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NC STATE UNIVERSITY

Energy from Wood

Exploring the Issues and Impacts for North Carolina

March 13 - 14, 2006
J.S. McKimmon Center
North Carolina State University
Raleigh, North Carolina

Conference website:
www.ncsu.edu/feop/Agenda2006/energy/

Conference Details

Prospectus

- “We must take a close look at all forest biomass and work to determine its’ highest and best use. Woody biomass is very abundant, and the portion we’re evaluating for energy production and other uses is mostly waste wood from which there is no present market or use. Our wasted forest biomass has the potential to drive the technology of our future.” - Stan Adams, Director, NC Division of Forest Resources
- “The potential use of woody biomass for fuel has enormous economic and environmental significance for North Carolina. Finding new biomass markets for pulpwood and poor quality timber will allow silvicultural options that currently do not exist for private woodland owners. Such markets could only help the overall productivity and health of our state’s 18 million acres of forests.” - Stephen A. Whitfield, Consulting Forester and *NCWoodlands* Executive Director
- “...Trees may be North Carolina’s oil tank; every calorie of energy generated by burning biomass rather than fossil fuels leaves fossil carbon in the ground rather than adding it to our atmosphere. (But) Biomass must be examined carefully...” These remarks by Dr. William Schlesinger, Dean, Nicholas School of the Environment, Duke University published November 7, 2005 in *The Raleigh News and Observer* speak of both the optimism and the concerns associated with the potential for using woody biomass (including standing timber) to help meet the state’s future energy needs.

This conference will:

- Present much of the known information about potential impacts and opportunities on North Carolina’s forests from a wood biomass economy,
- Offer an opportunity for diverse stakeholders to explore issues surrounding woody biomass; and
- Prepare stakeholders for the future policy discussions surrounding the use of woody biomass for energy.

Who Should Attend:

The conference will be useful for policy makers, regulatory agency staff, industry (energy, foresters, forest landowners, manufacturing), scientists, environmental interests, and local or regional biomass energy users.

Conference Goals

- Review of the current opportunities and issues related to incorporating woody biomass in North Carolina’s pending Renewable Portfolio Standard
- Learn from successful users and efforts underway across the nation to deploy woody biomass energy or technologies
- Explore the potential impacts (favorable or not) of increasing the use of woody biomass for energy in North Carolina and across the southern region
- Explore the net effects on conventional air pollutants and greenhouse gas emissions from increased use of wood-based fuels
- Explore the potential for increased carbon dioxide sequestration by forests in North Carolina
- Foster communication among potential users of biomass-energy and stakeholders of renewable energy in North Carolina

Location and Lodging

All conference sessions will be held at the J.S. McKimmon Center located on the North Carolina State University campus. Monday evening a social with displays will be held at the NC Solar House, located next to the McKimmon Center. **Lodging is not included in the registration fee**, however, rooms have been blocked at the Holiday Inn - Brownstone near NCSU. To make a reservation, call 919-828-0811 and mention that you are with the group “Energy Conference”.

Accreditation

Day 1 will offer 5.5 Category 1 Continuing Forestry Education credits (CFEs) from the Society of American Foresters and 7.0 Professional Development Hours (PDHs) from the NC Board of Examiners for Engineers and Surveyors. Day 2 will offer 3.5 Category 1 CFEs and 3.5 PDHs.

For More Information

The conference website can be found at www.ncsu.edu/feop/Agenda2006/energy/.

- For program questions, contact Dennis Hazel at 919-515-5573 or dennis_hazel@ncsu.edu.
- For registration questions, contact Becky Townsend at 919-515-9563 or becky_townsend@ncsu.edu.

Conference Agenda

Monday, March 13, 2006

8:30 Registration and Refreshments

POTENTIAL OF RENEWABLE ENERGY

Session Moderator: J.B. Jett, Interim Dean, NCSU, College of Natural Resources

9:00 Why renewable energy sources? Why now?! -Alex Hobbs, Director, North Carolina Solar Center, NC State University

9:30 Why (or why not) woody biomass? - Fred Mayes, Chief, Renewables Information Team, Energy Information Agency, Department of Energy

10:00 Break

EXISTING TECHNOLOGY FOR RENEWABLE ENERGY

Session Moderator: Dr. William Schlesinger, Dean, Nicholas School of the Environment, Duke University

10:30 Technologies to produce energy from woody biomass. -Sue LeVan, USFS, Wood Products Laboratory, Madison, WI

11:00 Harvesting woody biomass. -Robert Rummer, US Forest Service, Forest Operations Research Unit, Auburn, AL

11:30 Woody biomass technology and research in the Southern Region. - Larry Biles, Director, Southern Forest Research Partnership, Inc., Athens, GA

12:00 Lunch (provided)

UNDERSTANDING THE POTENTIAL IMPACTS OF WOODY BIOMASS

Session Moderator: Dr. Arthur Cooper, Professor Emeritus and former Department Head, Department of Forestry and Environmental Resources, North Carolina State University

1:00 Do we have the biomass? Can we sustain it? -Chris Hopkins, NC Division of Forest Resources

1:30 Forest level impacts of woody biomass utilization. -Dr. Dennis Hazel, NCSU Cooperative Extension Forestry

2:00 What are the potential wildlife impacts of woody biomass utilization. -Dr. Chris Moorman, NCSU Cooperative Extension Forestry

2:30 Break

3:00 Anticipating the on-site and off-site impacts of woody biomass on soil and water. -Sean Brogan, Water Quality Forester, NC Division of Forest Resources

3:30 Understanding the science of air quality, green house gases, and woody biomass. -Pamela Spath, Senior Chemical Engineer, National Renewable Energy Laboratory, US Department of Energy, Golden, CO

Monday, March 13 (continued)

4:00 Response Panel:

- Utility/ Power Perspective: Bob Goodson, COO TSE Services, N.C. Electric Cooperatives
- Environmental Perspective: Will McDow, Environmental Defense
- Forest Industry Perspective: TBA
- Non-Industrial Private Landowner Stakeholders: Stephen Whitfield, North Carolina Woodlands Association

5:20 Social and Exhibitors at the NC Solar House

6:30 Adjourn

Tuesday, March 14, 2006

7:30 Breakfast and Keynote Address (Speaker TBA)

ECONOMIC OPPORTUNITY AND POLICY FOR WOOD ENERGY

Session Moderator: Stan Adams, State Forester and Director, NC Division of Forest Resources

9:00 Impacts on local and regional economies. -Dr. Jian Gan, Associate Professor Forest Science, Texas A&M University

9:30 Success stories:

- Wade Bennett, CEO, Craven Wood Energy, New Bern
- John Sturges, Program Director, Vermont Superintendents Association School Energy Management Program
- Larry Stewart, Phoenix Consulting Group International, LLC
- Daniel Day, EPRIDA

10:30 Break

10:45 Climate Action Plan and its implications for woody biomass. -Thomas Peterson, Executive Director, Center for Climate Strategies, EESI

11:15 State of North Carolina policy. -Steve Kalland, Deputy Director of Development and Policy, North Carolina Solar Center

11:45 Where do we go from here? -Speaker TBA

12:00 Conference adjourns

OPTIONAL AFTERNOON FIELD TRIP

12:00 Lunch on your own

1:30 Field trip to the Dorothea Dix campus energy facility, which has been operational as a wood-chip using facility since 1979 and uses about 8,500 tons of woody chips annually for peak energy demand. Departs from McKimmon Center.

3:00 Field trip concludes. Return to McKimmon Center

Registration Details

The registration fee includes admission to all sessions, Monday lunch, Monday social, Tuesday breakfast, and refreshment breaks both days. The optional field trip on Tuesday afternoon is \$10. Full payment is required in advance by Visa/Mastercard or by check made out to "NC State University". You can register online at www.ncsu.edu/feop/Agenda2006/energy/ or by completing the form below and returning it to us. Upon receipt of your registration form and payment, you will be officially registered, and a letter of confirmation will be sent. *Cancellations made by March 6 will receive a refund less a \$15 service charge. Refunds will not be given for cancellations after March 6 - in this case it is recommended you send a substitute.*

Conference Registration Fees:

- Both days, March 13-14..... \$50
- Day 1 only, March 13..... \$30
- Day 2 only, March 14..... \$25

Additional Registration Fees:

- Optional field trip on Day 2... \$10

Conference Sponsors

Sponsors:

- North Carolina Cooperative Extension Service
- North Carolina Division of Forest Resources
- North Carolina State University Department of Forestry and Environmental Resources
- North Carolina State University College of Natural Resources
- Southern Forest Research Partnership
- Southern Regional Extension Forestry
- North Carolina Biotechnology Center
- North Carolina Farm Bureau
- North Carolina Solar Center
- Environmental Defense
- North Carolina Electric Membership Corporation

Co-sponsors:

- Duke University, Nicholas School of the Environment
- North Carolina Forest Landowners Association
- North Carolina Department of Environment, Health, and Natural Resources
- North Carolina Association of Consulting Foresters
- North Carolina Woodlands Association
- Society of American Foresters - NC Division
- Southern Center for Sustainable Forests
- North Carolina Forestry Association
- Southern Forests Network

Mail to FEOP, NC State University, Campus Box 8003, Raleigh, NC 27695 or fax with credit card info to 919-515-6883

<p style="text-align: center;">Registration Form Energy from Wood Conference March 13-14, 2006 - J.S. McKimmon Center, NCSU, Raleigh, NC Registration Deadline: March 6th</p>	<p>Name _____</p> <p>Organization _____</p> <p>Address _____</p> <p>City _____ State _____ Zip _____ Country _____</p> <p>Daytime Phone _____</p> <p>Fax _____</p> <p>E-Mail _____</p> <p>Vegetarian meals? <input type="checkbox"/> Yes</p> <p>Physical Restrictions? _____</p>	<p>REGISTRATION FEES</p> <p>Registration Fee (check one):</p> <p>___ Both days, March 13-14..... \$50</p> <p>___ Day 1 only, March 13..... \$30</p> <p>___ Day 2 only, March 14..... \$25</p> <p>Additional Fees:</p> <p>___ Optional field trip on Day 2 \$10</p> <p>TOTAL AMOUNT DUE.....\$ _____</p>	<p>METHOD OF PAYMENT</p> <p>___ Check (make payable to NC State University)</p> <p>___ Credit Card: ___ MasterCard ___ VISA</p> <p>Card Number: _____ - _____ - _____</p> <p>Expiration Date: _____ / _____</p> <p>Name of Cardholder: _____</p> <p>I agree to allow NC State University to charge this credit card for the conference registration.</p> <p>Cardholder Signature: _____</p>
<p style="text-align: center;">FOR OFFICE USE</p> <p style="text-align: center;">date rec'd _____ amt. _____ ck#: _____</p> <p style="text-align: center;">V/MC chgd _____ conf. sent _____ dep. date _____</p>			