

Opinion Editorial – January 9, 2012
“Ethanol’s Best Kept Secret – The Brazil Mandate”

Certain members of our state congress are attempting to take Florida in the wrong direction when it comes to biofuels and state energy security. In fact, Representative Matt Gaetz has called “ethanol a threat to Florida”, and that the “government has laced our gas with ethanol”. Rep. Gaetz and Senator Greg Evers are sponsoring a bill (HB4013, SB238) to repeal Florida’s Renewable Fuel Standard (“RFS”) which requires that all state gasoline contain 10% ethanol (commonly known as “E10”). In actuality, the Gaetz – Evers bill poses the real “threat”, not only to Florida”, but to the United States.

If we dig beneath the surface, we can see what forces are really at play here. The repeal of the Florida RFS serves as a stepping-stone for those forces seeking to eliminate the national RFS, which mandates our country use 36 billion gallons per year of biofuel by 2022. A repeal of the federal RFS would keep our country and our economy totally dependent on fossil fuels, and would put Big Oil back in charge of discretionary blending of ethanol. Does Florida want to be known as the state that helped catalyze our country’s reversion to a 100% fossil fuel based economy, at a time when the state is on the cusp of an emerging advanced biofuel industry from nonfood – based feedstocks? From a policy standpoint, we cannot allow certain forces to derail the progress that has been made in the development and commercialization of next generation ethanol and advanced biofuels.

Our country’s best kept secret on ethanol use is Brazil’s ethanol mandate, where all ethanol is made from sugar cane. In 1975, the Brazilian government started the National Alcohol Program (Proalcool) in response to the OPEC oil embargo. From 1976 until 1992, the Brazilian government made mandatory the blend of ethanol fuel with gasoline, fluctuating between 10% to 22% ethanol. Since that time, the mix of ethanol in gasoline has risen as high as 25%. Current legislation, enacted in 2003, requires an ethanol content between 20% and 25% (E20 to E25), with the executive branch having the flexibility to adjust levels within that range.

Today in Brazil, all retail gasoline stations sell either 100% ethanol (E100), or with E20 – E25 gasoline blends. For decades, conventional automobiles in Brazil have run on E20 – E25 with no engine problems. By 2005, the Brazilian government incentivized the sale of flex-fuel vehicles which can run on any blend of ethanol up to E100. Currently, Brazil has over 12 million flex-fuel vehicles and 500,000 flex-fuel motorcycles regularly using E20 to E100 fuel.

Brazil serves as an excellent case study on why government mandates work. Today, approximately 50% of Brazil’s motor fuel supply is ethanol as a direct result of ethanol’s mandated use. Ethanol has allowed Brazil to completely eliminate the importation of foreign oil. Brazil is essentially energy independent, thanks to its mandated ethanol program, which supplements its own domestic supply of petroleum.

Mandates, when used properly, remove uncertainty, provide market stability, reduce risk, and stimulate capital investment. Ethanol and advanced biofuel projects are very capital intensive. Large scale infrastructure needs to be built for biofuel production. The

investment community needs to know that the state and nation support the development of next generation ethanol and advanced biofuels in order for capital investment to occur.

Mandates also are established for the benefit of the country, which in the case of ethanol, is to create national energy security. Why then has Brazil's ethanol mandate success story not been touted throughout America whereby we could aspire to emulate the Brazilian model? A greater level of state and national awareness would serve to appreciate Brazil's case study mandate. *The last thing anti – ethanol interests desire is for Brazil's successful ethanol mandate to positively resonate throughout our country.*

The Florida RFS and Federal RFS are mandates that were intended to put us in the direction of energy independence. Yet, Rep. Gaetz claims over and over that ethanol is “burdensome”. If ethanol is so burdensome, then why are pro – biofuel oil companies, including Shell, BP, Valero, Marathon, Murphy Oil, and Sunoco, injecting several billion dollars of investment into ethanol research, technology, and production, both here in the U.S. and globally? Why does Gaetz not call these oil companies ethanol “special interest” groups like he criticizes our company as being?

Virtually every gallon of gasoline in the U.S. contains 10% ethanol, mostly made from corn. Since corn ethanol may not be the “ideal fuel”, the Federal government has capped corn ethanol production beyond what is required for E10. And the only “subsidy” for ethanol, the blender's credit, expired at the end of last year. The truth is, the corn ethanol industry has set a tremendous foundation for the ongoing transition to advanced biofuels, which include next generation ethanol from non-food based feedstocks, and drop-in biofuels such as biobutanol. The advanced biofuel industry that is emerging in the State of Florida will create thousands of new jobs, clean burning fuel, and energy security.

Yet, Rep. Gaetz continues to criticize corn ethanol by focusing on the only study which shows a negative energy balance for corn ethanol, by Pimental at Cornell. However, all other studies show corn ethanol to have a positive energy balance, including that by the USDA http://www.usda.gov/oce/reports/energy/2008Ethanol_June_final.pdf, which demonstrates a positive energy balance of 2.3 units of energy produced for every 1 unit of energy required. In fact, the Argonne National Laboratory study <http://www.transportation.anl.gov/pdfs/TA/267.pdf>, scientifically refutes the Cornell study by stating that Pimental uses erroneous assumptions, obsolete agricultural and technical data, and fails to include key energy credits on corn ethanol's co-products.

One has to wonder if Rep. Gaetz and Sen. Evers have ever taken the time to study the Brazilian model? Maybe a trip to Brazil might change their negative viewpoints on ethanol here in the U.S. They would see how successful the Brazilian ethanol mandate is, and how beneficial it has been to the Brazilian economy in terms of job creation, energy independence, and drastically improved air quality in cities like San Paulo.

Tearing down the Florida RFS would be devastating to the State of Florida and the nation as a whole, and will easily set the stage for an attempt to repeal the Federal RFS. This would leave the U.S. in a very vulnerable situation in regards to energy security. China is

aggressively securing global oil reserves, and Iran is threatening to shut down the straits of Hormuz in which approximately 40% of the worlds oil supply travels through. As a result, China along with Africa, Japan, South America, and Europe are all aggressively moving into advanced biofuel and next generation ethanol production.

The U.S. military has set of goal of obtaining 50% of its energy needs from non-fossil fuels by 2020. The Navy, Army, Air Force, and Marines are all making a rapid transition to advanced biofuels. I wonder what the military knows about our ability to procure petroleum from around the globe that the average U.S. citizen does not know. Attempting to repeal the Florida RFS is bad legislative policy. Instead, let's find a way to modify it so that all parties benefit, much the way Brazil has done.

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