



## News from the International Biochar Initiative

IBI is a non-profit organization supporting researchers, commercial entities, policy makers, farmers & gardeners, development agents and others committed to sustainable biochar production and use.

Help put the Earth **Back in the Black**

**September 2012**

### Biochar Offset Protocol for Carbon Markets: Update on Progress

IBI has continued its efforts with colleagues at The Climate Trust and The Prasino Group to develop a Biochar Offset Protocol for Carbon Markets. IBI's specific task in the development of this Protocol involves the formation of an Expert Panel to develop a test methodology to conservatively estimate the amount of biochar carbon that will remain in soil after 100 years. The Expert Panel has informally dubbed this a methodology for BC+100 (i.e., the amount of carbon in biochar that is predicted to remain in soil after 100 years).

The Expert Panel has now met four times (via webinar), and is essentially wrapping up its work, and perfecting the necessary background and accompanying documents to accompany the test methodology. This includes written documentation and citations explaining the choice of the test methodology, as well as instructions for utilizing the methodology, in the form of a test sheet that provides instructions for the user to apply the test. The test sheet will include details about the test apparatus, how to take and prepare biochar samples, test procedures and reporting requirements, etc.

The final stable carbon methodology document, anticipated for completion within a month, will then be incorporated into the larger Biochar Protocol being drafted by the Biochar Protocol Team, comprised of staff and colleagues from The Climate Trust and The Prasino Group, together with IBI staff. Once final, the entire Protocol will be circulated to the biochar community for public comment, prior to submission to voluntary carbon registries for approval.

### IBI Biochar Certification Program Announcements

The launch of the IBI Biochar Certification Program is just weeks away – and we are excited to soon share the full program with you! Currently, we are completing testing of the online tools and registration web-pages, and pending final legal review of the program and program documentation and process in the next couple weeks, we anticipate rolling out the program in the October/November timeframe. We are planning a series of informational webinars to introduce the final program, including step-by-step review of the process, documentation, and the online application and registration system, to familiarize biochar manufacturers with the program and to answer your questions.



The IBI Biochar Certification Program is based on the testing requirements specified in the International Biochar Initiative (IBI) [\*\*Standardized Product Definition and Product Testing Guidelines for Biochar That Is Used in Soil\*\*](#) (published in May 2012). By certifying biochar with IBI, producers and the public will gain critical safety and use assurances related to the quality and performance of the biochar, which provides market certainty and differentiation.

For questions or further inquiries regarding the IBI Biochar Certification Program, please contact us at [certification@biochar-international.org](mailto:certification@biochar-international.org).

## IBI Biochar Sustainability Guidelines Survey Launched

In June 2012, IBI initiated an open, public process to create international guidelines for the sustainable production and use of biochar, the IBI Biochar Sustainability Guidelines. These guidelines are intended to be a practical tool for sustainability evaluation that is adaptable to many different regions, feedstocks, technologies, environments and communities. Because all these contexts are so variable, and the biochar industry is so new, the Guidelines initially will provide self-reporting checklists for evaluation against benchmarks rather than absolute standards that require testing and certification. The IBI Biochar Sustainability Guidelines will consist of four elements:

- Sustainability Principles
- Biochar System Case Studies
- Biochar System Sustainability Checklists identifying good, better and best practices
- A tool kit of resources for assessing and monitoring sustainability

To ensure comprehensive feedback and input, IBI has just released a survey to the biochar community. We invite all members of the biochar community to complete this survey, in which IBI seeks feedback on the draft Sustainability Principles, input on what is the most important sustainability criteria for feedstocks and technology to help draft useful case studies, experiences and feedback on different sustainability assessment and monitoring tools, and input on some of the knowledge gaps on potential risks and benefits of biochar systems.

The survey takes an estimated 25 minutes to complete. [Click here to load the survey](#) or click the link: <http://www.surveymoz.com/s3/1008590/IBI-Sustainability-Guidelines-Survey>. The survey will be open until October 10, 2012. Please feel free to circulate the survey to others who may be interested in participating. We thank all of you in advance for your continued interest and support of these critical activities that can help promote commercially viable sustainable biochar systems.

For more information on this effort, please see: <http://www.biochar-international.org/sustainability>.

## New IBI Organizational Member: OVERSY

Oversy is a non-profit organization with the mission to raise awareness of the dangerous impacts of climate change—especially on the poor—by working with global experts and local communities around the world. The staff at Oversy



places great emphasis on their education programs aimed at schools, voluntary community organizations, and people living in the affected areas. Together with Dr. Sai Bhaskar Reddy Nakka, Oversy is promoting biochar across Asia. Through NGOs and other governmental organizations Oversy is highlighting biochar's best qualities and environmental-friendly features. They are also looking at how farmers can best benefit by utilizing biochar. Oversy also works with industrial farms to create biochar to suit their needs. Oversy is a real action organization that takes tangible actions and acts for a better and greener future. For more information, please see: [www.oversy.org](http://www.oversy.org) or contact [support@oversy.org](mailto:support@oversy.org).

A listing of all current [IBI Business Members can be found on our website](#). We also welcome

organizations to join IBI, and provide here a [list of current IBI Organizational Members](#). For more information on a membership or to join, please see: <http://www.biochar-international.org/join>.

## Phoenix Energy's Business Model: Building Small, Profitable Plants

Phoenix Energy's 500 kilowatt biomass gasifier in Merced, California is not only the first grid-tied biomass gasifier in the United States to meet strict California air-quality standards, it is also the first such facility to include biochar sales as part of its business model.



Phoenix Energy is a “private label” power company that builds, owns, and operates on-site biomass gasification plants in partnership with agricultural and other biomass processing businesses. The company got its start in 1999 when it began working in Europe on converting coal-fired boilers to natural gas and biomass gasifiers. At that time, the charcoal byproduct from gasifier operations was being sold as boiler fuel for about 2 cents a pound. CEO Greg Stangl believes biochar revenues may even eclipse electricity sales some day.

The Merced plant is co-located with a shipping pallet and crate refurbishing business that previously sent its broken and rotted boards to landfill. Phoenix Energy helped the business not only avoid the landfill costs but also helped eliminate electricity payments. According to Stangl, for Phoenix to have commercial success, they need to employ an “all of the above” approach. “It takes electricity, plus heat, plus fuel, plus biochar to make these plants a reality. We can't make this work on just one of those alone” he said. “Nothing is cheaper than burning coal for power. If you are going to compete with that you have to go for every economic advantage you can find.”

To read the remainder of the story, please see: [http://www.biochar-international.org/profile/Phoenix\\_Energy](http://www.biochar-international.org/profile/Phoenix_Energy)

## Biochar Briefs: News Roundup for September

We update the website daily with new articles on biochar. For more information, please see: <http://www.biochar-international.org/newsbriefs>.

### **Australia**

[The Australian Carbon Farming Futures program is funding field tests of biochar](#) and compost combinations at nine field sites across North Queensland where crop performance, carbon sequestration, and Greenhouse Gas fluxes will be measured. The project will also model costs and benefits of biochar systems at different scales.

[Lismore City Council is considering becoming a business partner in a slow-pyrolysis processing plant](#) to convert organic waste into biochar and electricity. The plant has secured \$4.25 million in funding from the Regional Development Australia Fund - 50% of the money required for the project.

### **Brazil**

[Embrapa Agro-energy is evaluating technological routes for obtaining energy and bio-products](#) from forest resources. Scientists will study the production of ethanol, bio-oil, hydrogen, syngas, and biochar from four species of trees.

### **Canada**

[A community garden in Newfoundland is demonstrating the value of biochar](#) in amending the region's poor, rocky soils while university researchers are working with paper mills and the forest products industry to convert waste streams into biochar.

[Start-up company Novotera has launched a fundraising campaign](#) on IndieGoGo.com to raise \$25,000 to supply 1000 of their biochar-making TLUD stoves to families across Asia.

### **Germany**

[The recent Biochar Symposium at the Leibniz Institute for Agricultural Engineering](#) in Potsdam featured presentations by David Wayne, IBI Board Member, TLUD stove designer Paul Anderson, and biochar researcher Bruno Glaser.

[At the Hamburg Central Train Station, researcher Peter Nils Grönwall has installed a biochar](#) fermentation system to the low-flow toilets that serve 200,000 people a year. Using 89 species of active microbes and biochar, the solids are transformed into a pathogen-free biochar fertilizer that researchers say is similar to terra preta.

### **Jamaica**

[Commercial bamboo production in Jamaica will be aided](#) by its membership in the International Network for Bamboo and Rattan (INBAR), an industry group based in China that is helping with bamboo manufacturing technology transfer. INBAR will also help develop the production technology for making biochar from bamboo.

### **United States**

[The Redwood Forest Foundation, Inc. has received a grant for \\$250,000 for a biochar](#) program on the 50,000-acre Usal Redwood Forest that it purchased in 2007 for conservation purposes. The Schatz Energy Lab at Humboldt State University will help implement the biochar production technology.

[A team of North Carolina A&T State University researchers has perfected a thermo-chemical](#) process that converts fresh swine manure into an asphalt substitute. Nutrients are retained in a liquid that is useful as fertilizer, and biochar is also produced as part of the process.

[Russ Lester won an award from the U.S. Environmental Protection Agency for sustainability](#) measures on his 1,250-acre walnut farm in California that include on-farm energy generation using Community Power Corporation's Biomax 50 gasifier that produces biochar as a co-product. The biochar is returned to the soil where it helps with nutrient management.

[Biochar Solutions is utilizing trees killed by the mountain pine beetle to produce biochar](#) for sales in Colorado and is seeing fast growth in demand for their product—from four tons of biochar three years ago to 1500 tons today.

## Opportunities in Biochar

- *Registration now open:* The 2nd Nordic Biochar Seminar (February 14 – 15, 2013 in Helsinki, Finland); see: <http://www.njf.nu/site/seminarRedirect.asp?intSeminarID=459&p=1004>.

- *Apply for a Grant:* The US Department of Agriculture's Natural Resources Conservation Service (NRCS) announces grants to help farmers and ranchers adapt to drought with \$5 million in Conservation Innovation Grants available for development of novel agricultural practices. NRCS is offering the grants to partnering entities to evaluate innovative, field-based conservation technologies and approaches. These technologies and/or approaches should lead to improvements such as enhancing the water-holding capacity in soils. **The deadline to apply for funding is October 15, 2012.** For more information see: <http://www.biochar-international.org/node/3558>
- *Apply for a Grant:* The US Department of Agriculture Rural Development is allocating up to \$14 million in grants available for projects that help farmers produce bio-based products from agricultural commodities. The Value-Added Producer Grants program is designed to help agricultural producers enter into value-added activities. Awards may be made for either economic planning or working capital activities related to the processing and/or marketing of valued-added agricultural products. The maximum grant amount for a planning grant is \$100,000 and the maximum grant amount for a working capital grant is \$300,000. **The deadline to apply for funding is October 15, 2012.** For more information see: <http://www.biochar-international.org/node/3583>.
- *Apply for Project Funding:* Sustainable Development Technology of Canada (SDTC) announces a call for applications for clean technology funding. SDTC supports technologies that address the challenges of Climate Change, Clean Air, Soil and Water. SDTC announced today it will be accepting applications for funding from entrepreneurs from **September 5 to October 24th, 2012**; for more information, please see: <http://www.biochar-international.org/node/3636>.

## Upcoming Calendar Events

- October 10 – 11: Biogas USA West; location San Francisco, CA, USA; more information: <http://www.biochar-international.org/node/3301>.
- October 17 – 19: RETECH 2012; location: Washington DC, USA; more information: <http://www.biochar-international.org/node/3083>.
- October 30 – November 2: ECHO Asia Myanmar Workshop including a full day on Biochar for agriculture and mitigation of climate change; location: Yangon, Myanmar; more information: <http://www.biochar-international.org/node/3595>.

See the [IBI Calendar page](#) for more events. To add an event to the calendar, send the information to [info@biochar-international.org](mailto:info@biochar-international.org).

## Regional Biochar Group Updates

To read more on the 46 regional and national biochar groups, [please see IBI's website](#). This month includes a new group—the European Biochar Research Network (eBRN).

### **European Biochar Research Network (eBRN) and EU COST Action**

The aims of the EU COST Action are to expand and connect knowledge groups working in biochar systems in Europe, to assess the environmental impacts of biochar use, and help biochar reach a stage where economically feasible application will begin. They are building a network (the European Biochar Research Network (eBRN)) of academic and industrial partners who perform nationally-funded research to assist these aims.

The main scientific objectives of the group are biochar certification, environmental impact assessment, knowledge expansion, and life cycle analysis. eBRN and the EU COST Action now count more than 70 members and partners from 23 countries and are open to new participants. The main portal of eBRN is a recently launched website at: <http://cost.european-biochar.org>.

## Recently Published Biochar Research

IBI tracks all published research on biochar and includes it in our [online bibliography](#). The following articles were added in the last month. Please visit the website bibliography for more information on any of these articles. Due to copyright, we cannot provide full copies of articles unless we have permission from the publisher. If you have published work that is not included, [please email us](#).

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