March 17-18, 2010  
Penn Stater Hotel and  
Conference Center  
State College, PA

Biomass heat and CHP (Combined Heat & Power) systems are a tremendous opportunity for providing clean, renewable, affordable energy for buildings and facilities. However, it is necessary for designers and developers to understand the unique aspects of biomass energy systems if they wish to create systems that are efficient, productive, and cost effective.

Engineers, architects, researchers and project developers are encouraged to register for this 1.5 day short course in which national leaders in the research, design, and manufacture of biomass energy present the latest in advanced biomass energy systems. A special breakout session will be held on Day 2 that focuses on the design of commercial and institutional thermal biomass systems.

Speakers:
An extensive group of nationally known experts and practitioners from the fields of engineering, science, and natural resources will provide the newest developments in this fast-developing field. The list of speakers includes:

Jim Babcock – Advanced Recycling Corp  
Richard Bain – National Renewable Energy Lab  
Daniel Ciolkosz – Penn State Ag and Biol. Engineering  
John Cuttica – US Department of Energy  
Carl Dunaway – Nexterra  
Jim Freihut – Penn State Architectural Engineering  
John Karakesh – Resource Professionals Group  
Larry Klope – Bioenergy Alternatives  
Mike Palko – Pennslyvania DCNR  
Chuck Ray – Penn State Forest Resources  
Joe Orlando – Mid Atlantic CHP Application Center  
Steven Rendos – Cannon Boiler Works Inc.  
Rich Sweetser – Exergy Partners  
Tom Wilson – Wilson Engineering

Topics include:
Feedstock availability and sustainability  
Effective fuel storage and handling systems  
Combustion and gasification systems  
Steam turbine systems and Organic Rankine Cycles  
Carbon footprint and emissions  
Opportunities for cofiring  
Market and economic aspects  
CHP vs SHP  
Overcoming barriers to biomass development  
Design configurations for commercial biomass systems  
Cost effective design for biomass systems

Registration Information:
Online registration opens on Oct. 1, 2009. Program and registration information, including driving directions and lodging, will be available online at:

http://www.bioenergy.psu.edu/shortcourses.asp

Registration includes event admission, informational packet, buffet lunch, coffee, tea and evening reception.

“Exhibitor” registration is available for companies wishing to provide a display.

If you have questions, please contact:  
Daniel Ciolkosz at dec109@psu.edu, 814-863-3484 or  
James Freihaut at jdf11@psu.edu, 814-863-0083.

This short course is sponsored by the Penn State Biomass Energy Center, the Penn State Architectural Engineering Department, and the Penn State Agricultural and Biological Engineering Department in conjunction with the U.S. Department of Energy’s Mid Atlantic Clean Energy Application Center.  
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