

**Agenda for Sept 10-11 workshop in Oak Ridge, TN
Sustainability of Bioenergy Systems: Cradle to Grave:
A Workshop for Oak Ridge National Laboratory,
the US Environmental Protection Agency, and their collaborators**

Building 5100, room 128 at Oak Ridge National Laboratory

September 10

8:30 Workshop convenes

- 8:30 Introduction:
 - Welcome ó Robin Graham
 - Goals of the workshop ó Virginia Dale
 - **A systems perspective for bioenergy**
 - Donna Perla (EPA)
 - Paul Leiby (ORNL)
 - **Components of sustainability to consider relevant to bioenergy**
 - Rebecca Efroymson (ORNL) - *A Framework for Selecting Sustainability Indicators for Bioenergy*
 - Denice Shaw (EPA) - *EISA Section 204. EPA Report to Congress*
- 10:00 Break
- 10:30 Reconvene
 - **Biomass / Feedstock Production (includes types of feedstocks)**
 - Overview
 - Tris West (ORNL)
 - Randy Bruins (EPA)
 - 3 in 5
 - Robin Graham (ORNL) - *Carbon Sequestration in Terrestrial Ecosystems*
 - Charles Garten (ORNL) - *Soil Organic Mater Inputs and Switchgrass Sustainability*
 - Betsy Smith (EPA) - *Ecosystem services associated with changes in land management under EISA and conservation alternatives for the Midwest*
 - Raymond Smith (EPA) ó *Design of Sustainable Biofuel Supply Chains*
 - Ozge Kaplan (EPA) - *Emerging Biomass Feedstocks: three perspectives*
- 12:00 Break for lunch: Discussions to continue over lunch (focused on bioenergy sustainability of feedstock production)

- 1: 30 Reconvene
 - **Continue with Biomass / Feedstock Production**
 - 3 in 5
 - Chris Impellitteri (EPA) - *Biofuels: Water Resources, Reuse and Energy*
 - Virginia Dale (ORNL) ó *Designing a Landscape Approach to Bioenergy Choices*
 - Esther Parish (ORNL) - *Incorporating Landscape Design into the Selection of Switchgrass Locations around Vonore, TN*
 - Yetta Jager (ORNL) - *Regional assessment of sustainability for bioenergy production*
 - Latha Baskaran (ORNL) - *Modeling the Impacts of Bioenergy Feedstock Driven Land-Use Changes on Habitat of Aquatic Insects*
 - Keith Kline (ORNL) - *Bioenergy, Land Use and Indicators of 'Sustainability'*
 - Lidia S. Watrud and David Olszyk (EPA) - *Life Cycle Analysis of Ecological Effects of Biofuels Crops*
 - Questions and discussion
- 3:00 Break
- 3:30 Reconvene
 - **Feedstock Logistics (harvesting, handling, processing, storage, transportation)**
 - Overview
 - Erin Wilkerson (ORNL)
 - Tim Johnson (EPA)
 - 3 in 5
 - Mike Hilliard (ORNL) - *Evolution and Optimization of the Biofuel Supply Chain*
 - Paul Leiby (ORNL) ó *Decision Support Model for Secure and Sustainable Bioenergy System*
 - Ray Smith (EPA) – *Deisgn of Biofule Supply Chains*
 - Ozge Kaplan (EPA) – *Biofuel supply Chain Modeling*
 - Questions and discussion
- 5:00 Close for the day
- 6:00 Reconvene at the Museum of the Appalachia
 - Tour of Museum ó with focus on historic farming practices and technologies and how they influence transformation to bioenergy production
 - Dinner
 - Presentation on future options in bioenergy
- 10:00 Close

Friday, September 11

- 8:30 Convene
 - **Conversion Technologies (biochemical, thermochemical and hybrid fuels and biomass power)**
 - Overview
 - Andy Miller (EPA)
 - Brian Davison (ORNL)
 - 3 in 5
 - Kimberly Swanson (EPA consultant) *6 End Use Combustion: The Final Environmental Input*
 - Stuart Daw (ORNL) *6 R&D Opportunities and Needs in Thermochemical (TC) Biomass Conversion*
 - Stuart Daw (ORNL)- *R&D Opportunities with the New ORNL Biomass Steam Plant*
 - Evelyn Hertzell (EPA) *6 EPA's Environmental Technology Verification Program (ETV): Waste-to-Energy Verifications under the ETV Greenhouse Gas (GHG) Technology Center*
 - Lee Beck (EPA) - *ETV Environmental and Sustainable Technology Evaluation (ESTE) Biomass Co-Fired Boiler Project*
 - Scott Curran (ORNL) - *Batch Scale Biodiesel Production at the University Level.*
 - Questions and discussion
- 10:00 Break
- 10:30 Reconvene
 - **Distribution and end use of fuel, energy, and coproducts**
 - Overview
 - Brian West (ORNL)
 - Andrea Barbery (EPA)
 - Kathryn Sargeant (EPA)
 - 3 in 5
 - John Storey (ORNL) - *Mobile Source Air Toxics from Biofuels*
 - Mike Kass (presentation by Brian West) (ORNL) - *Fuel Dispenser Compatibility Experiments Current Status and Results Summary*
 - Jeff Herzog (presentation by Andrea Barbery) (EPA) *6 Underwriters Laboratories (UL) Requirements for Ethanol Blend Dispensers*
 - Evelyn Hartzell (EPA) - *Underground Storage Tank Leak Detection Equipment: Performance Verification with Ethanol-Blended Fuels*
 - Steven Peterson (ORNL) - *Biofuels Distribution Analysis*
 - Fran Kremer (EPA) - *Climate Change and Biofuels – Multi-Media Problems Requiring Multi-Media Solutions*
 - Questions and discussion

- 12:30 Break for lunch: Discussion will continue over lunch (focused on bioenergy sustainability aspects of bioenergy conversion, distribution and end use)
- 1:00 Reconvene
 - Discussion of path forward for systems perspective for bioenergy sustainability
- 2:30 Break
- 3:00 Reconvene
- Closing:
 - Lessons learned about sustainability of bioenergy
 - Insight provided by a whole systems approach to bioenergy
 - Cross cutting themes
 - Gaps and needed research
 - Actions and next steps
- 4:00 Close workshop

PRESENTER SUMMARY

Lastname	Firstname	e-mail
Barbery	Andrea	Barbery.andrea@epa.gov
Baskaran	Latha Malar	baskaranl@ornl.gov
Beck	Lee	beck.lee@epa.gov
Bruins	Randy	Bruins.Randy@epamail.epa.gov
Curran	Scott	curransj@ornl.gov
Dale	Virginia H.	dalevh@ornl.gov
Davison	Brian H.	davisonbh@ornl.gov
Daw	Stuart	dawcs@ornl.gov
Efroymsen	Rebecca Ann	efroymsenra@ornl.gov
Garten Jr.	Charles T.	gartentjr@ornl.gov
Graham	Robin Lambert	grahamrl@ornl.gov
Hartzell	Evelyn	hartzell.evelyn@epa.gov
Hilliard	Michael R.	hilliardmr@ornl.gov
Impellitteri	Christopher	Impellitteri.christopher@epa.gov
Jager	Yetta	jagerhi@ornl.gov
Johnson	Tim	johnson.tim@epa.gov
Kaplan	Ozge	kaplan.ozge@epa.gov
Kline	Keith	klinekl@ornl.gov
Kremer	Fran	Kremer.fran@epa.gov
Leiby	Paul Newsome	leibypn@ornl.gov
Miller	Andy	millier.andy@epa.gov
Parish	Esther	parishes@ornl.gov
Perla	Donna	perla.donna@epa.gov
Petterson	Steve	petersonsk@ornl.gov
Sargeant	Kathryn	Sargeant.Kathryn@epa.gov
Shaw	Denice	Shaw.Denice@epa.gov
Smith	Betsy	Smith.betsy@EPA.gov
Smith	Ray	smith.raymond@epa.gov
Storey	John	storeyjm@ornl.gov
Swanson	Kimberly	kaj_511@earthlink.net
Watrud	Lidia	Watrud.lidia@epa.gov
West	Tristram O.	westto@ornl.gov
West	Brian	westbh@ornl.gov
Wilkerson	Erin	wilkersoneg@ornl.gov

