



2013 PROJECT PEER REVIEW

U.S. DEPARTMENT OF ENERGY
BIOENERGY TECHNOLOGIES OFFICE

May 20—23, 2013 | *Hilton Mark Center | Alexandria, VA*



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A Welcome Message

Dear Peer Review Attendees,

On behalf of the U.S. Department of Energy, I would like to welcome you to the 2013 Bioenergy Technologies Office (BETO) Project Peer Review. These reviews are critical to the success of our core mission: to make targeted investments in the research, development, and demonstration of new technologies that will help accelerate the commercialization of an advanced bioenergy industry. Once realized, these technologies will transform our nation's abundant biomass resources into high-performing bio-based fuels, power, and products.

This year's review will feature 223 projects across nine key technology areas, representing a combined value of approximately \$1.47 billion. We believe in the importance of accountability and in being responsible stewards of taxpayer dollars. We actively manage our projects for the best possible outcomes and the Peer Review is an invaluable opportunity for external stakeholders to rigorously evaluate the technical approach, progress, relevance, and overall merit of all the projects supported by our Office. We rely on the reviewers and members of the Steering Committee to provide an overall assessment of the focus and scope of each technology area, and we welcome their recommendations for the strategic direction and future outlook for our Office. Results of the Peer Review will inform programmatic decision making and impact future budget and funding opportunity decisions.

Thank you to our reviewers and members of the Steering Committee for participating in this year's review. Of the 49 reviewers and steering committee members; nearly half come from industry, one quarter from universities, and one quarter from national laboratories or other federal offices and agencies. These reviewers include some of the most experienced and knowledgeable experts in the bioenergy community, and we look forward to their analysis and recommendations for our Office's future direction.

Results of the Project Peer Review will be captured in a Peer Review Final Report, which will be available on our website, and presented during the Program Management Review on July 30, 2013, at the Renaissance Washington Hotel. The Program Management Review will also be open to the public and will immediately precede our annual conference—*Biomass 2013: How the Advanced Bioenergy Industry is Reshaping American Energy*—which will take place July 31–August 1, 2013, at the Washington Convention Center.

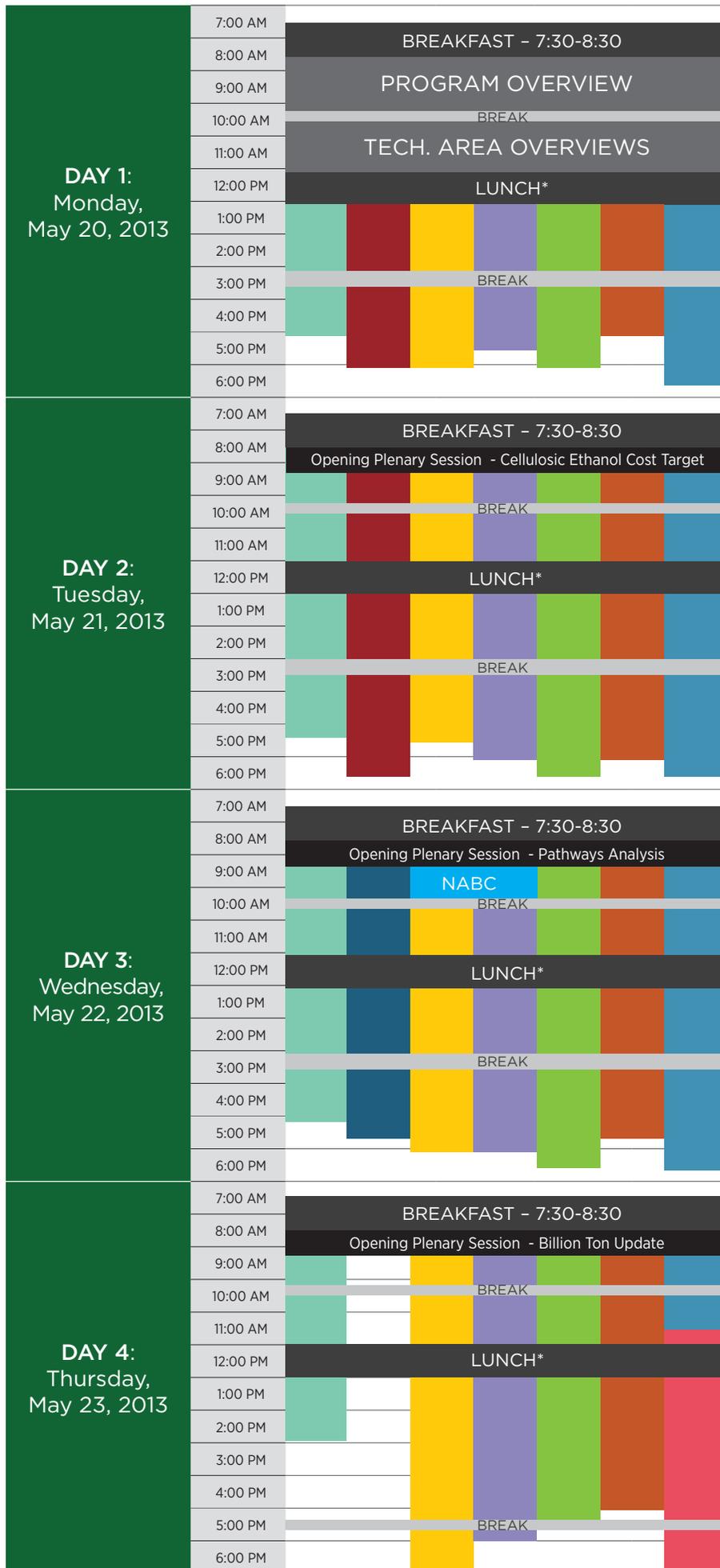
We hope to see you at both events this summer!

Sincerely,



Valerie Reed
Acting Office Director

AGENDA AT A GLANCE



- FEEDSTOCKS
Aspen Room
- BIODIESEL
Walnut Room
- ALGAE
Juniper Room
- BIOCHEM
Arbors Room
- BIO-OIL
Magnolia Room
- GASIFICATION
Walnut Room
- HEAT & POWER
Plaza A
- IBR
Plaza A
- ANALYSIS AND SUSTAINABILITY
Beech AB

*Lunch will be provided to reviewers and members of the Steering Committee each day.

AGENDA OVERVIEW

Day 1: MONDAY, MAY 20, 2013

TIME	Title	Presenter
7:30 a.m.–8:30 a.m.	BREAKFAST	
8:30 a.m.–8:40 a.m.	EERE Welcome	Steve Chalk, Deputy Assistant Secretary for Renewable Energy, DOE
8:40 a.m.–9:10 a.m.	Introduction to the Bioenergy Technologies Office	Valerie Reed, Acting Office Director, DOE
9:10 a.m.–9:35 a.m.	Overview: Analysis & Sustainability	Alison Goss Eng, Operations Lead, DOE
9:35 a.m.–10:15 a.m.	Overview: Terrestrial Feedstocks & Algae	John Ferrell, Program Manager, Feedstocks, DOE
10:15 a.m.–10:30 a.m.	BREAK	
10:30 a.m.–11:30 a.m.	Overview: Conversion R&D	Kevin Craig, Program Manager, Conversion, DOE
11:30 a.m.–12:00 p.m.	Overview: Integrated Biorefineries	Brian Duff, Program Manager, Demonstration and Deployment, DOE
12:00 p.m.–1:00 p.m.	LUNCH	
1:00 p.m.–3:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
3:00 p.m.–3:30 p.m.	BREAK	
3:30 p.m.–6:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	

Day 2: TUESDAY, MAY 21, 2013

TIME	Title	Presenter/Panel
7:30 a.m.–8:30 a.m.	BREAKFAST	
8:30 a.m.–9:10 a.m.	Breaking Barriers: How the Cellulosic Ethanol Cost Goal Was Achieved	Presenter: Adam Bratis, NREL Panelists: Leslie Pezzullo, DOE; Jonathan Male, PNNL; J. Richard Hess, INL
9:10 a.m.–10:15 a.m.	Breakout Sessions – See Technology Area Agendas for Details	
10:15 a.m.–10:30 a.m.	BREAK	
10:30 a.m.–12:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
12:00 p.m.–1:00 p.m.	LUNCH	
1:00 p.m.–3:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
3:00 p.m.–3:30 p.m.	BREAK	
3:30 p.m.–6:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	

Day 3: WEDNESDAY, MAY 22, 2013

TIME	Title	Presenter
7:30 a.m.–8:30 a.m.	BREAKFAST	
8:30 a.m.–9:10 a.m.	Charting a Path Forward: New Pathways to Hydrocarbon Biofuels	Presenter: Alicia Lindauer, DOE Panelists: Mary Bidy, NREL; Sue Jones, PNNL
9:10 a.m.–10:15 a.m.	Breakout Sessions – See Technology Area Agendas for Details	
10:15 a.m.–10:30 a.m.	BREAK	
10:30 a.m.–12:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
12:00 p.m.–1:00 p.m.	LUNCH	
1:00 p.m.–3:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
3:00 p.m.–3:30 p.m.	BREAK	
3:30 p.m.–6:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	

Day 4: THURSDAY, MAY 23, 2013

TIME	Title	Presenter
7:30 a.m.–8:30 a.m.	BREAKFAST	
8:30 a.m.–9:10 a.m.	Billion-Ton Update and Ongoing Resource Assessment	Bryce Stokes, CNJV; Laurence Eaton, ORNL; Matthew Langholtz, ORNL
9:10 a.m.–10:15 a.m.	Breakout Sessions – See Technology Area Agendas for Details	
10:15 a.m.–10:30 a.m.	BREAK	
10:30 a.m.–12:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
12:00 p.m.–1:00 p.m.	LUNCH	
1:00 p.m.–3:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	
3:00 p.m.–3:30 p.m.	BREAK	
3:30 p.m.–6:00 p.m.	Breakout Sessions – See Technology Area Agendas for Details	

Day 1: MONDAY, MAY 20, 2013

TIME	BIOCHEMICAL CONVERSION		
	Project Title	Organization	Presenter
1:00 p.m.–1:45 p.m.	Biochemical Feedstock Supply Interface	INL	Gary Gresham
1:45 p.m.–2:30 p.m.	Biochemical Processing Integration Task	NREL	Dan Schell
2:30 p.m.–3:00 p.m.	Biochemical Platform Analysis	NREL	Ryan Davis
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Analysis for Production - Technical and Market Analysis	PNNL	Sue Jones
4:00 p.m.–5:00 p.m.	Synthetic Biology	DOE	Gene Petersen

Day 2: TUESDAY, MAY 21, 2013

9:15 a.m.–9:25 a.m.	Day 2: Biochemical Conversion Overview	DOE	Leslie Pezzullo
9:25 a.m.–10:10 a.m.	Pretreatment and Enzymatic Hydrolysis	NREL	David Johnson
10:10 a.m.–10:25 a.m.	BREAK		
10:25 a.m.–11:10 a.m.	Validation Task - Integrated Process	NREL	James D. (Jim) McMillan
11:10 a.m.–11:55 a.m.	Process Improvements to Biomass Pretreatment for Fuels and Chemicals	MBI	Farzaneh Teymouri
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:45 p.m.	Novel Mechanical Pretreatment for Lignocellulosic Feedstocks	Texas Engineering Experiment Station	Mark Holtzapple
1:45 p.m.–2:30 p.m.	Targeted Conversion Research	NREL	Mike Himmel
2:30 p.m.–3:00 p.m.	Collaborative Research: Engineering Yeast Consortia for Surface-Display Complex Cellulosome Structures: A Consolidated Bioprocessing Approach from Cellulosic Biomass to Ethanol	University of California Riverside	Wilfred Chen
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:15 p.m.	Development of an Integrated Biofuel and Chemical Refinery	Genomatica, Inc.	Mark Burk
4:15 p.m.–5:00 p.m.	Fungal Genomics	PNNL	Jon Magnuson
5:00 p.m.–5:30 p.m.	Butanol from Woody Biomass by SSF Processes	ORNL	Jonathan Mielenz

Day 3: WEDNESDAY, MAY 22, 2013

TIME	BIOCHEMICAL CONVERSION		
	Project Title	Organization	Presenter
9:15 a.m.–10:15 a.m.	National Advanced Biofuels Consortium (Presented in Conjunction with the Biochemical Conversion Technology Area)	<i>Alliance for Sustainable Energy, LLC</i>	<i>Tom Foust</i>
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	A Novel SSF Strategy for Efficient Co-Fermentation of C5 & C6 Sugars using Native Non-GMO Yeasts	<i>The University of Toledo</i>	<i>Sasidhar Varanasi</i>
11:00 a.m.–11:30 a.m.	Producing Transportation Fuels Via Photosynthetically-Derived Ethylene	<i>NREL</i>	<i>Jianping Yu</i>
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Direct Catalytic Upgrading of Current Dilute Alcohol Fermentation Streams to Hydrocarbons for Fungible Fuels	<i>ORNL</i>	<i>Chaitanya Narula</i>
1:30 p.m.–2:00 p.m.	Lignin Utilization	<i>NREL</i>	<i>Gregg Beckham</i>
2:00 p.m.–2:30 p.m.	U.S.-India Consortia for Development of Sustainable Advanced Lignocellulosic Biofuels Systems Project	<i>University of Florida</i>	<i>Pratap Pullammanappallil</i>
2:30 p.m.–3:00 p.m.	Catalytic Conversion of Lignocellulosic Biomass to Hydrocarbon Fuels	<i>PNNL</i>	<i>Mike Lilga</i>
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Zymomonas Engineering	<i>NREL</i>	<i>Min Zhang</i>
4:00 p.m.–4:45 p.m.	LBNL PDU Support	<i>LBNL</i>	<i>Julio Baez</i>
4:45 p.m.–5:30 p.m.	Cellulosic Biomass Sugars to Advantaged Jet Fuel	<i>Virent</i>	<i>Randy Cortright</i>

Day 4: THURSDAY, MAY 23, 2013

9:15 a.m.–9:25 a.m.	Day 4: Biochemical Conversion Overview	<i>DOE</i>	<i>Leslie Pezzullo</i>
9:25 a.m.–9:55 a.m.	Low-Energy Magnetic-Field Separation Using Magnetic Nanoparticle Solid Absorbents	<i>ANL</i>	<i>Richard Brotzman</i>
9:55 a.m.–10:25 a.m.	BREAK		
10:25 a.m.–11:10 a.m.	Biomass Pre-Extraction, Hydrolysis and Conversion Process Improvements for an Integrated Biorefinery	<i>Virdia</i>	<i>Robert Jansen</i>
11:10 a.m.–11:40 a.m.	Integrated Biorefinery-Separations/ Separative Bioreactor- Continuous Bioconversion & Separations in Single Step	<i>ANL</i>	<i>Yupo Lin</i>

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Day 4: THURSDAY, MAY 23, 2013

TIME	BIOCHEMICAL CONVERSION		
	Project Title	Organization	Presenter
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	University of Nebraska–Lincoln, Bioenergy Demonstration Project: Value-Added Products from Renewable Energy Fuels	University of Nebraska-Lincoln	<i>Paul Blum</i>
1:30 p.m.–2:00 p.m.	Trenton Fuel Works Biofuels Plant Reconstruction	<i>Trenton Fuel Works</i>	<i>Stephen Paul</i>
2:00 p.m.–2:30 p.m.	Development of Applied Membrane Technology for Processing of Ethanol to Biomass	<i>Compact Membrane Systems, Inc.</i>	<i>Stuart Nemser</i>
2:30 p.m.–3:00 p.m.	Integrated Biomass Refining Institute at North Carolina State University	<i>North Carolina State University</i>	<i>Sunkyu Park</i>

Day 1: MONDAY, MAY 20, 2013

TIME	ALGAE		
	Project Title	Organization	Presenter
1:00 p.m.–1:30 p.m.	Day 1: Algae Introduction	<i>DOE</i>	<i>Daniel Fishman</i>
1:30 p.m.–2:00 p.m.	Algae Compositional Analysis	<i>NREL</i>	<i>Lieve Laurens</i>
2:00 p.m.–2:30 p.m.	Improving Microalgal Oil Production Based on Quantitative Analysis of Metabolism	<i>BNL</i>	<i>Changcheng Xu; John Shanklin</i>
2:30 p.m.–3:00 p.m.	Pond Crash Forensics	<i>SNL</i>	<i>Todd Lane</i>
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Microalgae Harvesting-Dewatering Technology Suite	<i>INL</i>	<i>Deborah Newby</i>
4:00 p.m.–4:30 p.m.	Hydrocyclone Separation of Targeted Biochemical Intermediates and Products	<i>ANL</i>	<i>Richard Brotzman</i>
4:30 p.m.–5:00 p.m.	Efficient Use of Algal Biomass Residues for Biopower Production with Nutrient Recycle	<i>NREL</i>	<i>Eric Jarvis</i>
5:00 p.m.–5:30 p.m.	Development of Value-Added Products from Residual Algae to Biomass	<i>Sapphire Energy, Inc.</i>	<i>Craig Behnke</i>

Day 2: TUESDAY, MAY 21, 2013

TIME	ALGAE		
	Project Title	Organization	Presenter
9:15 a.m.–9:45 a.m.	Day 2: Algae Introduction	DOE	Daniel Fishman
9:45 a.m.–10:15 a.m.	Development of Renewable Biofuels Technology by Transcriptomic Analysis and Metabolic Engineering of Diatoms	UCSD	Mark Hildebrand
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Climate Simulated Algae Cultures	PNNL	Michael H. Huesemann
11:00 a.m.–11:30 a.m.	Production-Scale Performance of Lipid Hyper-Accumulating Algae	LANL	Taraka Dale
11:30 a.m.–12:00 p.m.	Sustainable Development of Algae for Biofuels	ORNL	Rebecca Efroymsen
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Risk Assessment of Algal Production Systems: Impacts on Growth, Biomass-Lipid Quality, and Bioactive Metabolites	SRNL	Kitt Bagwell
1:30 p.m.–2:00 p.m.	Human Health Risk Assessment of Algae Production Systems	LANL	Enid J. Sullivan
2:00 p.m.–3:00 p.m.	Sustainable Algal Biofuels Consortium	SABC	Gary Dirks
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:30 p.m.	Consortium for Algal Biofuels Commercialization	CABComm	Stephen Mayfield; Jonathan Shurin
4:30 p.m.–5:30 p.m.	Cornell Consortium	Cornell	Mark Huntley; Charles Greene

Day 3: WEDNESDAY, MAY 22, 2013

9:15 a.m.–9:45 a.m.	Day 3: Algae Introduction	DOE	Daniel Fishman
9:45 a.m.–10:15 a.m.	Whole Algae HTL Model	PNNL	Daniel Anderson
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Microalgae Analysis	PNNL	Mark Wigmosta
11:00 a.m.–11:30 a.m.	REET for Algae Life-Cycle Analysis	ANL	Edward Frank
11:30 a.m.–12:00 p.m.	Algal Biofuel Techno-Economic Analysis	NREL	Ryan Davis
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–3:00 p.m.	National Alliance for Advanced Biofuels and Bioproducts	NAABB	Jose Olivares; Babetta Marrone

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Day 3: WEDNESDAY, MAY 22, 2013

TIME	ALGAE		
	Project Title	Organization	Presenter
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–5:30 p.m.	National Alliance for Advanced Biofuels and Bioproducts (Continued)	NAABB	Jose Olivares; Babetta Marrone

Day 4: THURSDAY, MAY 23, 2013

9:15 a.m.–9:45 a.m.	Day 4: Algae Introduction	DOE	Daniel Fishman
9:45 a.m.–10:15 a.m.	Collaborative: Algae-Based Biofuels Integrated Assessment Framework Development, Evaluation, and Demonstration	PNNL	Rick Skaggs
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Collaborative: Algae-Based Biofuels Integrated Assessment Framework Development, Evaluation, and Demonstration	INL	Jared Abodeely
11:00 a.m.–11:30 a.m.	BREAK		
11:30 a.m.–12:00 p.m.	Algae to Ethanol Research and Evaluation	Rowan University	Kauser Jahan
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:20 p.m.	Major Nutrient Recycling for Sustained Algal Production	SNL	Todd Lane
1:20 p.m.–1:40 p.m.	Integration of Nutrient and Water Recycling for Sustainable Algal Biorefineries	University of Toledo; University of Montana	Sridhar Viamajala; Brent Peyton
1:40 p.m.–2:00 p.m.	Recycling of Nutrients and Water in Algal Biofuels Production	California Polytechnic University	Tryg Lundquist
2:00 p.m.–2:30 p.m.	Algae Testbed Public-Private Partnership (ATP3)	Arizona State University	Gary Dirks

Day 1: MONDAY, MAY 20, 2013			
TIME	INTEGRATED BIOREFINERIES		
	Project Title	Organization	Presenter
1:00 p.m.–1:25 p.m.	Day 1: IBR Overview	DOE	Travis Tempel
1:25 p.m.–2:10 p.m.	Pilot-Integrated Cellulosic Biorefinery Operations to Fuel Ethanol	ICM, Inc.	Douglas Rivers
2:10 p.m.–2:55 p.m.	Conversion of Lignocellulosic Biomass to Ethanol and Ethyl Acrylate	Archer Daniels Midland	Thomas Binder
2:55 p.m.–3:10 p.m.	BREAK		
3:10 p.m.–3:55 p.m.	Fulton Ethanol Facility: A Landfill Waste Feedstock to Cellulosic Ethanol facility–Award 2–ARRA	Bluefire, LLC	Necy Sumait
3:55 p.m.–4:40 p.m.	BEI-Myriant Succinic Acid Biorefinery (MySAB)	Myriant	John Ellersick; Alif Saleh
4:40 p.m.–5:25 p.m.	Modification of Corn Starch Ethanol Refinery to Efficiently Accept Various High-Impact Cellulosic Feedstocks.	Logos/EdenIQ Technologies	Dan Derr
5:25 p.m.–6:10 p.m.	Alpena Prototype Biorefinery	American Process, Inc.	Kim Nelson
Day 2: TUESDAY, MAY 21, 2013			
9:10 a.m.–9:25 a.m.	Day 2: IBR Overview	DOE	Travis Tempel
9:25 a.m.–10:10 a.m.	Green Gasoline from Wood Using Carbona Gasification and Topsoe TIGAS Processes	Haldor Topsoe, Inc.	Niels Udengaard
10:10 a.m.–10:25 a.m.	BREAK		
10:25 a.m.–11:10 a.m.	Integrated Biorefinery Pilot Project for Diesel and Jet Fuel Production by Thermochemical Conversion of Woodwaste	ClearFuels-Rentech Technology	Harold Wright
11:10 a.m.–11:55 a.m.	MAS10BIO5	Mascoma	Michael Ladisch
11:55 a.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:45 p.m.	High-Yield Hybrid Cellulosic Ethanol Process Using High-Impact Feedstock for Commercialization by 2013	ZeaChem, Inc.	Tim Eggeman
1:45 p.m.–2:30 p.m.	Demonstration of an Integrated Biorefinery in Old Town, Maine	RSA	Jim St. Pierre
2:30 p.m.–3:15 p.m.	INP BioEnergy Indian River County Facility, Phase I	INEOS New Planet Bioenergy, LLC	Dan Cummings
3:15 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:15 p.m.	Heterogeneous Biorefinery Project	Enerkem Corporation	Tim Cesaek

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Day 2: TUESDAY, MAY 21, 2013

TIME	INTEGRATED BIOREFINERIES		
	Project Title	Organization	Presenter
4:15 p.m. – 5:00 p.m.	Demonstration of a Pilot-Integrated Biorefinery for the Economical Conversion of Biomass to Diesel Fuel	<i>Renewable Energy Institute International (REII)</i>	<i>Gregory Tamblyn</i>
5:00 p.m. – 5:45 p.m.	Pilot-Scale Biorefinery: Sustainable Transport Fuels from Biomass and Algal Residue via Integrated Pyrolysis and Catalytic Hydroconversion	<i>UOP, LLC</i>	<i>Stephen Lupton</i>
5:45–6:30	Sapphire Integrated Algal Biofinery	<i>Sapphire Energy, Inc.</i>	<i>Jaime Moreno</i>

Day 3: WEDNESDAY, MAY 22, 2013

9:10 a.m.–9:25 a.m.	Day 3: IBR Overview	<i>DOE</i>	<i>Travis Tempel</i>
9:25 a.m.–10:10 a.m.	Integrated Biorefinery for Conversion of Biomass to Ethanol, Synthesis Gas, and Heat	<i>Abengoa</i>	<i>Joe Bradford</i>
10:10 a.m.–10:25 a.m.	BREAK		
10:25 a.m.–11:10 a.m.	Scale-Up and Mobilization of Renewable Diesel and Chemical Production from Common Intermediate Using U.S.-based Fermentable Sugar Feedstocks	<i>Amyris Biotechnologies, Inc.</i>	<i>Joel Cherry</i>
11:10 a.m.–11:55 a.m.	LIBERTY: Launch of an Integrated Biorefinery with Eco-sustainable and Renewable Technologies in FY2009	<i>POET</i>	<i>Larry Ward</i>
11:55 a.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:45 p.m.	Integrated Pilot-Scale Biorefinery for Producing Ethanol from Hybrid Algae	<i>Algenol Biofuels, Inc.</i>	<i>Ed Legere</i>
1:45 p.m.–2:30 p.m.	Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae	<i>Solazyme, Inc.</i>	<i>Mark Warner</i>

Day 4: THURSDAY, MAY 23, 2013

TIME	HEAT & POWER		
	Project Title	Organization	Presenter
11:00 a.m.–11:10 a.m.	Day 4: Heat & Power Overview	DOE	Elliott Levine
11:10 a.m.–11:35 a.m.	Biomass Energy Generation Project	Cedar Falls Utilities	Edward Olthoff
11:35 a.m.–12:00 p.m.	Vermont Sustainable Jobs Fund, Montpelier, Central Vermont Recovered Biomass Facility	Vermont Sustainable Jobs Fund, Montpelier	Ellen Kahler; Donna Barlow Casey
12:00 p.m.–12:50 p.m.	LUNCH		
12:50 p.m.–1:15 p.m.	Green Power Initiative	University of Iowa	P. Barry Butler; Ferman Milster
1:15 p.m.–1:45 p.m.	Logistics, Costs and GHG of Co-Firing with 20% Biomass	PNNL; INL	Jonathan Male; Richard Boardman
1:45 p.m.–2:10 p.m.	Feedstock Pretreatment for Pyrolysis Upgrading	ORNL	Shahab Sokhansanj
2:10 p.m.–2:35 p.m.	Wallowa County Integrated Biomass Energy Center	Wallowa Resources	Nils Christoffersen; Matt King
2:35 p.m.–3:00 p.m.	Waste-to-Energy Cogeneration Project	Waste-to-Energy Cogeneration Project	Jim Mandon; Clay Johnson; Ryan Baker
3:00 p.m.–3:15 p.m.	BREAK		
3:15 p.m.–3:40 p.m.	Plasma Gasification Waste-to-Energy Project	Koochiching County, Renewable Energy Clean Air Project	John Howard
3:40 p.m.–4:05 p.m.	St. Petersburg Sustainable Biosolids Renewable Energy Plant	City of St. Petersburg, Florida	Steve Marshall
4:05 p.m.–4:30 p.m.	Municipal Anaerobic Co-Digestion for Renewable Energy	Marquette University	Daniel Zitomer
4:30 p.m.–4:55 p.m.	Bioenergy/ Bionanotechnology Projects	Louisiana Tech University	Stanley Napper; James Palmer
4:55 p.m.–5:20 p.m.	University of Wisconsin Oshkosh's Anaerobic Dry Digestion Facility	University of Wisconsin-Oshkosh	Mike Lizotte; Gregory Kleinheinz
5:20 p.m.–5:45 p.m.	Placer County Cabin Creek Forest Biomass Project	Placer County Biomass Utilization Pilot Project	Brett Storey

Day 3: WEDNESDAY, MAY 22, 2013

TIME	BIODIESEL		
	Project Title	Organization	Presenter
9:20 a.m.–9:25 a.m.	Day 3: Biodiesel Overview	DOE	Mark Elless
9:25 a.m.–9:50 a.m.	Use of Inedible Energy Crops for Production of Advanced Biofuels with the McGyan Process	SarTec Corporation	Peter Greuel
9:50 a.m.–10:15 a.m.	Development of an Economic and Efficient Biodiesel Production Process	University of North Carolina at Pembroke	Tom Dooling
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Biodiesel Production from Grease Waste	Eastern Municipal Water District	Mike Luker
11:00 a.m.–11:30 a.m.	Vermont BioFuels Initiative	Vermont Sustainable Jobs Fund	Ellen Kahler
11:30 a.m.–12:00 p.m.	Biofuel Micro-Refineries for Local Sustainability	University of Memphis	Srikant Gir
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Biodiesel Blending	Wisconsin Office of Energy Independence	Dave Jenkins
1:30 p.m.–2:00 p.m.	Montana Bio-Energy Center of Excellence	Montana State University-Northern	Greg Kegel
2:00 p.m.–2:30 p.m.	Development of Pollution Prevention Technologies	Brooklyn College	Juergen Polle
2:30 p.m.–3:00 p.m.	Biodiesel from Food Waste	University of Nevada-Reno	Dev Chidambaram
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Biodiesel Cellulosic Ethanol Research Facility	Hendry County	John Capece
4:00 p.m.–4:30 p.m.	Development of Biofuels Using Ionic Transfer Membranes Phase III	University of Nevada-Las Vegas	Kristina Lipinska
4:30 p.m.–5:00 p.m.	Alternative and Unconventional Energy Research and Development	Utah State University	Byard Wood

Day 1: MONDAY, MAY 20, 2013

TIME	FEEDSTOCK PRODUCTION & LOGISTICS		
	Project Title	Organization	Presenter
1:00 p.m.–1:40 p.m.	Biochemical Feedstock Supply Interface*	INL	Gary Gresham
1:50 p.m.–2:10 p.m.	Day 1: Feedstock Production & Logistics Overview	DOE	Steven Thomas
2:10 p.m.–2:20 p.m.	Regional Feedstock Partnership (RFP) Overview	South Dakota State University	Vance Owens
2:20 p.m.–3:00 p.m.	RFP: Agricultural Residues, Stover Removal Tool	USDA ARS	Doug Karlen
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:10 p.m.	RFP: Sorghum	Texas A&M University	Bill Rooney
4:10 p.m.–4:40 p.m.	RFP: Herbaceous Energy Crops	South Dakota State University	Vance Owens
4:40 p.m.–5:10 p.m.	University of Hawaii, College of Tropical Agriculture and Human Resources, Development of High Yield Tropical Feedstock	University of Hawaii	Andrew Hashimoto

Day 2: TUESDAY, MAY 21, 2013

9:20 a.m.–10:05 a.m.	Feedstock Interface & Feedstock-Thermochemical Interface Equipment**	INL; NREL; PNNL	David Muth; Tyler Westover; Daniel Carpenter; Daniel Howe
10:05 a.m.–10:15 a.m.	Feedstock Production & Logistics Recap of Day 1	Review Team	Lyle Stephens
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	RFP: Woody Energy Crops	University of Tennessee	Tim Rials
11:00 a.m.–11:30 a.m.	RFP: ORNL Field Trial Data Management and Analysis	ORNL	Laurence Eaton
11:30 a.m.–11:50 a.m.	Switchgrass Biofuel Research: Carbon Sequestration and Life-Cycle Analysis	University of Nebraska-Lincoln	Adam Liska
11:50 a.m.–12:10 p.m.	Alternative Crops and Biofuels Production	Oklahoma State University	Philip K. Kenkel
12:10 p.m.–1:10 p.m.	LUNCH		
1:10 p.m.–1:30 p.m.	Feedstock Sustainability Overview	DOE	Kristen Johnson
1:30 p.m.–2:00 p.m.	Laurentian Bioenergy Project	Laurentian Energy Authority	Bill Berguson
2:00 p.m.–2:10 p.m.	Introduction to In-House Logistics Projects	INL	J. Richard Hess
2:10 p.m.–2:55 p.m.	Feedstock Logistics Engineering	INL	Kevin Kenney
2:55 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Feedstock Logistics Fundamentals	INL	Jaya Shankar Tumuluru
4:00 p.m.–4:30 p.m.	Industrial Logistics	INL	Bobby Jeffers
4:30 p.m.–5:00 p.m.	Feedstock Supply Chain Analysis	INL	Jacob Jacobson

*The Biochemical Feedstock Supply Interface session will be held in the Biochemical Conversion Room (Arbors).

**The Feedstock Interface & Feedstock-Thermochemical Interface Equipment session will be held in the Bio-Oils room (Magnolia).

Day 3: WEDNESDAY, MAY 22, 2013

TIME	FEEDSTOCK PRODUCTION & LOGISTICS		
	Project Title	Organization	Presenter
9:25 a.m.–9:45 a.m.	Feedstock Production & Logistics Recap of Day 2	<i>Review Team</i>	<i>Lyle Stephens</i>
9:45 a.m.–10:15 a.m.	China Task (In 2011, China–Biomass Supply Logistics)	<i>INL</i>	<i>Chris Wright</i>
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–10:40 a.m.	Introduction to Logistics Solicitation	<i>DOE</i>	<i>Steven Thomas</i>
10:40 a.m.–11:20 a.m.	Development and Deployment of a Short Rotation Woody Crops Harvesting System Based on a Case New Holland Forage Harvester and SRC Woody Crop Header	<i>SUNY College of Environmental Science</i>	<i>Tim Volk; Mark Eisenbies</i>
11:20 a.m.–12:00 p.m.	High-Tonnage Forest Biomass Production Systems from Southern Pine Energy Plantations	<i>Auburn University</i>	<i>Steven Taylor</i>
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:40 p.m.	Integration of Advanced Logistical Systems and Focused Bioenergy Harvesting Technologies to Supply Crop Residues and Energy Crops in a Densified Large Square Bale Format	<i>Agco Corporation</i>	<i>Maynard Herron</i>
1:40 p.m.–2:20 p.m.	Development of a Bulk-Format System to Harvest, Handle, Store, and Deliver High-Tonnage, Low-Moisture Switchgrass Feedstock	<i>University of Tennessee</i>	<i>Alvin Womac</i>
2:20 p.m.–3:00 p.m.	Design and Demonstration of an Advanced Agricultural Feedstock Supply System for Lignocellulosic Bioenergy Production	<i>FDC Enterprises, Inc.</i>	<i>Kevin Comer; Fred Circle</i>
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:10 p.m.	Supply System Logistics Task	<i>ORNL</i>	<i>Shahab Sokhansanj</i>
4:10 p.m.–4:40 p.m.	Supply Forecasts and Analysis Task	<i>ORNL</i>	<i>Matt Langholtz</i>

Day 4: THURSDAY, MAY 23, 2013

9:25 a.m.–9:45 a.m.	Feedstock Production & Logistics Recap of Day 3	<i>Review Team</i>	<i>Lyle Stephens</i>
9:45 a.m.–10:15 a.m.	Deployable PDU (Process Demonstration Unit)	<i>INL</i>	<i>Neal Yancey</i>
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Research and Technology Development for Genetic Improvement of Switchgrass	<i>University of Rhode Island</i>	<i>Albert P. Kausch</i>

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Day 4: THURSDAY, MAY 23, 2013

TIME	FEEDSTOCK PRODUCTION & LOGISTICS		
	Project Title	Organization	Presenter
11:00 a.m.–11:20 a.m.	BioEnergy Initiative for Connecticut	<i>University of Connecticut</i>	<i>Steven L. Suib</i>
11:20 a.m.–11:40 a.m.	Saint Joseph's University Institute for Environmental Stewardship	<i>Saint Joseph's University</i>	<i>Clint Springer</i>
11:40 a.m.–12:00 p.m.	Energy from Biomass Research and Technology Transfer Program	<i>Consortium for Plant Biotechnology Research</i>	<i>Dorin Schumacher</i>
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Renewable Enhanced Feedstocks for Advanced Biofuels and Bioproducts (REFABB)–Development Program	<i>Metabolix</i>	<i>Oliver Peoples; Ben Locke; Kristi Snell</i>
1:30 p.m.–2:00 p.m.	Demonstration of On-Farm Production of a Dedicated Energy Crop Incorporating Multiple Varieties of Switchgrass Seed (Switchgrass Production)	<i>University of Tennessee</i>	<i>Samuel Jackson</i>
2:00 p.m.–2:40 p.m.	South Dakota State University, Sun Grant Initiative, Regional Biomass Feedstock Development Partnership	<i>South Dakota State</i>	<i>Vance Owens</i>

Day 1: MONDAY, MAY 20, 2013

TIME	GASIFICATION		
	Project Title	Organization	Presenter
1:00 p.m.–1:45 p.m.	Gasification Process Modeling and Optimization	<i>NREL; PNNL</i>	<i>Mark Nimlos; Daniel Howe</i>
1:45 p.m.–2:15 p.m.	Development of New Gasification Processes for Biomass Residues: Gasification Kinetics at Pressurized Conditions	<i>Georgia Institute of Technology</i>	<i>Pradeep Agrawal</i>
2:15 p.m.–2:45 p.m.	Validation of the RTI Therminator Syngas Cleanup Technology in an Integrated Biomass Gasification-Fuel Synthesis Process	<i>RTI International</i>	<i>David Dayton</i>
2:45 p.m.–3:15 p.m.	BREAK		
3:15 p.m.–4:00 p.m.	Novel Approach for Biomass Syngas Cleaning and Conditioning for Liquid Fuel Synthesis Applications & Associated CRADA with INL	<i>Emery Energy Company; INL</i>	<i>Ben Phillips; Richard Boardman</i>

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Day 1: MONDAY, MAY 20, 2013

TIME	GASIFICATION		
	Project Title	Organization	Presenter
4:00 p.m.–4:45 p.m.	Advanced Thermochemical Biofuels/ Syngas Quality for Fuel Synthesis	NREL; PNNL	Jesse Hensley; Mark Gerber
4:45 p.m.–5:15 p.m.	Catalyst Characterization	ANL; NREL	Theodore Krause; Jesse Hensley

Day 2: TUESDAY, MAY 21, 2013

9:15 a.m.–10:00 a.m.	Catalyst Fundamentals & Catalyst Fundamentals Integration	NREL; PNNL	Kim Magrini; Robert Dagle; Mark Gerber; Esteban Chornet
10:00 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Integrated Gasification and Fuel Synthesis	NREL	Stephen Phillips; Mark Davis
11:00 a.m.–11:30 a.m.	Syngas Mixed Alcohol Cost Validation	NREL	Abhijit Dutta
11:30 a.m.–12:00 p.m.	Fuel Synthesis Catalyst– Work with DOW Chemicals	NREL	Jesse Hensley
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	PNNL Fuel Synthesis Catalyst– CRADA with GRACE	PNNL	Richard Hallen; David Ward
1:30 p.m.–2:15 p.m.	A Hybrid Catalytic Route to Fuels from Biomass Syngas Including NREL and PNNL CRADAs	LanzaTech, Inc.; NREL; PNNL	Mike Shultz
2:15 p.m.–2:45 p.m.	Pilot–Scale Demonstration of a Fully Integrated Commercial Processes for Converting Woody Biomass into Clean Biomass Diesel Fuel	Southern Research Institute	Andrew Campos; Santosh Gangwal
2:45 p.m.–3:15 p.m.	Biomass Gasification Research and Development Project	Port of Benton	Birgitte Ahring
3:15 p.m.–3:45 p.m.	BREAK		
3:45 p.m.–4:15 p.m.	Renewable Energy Center	North Carolina A&T State University	Abolghasem Shahbazi
4:15 p.m.–4:45 p.m.	Near Zero Carbon Footprint Energy Creation through Thermal Oxidation (Hydrothermal Decomposition and Resource Recycling)	City of Allentown	Lauren K. Giguere
4:45 p.m.–5:15 p.m.	Auburn University, Biomass-to- Liquid Fuels and Electric Power Research	Auburn University	Steven Taylor

Day 1: MONDAY, MAY 20, 2013

TIME	BIO-OILS		
	Project Title	Organization	Presenter
1:00 p.m.–1:15 p.m.	Day 1: Bio-Oils Overview	DOE	Melissa Klembara
1:15 p.m.–1:45 p.m.	New Ebullated Bed Technology for Hydroprocessing Bio-oils to Produce Gasoline, Diesel and Jet Fuels	W.R. Grace & Co.; PNNL; ORNL	Steve Schmidt
1:45 p.m.–2:15 p.m.	Optimizing Co-Processing of Bio-Oil in Refinery Unit Operations Using a Davison Circulating Riser (DCR)	PNNL; W.R. Grace & Co.; ORNL; PNNL	John Holladay; Alan Zacher
2:15 p.m. –2:45 p.m.	Upgrading of Biomass Fast Pyrolysis Oil (Bio-oil)	PNNL; UOP; TUM; W.R. Grace & Co.	Corinne Valkenburg
2:45 p.m.–3:15 p.m.	Pt-Based Bi-Metallic Monolith Catalysts for Partial Upgrading of Microalgae Oil	Stevens Institute of Technology	Adeniyi Lawal
3:15 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Stabilization of Bio-Oil Fractions for Insertion into Petroleum Refineries	Iowa State University; PNNL	Robert Brown
4:00 p.m.–4:30 p.m.	Demonstration of Pyrolysis-Based Biorefinery Concept for Biopower, Biomaterials and Biochar	Avello Bioenergy	Dennis Banasiak
4:30 p.m.–5:00 p.m.	Mississippi State University Sustainable Energy Center	Mississippi State University	Fei Yu

Day 2: TUESDAY, MAY 21, 2013

8:30 a.m.–8:35 a.m.	Day 2: Bio-Oils Overview	DOE	Melissa Klembara
8:35 a.m.–9:05 a.m.	Thermochemical Platform Analysis–Fast Pyrolysis Design Case and Sustainability Interface	PNNL; NREL	Sue Jones; Abhijit Dutta; Lesley Snowden–Swann
9:05 a.m.–9:20 a.m.	BREAK		
9:20 a.m.–10:05 a.m.	Feedstock Interface & Feedstock-Thermochemical Interface Equipment	INL; NREL; PNNL	David Muth; Tyler Westover; Daniel Carpenter; Daniel Howe
10:05 a.m.–10:10 a.m.	BREAK		
10:10 a.m.–10:55 a.m.	Pyrolysis Oil R&D, Hydrotreating of Physically Stabilized Pyrolysis Oil & CapEx	PNNL; NREL	Alan Zacher; Kristiina Iisa
10:55 a.m.–11:25 a.m.	PNNL/VTT Production and Upgrade of Infrastructure Compatible Bio-Oil	PNNL	Douglas Elliott; Iva Tews
11:25 a.m.–11:45 a.m.	CA-02 Pyrolysis and Upgrading Collaboration with Canada	NREL; PNNL	Kristiina Iisa; Alan Zacher
11:45 a.m.–12:05 p.m.	IEA Task 34 Fast Pyrolysis	PNNL	Douglas Elliott

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Day 2: TUESDAY, MAY 21, 2013			
TIME	BIO-OILS		
	Project Title	Organization	Presenter
12:05 p.m.–1:05 p.m.	LUNCH		
1:05 p.m.–1:25 p.m.	Brazil Bilateral: Petrobras–NREL CRADA	NREL	Helena Chum; Andrea Pinho
1:25 p.m.–1:45 p.m.	U.S.–China Collaboration–Thermochemical Conversion of Biomass	PNNL	Jonathan Male; Huamin Wang
1:45 p.m.–2:15 p.m.	Bio–Oil Upgrading with Novel Low–Cost Catalysts and the Synergistic Evaluation of Novel Catalytic Metals for Bio–Oil Upgrading	ORNL; PNNL	Jae–Soon Choi; Alan Zacher
2:15 p.m.–2:35 p.m.	Selective Deoxygenation Catalysts / Prevention of Deactivation of Supportive Metal Catalysts	ANL	Joseph Libera; Jeffrey El a.m.
2:35 p.m.–3:20 p.m.	Characterization and Treatment of Aqueous Products from Direct Liquefaction (DL) Processes; Conversion of DL Process Aqueous Phase Organic Products into Liquid HC Fuels and H ₂	PNNL	Karl Albrecht; Robert Dagle; Daniel Howe; Mark Gerber
3:20 p.m.–3:45 p.m.	BREAK		
3:45 p.m.–4:30 p.m.	Renewable Home Heating Oil for the Northeast	PNNL; BNL; INL; ORNL	Jonathan Male
Day 3: WEDNESDAY, MAY 22, 2013			
9:15 a.m.–10:15 a.m.	National Advanced Biofuels Consortium (NABC) (Presented in conjunction with the Biochemical Conversion Technology Area)	Alliance for Sustainable Energy, LLC	Tom Foust
10:15 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–10:35 a.m.	Day 3: Bio–Oils Overview	DOE	Melissa Klembara
10:35 a.m.–11:05 a.m.	Thermochemical Platform Analysis–Ex–Situ and In–Situ TEAs	NREL; PNNL	Abhijit Dutta; Sue Jones
11:05 a.m.–11:35 a.m.	Computational Pyrolysis Consortium	ORNL; NREL; ANL; INL; PNNL; University of Delaware; TU Munich	Stuart Daw
11:35 a.m.–12:05 p.m.	Catalytic Pyrolysis Science	NREL	Mark Nimlos
12:05 p.m.–1:05 p.m.	BREAK		
1:05 p.m.–1:35 p.m.	Catalyst Development/ Testing: Deconstruction	NREL	Kim Magrini

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Day 3: WEDNESDAY, MAY 22, 2013

TIME	BIO-OILS		
	Project Title	Organization	Presenter
1:35 p.m.–2:05 p.m.	Catalytic Upgrading of Pyrolysis Products	NREL	Jesse Hensley
2:05 p.m.–2:35 p.m.	Integration and Scale-Up	NREL	Mark Davis; Esther Wilcox
2:35 p.m.–3:05 p.m.	Biomass-Derived Pyrolysis Oils Corrosion Studies	ORNL	James Keiser
3:05 p.m.–3:20 p.m.	BREAK		
3:20 p.m.–3:40 p.m.	TAN Control of Bio-Oil	ANL	Yupo Lin; Seth Snyder
3:40 p.m.–4:10 p.m.	A Low-Cost High-Yield Process for the Direct Production of High Energy Density Liquid Fuel from Biomass	Purdue University	Fabio Ribeiro
4:10 p.m.–4:40 p.m.	Upgrading of Intermediate Bio-Oil Produced by Catalytic Pyrolysis	Battelle Memorial Insititute; PNNL	Zia Abdullah
4:40 p.m.–5:10 p.m.	Catalytic Upgrading of Thermochemical Intermediates to Hydrocarbons	RTI International	David Dayton

Day 4: THURSDAY, MAY 23, 2013

9:25 a.m.–9:30 a.m.	Introduction-Competitive R&D in Catalytic Fast Pyrolysis, Hydropyrolysis, and Other Catalytic Routes	DOE	Melissa Klembara
9:30 a.m.–10:00 a.m.	Southern Pine Based Biorefinery Center	Georgia Institute of Technology	Arthur Ragauskas
10:00 a.m.–10:30 a.m.	University of Oklahoma Biofuels Refining	University of Oklahoma	Steve Crossley
10:30 a.m.–11:00 a.m.	Long Term Processing in the Production of Gasoline and Diesel from Biomass Using Integrated Hydropyrolysis Plus Hydroconversion Process (IH2 Process)	Gas Technology Institute	Terry Marker
11:00 a.m.–11:30 a.m.	Refinery Upgrading of Hydropyrolysis Oil from Biomass	Gas Technology Institute	Terry Marker
11:30 a.m.–12:00 p.m.	Advanced Biomass-to-Gasoline Process	Exelus, Inc.	Mitrajit Mukherjee
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Thermochemical Conversion Platform Analysis-HTL TEA	PNNL; NREL	Sue Jones; Abhijit Dutta
1:30 p.m.–2:00 p.m.	Improved Hydrothermal Liquefaction Bio-Oil Production	PNNL	Richard Hallen
2:00 p.m.–2:30 p.m.	Optimized Co-Processing of Algal Bio-Crude through a Petroleum Refinery	Sapphire Energy, Inc.	Benjamin Saydah

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Day 4: THURSDAY, MAY 23, 2013

TIME	BIO-OILS		
	Project Title	Organization	Presenter
2:30 p.m.–3:00 p.m.	Development of Bio-Oil Commodity Fuel as a Refinery Feedstock from High-Impact Algae Biomass	<i>University of Georgia</i>	<i>James Kastner</i>
3:00 p.m.–3:15 p.m.	BREAK		
3:15 p.m.–3:45 p.m.	Bio-Oil Separation and Stabilization by Supercritical Fluid Fraction	<i>INL</i>	<i>Daniel Ginosar</i>
3:45 p.m.–4:15 p.m.	Liquefaction of Agricultural and Forest Biomass to "Drop-In" Hydrocarbon Biofuels	<i>Iowa State University</i>	<i>Robert Brown</i>
4:15 p.m.–4:45 p.m.	Catalytic Upgrading of Thermochemical Intermediates to Hydrocarbons: Conversion of Lignocellulosic Feedstocks to Aromatic Fuels and High-Value Chemicals	<i>Virent Energy Systems, Inc.</i>	<i>Randy Cortright</i>
4:45 p.m.–5:15 p.m.	Mild Biomass Liquefaction Process for Economic Production of Stabilized, Refinery-Ready Bio-Oils	<i>Southern Research Institute</i>	<i>Santosh Gangwal</i>

Day 1: MONDAY, MAY 20, 2013

TIME	ANALYSIS & SUSTAINABILITY		
	Project Title	Organization	Presenter
1:00 p.m.–1:15 p.m.	Day 1: Analysis Overview	<i>DOE</i>	<i>Alicia Lindauer</i>
1:15 p.m.–2:00 p.m.	Overview of the NREL Strategic Analysis Project Portfolio	<i>NREL</i>	<i>Mary Bidy</i>
2:00 p.m.–2:30 p.m.	Opportunities for Biomass-Based Fuels and Products to Address the Entire Barrel of Oil in a Refinery	<i>PNNL</i>	<i>Susanne Jones</i>
2:30 p.m.–2:50 p.m.	Techno-Economic Analysis of Innovative Technology Concepts	<i>PNNL</i>	<i>Corinne Valkenburg</i>
2:50 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Resource Analysis Project	<i>ORNL</i>	<i>Matt Langholtz</i>
4:00 p.m.–4:30 p.m.	Algae Resource Assessment	<i>PNNL</i>	<i>Mark Wigmosta</i>
4:30 p.m.–5:00 p.m.	Biofuel Production Potential in the Western U.S.	<i>PNNL</i>	<i>Mark Wigmosta</i>

Day 2: TUESDAY, MAY 21, 2013

TIME	ANALYSIS & SUSTAINABILITY		
	Project Title	Organization	Presenter
9:25 a.m.–9:40 a.m.	Day 2: Analysis Overview	DOE	Alicia Lindauer
9:40 a.m.–10:10 a.m.	The Bioenergy Knowledge Discovery Framework (Bioenergy KDF)	ORNL	Aaron Myers; Budhendra Bhaduri
10:10 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	INL Feedstock Analysis	INL	David Muth
11:00 a.m.–11:30 a.m.	Biomass-to-Bioenergy Supply-Chain Scenario Analysis	NREL	Brian Bush
11:30 a.m.–12:00 p.m.	BioLUC Model	NREL	Daniel Inman
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Land Use Change Data and Causal Analysis	ORNL	Nagendra Singh
1:30 p.m.–2:00 p.m.	GCAM Bioenergy and Land-Use Modeling	PNNL	Marshall Wise
2:00 p.m.–2:30 p.m.	Global Analysis of Biofuel Policies, Feedstock and Impacts	ORNL	Gbadebo Oladosu
2:30 p.m.–3:00 p.m.	Biofuels National Strategic Benefits Analysis	ORNL	Paul Leiby
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:15 p.m.	GREET Life-Cycle Analysis of Biofuels	ANL	Michael Wang

Day 3: WEDNESDAY, MAY 22, 2013

9:20 a.m.–9:35 a.m.	Day 3: Sustainability Overview		Kristen Johnson
9:35 a.m.–10:20 a.m.	Defining Sustainability	ORNL	Virginia Dale
10:20 a.m.–10:30 a.m.	BREAK		
10:30 a.m.–11:00 a.m.	NREL Sustainability Analysis: Life-Cycle Inventory of Air Emissions	NREL	Garvin Heath; Daniel Inman
11:00 a.m.–11:30 a.m.	Life-Cycle Assessment of Logistics Supply Systems	INL	Kara Cafferty
11:30 a.m.–12:00 p.m.	Thermal Conversion Sustainability Interface	PNNL	Lesley Snowden-Swan
12:00 p.m.–1:00 p.m.	LUNCH		
1:00 p.m.–1:30 p.m.	Impact of Projected Biofuel Production on Water Use and Water Quality	ANL	May Wu
1:30 p.m.–2:00 p.m.	Forecasting Water Quality and Biodiversity	ORNL	Henrietta (Yetta) Jager
2:00 p.m.–2:30 p.m.	Optimization of Southeastern Forest Biomass Crop Production: A Watershed Scale Evaluation of the Sustainability and Productivity of Dedicated Energy Crop and Woody Biomass Operations	North Carolina State University	George Chescheir

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Day 3: WEDNESDAY, MAY 22, 2013

TIME	ANALYSIS & SUSTAINABILITY		
	Project Title	Organization	Presenter
2:30 p.m.–3:00 p.m.	Watershed Scale Optimization to Meet Sustainable Cellulosic Energy Crop Demand	<i>Purdue University</i>	<i>Indrajeet Chaubey</i>
3:00 p.m.–3:30 p.m.	BREAK		
3:30 p.m.–4:00 p.m.	Pathways Toward Sustainable Bioenergy Feedstock Production in the Mississippi River Watershed	<i>University of Minnesota</i>	<i>Jason Hill</i>

Day 4: THURSDAY, MAY 23, 2013

9:25 a.m.–9:40 a.m.	Day 4: Sustainability Overview	<i>DOE</i>	<i>Kristen Johnson</i>
9:40 a.m.–10:10 a.m.	Biomass Production and Nitrogen Recovery	<i>ANL</i>	<i>Cristina Negri</i>
10:10 a.m.–10:30a.m.	BREAK		
10:30 a.m.–11:00 a.m.	Short Rotation Woody Biomass Sustainability	<i>ORNL</i>	<i>Matt Langholtz; Natalie Griffiths</i>
11:00 a.m.–11:30 a.m.	Sustainable Feedstock Production–Logistics Interface	<i>INL</i>	<i>David Muth</i>
11:30 a.m.–12:45 p.m.	LUNCH		
12:45 p.m.–1:30 p.m.	International Sustainability	<i>NREL</i>	<i>Helena Chum</i>
1:30 p.m.–2:00 p.m.	International Sustainability and Standards; Brazil Collaborations	<i>ORNL</i>	<i>Keith Kline</i>

BETO REVIEWER AND STEERING COMMITTEE INFORMATION

PEER REVIEW STEERING COMMITTEE	
Jim Dooley	Forest Concepts, LLC.
Steve Kelley	North Carolina State University
Bob Miller	Consultant, retired Air Products
Mark Yancey	Neatech, LLC
George Parks	Consultant, retired ConocoPhillips
Bob Mantz	Army Research Laboratory
Kelly Ibsen	Lynx Engineering, LLC.

ANALYSIS & SUSTAINABILITY REVIEW SESSION	
REVIEWERS	
Shelie Miller (Lead Reviewer)	University of Michigan
Sylvie Brouder	Purdue University
Jeremy Alcorn	Logistics Management Institute
Andras Marton	Independent Project Analysis, Inc.
John Sheehan	University of Minnesota

ALGAE REVIEW SESSION	
REVIEWERS	
Brent Massmann (Lead Reviewer)	Monsanto
Chris Cassidy	USDA
Philip Marrone	SAIC
Tasios Melis	University of California Berkeley, Lawrence Berkeley National Laboratory
Emilie Slaby	The Scoular Company
David Hazlebeck	General Atomics

BIOCHEMICAL CONVERSION REVIEW SESSION	
REVIEWERS	
Carol Babb (Lead Reviewer)	SAIC
Kevin Gray	Chemtex
Robert Kelly	North Carolina State University
Matthew Lipscomb	OPX Biotechnologies, Inc.
Jim Kellis	DuPont Industrial Biosciences
K. Thomas Klasson	USDA-ARS

FEEDSTOCK PRODUCTION AND LOGISTICS REVIEW SESSION

REVIEWERS

Lyle Stephens (Lead Reviewer)	Deere & Company
Tom Richard	Pennsylvania State University
Marilyn Buford	U.S. Forest Service
Jamie Nettles	Weyerhaeuser Company
Michael Tumbleson	University of Illinois
Steve Searcy	Texas A&M University

BIO-OILS CONVERSION REVIEW SESSION

REVIEWERS

Don Stevens (Lead Reviewer)	Cascade Science and Technology Research, retired PNNL
Paul Bryan	Consultant, formerly with Chevron and DOE
Thomas Phillips	Intellection, LLC
Dean Draemel	UC Berkeley, College of Chemistry
Caroline Burgess Clifford	Pennsylvania State University

GASIFICATION REVIEW SESSION AND BIODIESEL REVIEW SESSION

REVIEWERS

Suresh Babu (Lead Reviewer)	BNL
John Scahill	Thermal Biofuels Consultants, LLC, retired NREL and Golden Field Office
Foster Agblevor	Utah State University
Jack Lewnard	Gas Technology Institute
David Sudolsky	Anellotech, Inc.
Nathan Weiland	West Virginia University

INTEGRATED BIOREFINERY REVIEW SESSION AND HEAT & POWER REVIEW SESSION

REVIEWERS

Bill Crump (Lead Reviewer)	SAIC
Steve Moorman	Babcock & Wilcox Company
George Philippidis	University of South Florida
Dan Strobe	Consultant, retired KIOR
James Doss	Professional Project Services, Inc.
Ralph Anthenien	Army Research Office
John Wyatt	Carmagen Engineering, Inc.

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