



## National Algal Biofuels Technology Roadmap

### Workshop Agenda

December 9-10, 2008

The Inn & Conference Center, University of Maryland

Tuesday, December 9, 2008 – Day One		
8:00 – 8:15a.m.	Welcome and Introduction	Valerie Reed, DOE/EERE
8:15 – 8:30	Workshop Objectives, Agenda, Output	Al Darzins, NREL Grant Heffelfinger, SNL
8:30 – 9:15	Overview of Prior Algae Science Technology & Engineering (ST&E) Efforts	Eric Jarvis, NREL
9:15 – 9:45	Recent and Current Research & Roadmapping Activities Overview	Al Darzins, NREL
9:45 – 10:00	Break	
10:00 – 10:15	What Is Different About This Effort? – Sustainable Systems Approach	Valerie Reed, DOE/EERE Al Darzins, NREL Grant Heffelfinger, SNL
10:15 – 11:30	Review of Techno-economic Literature & Analyses	Ron Pate, SNL Phil Pienkos, NREL
11:30a.m. – 12:30p.m	Lunch	
12:30 – 3:30	Breakout Sessions: <ol style="list-style-type: none"> <li>1. Algal Biology (including strain selection)</li> <li>2. Cultivation</li> <li>3. Harvest/dewatering</li> <li>4. Extraction/fractionation</li> <li>5. Conversion to fuels</li> <li>6. Co-products</li> <li>7. Systems integration</li> <li>8. CO<sub>2</sub> sourcing &amp; siting; land, water resources</li> <li>9. Regulatory/Policy</li> </ol>	
3:30 – 5:30	Break Out Groups - Report Back to the Entire Group	
5:30 – 6:00	Break	
6:00 – 7:30	Networking Session	
7:30 – 9:30	Evening Session: Techno-economic Modeling <ol style="list-style-type: none"> <li>1. Review of day's "learnings" and implications to the present TE framework</li> <li>2. Techno-economic modeling networking; main invitees are the algal biofuels companies</li> </ol>	Ron Pate, SNL Phil Pienkos, NREL

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<b>Wednesday, Dec 10, 2008 – Day Two</b>		
<b>GOAL:</b> Day Two is geared around identifying the challenges, opportunities, and value proposition within each industry or market niche, define the key subsystems or pathways, and identify the critical market drivers and investment areas for ROI needed for successful commercialization of algae based fuels and co-products.		
8:00 – 8:15a.m.	Quick Recap, Questions, Agenda & Logistics for Today	
8:15 – 9:45	High Level Keynote(s): Energy Independence	Speaker(s)-TBD
9:45 – 10:30	Modeling & Analysis Recap	Ron Pate, SNL Phil Pienkos, NREL
10:30a.m. – 1:30p.m.	Breakout Groups By Industry Sector: <ol style="list-style-type: none"> <li>1. Fossil fuel producers, refiners, catalyst suppliers</li> <li>2. Algal biofuel companies</li> <li>3. Biodiesel/Ethanol renewable fuel producers and appropriate user groups (e.g. auto industry)</li> <li>4. Co-product and competing product companies</li> <li>5. Input groups/sourcing (utilities, wastewater, CO<sub>2</sub> sources)</li> <li>6. Policy, regulatory, and standards</li> <li>7. Financial interests and risk analysis</li> <li>8. Possible public-private partnerships and interests</li> </ol>	
1:30 – 2:30	After Lunch Networking	
2:30 – 6:00	Break Out Groups - Report Back to the Entire Group	
6:00	Adjourn	