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Office of Energy Efficiency & Renewable Energy

Bioenergy Technologies Office



Monthly News Blast

August 2014

Grand Opening for Project LIBERTY: Nation's First Plant to Use Corn Waste as a Feedstock



*Fermentation tanks. Source: POET-DSM
Advanced Biofuels*

POET-DSM's Project LIBERTY in Emmetsburg, Iowa, will celebrate its grand opening September 3, 2014, becoming the first commercial-scale

cellulosic ethanol plant to use corn waste as a feedstock. Developed through a joint venture between POET, LLC in Sioux Falls, South Dakota, and DSM Royal, a Dutch maker of enzymes, the project uses biochemical conversion technologies (yeast and enzymes) to convert cellulosic biomass into transportation fuels.

The Bioenergy Technologies Office (BETO) provided cost-shared funding for POET to design, build, operate, and validate the technology and project. Project LIBERTY will have an annual output of 20 million gallons of cellulosic ethanol per year from corncobs, leaves, husks, and corn stalk harvested by local farmers in a 30–40-mile radius of the plant—creating enough energy to power the

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facility, as well as a co-located bioethanol plant.

Read more on the [BETO website](#).

Event Recap: *Biomass 2014's* Greatest Hits

Last month, *Biomass 2014* served as a platform for stakeholders across the entire bioenergy supply chain to engage and discuss the future of the bioeconomy. We at BETO are thrilled about the excitement and dedication of attendees and presenters. Biomass 2014 included distinguished speakers, important BETO announcements, audience polls, panel discussions, and more, and we covered it on the Bioenergy KDF's [Twitter](#) and [Facebook](#) with hashtag #Biomass2014. If you missed the conference and/or want to read up on the greatest hits, read our recap post in the [BETO Blog](#).

Energy Department Announces \$11 Million to Advance Renewable Carbon Fiber Production from Biomass

The Energy Department recently announced up to \$11.3 million for two projects—in support of the [Clean Energy Manufacturing Initiative](#)—that aim to advance the production of cost-competitive, high-performance carbon fiber material from renewable, non-food-based feedstocks.

- **Southern Research Institute (SRI)** of Birmingham, Alabama, will receive up to \$5.9 million to innovate on a multi-step catalytic process for conversion of sugars from non-food biomass to acrylonitrile—an essential feedstock for high-performance carbon fiber.
- **National Renewable Energy Laboratory (NREL)** of Golden, Colorado, will receive up to \$5.3 million to investigate and optimize multiple pathways to bio-acrylonitrile.

With BETO's increased focus on biomass-derived carbon fiber, this super strong material may have an even stronger future ahead of it. Learn more on the [Energy Efficiency and Renewable Energy \(EERE\) website](#).

Energy Department Announces Notice of Intent to Issue Funding Opportunity Announcement for Targeted Algal Biofuels and Bioproducts

Did you know that algal feedstocks are a technically feasible alternative to petroleum-based diesel and jet fuels? BETO projects that, by 2019, the cost of algal biofuels will be around \$7.00 per gasoline gallon equivalent—the amount of alternative fuel it takes to equal the energy content of one liquid gallon of gasoline. In an effort to reduce these costs and make algal biofuels an affordable alternative, the Energy Department recently released a notice of

intent to issue a funding opportunity announcement (FOA), “Targeted Algal Biofuels and Bioproducts.” The FOA will seek to reduce algal biofuels’ projected cost by up to 50% through the creation of valuable bioproducts alongside fuels, thus achieving increased biomass productivity. Read more on the [BETO website](#).

BETO Announces Request for Information on Landscape Design for Sustainable Bioenergy Systems

BETO invites public comment on its request for information (RFI) regarding landscape design for sustainable bioenergy systems. The purpose of this RFI is to solicit feedback from bioenergy stakeholders on landscape design approaches that integrate cellulosic bioenergy feedstock production into existing agricultural and forestry systems while maintaining or enhancing environmental and socioeconomic sustainability. To get more information and to learn how to respond, visit the [BETO website](#). *Responses to this RFI must be submitted electronically to BETOLandscapeDesignRFI@ee.doe.gov by 5:00 p.m. Eastern Standard Time on September 2, 2014.*

BETO Premieres Bioenergy Video



Why do you care about bioenergy? Originally premiering at *Biomass 2014*, BETO’s new 15-minute video, [Bioenergy: America’s Energy Future](#), shares the stories of farmer and All-American NFL player Bruce Nelson, Intel Science Talent Search winner Sara Volz, and Solazyme CEO Jonathan

Wolfson as they work to move the U.S. bioenergy industry forward. Investing in bioenergy helps maintain America’s competitive advantage, while creating domestic jobs for manufacturers, scientists, and engineers. Watch and share this video, explaining why it matters to you, via social media using hashtag #Biomass2014.

OPERATION BioenergizeME Now Online

BETO has created a new Web page for *OPERATION #BioenergizeME*, where students, educators, and anyone interested in the future of the U.S. energy industry can learn more about the promises and challenges in developing a thriving bioeconomy. OPERATION BioenergizeME’s mission is to (1) improve public accessibility to information about the benefits and challenges of domestic bioenergy production; (2) support formal and informal education, including science, technology, engineering, math, and vocational programs, in exploring issues relevant to sustainable production of biopower, biofuels, and other bioproducts; and (3) engage with future scientists and engineers to develop solutions to technical and nontechnical challenges associated with broad adoption of bioenergy

technologies. Visit the [OPERATION BioenergizeME](#) Web page for more information.

July Events with Bioenergy Office Representation

2014 Biomass Feedstock Engineering and Depot Systems Forum

The 2014 Biomass Feedstock Engineering and Depot Systems Forum was held July 12, 2014, in Montreal, Canada. The primary objective of the forum was to discuss the biggest challenges facing biomass logistics and how the deployment of depot systems can overcome these challenges. Sam Tagore, a BETO Feedstock Technology Manager, gave a presentation on BETO's feedstock logistics research and deployment programs.

Opportunities for Expanding the Bioeconomy Public Meeting

On July 31, 2014, the Biomass Research and Development Board hosted a public meeting in Washington, D.C., to discuss opportunities for expanding the bioeconomy. Jonathan Male, BETO Director, alongside Todd Campbell, U.S. Department of Agriculture, gave a presentation on the Board and the potential of the bioeconomy. The meeting focused on three opportunities and challenges facing the bioeconomy: feedstock production and logistics, conversion technologies, and distribution and end use.

Upcoming Events with Bioenergy Office Representation

- [Grand Opening of POET/DSM Facility](#); September 3, 2014; Jonathan Male, Bryna Berendzen, Leslie Ovard; Emmetsburg, Iowa
- [TCS 2014: Symposium on Thermal and Catalytic Sciences for Biofuels and Biobased Products](#); Jonathan Male, Paul Grabowski, Liz Moore; September 2–5, 2014; Denver, Colorado
- [Algae Biomass Summit](#); September 29, 2014–October 2, 2014; Daniel Fishman, Christy Sterner, Roxanne Dempsey, Neil Rossmeissl, Jonathan Male; San Diego, California
- [Abengoa Grand Opening](#); October 17, 2014; Hugoton, Kansas

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