



4th annual
Cellulosic Ethanol and 2nd Generation Biofuels
Next Steps in Commercial Development
October 22-23, 2009 • Embassy Suites Downtown Lakefront • Chicago

FINAL AGENDA

DAY ONE - Thursday, October 22, 2009

7:30 *Registration and Continental Breakfast*

8:30 *Chair's Welcome and Opening Remarks*
Vonnie Estes, Vice President, Business Development, DuPont Danisco Cellulosic Ethanol

State of the Industry and New Directions

8:45 **An Oil Company's Perspective on Cellulosic Ethanol**
Dave Austgen, Senior Business Manager, Shell

9:15 **Cellulosic Ethanol and 2nd Generation Biofuels – Current Outlook and Future Directions**

- Advantages of cellulosic ethanol for sustainable production of biofuels
- Investment strategies and timelines
- Financing cellulosic projects – Short and long term perspectives
- Developing 2nd generation biofuels
- Evaluating progress and setting milestones in the transition from demonstration to pilot plants

Neil S. Suslak, Managing Director, Braemar Energy Ventures

9:45 **Cellulosic Ethanol – From Good to Great**

- What is vital to advancing cellulosic ethanol?
- What cellulosic ethanol can learn from the corn ethanol industry
- Addressing success factors in a first commercial project
- Translating commercial project success into a sustainable business
- Opportunities to accelerate development of a thriving cellulosic ethanol industry

James Flatt, Ph.D., Executive Vice President, R&D/Operations, Mascoma Corporation

10:15 **Cellulosic Biofuels – Obtaining Environmental Goals**

- Role of biofuels in regulatory plans
- EPA rule making and interpretation
- Status of RFS2

Paul Machiele, Director, Center for Fuel Programs, Office of Transportation and Air Quality, U.S. Environmental Protection Agency

10:45 *Networking and Refreshment Break*

From Pilot Projects to Commercial Production

11:15 *PANEL DISCUSSION*

Commercialization of Cellulosic Ethanol

- Case studies of commercial development
- Examples using different feedstocks and process technologies
- Key steps in reducing cost of production
- Increasing efficiencies in pretreatment / deconstruction of cellulose
- Building demonstration plants
- Status of large scale commercial development
- How cellulosic biofuels integrate with existing infrastructure for fuel distribution

Moderator: *Bradley Saville, Ph.D., Vice President, Research and Development, SunOpta BioProcess, Inc.*

Jeff Passmore, Executive Vice President, Iogen Corporation

Carlos Riva, Chief Executive Officer, Verenum Corporation

Wesley Bolsen, Chief Marketing Officer, Coskata

Hamish Curran, Chief Executive Officer, TMO Renewables

12:45 *Luncheon*

2:00 **New Advances in Biochemical/Thermochemical Processes**

- Key advantages of gasification including low cost
- Bio-Catalytic reactions
- State of commercial development
- Evaluating sustainable feedstock supply and availability
- Proposed government policy and its impact on feedstocks and technology choices

Mark Niederschulte, Ph.D., Chief Operating Officer, INEOS Bio

2:30 *PANEL DISCUSSION*

Financing Cellulosic Ethanol Projects

- Learning from the experience of corn-based ethanol
- Managing risk in turbulent markets
- Evaluating business plans and financial profiles
- Evaluating readiness for commercial project financing
- Critical issues for financing new plants
 - feedstock contracts
 - loan guarantees
 - process guarantees/warranties
 - liability assumptions
- Market outlook and long term support for biofuels

Moderator: *Craig Miller, Chief Executive Officer, Association for Corporate Growth, Chicago*

Tony Lent, Managing Director, U.S. Renewables Group

Rob Toker, Senior Vice President, Technology Solutions Group, SCC Americas

Irvin Barash, President, Vencon Management, Inc.

4:00 *Networking and Refreshment Break*

4:30 **Municipal Solid Waste as a Feedstock – Benefits and Challenges**

- Environmental benefits of thermochemical plants and MSW feedstock
- Economic benefits of waste-to-biofuels plants
- Importance of partnerships with municipal leaders for feedstock supply and long term agreements
- Evaluating regulatory or permitting issues
- Examples of problems and solutions

Vincent Chornet, President and Chief Executive Officer, Enerkem

5:00 **Cellulosic Ethanol Plant Design Considerations**

- Plant Design Basics
 - mass and energy balance
 - equipment sizing and layout
 - balance of plant (utilities, feed and product handling, etc)
 - choosing appropriate technologies and equipment to achieve performance standards
 - Critical issues / problem solving
 - plant scale-up issues from pilot/demo stage to commercial scale
 - energy conservation/heat recovery/reuse
 - air pollution control
 - water supply & reuse, wastewater and waste residues management
 - operational flexibility and reliability
 - safety considerations
 - permitting considerations
 - Lessons learned from commercializing similar technologies on similar scale

Mike Merdinger, Manager, Technical Services, Tetra Tech EC Inc.

5:30-6:30 *Networking Wine & Cheese Reception*

DAY TWO - Friday, October 23, 2009

7:30 *Continental Breakfast*

8:15 *Chair's Introduction to Day Two*

Vonnie Estes, Vice President, Business Development, DuPont Danisco Cellulosic Ethanol

Biomass Feedstocks for Cellulosic Ethanol – Logistics and Economics

8:30 **Economics of Cellulosic Ethanol – Biomass Feedstock Economics and Production**

- Overview of an economically viable cellulosic ethanol project
- Woody biomass feedstock
- Financial details of the project

Bradley Saville, Ph.D., Vice President, Research and Development, SunOpta BioProcess, Inc.

9:00 *PANEL DISCUSSION*

Biomass Feedstocks – Availability, Cost, and Logistical Challenges

- Feedstock overview
- A broad spectrum look at availability and cost
- Feedstock supply and quality

- Examples from major biomass sources
 - agricultural residue
 - dedicated energy crops
 - perennial grasses
- Projections of feedstock capacity
- What is the optimum land area to supply a cellulosic ethanol plant?
- Storage and handling of biomass
- Transportation costs and distribution models
- Biomass supply, long term contracts
- Will the cellulosic ethanol industry compete for feedstocks with the power industry?

Moderator: *Joel Tallaksen, Ph.D., Biomass Project Coordinator, College of Food, Agriculture, and Natural Resources, **University of Minnesota***

*Bill Lee, Chief Executive Officer, **Front Line BioEnergy***

*Doug Berven, Vice President, Corporate Affairs, **POET***

*Spencer Swayze, Manager, Business Development, **Ceres, Inc.***

*Bob Matousek, Manager, Development & Research Engineering, **AGCO Corporation***

*Jim Lane, Editor, **Biofuels Digest***

*Bill Levy, President, **Pacific Ag Solutions, LLC***

10:30 *Networking and Refreshment Break*

11:00 **Economics of Biomass Feedstocks – Examples from Forest Resources**

- Achieving low cost and reliable production by managing feedstock supply
- Sustainability concerns for forest biomass
 - Estimating cost of harvesting, collection, transportation, and storage
 - Forest quality issues including energy content, density, and ash
 - Calculating land area to supply a forest biorefinery
 - Spread between feedstock costs and product value
 - Price increases in wood waste and other feedstocks
 - Potential competition with power generation
 - Managing risk and volatility in supply

Moderator: *Kenneth Skog, Project Leader, **USDA Forest Service***

*John Gephart, President, **North Shore Forest Products, Inc.***

*Scott P. Jones, Executive Vice President, **Forest Landowners Association***

*Maud Hinchee, Ph.D., Chief Technology Officer, **ArborGen LLC***

12:30 *Close of conference*