

2015 Project Peer Review

U.S. Department of Energy
Bioenergy Technologies Office

Technology Area Agenda – Thermochemical Conversion

Day 1: Monday, March 23, 2015			
Time	Thermochemical Conversion Technology Area		
	Project Title	Organization	Presenter
1:00 p.m.–1:20 p.m.	Thermochemical Conversion Overview Presentation	U.S. DOE-BETO	Liz Moore
1:20 p.m.–1:50 p.m.	Analysis and Sustainability Interface	PNNL	Sue Jones
1:50 p.m.–2:35 p.m.	Computational Pyrolysis Consortium	ORNL	Stuart Daw
2:35 p.m.–3:05 p.m.	Development and Standardization of Techniques for Bio-Oil Characterization	NREL	Jack Ferrell
3:05 p.m.–3:15 p.m.	Break		
3:15 p.m.–3:45 p.m.	Feedstock Characterization for Thermochemical Conversion Specifications	INL	Tyler Westover
3:45 p.m.–4:15 p.m.	High-Throughput Characterization	INL	Gary Gresham
4:15 p.m.–4:45 p.m.	Thermochemical Feedstock Interface	NREL	Danny Carpenter
Day 2: Tuesday, March 24, 2015			
8:30 a.m.–9:00 a.m.	Electrochemical Methods for Upgrading Pyrolysis Oils	INL	Tedd Lister
9:00 a.m.–9:30 a.m.	Novel Electro-Deoxygenation Process for Bio-Oil Upgrading	Ceramatec	Elango Elangovan
9:30 a.m.–9:45 a.m.	Break		
9:45 a.m.–10:15 a.m.	Advanced Membrane Separations to Improve Efficiency of Thermochemical Conversion	ORNL	Michael Hu
10:15 a.m.–10:45 a.m.	Biological Pyrolysis Oil Upgrading	NREL	Gregg Beckham
10:45 a.m.–11:15 a.m.	Cascade reactions with Technische Universität München (TUM) and University of Toronto (U of T)	PNNL	Mariefel Olarte
11:15 a.m.–11:45 a.m.	Bio-Oil Upgrading with Novel, Low-Cost Catalysts	ORNL	Jae-Soon Choi
11:45 a.m.–1:00 p.m.	Lunch		
1:00 p.m.–1:30 p.m.	Novel and Robust Catalysts for Bio-Oil Hydrotreating	PNNL	Corinne Drennan
1:30 p.m.–2:00 p.m.	Upgrading of Intermediate Bio-Oil Produced by Catalytic Pyrolysis	Battelle Memorial Institute	Zia Abdullah
2:00 p.m.–2:30 p.m.	Catalytic Upgrading of Pyrolysis Products	NREL	Josh Shaidle
2:30 p.m.–3:00 p.m.	Catalyst Development/Testing: Deconstruction	NREL	Kim Magrini

3:00 p.m.–3:15 p.m.	Break		
3:15 p.m.–3:45 p.m.	Bio-Oil Quality Improvement and Catalytic Hydrotreating of Bio-Oils	PNNL	Mariefel Olarte
3:45 p.m.–4:15 p.m.	Catalytic Upgrading of Thermochemical Intermediates to Hydrocarbons	Research Triangle Institute	Dave Dayton
Day 3: Wednesday, March 25, 2015			
9:45 a.m.–10:15 a.m.	Biomass-Derived Pyrolysis Oils Corrosion Studies	ORNL	Jim Keiser
10:15 a.m.–10:45 a.m.	Refinery Upgrading of Hydrolysis Oil from Biomass	Gas Technology Institute	Terry Marker
10:45 a.m.–11:15 a.m.	Optimizing Co-Processing of Bio-Oil in Refinery Unit Operations Using a Davison Circulating Riser	PNNL	Corinne Drennan
11:15 a.m.–11:45 a.m.	Mild Biomass Liquefaction Process for Economic Production of Stabilized Refinery-Ready Bio-Oils	Southern Research Institute	Santosh Gangwal
11:45 a.m.–1:00 p.m.	Lunch		
1:00 p.m.–1:30 p.m.	Production and Upgrading of Infrastructure Compatible Bio-Oil with VTT (Technical Research Center of Finland)	PNNL	Doug Elliot
1:30 p.m.–2:00 p.m.	New Ebullated Bed Technology for Hydroprocessing Bio-Oils to Produce Gasoline, Diesel, and Jet Fuels	W.R. Grace & Co.	Corinne Drennan
2:00 p.m.–2:30 p.m.	Brazil Bilateral—Petrobras—NREL CRADA	NREL	Helena Chum and Andrea Pinho
2:30 p.m.–3:00 p.m.	Integration and Scale-Up	NREL	Esther Wilcox
3:00 p.m.–3:15 p.m.	Break		
3:15 p.m.–3:45 p.m.	Demonstration of Pyrolysis Based Biorefinery Concept for Biopower, Biomaterials, and Biochar	Avello Bioenergy	Dennis Bansiak
3:45 p.m.–4:15 p.m.	Catalytic Upgrading of Thermochemical Intermediates to Hydrocarbons: Conversion of Lignocellulosic Feedstocks to Aromatic Fuels and High-Value Chemicals	Virent, Inc.	Randy Cortright
4:15 p.m.–4:45 p.m.	Improved Hydrogen Utilization and Carbon Recovery for Higher-Efficiency Thermochemical Bio-Oil Pathways	Research Triangle Institute	Dave Dayton
Day 4: Thursday, March 26, 2015			
9:45 a.m.–10:15 a.m.	Thermochemical Platform Analysis	NREL	Abhijit Dutta
10:15 a.m.–10:45 a.m.	Liquid Fuels via Upgrading of Syngas Intermediates	NREL	Jesse Hensley
10:45 a.m.–11:15 a.m.	Liquid Fuels via Upgrading of Syngas Intermediates	PNNL	Rob Dagle

11:15 a.m.–11:45 a.m.	A Hybrid Catalytic Route to Fuels from Biomass Syngas	LanzaTech, Inc.	Alice Havill
11:45 a.m.–1:00 p.m.	Lunch		
1:00 p.m.–1:30 p.m.	City of Gridley Biofuels Project	City of Gridley	Matt Michaelis
1:30 p.m.–2:00 p.m.	Testing, Evaluation, and Qualification of Bio-Oil for Heating	BNL	Tom Butcher
2:00 p.m.–2:30 p.m.	Renewable Energy Center	North Carolina Agricultural & Technical State University	Abolghasem Shahbazi
2:30 p.m.–3:00 p.m.	Hydrothermal Processing of Biomass	PNNL	Richard Hallen
3:00 p.m.–3:15 p.m.	Break		
3:15 p.m.–3:45 p.m.	Liquefaction of Agricultural and Forest Biomass to "Drop-In" Hydrocarbon Biofuels	Iowa State University	Ryan Smith
3:45 p.m.–4:15 p.m.	Fractional Multistage Hydrothermal Liquefaction of Biomass and Catalytic Conversion into Hydrocarbons	Virent, Inc.	Randy Cortright
4:15 p.m.–4:45 p.m.	Fractionation and Catalytic Upgrading of Bio-Oil	University of Oklahoma	Daniel Resasco
Day 5: Friday, March 27, 2015			
8:30 a.m.–9:00 a.m.	Catalytic Pyrolysis Science	NREL	Mark Nimlos
9:00 a.m.–9:30 a.m.	Characterization and Valorization of Aqueous Phases Derived From Liquefaction and Upgrading of Bio-Oils	PNNL	Karl Albrecht
9:30 a.m.–10:00 a.m.	Reforming Pyrolysis Aqueous Waste Streams to Process Hydrogen and Hydrocarbons	NREL	Kim Magrini
10:30 a.m.–11:00 a.m.	Renewable Hydrogen Production from Biomass Pyrolysis Aqueous Phase	ORNL	Abhijeet Borole