

“Tax uncertainty hurting alternative energy”

By Malcolm Woolf, *The Hill*, January 2, 2014

We have seen it all before: Just last year, the production tax credit (PTC), the life's blood of wind energy development, got an extension in the first days of January, though just for one year. That was better than 2000, or 2002, or 2004, years when the PTC was allowed to lapse altogether, with the consequent collapse of wind energy installation by as much as 90 percent. Still, uncertainty about the tax credit's fate in late 2012 caused layoffs at wind-component manufacturing facilities across the country.

2013 was supposed to be different: With leaders of both parties in both houses of Congress vowing to bring comprehensive reform to the tax code, the boom-and-bust cycle that comes from arbitrary deadlines suddenly extended – or not – was supposed to be over. As the year wore on, however, it became clear that comprehensive tax reform would be a long time coming – while the clock ticked on existing tax credits with expiration dates written into law. So now, at the start of 2014, advanced energy developers, manufacturers, and installers brace themselves for growth-killing tax increases imposed on them without Congress even taking a vote. Meanwhile, the tax sweeteners for conventional energy development, etched into the tax code as if in stone, continue undisturbed.

Though these advanced energy tax credits have vanished, industry impact will be blunted at first because of language included in the last PTC extension that allowed projects to qualify as long as they “commenced construction” by the December 31 deadline, rather than been placed into service. That just means the development pipeline will not dry up immediately after December 31, but rather a few months later.

Read more: <http://thehill.com/blogs/congress-blog/energy-environment/194271-tax-uncertainty-hurting-alternative-energy>

“BASF SE : Patent Issued for Iron- and Manganese-Comprising Heterogeneous Catalyst and Process for Preparing Olefins by Reacting”

4-Traders, January 9, 2014

Patent number 8618016 is assigned to BASF SE (Ludwigshafen, DE).

The following quote was obtained by the news editors from the background information supplied by the inventors: "It is known that lower olefins can be prepared from carbon monoxide (CO) and hydrogen (H₂) over metal catalysts, e.g. iron or cobalt catalysts. Iron oxides are usually used as catalyst precursors. Such catalysts are described, for example, in U.S. Pat. Nos. 4,544,674, 5,100,856, 5,118,715, 5,248,701, US 2004/0127582 A1, H. P. Withers et al., Ind. Eng. Chem. Res. 1990, 29, pages 1807 to 1814, and M. E. Dry et al., Stud. Surf. Sci. Catal., Vol. 152, 2004, pages 533 to 600.

"This reaction is also referred to as the Fischer-Tropsch synthesis.

"Conventional processes for the Fischer-Tropsch synthesis produce hydrocarbons having a wide product distribution.

"In principle, this range of the product distribution can be characterized by the Anderson-Schulz-Flory distribution; cf.: M. Janardanao, Ind. Eng. Chem. Res. 1990, 29, pages 1735-53.

"It is likewise known that the composition of the hydrocarbons formed in the Fischer-Tropsch process can be strongly influenced by the choice of catalysts used, the types of reactor and the reaction conditions.

"For example, it is known that the product distribution can be shifted in the direction of lower olefins by use of high temperatures in the presence of modified iron catalysts: B. Bussemeier et al., Hydrocarbon Processing, November 1976, pages 105 to 112.

"The main problem here is the formation of large amounts of undesirable methane (CH₄).

"In addition, the iron oxides required as starting material for the catalyst are difficult to reduce.

Read more: <http://www.4-traders.com/BASF-SE-6443227/news/BASF-SE--Patent-Issued-for-Iron-and-Manganese-Comprising-Heterogeneous-Catalyst-and-Process-for-Pr-17771321/>

“Gas To Liquids In The U.S. Appears Attractive, Despite Shell's Recent Decision”

By James Williams, *Seeking Alpha*, January 13, 2014

In September 2013 - and in close coordination with the Governor of Louisiana - Shell (RDS.A) (RDS.B) announced its intent to potentially develop a world-scale Gas-To-Liquids (GTL) facility, to be located near Baton Rouge. Shell committed to spending at least \$12.5B on the project, and the State of Louisiana committed to providing a supporting incentive package for the project, including a \$112M grant.

Just ten weeks later, Shell issued a press release on December 5th stating it will not pursue the Louisiana GTL project at this time. Why did Shell make such a quick position change? What were the real reasons behind Shell's decision? Should Shell's decision be interpreted as a

bellwether for GTL in the United States? What figures should be used to characterize Shell's proposed (and now halted) project in Louisiana?

It appears that Shell's decision was not so much based on concerns regarding forecasted price spreads between crude oil and natural gas, but was based primarily on its internal capital allocation needs, corporate portfolio considerations and shareholder concern about cash flow. I disagree with those who interpret Shell's statements to imply that GTL in the United States is not attractive. Apparently, it is not attractive to Shell but in my opinion GTL in the United States remains an attractive investment. My conclusion reflects analyses of commodity price forecasts and the price spread that drives GTL feasibility, as well as analyses of Royal Dutch Shell, both of which are discussed below. But before we get into those details, let's take a careful look at some key elements in Shell's December 5th Press release.

Read more: <http://seekingalpha.com/article/1941041-gas-to-liquids-in-the-u-s-appears-attractive-despite-shells-recent-decision>

“Alternative Energy Patent Issued to Kansas State University”

Kansas State University (Press Release), *NewsWire*, January 16, 2014

NewsWire — MANHATTAN, Kan. -- Kansas State University was recently granted a U.S. patent for a material that helps convert straw and other grasses into a cleaner substance for alternative energy and fuel.

The patent, "Char Supported Catalysts for Syngas Cleanup and Condition," was issued to the Kansas State University Research Foundation, a nonprofit corporation responsible for managing technology transfer activities at the university. The patent is for research conducted by former faculty members Wenqiao Yuan and Duo Wang.

The patent focuses on more efficiently converting biomass made from straw and other grasses into a synthetic gas called syngas. Syngas can be burned for energy, used to generate electricity and is a basic building block in fossil fuels.

Yuan and Wang developed a catalyst -- a substance that increases the rate of a chemical reaction and is left unchanged by the reaction -- that can be used in syngas production. Converting biomass to syngas creates tar, an unwanted byproduct that must be scrubbed from the syngas.

Read more: <http://www.newswise.com/articles/alternative-energy-patent-issued-to-kansas-state-university>

“Studies aimed at making next generation easier and less costly to produce”

By Thomas Content, *Journal Sentinal*, January 25, 2014

One bottle in professor Jim Dumesic's chemical engineering lab stands out from the rest these days.

The bottle has a brown solution on top and a clear one on the bottom, and they're elegantly separated.

"It's just like with oil and vinegar for a salad. If you let it sit, it'll separate on its own," said Jeremy Luterbacher, a graduate fellow at the University of Wisconsin-Madison.

There's not much liquid in it, just a few milliliters. But the vial may invigorate research into making next-generation biofuels a little easier — and less costly — to produce.

The reason: It could potentially save billions on the cost to bring to market new biofuels, those that move beyond the fuel vs. food debate.

The way that bottle became two liquids in one is the subject of an article published this month in the journal *Science*. The research by Luterbacher, Dumesic and their colleagues, which began in 2012, is so promising that the Wisconsin Alumni Research Foundation is funding additional work to prove it at a larger scale. And a start-up company, Glucan Biorenewables, at the UW Research Park is also working to refine the process.

The research, if it pans out in more testing, seeks to remove a key roadblock on the path toward producing more biofuels from plants that aren't used as food.

An initial economic assessment of the process indicates that using this method could produce savings of 10% when compared with competing technologies, the UW researchers found.

That got the attention of Jim Lane, editor of *Biofuels Digest*, who termed the research a "hot biofuels development" in his industry publication.

Savings of 10% could be significant, Lane said.

Read more: <http://www.jsonline.com/business/uw-madison-researchers-are-building-better-biofuels-b99190278z1-241974641.html>

“ND delegation fighting changes to ethanol standard”

By Henry C. Jackson, *The Bismarck Tribune*, January 27, 2014

WASHINGTON — With a deadline for comments approaching, North Dakota's congressional delegation is pressing the Obama administration to reverse course on proposed changes that would significantly reduce the amount of ethanol in the country's fuel supply.

The Environmental Protection Agency announced in November it was proposing reductions by nearly 3 billion gallons in the amount of biofuels required to be blended into gasoline in 2014. The EPA has said the additive had become less necessary in light of fuel-efficient engines and lower fuel demand.

A deadline for comments on the proposed rule change is Tuesday. Members of North Dakota's delegation have used much of the time between November and the deadline to press federal officials to reverse their proposed changes.

The latest effort came last week when Sens. John Hoeven, a Republican, and Heidi Heitkamp, a Democrat, signed onto a letter with 29 other senators to EPA Administrator Gina McCarthy saying that changes would make the U.S. more reliant on foreign oil and would hurt farmers and small-town economies.

Read more: http://bismarcktribune.com/news/state-and-regional/n-d-delegation-fighting-changes-to-ethanol-standard/article_65de55f0-8709-11e3-a812-0019bb2963f4.html

“Landfill gas to power three Lynchburg-area colleges”

By Allie Robinson Gibson, *News Advance*, January 27, 2014

EMORY, Va. — It's an energy source that otherwise would be trashed, but five small Virginia colleges -- three in the Lynchburg area -- are taking advantage of it.

It's landfill gas, the toxic methane that landfills routinely capture and flare off. Lynchburg College, Randolph College, Sweet Briar College, Emory & Henry and Hollins University have partnered with Collegiate Clean Energy, a business that is an affiliate of Ingenco, a landfill gas energy operator. The company captures methane off of the landfill and turns it into electricity, which is sold back to utilities.

In a practical sense, the changes at Emory & Henry will be as simple as switching from one electricity provider to another, through Appalachian Power, said Jesse Freedman, energy manager for the college. He said he expects the switch to happen within the next two months.

The change will help reduce the college's carbon footprint and will go a long way toward helping the college reach its carbon neutral goal, he added.

“Fifty-five percent of our carbon footprint is from electricity, so it will potentially cut [the footprint] in half,” he said. “And it will be between \$500,000 and \$1 million in savings” over the life of the 12-year contract.

Read more: http://www.newsadvance.com/news/local/landfill-gas-to-power-three-lynchburg-area-colleges/article_176c1de8-875a-11e3-b897-001a4bcf6878.html

“Ethanol Gains as Gas Pipeline Outage May Curb Output”

By Mario Parker, *Bloomberg News*, January 28, 2014

Ethanol gained the most in five weeks on speculation that natural gas pipeline shutdowns will force distillers to reduce production.

Futures rose 2.1 percent, snapping the longest streak of losses since July, as TransCanada Corp. (TRP) shut three pipelines after an explosion and fire 50 kilometers (31 miles) south of Winnipeg, Manitoba. Natural gas is used to power ethanol plants.

“That pipeline up in Canada is affecting things,” said Mike Blackford, a consultant at INTL FCStone in Des Moines, Iowa. “That may cause some of these plants to slow down.”

Denatured ethanol for February delivery advanced 3.7 cents to settle at \$1.794 a gallon on the Chicago Board of Trade. Today’s increase was biggest on a percentage basis since Dec. 19. Futures have fallen 25 percent in the past year.

Gasoline for February delivery rose 0.61 cent to \$2.6278 a gallon on the New York Mercantile Exchange. The futures cover reformulated gasoline, made to be blended with ethanol before delivery to filling stations.

Ethanol’s discount to gasoline contracted by 3.09 cents to 83.38 cents a gallon.

The fire caused by the Jan. 25 TransCanada explosion forced emergency deliveries of compressed natural gas, the company said on Jan. 26, and prompted gas providers in North Dakota and Wisconsin to ask for customer conservation.

Read more: <http://www.bloomberg.com/news/2014-01-28/ethanol-gains-as-gas-pipeline-outage-may-curb-output.html>

“GTL test reactor meeting targets”

Offshore, January 29, 2014

TEESSIDE, UK – Gas reforming company Gas2 has achieved a breakthrough at its natural gas-to-liquids test facility in northeast England.

The company has commissioned and started up the Fischer Tropsch (FT) reactor at the 3 b/d Wilton Research Center pilot plant, using syngas formed in the syngas reactor to produce hydrocarbon liquids.

The syngas reactor has been operating at a range of operating pressures, with minimal loss of conversion at higher pressures, the company says.

Gas-to-liquids (GTL) is a two-step petrochemical process to convert natural (methane-rich) gas into liquid hydrocarbons such as synthetic crude oil (syncrude). Synthesis gas (syngas) is generated from a combination of natural gas and oxygenate. FT reactor units then convert the syngas into GTL fuels.

Gas2' says its GTL system is less complex than other GTL processes, one advantage being the elimination of the intermediate compression stage between syngas and FT reactors. This could help cut capital and operating costs.

Read more: <http://www.offshore-mag.com/articles/2014/01/gtl-test-reactor-meeting-targets.html>