

# ALGAE BIOFUELS

## World Summit

March 23-25, 2009 | San Francisco, CA

Pre-Summit Briefing March 23, 2009

## COMMERCIALIZING ALGAE BIOFUELS: THE ROAD FORWARD

### About the Briefing

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As a prelude to the Summit, this all-day briefing will provide an excellent opportunity for attendees to obtain a well-grounded understanding of what it is going to take to move current algae research and development efforts to full scale commercialization. The briefing will layout the business and economic requirements for industry commercialization, look at the roadmap for industry development, evaluate the status and outlook of key technology challenges, and consider the risk involved in project development. The goal is to provide the kind of practical information that will provide a solid foundation for future decision-making.

### About the Briefing

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8:30 – 8:45 Welcome & Introduction – **Mark Hanson**, *Principal*,  
STOEL RIVES LLP

8:45 – 9:30 **OPPORTUNITIES AND CHALLENGES IN ALGAE BIOFUELS PRODUCTION**  
**John R. Benemann, Ph.D.**, *Consultant*, BENEMANN ASSOCIATES; *Manager*,  
*International Network on Biofixation of CO<sub>2</sub> and Greenhouse Gas Abatement with*  
*Microalgae, Greenhouse Gas R&D Programme*, INTERNATIONAL ENERGY  
AGENCY (England)

### Project Economics: What Does Success Look Like?

9:30 – 10:00 **PROJECT ECONOMICS OVERVIEW**  
**Ron Pate**, *researcher*, SANDIA NATIONAL LABORATORIES

- What is commercial scale?
- What are the economic points of production?
- What price points need to be met?
- What production and capital cost targets need to be met?

10:00 – 10:30 **OPEN END SYSTEM ECONOMICS**  
**Tryg Lundquist**, *Assistant Professor, Civil and Environmental Engineering*,  
CALIFORNIA POLYTECHNIC STATE UNIVERSITY

10:30 – 11:00 *Networking Break*

11:00 – 11:30 **CLOSED END SYSTEM ECONOMICS**  
**Ben Cloud**, *President and Chief Operating Officer*, XL RENEWABLES

### Roadmap to Commercialization

11:30 – 12:30 **THE ROADMAP TO ALGAE COMMERCIALIZATION**  
**Philip Pienkos**, *Supervisor, Applied Biology*, NATIONAL RENEWABLE ENERGY LABS

12:30 – 2:00 *Group Luncheon*

2:00 – 2:30 **GROWING ALGAE: STATUS AND OUTLOOK**  
**Dr. Tony Michaels**, *Managing Partner and Director*, PROTEUS ENVIRONMENTAL TECHNOLOGIES, LLC

2:30 – 3:00 **HARVESTING ALGAE: STATUS AND OUTLOOK**  
**Dr. Ike Levine**, *Associate Professor, Natural and Applied Sciences*, UNIVERSITY OF SOUTHERN MAINE

3:00 – 3:30 *Networking Break*

3:30 – 4:00 **EXTRACTION: STATUS AND OUTLOOK**  
**Mark Edwards, Ph.D.**, *Professor, Food Marketing and Sustainability*, ARIZONA STATE UNIVERSITY

### Plant Development Challenges

4:00 – 5:00 **PLANT DEVELOPMENT AND COMMERCIALIZATION RISKS**  
**Mark Hanson**, *Principal*, STOEL RIVES LLP