

Southeast United States Bioenergy Study Tour

April 10-14, 2016

General Information

Oak Ridge National Laboratory will be hosting a Bioenergy Study Tour in the Southeastern United States from April 10 to 14, 2016. This Study Tour will highlight innovations developed by the US Department of Energy (DOE) national laboratories that support deployment of a sustainable bioeconomy. The goal of the Tour is to have participants develop a better understanding of bioenergy systems in the southeastern United States. The Tour will illustrate work supported by the DOE Bioenergy Technologies Office (BETO), the US Department of Agriculture, industry, and others. The Tour will begin with a one-day overview on April 11 and then consist of a bus excursion with several stops, lectures and videos that illustrate sustainability considerations associated with feedstock operations such as perennial grasses and woody residues as well as harvesting operations, logistics, and use of the materials for different purposes.

The Study Tour is scheduled to occur shortly after the April 2-8 meeting in Asheville, North Carolina, of the US Chapter of the International Association for Landscape Ecology - see <http://www.usiale.org/annual-meetings>. Several symposia focused on bioenergy will occur at that meeting.

Participants in the Study Tour are expected to include researchers associated with DOE and its national laboratories, the International Energy Agency (IEA) Bioenergy, university staff and students, and industry as well as key stakeholders in the region such as land owners, practitioners from industry, and non-governmental organizations (NGOs). Only those who are invited can attend.

The Study Tour will begin with an overview on April 11 designed for those who can only participate for one day and be a bus excursion with more in depth discussions and demonstrations. Participants should plan to fly into the McGee Tyson airport (TYS) in Knoxville, Tennessee, by Sunday, April 10. Participants can fly out of Savannah, Georgia (SAV), after 2 PM on Thursday, April 14, or return to Knoxville on the bus arriving very late that evening (a 7-hour bus ride).

Participants will be responsible for arranging and paying for their own airfare and hotel room at each of the three hotels along the route. Special negotiated rates have been obtained for the tour ([see logistics information](#)). All meals will be provided beginning with breakfast on Monday, April 11, through breakfast, Thursday, April 14. Alcoholic beverages and incidentals must be paid for by Tour participants.

A website will be available for registration of those interested in participating in the Tour. As more information becomes available, it will be provided.

For more information, contact Gina Busby, busbygl@ornl.gov, (1-865-241-5601).



Schedule for Study Tour
Bioenergy in the Southeastern United States
 A meeting hosted by Oak Ridge National Laboratory
 April 10 – 11, 2016

This meeting will highlight innovations developed by the US Department of Energy (DOE) in support of deployment of a sustainable bioeconomy. The meeting will begin the evening of April 10th with a reception held at the Comfort Inn in Oak Ridge. The activities on April 11 will consist of a bus excursion with several stops and lectures and well as an afternoon symposium.

Comfort Inn • 433 S. Rutgers Ave • Oak Ridge, TN, 37830

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|---------------------------------------|--------------------------|---|
| <u>Sunday, April 10, 2016:</u> | 2:00 pm – 5:00 pm | Optional guided hike. |
| | 6:00 pm – 8:00 pm | Reception with heavy hors d’oeuvre. Overview of landscape approach to making progress toward a sustainable bioeconomy |
| <u>Monday, April 11, 2016:</u> | 6:00 am – 7:45 am | Breakfast (provided by hotel) <i>Give poster, if any, to Becky Bowman</i> <i>Fill water bottle</i> |
| | 7:45 am | Board buses for morning tours |

Remember to bring required ID for visitor’s badge at ORNL!

Morning Tours: 7:45 to 12 noon

The morning tours will split into three subgroups that will all visit the sites below in a round robin:

UT Forest Resources AgResearch and Education Center: Forestry practices in the absence of an active pellet industry - Leader: Kevin Hoyt

Old growth forest on the Oak Ridge Reservation: Old-growth low-elevation forests are quite rare in the southeastern United States – Leaders: Larry Pounds

National Transportation Research Center (NTRC):

- Visualization of progress toward bioenergy sustainability – Leader: Mike Hilliard
- Vehicle emissions testing – Leaders: Jae-Soon Choi and Sam Lewis

Buses return to Oak Ridge National Laboratory, JICs Auditorium, Building 5100

Noon – 1:00 pm Lunch & Poster Display

1:00 pm – 5:30 pm Overview of opportunities and constraints of a wood-based pellet-industry in the southeastern United States

- Welcome to Oak Ridge National Laboratory
- BETO's role in expanding the advanced bioeconomy and the importance of context specific opportunities - Kristen Johnson (BETO)
- Forest condition, history, and trends in the Southeastern United States (SE US): Dave Wear (US Department of Agriculture)
- The wood based pellet industry in the SE US: Seth Ginther (US Industrial Pellet Association)
- Perspectives on the pellet industry in the SE US:
 - Economic perspective - Karen Abt (US Department of Agriculture)
 - Environmental concerns -Brian A. Kittler (Pinchot Institute for Conservation)
 - Wetland issues – Bob Emory (Weyerhaeuser Company)
 - Carbon issues - Bob Malmsheimer (State University of New York)

• Break • Photo •

- Noncorporate land owner perspective - Scott Jones (Forest Landowners Association)
- Certification programs supporting the pellet industry in the SE US – Paul Trianosky (Sustainable Forestry Initiative)
- European perspective
 - Kristine Van het Erve Grunnet (Danish Energy Association, Demark)
 - Richard Peberdy (Drax Biomass International Inc., United Kingdom)
- Summary of key opportunities and concerns - Tat Smith (University of Toronto, Canada)

• **RECEPTION: Calhoun's on the Water, 100 Melton Lake Peninsula, Oak Ridge**
DOE Innovations to Support a Sustainable Bioeconomy – Alison Goss-Eng (BETO)

• Return to the Comfort Inn by 8 pm via buses •

Tuesday, April 12, 2016:

6:00 am – 7:30 am Breakfast (provided by hotel)
Bring luggage to Becky before breakfast
Checkout and fill water bottle.

7:30 am – 8:30 am Travel to Vonore, TN (167 Tellico Port Rd.) - In Route Presentations:

- Overview of day – Virginia Dale (ORNL)
- Surveying landowners regarding supporting the bioeconomy – Don Hodges (University of Tennessee)
- Feedstock logistics – Erin Webb (ORNL)

8:30 am – 9:15 am Genera Inc.

- Tour of Genera Inc. and discussion of switchgrass logistics – Kelly Tiller and Clay Dye (Genera Inc.)

Break

9:15 am – 9:30 am Travel to switchgrass field

9:30 am – 10:00 am Switchgrass field

- Grower perspectives– Brad Black

- 10:00 am – 12:30 am** Travel to Hiawasee, Georgia - In route presentation:
- Assessing multimetric aspects of sustainability: Application to a bioenergy crop production system in East Tennessee - Esther Parish (ORNL)
- 12:30 am – 2:00 pm** Lunch  Forest
- Discussion of non-corporate forest landowner concerns and opportunities – Frank Riley (land owner) and Scott Jones (Forest Landowners Association)
- 2:00 pm – 3:45 pm** Travel to Liberty, South Carolina - In route presentation
- Landscape design and stakeholder engagement in the Midwestern US – Cristina Negri (ANL)
- 3:45 pm – 5:30 pm** Non-corporate private forest operations
- Non-corporate forest operation and biodiversity issues – Derek Dougherty (Dougherty and Dougherty Forestry)
 - An experimental approach to assess the ecological sustainability of woody biomass harvests - Chris Moorman and Steve Grodsky (NCSU) and Ben Wigley (NCASI) (presenter)
- 5:30 pm – 6:45 pm** Travel to Montague's Restaurant, Greenwood, SC
- 6:45 pm – 8:00 pm** Dinner: Discussion of (1) Planning for the triennium for IEA Bioenergy Tasks 38 and 43 and (2) Opportunities & constraints in resource management for all others
- 8:00 pm – 9:15 pm** Travel from Greenwood, SC, to Aiken, SC

Holiday Inn Express • Aiken, SC 29803

Wednesday, April 13, 2016:

- 6:00 am – 7:30 am** Breakfast (provided by hotel)
*Check out with luggage and fill water bottle.
Bring luggage to Becky before breakfast.*
- 7:30 am – 8:00 am** Travel to Savannah River National Laboratory, register & badging
- 8:00 pm – 12:00 pm** Savannah River Site:
- Field studies of effects on water quality – Rhett Jackson (University of Georgia) & Natalie Griffiths (ORNL)
 - Drive to Cogen Plant / Break
 - Cogen Plant – Ken Chacey
- 12:00 am – 1:00 pm** Lunch at meeting room at Cogen Plant
- Sustainability-driven integrated landscape management through the application of LEAF in Iowa - Shyam Nair and Jason Hansen (INL)
 - Integrated systems for the bioeconomy - Helena Chum (NREL)
- 1:00 pm – 3:00 pm** Travel to and drive by chipping mill
- Fulghum Fibres Chip mill operations – Kevin Kane
- 3:00 pm -4:30 pm** Forest near Weyerhaeuser nursery and seed orchard (Chris Muckenfuss)
- Sustainable bioenergy intercropping in pine plantations - results from research to operational-scale trials - Jami Nettles (Weyerhaeuser Company)
 - Forest sustainability from a large land owner perspective – Kyla Cheynet (Weyerhaeuser Company)
 - NCASI work on sustainable bioenergy - Ben Wigley (NCASI).

- 4:30 pm - 5:00 pm** Travel to non-corporate private forest
- 5:00 pm - 6:00 pm** Visit to non-corporate private forest
- Family forest landowner perspectives – Fred Warnell
 - Master logging program
 - ASTM standards for bioenergy sustainability – Keith Kline (ORNL)
- 6:00 pm – 6:30 pm** Travel to Comfort Inn, Savannah, GA 31408
- 7:00 pm – 9:00 pm** Walk to Sam Sneads Tavern, 7 Sylvester C. Formey Drive, Savannah, GA 31408 (0.3 miles) for dinner and discussion on “Innovations in bioenergy”

Comfort Inn • Savannah, GA 31408

Thursday, April 14, 2016:

- 6:00 am – 7:30 am** Breakfast (provided by hotel)
- *Bring luggage to Becky before breakfast and tagged it for destination (Becky will have tags):*
 - Savannah airport,
 - Downtown Savannah hotel
 - Return on bus to Tennessee.
 - Check out of room
 - Fill water bottle.
- 7:30 am – 9:00** Travel to pellet mill with drive by saw mill in route – presentations on bus
- Success stories of US NE wood fuels for local heating markets - Charles Levesque (Innovative Natural Resource Solutions, LLC)
 - Ensuring Sustainability at Enviva– Jen Jenkins and Allison Gratz (Enviva)
 - Interfor-CNS Mill – Stephen Sapp
- 9:00 to 10:30** Pellet mill operations
- Pellet mill operations – Danny Faircloth (LJR mill manager)
- 10:30 to noon** Travel to Savannah airport – presentations on bus
- Albedo effects of biomass production - Pierre Bernier (Canadian Forest Service)
 - Opportunities and costs of wood-based bioenergy in the SE US – Virginia Dale (ORNL)
 - Wrap up & exit survey – Virginia Dale (ORNL)
- Noon** Bus drops participants at Savannah/Hilton Head International Airport
<http://savannahairport.com/airport>
- 12:30 pm** Bus drops participants at Hilton DeSoto Hotel in downtown Savannah
- 12:40 pm** Bus departs for return trip to Knoxville airport and Oak Ridge – Comfort Inn (7-hour trip)

Acronyms and twitter handles

- ANL – Argonne National Laboratory @argonne
- BETO – Bioenergy Technologies Office @BioenergyKDF
- CBES – Center for BioEnergy Sustainability @ORNL CBES

- INL – Idaho National Laboratory @INL
- NCASI – National Council for Air and Stream Improvement
- NCSU – North Carolina State University @NCState
- NREL – National Renewable Energy Laboratory @NREL
- ORNL – Oak Ridge National Laboratory @ORNL
- SRNL – Savannah River National Laboratory @SRSNews

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The Study Tour has been certified for Category 1-CF credit with the Society of American Foresters.

*If you need assistance during the workshop, please contact
Becky Bowman at (505)699-3641 or Gina Busby at (865)241-5601(busbygl@ornl.gov).*



#BioenergyTour