

## Ethanol is Becoming a Bad Word



By JIM LANE, Biofuels Digest

In California, BlueFire Ethanol Fuels, voted the 19th Hottest Company in Bioenergy for 2009-2010 by Digest readers and a panel of international selectors, announced that the company has changed its name to BlueFire Renewables to more clearly illustrate the company's capabilities in renewable energy. BlueFire Renewables will continue to trade as BFRE.OB.

Its not the first re-branding. Cobalt Biofuels retreated to its original Cobalt Technologies brand not too long ago. Solazyme has repositioned as a renewable oils company (away from algae) to emphasize its products over its process. Joule Biotechnologies morphed this year into Joule Unlimited.

If BP famously branded itself as "beyond petroleum," these groups are moving "beyond ethanol," "beyond biofuels," or "beyond biotech." In each case, its a little about product clarity - note the rampant confusion over PetroAlgae's IPO, which has been received as an algae-play rather than as a commercialization of lemna-based biofuels.

But a lot of it is escaping the shackles of a bad vibe over bio-anything, which taps into negatives over food vs fuel, and genetic modification, as well as conjuring up memories for lenders of the wave of bankruptcies in 2008-2009.

The hope? To rise like a Phoenix from the ashes of the old brands, but still benefitting from the transformative characteristics of the underlying technologies. In an earlier day, a lot of companies wanted to move away from the negatives of the old Standard Oil brand in the oil & gas industry. So, today, we have Chevron (Standard Oil of California), ExxonMobil (based on the old Standard Oil of New Jersey, Standard Oil of New York and Pennsylvania), and BP (which tapped into the old Standard Oil of Indiana and Sohio assets). So, there's a precedent - hardly a successful oil company still operating under its original name.

## **Ethanol is Becoming a Bad Word**

Published on Chem.Info (<http://www.chem.info>)

---

The Digest took the opportunity to visit with BlueFire's CEO Arnold Klann, who has been working in the cellulosic biofuels space for more than a decade, and continues to be a driving force in the loose industry confederation, the Cellulosic Ethanol Alliance, also known as the Thursday Club for the timing of its weekly conference calls. We wanted to find out more about the re-branding, expanded opportunities in advanced biofuels, and the latest scoop on how the cellulosic ethanol business is progressing in financing, loan guarantees, and policy.

### **The New Brand**

"It shows more capability," Klann told the Digest regarding the new branding. "The biggest issue, ethanol has a negative connotation for many people, going back to the food versus fuel issue. We have to explain all the time that we are not corn-based. The upside is that many of the fuels that Amyris proposes to make, we can make, that new generation of advanced biofuels. We did a lot of that in 95-96 at our pilot plant. We can do biojet, alkanes, fuel additives for clean diesel, and did back in 95."

### **More About BlueFire**

BlueFire was established to deploy a commercially ready, patented and proven Concentrated Acid Hydrolysis Technology Process, developed originally by Arkenol back in the 1990s, or the profitable conversion of cellulosic waste materials to renewable fuel sources, including Cellulosic Ethanol, Biodiesel, BioJet Fuel, and Drop-in Directs. BlueFire is the only cellulose-to-fuel company worldwide with demonstrated production of Biofuels from urban trash (post-sorted MSW), rice and wheat straws, wood waste and other agricultural residues.

### **BlueFire's Projects**

BlueFire's proposed project in Lancaster, California (artist rendering)  
BlueFire Renewables is also currently in the process of developing two cellulosic ethanol facilities in Lancaster, CA and Fulton, MS. The fully-permitted and shovel-ready Lancaster, CA, facility, BlueFire's first U.S. commercial plant, will use post-sorted cellulosic wastes diverted from Southern California's landfills to produce approximately 3.9 million gallons of fuel-grade ethanol per year.

BlueFire is in the detailed engineering phase for its second commercial plant in Fulton, MS, which will produce approximately 19 million gallons of ethanol per year from woody biomass, mill residue, and other cellulosic waste.

"We are still going ahead at Fulton with no changes," said Klann. "And in Lancaster, if we can ever figure out how to finance it. With Fulton, we have a take & pay agreement for the ethanol over 15 years, so we will produce ethanol in Fulton for a long time. With future projects, that may change, but our core technology that can utilize landfill waste, all that will stay the same.

### **BlueFire - its Range Beyond Ethanol**

## **Ethanol is Becoming a Bad Word**

Published on Chem.Info (<http://www.chem.info>)

---

Through its internally-designed and third-party-developed back-end technologies, BlueFire can produce Biodiesel, BioJet Fuel, Drop-in Directs, and more. As such, the name change and rebranding as a renewable energy company more clearly represents the many applications for which BlueFire's technology can be applied.

"At Arkenol," said Klann, "we were able to produce ethyl levulinate and levulinic acid, and with ethyl levulinate we could produce additives that could reduce particulate emissions by 95-97 percent, with a 70 percent drop in NOx and a big drop in carbon monoxide. We did a lot of testing with Mobil before it merged with Exxon, and did it all at our pilot plant. So we still have all that.

### **The BlueFire-Solazyme Connection: BlueFire CEO Arnold Klann**

Solazyme has been testing sugars produced through BlueFire's patented process for compatibility with its renewable oil process to produce the oil cost effectively and at scale.

"Clearly Solazyme is a shape changer," commented Klann, "in the path that they have established to making oil, with their heterotrophic algae, and utilizing our sugars. With modified bacteria, and all those technologies, there's no sugar production on their front end, and using our concentrated acid hydrolysis we can do that, and we don't produce fermentation inhibitors, so its a perfect front end, ideally situated to use our internal technologies.

### **The Search for Cheap Cellulosic Sugars**

Klann is right. We have noted that the Digest should have long ago opened a new division offering packaged trips to Brazil for advanced biofuels executives, and would have done well to have added India, too. What are they searching for? Cheap sugar.

"It gets back to cellulosic versus food sugars," Klann added. It's the same argument, all the ventures in Brazil are not using cellulosic sugars, they are using food sugars and eventually they may run into the same food vs fuel arguments that I find very specious, but they are out there, that an acre of sugarcane for ethanol displaces an acre of sugar for food or something else.

"Right now we are at 6 cents per pounds for our cellulosic sugars as an intermediate, but we would never sell it in the long run simply as an intermediate because the real value add is in the end product. If Amyris, for instance, simply wanted us to supply intermediates, sugars for their process, we wouldn't do it. We would want to create a JV, or if they didn't want to own, we could own the asset.

### **Delaying Factors for Advanced Drop-In Biofuels**

Klann is bullish about the opportunities for the new, drop-in, advanced biofuels companies, but cautions on the timing for building plants, getting fuels certified, and getting a downstream fuel marketer to buy the fuel.

## **Ethanol is Becoming a Bad Word**

Published on Chem.Info (<http://www.chem.info>)

---

“Biobutanol and alkanes – some of these new fuels are not yet certified, there’s no market yet to fall into, but as they do that market development work, we can license their back end and have a whole new product stream.

“These nascent technologies have to get to commercial viability, have to develop markets, get their fuel additives certified, and find buyers who will blend their fuels, because being certified and being used are different matters. All that could take 5 years – could be up to two years just to get a fuel certified.

“But in five years, these new companies like Solazyme, Gevo, Virent, LS9, Amyris, all of them will be coming to the forefront.

### **The IPO Rush**

Since BlueFire has been a public company for some time, we took the opportunity to ask Klann his thoughts on the rash of biofuels IPOs from the likes of Amyris, Gevo and PetroAlgae.

“Its not what it cracked up to be,” he joked about being a public company CEO. “They’re trying to raise money, VC are trying to leverage up and create an exit strategy. But a lot of these technologies are hostage to the price of sugar.”

### **The Cellulosic Ethanol Alliance**

BlueFire is a key player in the Cellulosic Ethanol Alliance, and we asked about the group’s progress.

“It is hard to get 30 companies moving in one direction,” Klann noted, “but we are positioning to work on some legislative fixes, for example extending production credits because they expire on 12/31/2012 and there isn’t going to be a lot of production by them. Also, extending the investment tax credit to cellulosic biofuels. In our case, we can take some of the ITC because as part of our process, we create power in our system and can tap into the ITC for that.

“Also, we still don’t have a mandated marketplace, and even though the EPA has set a price of \$1.56 per gallon for RINs, blenders can opt out because the EPA waives down the mandate. We think we might be able to do this via rule-making, because getting a bill passed in this environment might be difficult.

“We are also talking about the concept of a production bounty that would incent the equity players to come in.”

### **Loan guarantees — USDA vs DOE**

BlueFire has applied for both DOE and USDA loan guarantees, so we asked Klann to compare the two.

“With the USDA, it is less rigorous on the technical aspects than DOE, but more rigorous on the banks,” he said. “For example, the USDA wants them to continue to

## **Ethanol is Becoming a Bad Word**

Published on Chem.Info (<http://www.chem.info>)

---

have considerable skin in the game, and keep a big piece [as opposed to selling or syndicating most or all]. We must have talked to 60 or 70 banks before we found one who would go through the process with us. A lot of them took a big hit on conventional ethanol, a lot of ag banks had pieces of those through syndication, and they don't have much appetite for ethanol.

"On the other side, the DOE still has not approved a loan guarantee, but we are getting very close on Fulton to meeting all their criteria, and we are in Phase 2 negotiations now, where we are getting into project specific info. Their six-step process is slow, almost glacial."

### **The Phoenix Riseth**

So there we have it - like the oil companies of long ago, the biofuels companies are in the process of renewing their brands. Initial reaction, according to BlueFire, has been strongly positive among industry observers and shareholders. It won't make cheaper sugar, but it may well ensure that cheaper cellulosic sugars are more widely available. Let's hope so.

Copyright 2010; [Biofuels Digest](#) [1]; All rights reserved

**Source URL (retrieved on 03/29/2015 - 10:42pm):**

<http://www.chem.info/articles/2010/08/ethanol-becoming-bad-word>

### **Links:**

[1] <http://biofuelsdigest.com/bdigest/2010/08/18/the-blue-phoenix-bluefire-ethanol-repositions-as-bluefire-renewables/>