regulating proper tire pressure, and staggering commute times to reduce rush-hour and bumper-to-bumper congestion. And, of course, automakers will have to produce more fuel-efficient vehicles.

Is all this feasible?

If auto manufacturers don't change, they will go under. The one American carmaker I am cautiously optimistic about is General Motors. In 2010, GM is planning to introduce the Volt—an electric vehicle augmented by external combustion that can travel 40 miles on a single charge. Rather than build a token number of these kinds of alternative vehicles, as has been true of other manufacturers, GM at the highest level has repeatedly told me that they are committed to selling thousands of Volts as fast and as inexpensively as possible. Only GM has the muscle and the experience to mass produce in this fashion. If true, I applaud GM for this.

Can we afford to wait until 2010?

No. We must stop our oil addiction now. The answer to a heroin addiction is not to find new sources of heroin, but to go into rehab on a massive scale.

And America's addiction has been financing Islamic extremists who threaten to destroy Israel.

Right. That is only one reason why Israelis such as Shai Agassi, the entrepreneur behind the Israeli company Better Place, have been at the forefront of developing alternative transportation systems. In a plan backed by the Israeli government, Agassi is working with the Japanese automaker Nissan to create



electronic cars which are powered by wind turbines, solar, and other renewable electric sources. He has already raised some \$200 million in venture funding, led by The Israel Corporation, to create hundreds of thousands of battery recharging stations as well as scores of battery swapping centers. Working from the model of cell phone companies, electric automotive subscribers would receive the electric cars for a nominal fee; the company would make its money from the recharging business.

Will these cars have to go to a commercial station for recharging?

No, they'll be able to be plugged into an ordinary electrical wall socket. But for traveling, the onboard GPS navigation system will direct the driver to one of the

continued on page 60