

TAPPI International Bioenergy & Bioproducts Conference
August 27 – 29, 2008
Portland, Ore., USA

Technical Program (8/4/08)

WEDNESDAY, AUGUST 27

EPE/IBC Bridge Session 1

1:30 p.m. – 3:00 p.m.

Session Moderator: *Theodora Retsina, American Process Inc.*

- **Opening Remarks by Conference Co-chairs**
Theodora Retsina, API, and Tom Amidon, SUNY, Conference Co-Chairs. Eric Fletty, TAPPI
- **Keynote Presentation: What's Behind the Growing Interest in Forest-Based Biofuels, How the Segment will Likely Develop, and What it Means for the Forest Industry in General**, *Denny Hunter, Chief Technology Officer, Catchlight Energy LLC, a Chevron / Weyerhaeuser Joint Venture*
- **Presentation of AF&PA's Agenda 20/20 Official Thermochemical Biorefinery "Position Paper" for the U.S. Pulp and Paper Industry, as developed and approved by the CTOs Committee—followed by question-answer/commentary period**, *John Cowie, AF&P*

Refreshment Break in Exhibit Area

3:00 p.m. – 3:30 p.m.

EPE/IBC Bridge Session 2

3:30 p.m. – 5:00 p.m.

Session Moderator: *Thomas McDonough, Georgia Institute of Technology*

- **Technical/Economic Assessment of Biorefining Applications at Kraft and Paper Mills**, *Hasan Jameel and Richard Phillips, North Carolina State University, and Calvin Clark, BE&K Engineering*
- **Guided Tour: Implementing the Forest Biorefinery at an Existing Pulp and Paper Mill**, *Jacquelyn-Danielle McNutt, CPBIS, Virginie Chambost and Paul R. Stuart, Department of Chemical Engineering, École Polytechnique (Montréal)*
- **Betting on Biorefinery and Positioning the Pulp and Paper Industry for Biorefinery Success**, *V.R. Parthasarathy, Weyerhaeuser*

EPE/IBC Bridge Session 3

3:30 p.m. – 5:00 p.m.

Session Moderator: David White, Herty Foundation

- **Impact of the Integrated Pulp Mill/Biorefinery on the Chemical Recovery Cycle, Nikolai DeMartini, Georgia Institute of Technology**
- **Production of Ethanol from Forest Residues and Hog Fuel in a Pulp Mill, Presenter: Yunqiao Pu, Georgia Institute of Technology. Authors: Kristiina Iisa, Kristina Knutson, Art Regauskas, W.J. Frederick Jr., Nikolai DeMartini, Georgia Institute of Technology**
- **Integrated Bio- & Thermo-chemical Route for Mixed Alcohol Production in a Pulp and Paper Mill, David Koch, Kristiina Iisa, Matthew Realff, W. J. Frederick Jr., Georgia Institute of Technology**

IBBC Reception

6:30 p.m. – 8:00 p.m.

THURSDAY, AUGUST 28

Conference Breakfast in Exhibit Area

7:00 – 8:00 a.m.

SESSION 4: Keynote Presentation

8:00 – 8:30 a.m.

Session Moderator: Don Sorenson, Amec

Bioenergy Perspectives from the Petroleum Industry, Joe Powell, Chief Scientist, Shell Global Solutions (U.S.)

Session 5: Biorefining Drivers, Challenges, Opportunities

8:30 – 10:00 a.m.

Session Moderator: Tom Amidon, SUNY

- **Overview of Biorefinery Technologies and Challenges, Vesa Pylkkanen, American Process Inc.**
- **Review of Greenhouse Gases and Carbon Trading Systems, Steve Dowe, Jacobs Engineering**

- **Materials Challenges in Converting Biomass to Fuels and Chemicals,** *Andrew Garner, Andrew Garner & Assoc., and Doug Singbeil, FP Innovations (Paprican)*
- **Waste-to-Fuel Possibilities and Considerations for the Forest Products Industry,** *Steve Lucas, Chief Engineer, Fulcrum Bioenergy*

Refreshment Break in Exhibit Area

10:00 – 10:30 a.m.

Session 6: Current and Future Biomass Outlook

10:30 a.m. – Noon

Session Moderator: Ken Patrick, TAPPI

- **Manufacturing and Agricultural Residuals Outlook, and General Assessment of Forest Residuals Potential in View of the Paper Industry's Recent Trend Toward Divesting of Forest Assets,** *Steve Kelley, North Carolina State University*
- **Purpose-Grown Trees as an Economical, Sustainable, Renewable Energy Source in the Bioenergy Arena,** *Nathan Ramsey, ArboGen.*
- **Enabling a Lignocellulosic Biorefinery Using Pine as a Feedstock,** *R. W. Allison, General Manager, Papro/Scion Research, New Zealand*

Lunch in Exhibit Area

Noon – 1:30 p.m.

Session 7: Microorganisms and Catalysts

1:30 – 3:00 p.m.

Session Moderator: Yunqiao Pu, IPST @ Georgia Tech

- **Update on Microorganism Technologies, Projects at USDA Forest Products Lab,** *Barbara Illman, Institute For Microbial & Biochemical Technology*
- **Verenium Report on Enzymatic Technologies and Demonstration Center in Jennings, La.,** *Justin Stege, Verenium Technologies*
- **Engineered Yeast Update,** *Nancy Ho, Purdue University*

Session 8: Biorefining Technology - I

1:30 – 3:00 p.m.

Session Moderator: Steve Dowe, *Jacobs Engineering*

- **Potential for Low Cost Pretreatment of Cellulosic Biomass for Biological Production of Fuels and Chemicals**, *Dr. Bin Yang, Assoc. Research Engineer, and Dr. Charles Wyman, College of Engineering—Center for Environmental Research and Technology, University of California, Riverside, Calif.*
- **Review/Update of Current ThermoChemical Platforms**, *Eric Connor, Thermochem Recovery International*
- **Report on Value Prior to Pulping (VPP) High Mass Removal Work with Sugar Platform at SUNY-ESF**, *Tom Amidon, SUNY-ESF*
- **Evaluation of Biomass Using Advanced Imaging Techniques**, *Shi-You Ding, Senior Scientist II, Chemical & Biosciences Center, National Renewable Energy Laboratory, Golden, Colo.*

Refreshment Break in Exhibit Area

3:00 – 3:30 p.m.

Session 9: Biorefining Technology – II

3:30 – 5:30 p.m.

Session Moderator: Eric Connor, *Thermochem Recovery International*

- **Comparing Impact of Pre-Treatment of Aspen and Alfalfa Biomass on Fermentable Sugars Yield**, *Dr. Lei Xu, University of Minnesota*
- **A Commercially Viable Platform for Efficient and Robust Conversion of Woody Biomass**, *J.Y. Zhu, USDA Forest Service, Forest Product Lab., X.J. Pan, University of Wisconsin, K.E. Skog, TianJin University of Science and Technology, TianJin, China*
- **American Value Added Pulping (AVAP) Technology and Systems Update**, *Theodora Retsina, American Process Inc.*
- **Second Generation Renewable Motor Fuels from the Pulp Mill—Cash-Flow Booster Now Becoming Reality**, *Invar Landälv and Patrik Löwnertz, Chemrec AB*

Evening Open

FRIDAY, AUGUST 29

Conference Breakfast in Exhibit Area

7:00 – 8:00 a.m.

SESSION 10: Keynote Presentation

8:00 – 8:30 a.m.

Session Moderator: Eric Fletty, *TAPPI*

- **Will the Integrated Forest Biorefinery Become Mainstream?**
...Opportunity is Just Over the Horizon. *Masood Akhtar, president, CleanTech Partners (CTP), and Ben Thorp, CTP's Strategic Consultant*

Session 11 : Financial, Government, Legal Framework Panel Session

8:30 – 10:00 a.m.

Session Moderators: John Pierce, Wilson Sonsini Goodrich & Rosati (covering deal structuring, project financing) and Parag Gheewala – Wilson Sonsini Goodrich & Rosati (covering IP issues)

- **Financing Options for Biorefinery Projects Located Near or in a Pulp Mill,** *David Brown, Obsidian Finance*
- **Legal and Financial Issues in Commercializing Woody Biomass-Based Biofuels—Review, Analysis, Discussion of Tax, Law, and Financial Issues, Including Implications of the New Energy Act's Section on Biofuels**

Session 12: Bioproducts, Markets, and Operating Issues

8:30 –10:00 a.m.

Session Moderator: Scott Springmier, *TAPPI*

- **Use of Ligno-Bioproducts in the Lime Kiln as Supplemental Fuel,** *Hassan Loutfi, Baisch Engineering Inc., and Brian Hans, EarthMimic Inc.*
- **Managing Energy Efficiency and CO₂ Operating Issues in an Integrated Pulp and Paper Mill Biorefinery,** *Marc Tice, Americas Region Lead for Carbon and Energy Management, Shell Global Solutions (U.S.)*
- **Review and Revenue-Capital Cost Analysis of Bioenergy Related Equipment and Systems** *(fuel feed equipment, stoker boilers, bubbling fluidized bed boilers, circulating fluidized bed boilers, combustion control systems, emission controls), Arnie Iwanick, Sr. Process Engineer, Harris Group*

Refreshment Break in Exhibit Area

10:00 a.m. - 10:30 a.m.

Session 13: Biorefinery Case Studies

10:30 a.m. – 12:30 p.m.

Session Moderator: John Cowie, *AF&PA*

- **Update of RSE Pulp & Chemical/Red Shield Environmental Biorefinery Project at Old Town, Maine, *Dick Arnold, General Manager, RSE Pulp & Chemical***
- **Creating Value from Wood—a Working Biorefinery Concept (based on operations at Borregaard Biorefinery in Norway), *Klaus Neumann, Vice President Business Development, Borregaard***
- **Update on NewPage Integrated Biorefinery Project at Wisconsin Rapids, Wis., Mill, *Doug Freeman, NewPage Corp.***
- **Technical Demonstration of Production of an Advanced Renewable Diesel Fuel – the BioDME project in Piteå, Sweden, *Invar Landälv and Patrik Löwnertz, Chemrec AB***
- **Update of Mascoma Biorefinery Projects, *Colin South, Mascoma***
- **Flambeau River Biorefinery Update Report, *Bill Johnson, Flambeau River Biofuels***

Session 14: Wrap-up Session

12:30 – 1:00 p.m.

Session Moderator: Theodora Retsina, *American Process Inc.*

- **Chairman and Members of the Conference Planning Group**