



BIOMASS 2013:

HOW THE ADVANCED BIOINDUSTRY IS RESHAPING AMERICAN ENERGY

July 31–August 1, 2013 at the Washington, D.C. Convention Center

Wednesday, July 31, 2013

7:00 a.m.–7:50 a.m.	Breakfast and Registration
7:50 a.m.–8:00 a.m.	Welcome <ul style="list-style-type: none"> Valerie Reed, Acting Director, Bioenergy Technologies Office, U.S. Department of Energy
8:00 a.m.–9:00 a.m.	Introductory Keynotes <ul style="list-style-type: none"> Chuck Grassley, U.S. Senate (R–IA) Michael Carr, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy
9:00 a.m.–9:30 a.m.	Energy and Climate Change <ul style="list-style-type: none"> Dan Utech, Deputy Director for Energy and Climate Change at the White House Domestic Policy Council
9:30 a.m.–9:55 a.m.	Morning Break
9:55 a.m.–10:10 a.m.	Update from INEOS BIO <ul style="list-style-type: none"> Dan Cummings, Vice President, INEOS Bio
10:10 a.m.–11:30 a.m.	Opening Plenary Session: Celebrating Successes – The Foundation of An Advanced Bioindustry <i>This session will provide a glimpse at the successes and future endeavors of an industry built from the ground up, continuing to play a chief role in the integration of domestic, renewable energy in America's energy portfolio.</i> Moderator: Neil Rossmeissl, Bioenergy Technologies Office, U.S. Department of Energy <ul style="list-style-type: none"> The Progress of the U.S. Ethanol Industry—Bob Dinneen, President and CEO, Renewable Fuels Association Cellulosic Technology Advances—Thomas Foust, Director, National Bioenergy Center, National Renewable Energy Laboratory Not All Chemicals Are Created Equal™—Susan Hager, Senior Vice President, Corporate Communications and Government Affairs, Myriant New RIN Generators—John Kasbaum, Senior Vice President of Commercial,

	KiOR, Inc.
11:30 a.m.– 11:45 a.m.	<p>The Success of Advanced Biofuels</p> <ul style="list-style-type: none"> Anne Steckel, Vice President of Federal Affairs, National Biodiesel Board
11:45 p.m.–1:00 p.m.	Lunch: Screening of <i>Chasing Ice</i> , Directed by Jeff Orlowski (2012)
1:00 p.m.–1:25 p.m.	<p>Afternoon Keynote: Bioenergy Policy</p> <ul style="list-style-type: none"> Margo Oge, formerly the Director of the Office of Transportation and Air Quality, U.S. Environmental Protection Agency, currently a Visiting Scholar at the International Council on Clean Transportation
1:25 p.m.–2:55 p.m.	<p>Afternoon Plenary Session: Current Trends in the Advanced Bioindustry <i>This session will address prominent topics of the day with regards to the advanced bioindustry. Discussion will feature perspectives on sustainable development of bioenergy, the role of policy, advances in and the current state of technology, and the financial landscape bioenergy projects are operating in today.</i></p> <p>Moderator: Neil Rossmeissl, Bioenergy Technologies Office, U.S. Department of Energy</p> <ul style="list-style-type: none"> Climate Change, Drought, and Environment—Michael Champ, Executive Director, The Sustainable Water Challenge Advanced Biofuels & Policy—Brett Lund, Executive Vice President, General Counsel and Secretary, Gevo Inc. State of Technology—Michael McAdams, President, Advanced Biofuels Association Bioenergy Project Finance Mechanisms—Mark Riedy, Counsel, Kilpatrick, Townsend & Stockton LLP
2:55 p.m.–3:10 p.m.	Afternoon Break
3:10 p.m.–4:45 p.m.	<p>Breakout Session I – New Developments and Hot Topics</p> <p>Session 1–A: Biomass and the U.S. Competitive Advantages for Manufacturing Clean Energy Products <i>Biomass is currently the largest renewable energy resource consumed in the United States. This session will address the inherent U.S. economic competitiveness opportunities and challenges for biomass-based manufacturing to produce value-added fuels and chemicals, beyond biomass power. Discussion will focus on the latest market trends for both of these sectors, technologies on the horizon, and government programs and policies that foster growth.</i></p> <p>Moderator: Joyce Yang, Bioenergy Technologies Office, U.S. Department of Energy</p> <p>Speakers:</p> <ul style="list-style-type: none"> Gary Anderson, Economist, NIST Thomas Robb, Manager of Institutional Relations, Abengoa Bioenergy Rina Singh, Director of Policy, Science & Renewable Chemicals, Industrial Biotechnology and Environmental Section, Biotechnology Industry Organization

- Libby Wayman, Director, EERE Clean Energy Manufacturing Initiative

Session 1–B: Advancing Alternative Fuels for the Military and Aviation Sector

This session brings together government and industry leaders to highlight the achievements of and the future challenges for the production of renewable jet fuel and diesel. The panelists will also address the importance of biofuels as a solution for the alternative fuel needs of the military and aviation industry.

Moderator: Zia Haq, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

- Nate Brown, Alternative Fuels Project Manager, Office of the Environment and Energy, Federal Aviation Administration
- Steve Csonka, Executive Director, Commercial Aviation Alternative Fuels Research Initiative
- Casey Howard, Military Legislative Assistant, Senator Mark Udall's Office
- Jill Stuckey, Acting Director, Herty Advanced Materials Development Center
- Chris Tindal, Director of Operational Energy, Office of the Deputy Assistant Secretary of the Navy for Energy

Session 1–C: Beyond Biofuels

This session will explore opportunities to harness biological systems for energy generation, beyond conventional biofuel production. Speakers from industry, academia, and government research laboratories will discuss ongoing work to produce fuels and chemical precursors directly from microbial systems that utilize CO₂, sunlight, water, and waste resources.

Moderator: Gene Petersen, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

- Larry Baresi, Professor of Biology, California State University, Northridge
- Mark F. Davis, Thermochemical Platform Program Manager, NREL
- Ramon Gonzalez, Program Director, Advanced Research Projects Agency-Energy (ARPA-E), U.S. Department of Energy
- Dan Robertson, Chief Scientific Officer, Joule Unlimited

Session 1–D: Natural Gas & Biomass to Liquids

Biomass conversion processes, particularly thermochemical routes to hydrocarbons, utilize natural gas for process heat and for hydrotreating (to remove excess oxygen) and hydrocracking (to create hydrocarbons of the appropriate chain length to meet the specifications for gasoline and diesel fuels). The recent development of the increased availability and low cost of natural gas has created new opportunities to use natural gas as a feedstock for conversion into liquid hydrocarbons. This session will preface a technical workshop exploring topics such as technical barriers, techno-economic analysis, greenhouse gas life-cycle analysis, volume/resource potentials, and impacts on biomass resources.

Moderator: Prasad Gupte, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

	<ul style="list-style-type: none"> • Suresh Babu, Senior Program Manager, Biomass Program Development, Brookhaven National Laboratory • Josephine Elia, Graduate Student, Princeton University • Vann Bush, Managing Director, Energy Conversion, Gas Technology Institute • Chris Perkins, Research & Development Director, Sundrop Fuels <p>Session 1–E: Examining Biomass Sectors that are Gaining Traction, Breaking Ground and Building Capacity</p> <p><i>Nearly every sector within the bioenergy industry boasts projects that are in active development or are under construction. Each sector’s growth is fueled by varied market and policy drivers and this panel will serve to explore each sector’s projects and project catalysts in detail. Beginning with a comprehensive review of the construction of the biomass industry across its varied sectors, the panel will then move into a sector by sector review featuring reports from the professionals working on the front lines of the biomass industry’s battle for increased energy market share.</i></p> <p>Moderator: Elliott Levine, Bioenergy Technologies Office, U.S. Department of Energy</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Dick Bratcher, Senior Consultant, Energy & Environmental Issues, KEMA • M. Seth Ginther, Executive Director, Attorney, Hirschler Fleischer • Tim Portz, Executive Editor, Biomass Magazine • Patrick Serfass, Executive Director, American Biogas Council
4:45 p.m.–5:30 p.m.	<p>New Directions & New Business Opportunities for BETO</p> <ul style="list-style-type: none"> • Valerie Reed, Acting Director, Bioenergy Technologies Office, U.S. Department of Energy <ul style="list-style-type: none"> ○ EERE Incubator ○ Waste-to-Energy Initiative ○ Carbon Fiber Initiative ○ Future of Algae

Thursday, August 1, 2013

7:00 a.m.–8:00 a.m.	Breakfast and Registration
8:00 a.m.–9:00 a.m.	<p>Day 2 Opening Keynotes</p> <ul style="list-style-type: none"> • John Garamendi, U.S. House of Representatives (D-CA) • Tom Vilsack, Secretary of Agriculture, U.S. Department of Agriculture
9:00 a.m.–9:30 a.m.	<p>Promoting Sustainability on a Global Scale</p> <ul style="list-style-type: none"> • Martina Otto, Head of the Policy Unit, United Nations Environment Programme
9:30 a.m.–9:45 a.m.	Morning Break

9:45 a.m.–11:15 a.m.

Opening Plenary Session: Bioenergy Sustainability – Charting the Path toward a Viable Future

What are the environmental implications of expanding biomass production to support the U.S. bioindustry, and how can we meet food, feed, fiber, and energy needs while preserving ecosystem services? This panel will discuss challenges and opportunities at the nexus of bioenergy, land management, and ecosystem dynamics, and share perspectives on maximizing the environmental and social benefits of bioenergy.

Moderator: Kristen Johnson, Bioenergy Technologies Office, U.S. Department of Energy

- Jody Endres, Assistant Professor, College of Agricultural, Consumer and Environmental Sciences, University of Illinois
- Al Lucier, Senior Vice President, National Council for Air and Stream Improvement, Inc.
- Dennis Ojima, Professor and Senior Research Scientist, Colorado State University
- Nathan Rudgers, Senior Vice President, Farm Credit East

11:15 a.m.–1:00 p.m.

Breakout Session II – Frontiers & Horizons

Session 2–A: Synthetic Biology and the Promise of Biofuels

The goals of this session are to present the current state of synthetic biology research specific to bioenergy crop production, explore how synthetic biology can address environmental and economic sustainability issues, and identify what parameters and model developments are needed to ensure robust and sustainable bioenergy outcomes via synthetic tools.

Moderator: Cyd Hamilton, AAAS/ORISE Fellow, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

- Jonathan Burbaum, Program Director, Department of Energy, Office of Science, ARPA–E
- Pablo Rabinowicz, Program Manager, Biosystems Design Program, Biological and Environmental Research (BER), U.S. Department of Energy
- Pamela Peralta–Yahya, Assistant Professor, Georgia Institute of Technology
- Heike Sederoff, Associate Professor, Plant Sensory Genomics and Metabolic Engineering, North Carolina State University

Session 2–B: End Use and Fuel Certification

This session will discuss alternative methods for consuming existing biofuels within current U.S. transportation infrastructure. It will explore fuel and vehicle optimization, certification, and distribution shifts that might accompany or incentivize changes in biofuel consumption. The session will also discuss emerging regulations on ethanol blends, ideas for improving the value of ethanol to fuel retailers and consumers, and the potential benefits and challenges of adding high octane fuel blends to the transportation fuel supply.

Moderator: Chris Ramig, Office of Transportation & Air Quality, U.S.

Environmental Protection Agency

Speakers:

- John Eichberger, Vice President of Government Relations, National Association for Convenience Stores
- Paul Machiele, Center Director for Fuel Programs, Office of Transportation & Air Quality, U.S. Environmental Protection Agency
- Robert McCormick, Principal Engineer in Fuels Performance, National Renewable Energy Laboratory
- Brian West, Deputy Director for the Fuels, Engines, and Emissions Research Center, Oak Ridge National Laboratory
- Bill Woebkenberg, Fuels Technical and Regulatory Affairs Senior Engineer, Mercedes-Benz

Session 2–C: Navigating Roadblocks on the Path to Advanced Biofuels Deployment

This session will highlight successful business models deployed to overcome barriers in commercial–scale production of advanced biofuels. Panelists will focus on how to strategically leverage innovative technological and financial solutions in order to meet the challenges faced by this emerging market.

Moderator: Alicia Lindauer, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

- Alan A. Del Paggio, Vice President of Upstream & Renewables, CRI Catalyst Company
- Arunas Chesonis, Chief Executive Officer and Chairman of the Board, Sweetwater Energy
- Andrew Held, Senior Director of Feedstock Development, Virent, Inc.
- Carl Wolf, Business Development Manager, LanzaTech
- Brian Duff, Principal Biorefinery Engineer, Northrop Grumman Corporation

Session 2–D: Working Together: Conventional Refineries and Bio-Oil R&D Technologies

This session will address the resources needed for the compatibility of U.S. refineries and bio– oils (hydrocarbons produced from biomass liquefaction). Both the refining industry and bio– oil R&D technologies must overcome key barriers in order to promote a clean alternative to petroleum refinery feedstocks. Discussions may focus on refinery insertion points, bio– oil specifications, and the challenges related to RFS qualification and certification.

Moderator: Liz Moore and Melissa Klembara, Bioenergy Technologies Office, U.S. Department of Energy

Speakers:

- Thomas Foust, Director, National Bioenergy Center, National Renewable Energy Laboratory
- E. Thomas (Tom) Habib, Jr., Director, Customer Research Partnerships, W.R. Grace & Co.

	<ul style="list-style-type: none"> • Jeffery M. Jacobs, Vice President, Biofuels, Chevron Technology Ventures • Corinne Valkenburg, Staff Engineer, Pacific Northwest National Laboratory • John L. Jechura Jr., STS, Process Department Manager, URS
1:00 p.m.–2:00 p.m.	Lunch
2:00 p.m.–2:30 p.m.	Afternoon Keynote <ul style="list-style-type: none"> • Ernest Moniz, Secretary of Energy, U.S. Department of Energy
2:30 p.m.–2:50 p.m.	Keynote Success Story <ul style="list-style-type: none"> • Robert Graham, Chairman and CEO, Ensyn Corporation
2:50 p.m.–3:10 p.m.	Afternoon Plenary Introduction <ul style="list-style-type: none"> • Brent Erickson, Executive Vice President, BIO
3:10 p.m.–4:30 p.m.	Demonstration & Deployment Successes <i>This session will highlight bioenergy projects which have had success in their efforts to construct advanced biorefineries, examining the opportunities involved and the challenges yet to be overcome.</i> Moderator: Neil Rossmeissl, Bioenergy Technologies Office, U.S. Department of Energy <ul style="list-style-type: none"> • Integrated Biorefinery Successes <ul style="list-style-type: none"> ○ Abengoa, Gerson Santos, Executive Vice President ○ Sapphire Energy, Inc., Jaime Moreno, Vice President of Projects ○ INEOS Bio, Dan Cummings, Vice President
4:30 p.m.–4:40 p.m.	Closing Remarks <ul style="list-style-type: none"> • Valerie Reed, Acting Director, Bioenergy Technologies Office, U.S. Department of Energy