



## Lessons from Brazil

Posted by [Robert Rapier](#) on June 1, 2006 - 1:46am

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### "Brazil has it figured out; why can't we?"

The following claim from Tom Daschle and Vinod Khosla appeared in their recent New York Times editorial, **Miles Per Cob** (now behind a pay wall):

*As Brazil's "energy independence miracle" proves, an aggressive strategy of investing in petroleum substitutes like ethanol can end dependence on imported oil.*

You may have also recently seen Dan Rather's report [The Ethanol Solution](#), in which he gushes over Brazil's ethanol success and wonders why we don't heed their example. Perhaps you heard Frank Sesno on CNN's [We Were Warned](#) ask why the U.S. is not following Brazil's example. The mainstream media have it figured out. The politicians have it figured out. Many ordinary Americans have it figured out. We just need to apply the Brazilian example to the U.S., and we will end our dependence on foreign oil. But is it as simple as that? Let's investigate.

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### Warning: Reality Check Ahead

According to [Per Capita Oil Consumption and Production](#), oil consumption in Brazil is 4.2 barrels per person per year. In the U.S., oil consumption is 27 barrels per person per year, 6.4 times as much per person as Brazil's.

However, we do produce much more oil per person than Brazil. Each year the U.S. produces 11 barrels per person, compared to 3.35 barrels per person for Brazil. In order to achieve energy independence, the gap between demand and production must be closed. Brazil has to close a gap of 0.85 barrels per person per year (4.2 - 3.35). They produce sufficient ethanol to close this gap, and therefore they are energy independent. The U.S., on the other hand, has to close a gap of 16 barrels per person per year. The U.S. gap in production/demand is almost 19 times greater than the production/demand gap in Brazil.

Clearly, the U.S. has quite a large gap to close. But this is a difficult proposition. Not only do we use more energy per person, but the population of the U.S. is [110 million greater](#) than that of Brazil. According to [my calculations](#), we can't possibly hope to close the production/demand gap with grain ethanol. Others have shown the futility of closing that gap with cellulosic ethanol [here](#) and [here](#).

### The Real Lesson from Brazil

Yes, Brazil has in fact "figured it out" with respect to energy independence. But the reason they

achieved energy independence is primarily because of their frugal energy usage, not because of ethanol. Increase their energy usage to U.S. levels, and the "energy independence miracle" would quickly vanish. This is the factor that the media and the politicians have overlooked. On the other hand, if the U.S. had the same per capita energy consumption as Brazil, we would be net oil exporters. In fact, our per capita energy consumption could be 11 barrels per person per year - triple the consumption of Brazil - and our production and demand would be in balance. We would be energy independent.

The real lesson from Brazil is that energy independence can be achieved by slashing our energy usage. It is simply not realistic to expect the U.S. to achieve energy independence with biofuels - unless we sharply curb our consumption. The next time you hear someone say we should emulate Brazil's example, ask them to calculate the amount of ethanol this would require, and ask them how we are supposed to produce that much. It is time to start demanding details from the "Brazil believers". In doing so, we may convey the gravity of the situation to those who think ethanol will lead us to energy independence.



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