

## Is the Quick Answer to Soaring Fuel Costs Ethanol and Methanol in the End?

### Rapid Move to Alcohol-Capable Vehicles Would Effectively Put a Ceiling on Traditional Oil Prices, Author Says, and Could Happen Quickly with One Law from Congress

SCDigest Editorial Staff

Is there really a simple answer to soaring energy costs?

Yes, says author **Robert Zubrin**, who earlier this year wrote a book called "Energy Victory," which garnered reasonable coverage at the time – but which is now worth looking at again at prices have soared well above even the lofty levels at the beginning of 2008.

Zubrin's basic contention:

- The ability of cars to run on arbitrary combinations of ethanol/methanol is proven, and already in place now in Brazil. This technology has made these Flexible Fuel Vehicles (FFVs) capable of running on any mixture of ethanol/methanol and gasoline, from 100% of either to a random mix of the two fuel types based on refilling a partially full tank of one type with the other.
- Ethanol/methanol can be produced for something around \$1-1.50 per gallon (more on that below). Add some profit and logistics costs, and you still wind up with a cost per gallon at retail well below today's levels.
- With that as the case, motorists would flock to ethanol/methanol as the fuel of choice, effectively putting a ceiling on what OPEC and other oil producers could charge per barrel.

So, we would be looking at consumer gasoline costs of somewhere in the \$2.00 per gallon range, and maybe less, and a similar spillover effect to diesel fuel prices as well. There would also be large environmental benefits from greater use of the alcohol-based fuels.

**We would be looking at consumer gasoline costs of somewhere in the \$2.00 per gallon range, and maybe less, and a similar spillover effect to diesel fuel prices as well. There would also be large environmental benefits from greater use of the alcohol-based fuels.**

---

"Alcohol FFVs are proven systems. They can be manufactured for approximately the same price as gasoline cars, they pollute much less, and they are significantly safer," Zubrin says.

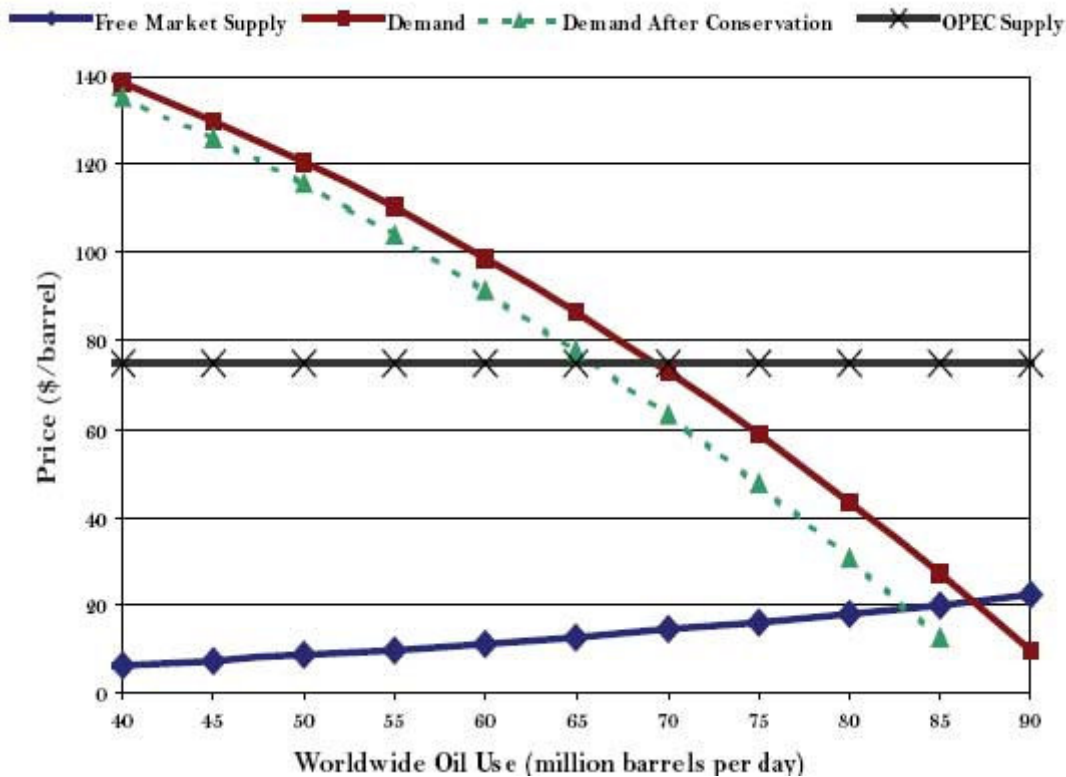
Corn-based ethanol can't meet market volume needs, Zubrin says, and while there is the strong probability that technology will be developed that can use other types of plant material to produce ethanol, it isn't here yet.

Fortunately, ethanol is not required – basic methanol should be just fine, and methanol can be made from coal, natural gas, virtually any "biomass" (plants), even trash.

"The chemistry needed to dethrone oil is well understood. We can readily convert our available fuels into an alcohol supply bountiful enough to displace a large portion of the oil we import," Zubrin adds. "The only problem is, we need to have cars and trucks that can use it."

**Is the Quick Answer to Soaring Fuel Costs Ethanol and Methanol in the End? (Con't)**

FIGURE 1. SUPPLY AND DEMAND CURVES FOR OIL WORLDWIDE



**One Law to Can Do the Trick**

Other than upgrading some components to better withstand the more corroding effects of the alcohol-based fuels and adding some fuel sensor technology, there are very few changes needed to produce FFVs, Zubrin contends.

However, the automotive OEMs are unlikely to begin producing FFVs on their own, without certainty that there will be a market – and available fuel – for such vehicles. There would clearly be some costs to the automotive companies for engineering and tooling – but these additional costs are minor in the grand scheme of what we spend on oil.

Zubrin says the answer is a federal law that simply mandates that by a certain date, all vehicles sold (not just made) in the country will be FFVs – the same step Brazil took in 2003 with great success. The requirement could certainly

be phased in over time as well – defining set percentages of FFV production minimums over some period of years.

“Within three years of such a mandate, there would be 50 million such FFVs on American roads,” Zubrin argues. “This will, in turn, force all automobile manufacturers abroad to switch to FFVs as well, thereby creating a huge global market and infrastructure for alcohol fuels.

It all just seems too easy, too logical – yet for unclear reasons, the idea has thus far gained little traction in Congress or other circles – but that was before the most recent fuel price explosion.

“In a game of chess, the struggle ends not with the taking of the enemy king, but with his entrapment. If we could engineer a liberation from oil, the enemy would be rendered helpless, and one way or another, the oil-for-terror game will be finished,” Zubrin concludes. “Call it checkmate. Call it victory.”