



Tapping into West Virginia's Renewable Fuel – Biomass

With West Virginia's recently passed **Alternative and Renewable Energy Portfolio Standard**, federal production tax credits (PTC) for biomass fuels, prospects of future national-level CO2 reduction programs, large export markets for electricity, an extensive forest products industry, and established educational and training programs - [biomass energy makes good sense for West Virginia](#)

BTUs from the Forest Conference

The **Appalachian Hardwood Center at West Virginia University** in cooperation with the **West Virginia Division of Energy** is hosting a conference on the use of wood as an alternative energy source. West Virginia is the second most forested state; the efficient utilization of woody biomass could benefit the local economy for years by increasing job opportunities and markets for the wood products sector. Attendees will learn about financing opportunities, federal cost share programs, long term contractual issues, and emerging technologies. The conference will feature technical and poster presentations, and tabletop exhibits. This meeting will provide an excellent environment for attendees to network and foster the development of biomass projects in West Virginia.

The conference will be held at the **Waterfront Place Hotel in Morgantown, WV on September 21 (evening) and September 22**. To learn more about the conference please visit the website at www.wvbiomass.org. You may register online, or contact Shawn Grushecky at (304) 293-9417 (sgrushec@wvu.edu).

WV Incentives for Biomass Energy

West Virginia's recently passed **Alternative and Renewable Energy Portfolio Standard** defines biomass energy as "... a technology by which electricity is produced from a nonhazardous organic material that is available on a renewable or recurring basis, including paper mill sludge."

West Virginia's portfolio standard awards two tradable emissions credits to a utility for each megawatt-hours of electricity generated or purchased from a renewable

energy resource facility meeting certain conditions. Furthermore, biomass energy (in fact any renewable energy resource) is awarded three emissions credits for each megawatt-hours of electricity if the generating facility is sited on a reclaimed strip mine.

Individual utility companies have many methods for accumulating emissions credits including ten different alternative energy technologies, ten different renewable energy technologies, CO2 reduction or offset projects, energy efficiency, and demand side management. However, biomass energy should be especially attractive because of West Virginia's extensive forest resources, wood products industries, and sources of wood residue. The upcoming **BTUs from the Forest Conference** will provide further information on business opportunities for biomass and renewable energy.

Federal PTC Incentives for Biomass Energy

Title 26, section 45 of the Internal Revenue Code provides a 1.5 cent per-kilowatt-hour production tax credit for electricity generated by qualified renewable energy resources, including biomass. Closed-loop biomass and open-loop biomass are both eligible for the tax credit.

The term "**Closed loop biomass**" means any organic material from a plant which is planted exclusively for being used to produce electricity

The term "**open loop biomass**" means any agricultural livestock waste nutrients, any solid, nonhazardous, cellulosic waste material or lignin products derived from forest products mill and harvesting residues, thinnings, slash, solid waste materials, e.g. pallets, crates, construction waste, etc, or orchard tree crops, vineyards, and other crop byproducts.

EU Demand for wood pellets

A July 7, 2009 article in the *Wall Street Journal*, "Wood Pellets Catch Fire as Renewable Energy Source," describes rapidly growing demand for wood pellets in Europe - and new export opportunities for U.S. companies. Comments from the article follow.

- The wood-pellet market is booming because the European Union has rules requiring member countries to generate 20% of their electricity from renewable sources by 2020. Europe imported about \$92.6 million of pellets and other wood-based fuels in the first three

Continued on page 2

EVENTS

Materials Science & Technology 2009 Conference & Exhibition will be held **October 25-29, 2009** at the David L. Lawrence Convention Center in Pittsburgh, PA. Learn about structure, properties, processing and performance across the materials community. For registration information visit: <http://matscitech.org/>

New Energy. New Jobs. New Opportunities for Appalachia sponsored by the Appalachian Regional Commission will be held **October 26-28, 2009** at the John Calhoun Baker University Center at Ohio University, Athens, Ohio. For more information or to register visit: <http://www.arc.gov/index.jsp>.

16th Annual West Virginia Economic Outlook Conference sponsored by the West Virginia University College of Business and Economics will be held **November 11, 2009** at the Embassy Suites Hotel in Charleston, WV. This conference will cover the latest economic analysis and forecasts to help in business decision-making. For more information or to register, contact WVU College of Business and Economics at (304) 293-7831.

IOF-WV Contacts

Carl Irwin
WVU NRCCE
(304) 293-2867 ext. 5403
Carl.Irwin@mail.wvu.edu

Jeff Herholdt
WV Division of Energy
(304) 558-2234
jherholdt@wvdo.org

B. "Gopala" Gopalakrishnan
WVU NRCCE & CEMR IMSE
(304) 293- 2867 ext. 5530
Bhaskaran.Gopalakrishnan@mail.wvu.edu

Ed Crowe
WVU NRCCE
(304) 293-2867 ext. 5435
Ed.Crowe@mail.wvu.edu

Kathleen Cullen
WVU NRCCE
(304) 293-2867 ext. 5426
Kathleen.Cullen@mail.wvu.edu

Angela Shock
WVU NRCCE
(304) 293-2867 ext. 5434
Angela.Shock@mail.wvu.edu



The IOF-WV Monthly Update

September 2009

Vol. 10.09

months of 2009, up 62% from the same period a year earlier, according to the EU's statistical arm.

- Europe's eagerness for more pellets has turned the U.S. into an energy exporter. Until recently, there were only about 40 pellet factories in the U.S. which produced about 900,000 tons a year, mostly for heating homes. But in May 2008, Green Circle Bio Energy Inc. opened a pellet plant in Cottdale, Fla., that produces 500,000 tons of pellets a year; it ships them by rail to the coast and then on to Rotterdam, Netherlands.
- Another 500,000 ton facility in Selma, Ala., owned by Dixie Pellet LLC, also opened last year. And Phoenix Renewable Energy LLC plans to break ground next month on a 250,000-ton-a-year pellet plant in Camden, Ark., along with a 20-megawatt power plant run off tree scraps that will feed heat to the pellet plant.
- California, which has a goal of producing 33% of its electricity from renewable resources by 2020, is looking at using wood products in coal plants.

Dr. Xingbo Liu chosen as the TMS 2010 Early Career Faculty Fellow

The IOF-WV team congratulates Dr. Xingbo Liu, Assistant Professor in the WVU Mechanical & Aerospace Engineering Department for his being chosen as the recipient of the 2010 Early Career Faculty Fellow Award by The Minerals, Metals, and Materials Society. He will receive the award at the TMS Annual Awards Dinner on Tuesday February 16, 2010 in Seattle, Washington during the 139th Annual TMS Meeting. As part of the award, Dr. Liu will give a luncheon address. His talk, titled "Energy Materials—Past, Present, and Future," focuses on the history of pursuing improved materials for the efficient production and use of energy.

Co-Funding Opportunities for IOF-WV Research Teams

Announcement

Due Dates

Funding

NSF Environmental Implications of Emerging Technologies http://www.nsf.gov/funding/	Request for Proposals: Now Open Proposals: August 15-September 15, 2009	Funding TBD
NSF Small Business Technology Transfer Program Phase I Solicitation FY 2010 http://www.nsf.gov/pubs/2009/nsf09605/nsf09605.pdf Topic: Multi-FunctionalMaterials (MM)	Request for Proposals: Now Open Proposals: November 17, 2009	Estimated funding up to \$150,000 per award. Subtopics: Bio-inspired Materials and Systems (BMS), Materials for Energy Generation and Storage (ME), Materials for Sustainability (MS), Nanostructured Materials (NM), and Smart Materials and Structures (SMS)
NSF Emerging Frontiers in Research and Innovation 2010 http://www.nsf.gov/pubs/2009/nsf09606/nsf09606.pdf	Request for Proposals: Now Open Letter of Intent: October 9, 2009 Preliminary Proposal: November 14, 2009 Full Proposals: March 31, 2010	Estimated Funding: TBD Topics: Renewable Energy Storage (RESTOR) and Science in Energy and Environmental Design (SEED): Engineering Sustainable Buildings
NSF Small Business Innovation Research Program Phase I Solicitation(2) FY-2010 http://www.nsf.gov/pubs/2009/nsf09609/nsf09609.pdf	Request for Proposals: Now Open Proposals: December 3, 2009	Estimated funding: \$45,000,000 Topics: Biotech and Chemical Technologies (BC), Education Applications (EA), Information and Communication Technologies (IC), Nanotechnology, Advanced Materials, and Manufacturing (NM)



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Nonprofit Organization
U.S. Postage
PAID
Morgantown, WV
Permit No. 34

Change Service Requested