

Biorefineries May be New Greenfield Theme for U.S. Fuel Producers

BY JOHN LICATA, FOUNDER & CHIEF ENERGY STRATEGIST, BLUE PHOENIX INC.



With the recent focus on Hurricane Isaac forcing the temporary shutdown of most crude oil and natural gas production in the Gulf of Mexico, it is clear the lack of refinery capacity in the U.S. is still a major issue that simply won't go away.

That makes Americans hostage to rising gasoline prices at the pump now more than ever, since there hasn't been a new refinery built in the U.S. since 1976. Nationwide, refinery numbers continue a three-decade contraction.

There are currently about 144 operable U.S. refineries, the fewest since at least 1949, which is as far back as Energy Department data goes.

With more stringent government fuel requirements coming and older refineries incapable of breaking down crude to more eco-friendly gasoline, it is possible to see pump prices run even higher, especially if more Gulf storms come along.

Despite a recent short-term rise in refiner "crack spreads," the margin from breaking down a barrel of crude into gasoline and diesel, the "golden age" of refiners seems largely something of the past.

So what's next? **Refiners may need to focus on "greener" pastures in light of government mandates to produce cleaner-burning fuels.** This has me thinking refiners are

going to be forced to add biogas to their business models in a big way to sustain revenue growth.

San Antonio-based Valero Energy Corp., the largest independent oil refiner in the world, quietly changed the direction of its massive enterprise in recent years by becoming a major player in ethanol. A \$60 million equity investment last year in Enerkem Inc., a Montreal-based company that converts waste into ethanol, solidified Valero's intention of growing with the times.

As fuel output in the Northeast declines in the wake of refinery asset sales and closures and industry focus turns to more appealing margins in the West Coast and the Mid-Atlantic regions, there has become a void in distillate and gasoline production. As a result, opportunities for biogas development in the eastern U.S. are growing.

"We could soon witness crack spreads being replaced by 'pesto' spreads, representing a new paradigm for refiners to create green fuel, or the 'green sauce' for making fuel..."
Energy consultant John Licata

We could soon witness crack spreads being replaced by "pesto" spreads, representing a new paradigm for refiners to create green fuel, or the "green sauce" for making fuel, by distilling garbage, plastics and biomass such as wood chips, plastics, corn husks, wood residues, straw and switch grass into "syngas" rich with complex hydrocarbons that can power commercial vehicles and airplanes.

While cellulosic ethanol is a promising fuel alternative, there are issues we must call attention to, namely high production costs and the potential environmental damage.

The U.S. produces about 1.3 billion tons of biomass a year. Therefore, fuel derived from biomass could potentially offset 30% of our present crude oil needs.

Progress in this area should be seen sooner than later, and more refiners will likely look to follow Valero's lead to boost exposure to biogas without harming food crops or timber.

John Licata, a CME Group featured contributor, is founder and chief energy strategist with Blue Phoenix Inc., a New York-based, independent research & consulting firm focused on next generation energy. Prior to starting Blue Phoenix in 2005, Licata held research and trading positions at Dow Jones, Salomon Smith Barney, BrokerageAmerica and R&M Futures, an over-the-counter energy trader.

Blue Phoenix next generation energy research helps lead clients to uncover the latest developments, trends and financial opportunities by combining traditional energy and natural resource studies, macroeconomic analysis of commodity futures and related equities and first-hand knowledge of new technologies that are developing globally, including small nuclear reactors, electric vehicles and utility scale storage.

This information was obtained from sources believed to be reliable, but we do not guarantee its accuracy. Neither the information nor any opinion expressed therein constitutes a solicitation of the purchase or sale of any futures or options contracts.