



Sustainable Energy Forum

June 21 - 23, 2009

Youngstown State University, Ohio

Rev 0. Final Program (as of June 15, '09)



MAHONING & SHENANGO VALLEY
ADVANCED MANUFACTURING INITIATIVE



GLOBAL GREEN USA®



United States Business Council
For Sustainable Development

Forum Objectives:

1. Drive regional economic development through the commercialization of energy technologies
2. Information exchange on technologies related to renewable energy and energy efficiency
3. Identification of specific areas of research that are needed and topics for future discussion and exploration
4. Pinpoint opportunities to pursue joint research in technology development for sustainable energy
5. Discuss current models for developing partnerships and collaboration in energy technology development (work sharing, funding, contracting)

Focus: Forum combines national perspectives with a regional economic development focus on specific initiatives in the Ohio/Pennsylvania/West Virginia tri-state area.



SUNDAY, JUNE 21 - REGISTRATION & PRECONFERENCE ACTIVITIES

Noon to 3:00 PM — Pick up preregistration packets and badges, Holiday Inn Boardman (Off Campus)
7410 South Ave, Boardman, Ohio 44512, (330) 726-5472

Public Film Forum: Sponsored by City of Youngstown and Youngstown State University

Schwebel Auditorium, Youngstown State University, located in the College of STEM in Moser Hall

4:00 PM "FUEL"... a provocative documentary which explores reducing dependence on fossil fuels

5:45 PM Q & A with Film Director, Josh Tickell

MONDAY, JUNE 22 – GENERAL SESSION OVERVIEWS: WHAT ARE THE NEEDS?

Schwebel Auditorium, Youngstown State University, located in the College of STEM in Moser Hall

8:00 AM Pick up preregistration packets
Continental breakfast

Part 1 – WHAT ARE THE NEEDS?

9:00 AM Opening remarks

- Jay Williams, Mayor, City of Youngstown
- George McCloud, Vice President, Youngstown State University
- Jack Scott, President & Chief Operating Officer, Parsons

9:30 AM Keynote: **Congressman Tim Ryan, Appropriations Committee, Energy & Water**

- Collaboration and Retooling: The Cornerstones to Building the Pittsburgh – Youngstown – Cleveland Tech Belt

10:00 AM National Perspectives on Sustainable Energy

- Overview of Federal Funding for Energy Technologies, Karen Kimball, Parsons
- Overview of Energy Research at NETL, Anthony Cugini, National Energy Technology Lab
- General Motors Alternative Fuels Program, Bob Babik, GM

11:00 AM Break

11:20 AM Views from the NGOs

- Billion Dollar Biofuels Breakthroughs, Josh Tickell, Tickell Energy Consulting
- How Energy Impacts Global Warming, Matt Petersen, Global Green
- Energy Conservation and Reuse Through By-Product Synergy, Dennis Milligan, U.S. Business Council for Sustainable Development

12:30 LUNCH—Magg Library (Archives)

- Including Roundtable Discussions on “What are the Needs”

2:30 PM Views from the Collaborating Organizations

- Youngstown State University, Martin Abraham
- Advanced Manufacturing Initiative, Mike Garvey
- NorTech, Dorothy Baunach
- Cleveland Foundation, Richard Steubi
- Jump Start, Dave Nestic
- Parsons Technology Transfer Continuum, Joe Pecoraro, Parsons

3:15 PM Break

Part 2 – WHAT ARE THE SOLUTIONS?

3:30 PM Implementation Strategies

- Integrated Environmental and Renewable Energy Solutions, Battelle
- Integrated Coal & Renewable Energy System for Energy Sustainability, APS
- Developing the Hydrogen Economy, IF, LLC
- Energy Technology Commercialization, Technology Ventures Foundation
- A Model for Accelerating the Deployment of CCS Technologies, Visage Energy

4:30 PM Adjourn

5:00 PM Reception off campus (sponsored by City of Youngstown) with Equinox fuel cell electric vehicle

TUESDAY, JUNE 23 – RESEARCH WORKSHOPS: WHAT ARE THE SOLUTIONS?

Schwebel Auditorium, Youngstown State University, located in the College of STEM in Moser Hall

8:30 AM Continental breakfast and Workshop room assignments

Part 2 – WHAT ARE THE SOLUTIONS? (continued from day 1, Monday June 22)

The following papers are listed in alphabetical order for each workshop. Order may change in the session.

9:00 AM – Noon		
Biofuels or Biowaste Conversion	Carbon Management	Energy Conservation & Reuse
<p>1. Anaerobic Digestion Enhancement with Ultrasound Disintegration Presenter: Miguel A. Vera Company: Elmco Water Technologies</p> <p>2. Biogas Purification System Presenter: Lowell E. Howard Company: Environmental Systems and Composites, Inc.</p> <p>3. Biomass Conversion to Liquid Fuels Presenter: Chuck Taylor Company: NETL</p> <p>4. Conversion of LFG to LNG Presenter: John Barclay Company: Prometheus Energy</p> <p>5. Crude Glycerin Presenter: Richard Krystowski Company: AfterHeat Co</p> <p>6. Energy Efficient & Environmentally Safe Clean-up of Bio Gases Author: Sam Bassen Company: Pioneer</p> <p>7. Production of Ultra Pure Biogas for Fuel Cells using Multiple Stages of Treatment Presenter: Paul Tower Company: AFT</p> <p>8. Unleash the Power of Anaerobic Digestion with Cambi Thermal Hydrolysis Sludge Pre-Treatment Presenter: Cambi and Alan Cooper Company: EIMCO</p>	<p>1. Green Car Opportunities Presenter: Paul West Company: Mahoning Automotive Design, LLC</p> <p>2. Hydrogen Engines Presenter: Brian Davis Company: Mizar Technologies, LLC</p> <p>3. Integrated Coal & Renewable Energy System for Energy Sustainability Presenter: Ray Hobbs Company: Arizona Public Service</p> <p>4. Research in Carbon Management Presenter: Abbie Layne Company: NETL</p> <p>5. Small Car Opportunities Presenter: Paul West Company: Mahoning Automotive Design, LLC</p> <p>6. Structured Bed for CO² Capture Author: William A. Whittenberger Company: Catacel Corp</p>	<p>1. Adaptive Liquid Crystal Windows Presenter: Bahman Taheri Company: AlphaMicron Inc.</p> <p>2. Advanced Ceramic Composites for Improved Thermal Management in Molten Metal Applications Presenter: Klaus-Markus Peters Company: Fireline TCON, Inc.</p> <p>3. Electron Beam an Innovative and Energy Efficient Technology for Water Treatment and Other Cleantech Applications Presenters: Dr. Nathan Zommer and Dr. Bum-Soo Han Company: Pele Inc.</p> <p>4. Higher Efficiency via More Conductive Copper Presenters: Louis A. Luedtke Company: Third Millenium Metals</p> <p>5. Highly Efficient and Low Energy Mixing Presenter: Miguel A. Vera Company: Elmco Water Technologies</p> <p>6. Powering the World: An Overview on Rexorce Thermionics Inc. Presenter: Phil Brennan Company: Rexorce Thermionics Inc.</p> <p>7. Research to Improve Energy Efficiency in Materials Manufacture Presenter: Cindy Powell Company: NETL</p>
<p>12:15 PM – 2:15 PM LUNCH Stadium Club</p>	<p>Taking New Technologies to Market: Four Entrepreneurial Sagas in Renewable Energy Learn firsthand what it's really like to be your own boss by four entrepreneurs who are developing new products in the alternative energy field. Phil Brennan, Rexource Therminonics, Inc.; Bill Whittenberg, Catacel Corp.; Peter Tien, Princeton Environmental, and Bahman Taheri of Alpha Micron will share their triumphs and challenges, and discuss how they made critical decisions about their market niches, marketing strategies, and business plans. Their stories are inspiring for anyone who is considering taking a new technology to market.</p>	
2:30 PM – 5:00 PM		
Renewable Energy	Hydrogen Systems	Sustainable Energy from Geological Sources
<p>1. Renewable Energy Hydrogen Systems Concentrated Solar Thermal with Storage in Spain Presenters: Mike Brady and Ernesto Martinez Company: Parsons and TSK</p> <p>2. Mobile Power System Presenter: Kurt Lauer Company: ADI Wind</p> <p>3. Nickel-Zinc Battery Technology and Strategic Potential Presenter: Dr. Barry Rosenbaum Company: The University of Akron Research Foundation</p> <p>4. Tremont Electric: An Alternative Energy Company Presenter: Aaron P. LeMieux Company: Tremont Electric</p> <p>5. WindCube Presenter: Mark Cironi Company: Green Energy Technologies</p>	<p>1. Alternative Fuel Cell Membrane Electrolytes Presenter: Clovis A. Linkous Company: Youngstown State University</p> <p>2. Sustainable Energy #3 Hydrogen Engines Presenter: Brian Davis Company: Mizar Technologies, LLC</p> <p>3. On-board Hydrogen Storage Using Borohydrides Presenter: Clovis A. Linkous Company: Youngstown State University</p> <p>4. PEM Water Electrolysis for On-site Hydrogen Generation Presenter: Everett B. Anderson Company: Proton Energy Systems</p> <p>5. Photochemical Recovery of Hydrogen from Hydrogen Sulfide Presenter: Clovis A. Linkous Company: Youngstown State University</p>	<p>1. Fossil Fuel Liquefaction As Part Of A Long Term Sustainable Energy Strategy Presenter: Elliot Kennel Company: WVU, Dept. of Chemical Engineering</p> <p>2. Natural Gas Hydrates: A Case Study in Collaboration Presenter: Michael Bailey-Van Kuren Company: Miami University</p> <p>3. Next Generation Technology for Economically Producing U.S. Unconventional Gas Resources Presenter: Guy Lewis Company: Gas Technology Institute</p>
<p>Community Synergies – The objective of the by-product synergy (BPS) workshop is to provide the participants with an overview of the BPS work process, participate in a BPS practice session, and then explore the requirements of initiating a regional BPS Network. The session starts with an overview of the BPS work process and benefits. Then moves to a “practice by-product challenge” where they presents 2 to 3 by-products for discussion that are either actual materials from their company/organization, or by-products provided to them from a previous real life by-product challenge session. A brainstorming session will identify synergies for the materials presented during the challenge session and conclude with a discussion of the requirements for initiating a Youngstown BPS project. Speaker are Dennis Milligan, U.S. Business Council for Sustainable Development and Joseph Fiksel, Center for Resilience, Ohio State University.</p>		

YOUNGSTOWN LOCAL MAP

- 1. **Youngstown State University**
One University Plaza,
College of Engineering Building /
Moser Hall–Schwebel Auditorium
- 2. **Holiday Inn-Boardman**
7410 South Avenue
Youngstown, OH 44512
- 3. **Rosetta Stone Cafe**
110 Federal Plaza W Youngstown,
OH 44503
- 4. **The Youngstown Club**
201 E Commerce Street No. 450
Youngstown, OH 44503



- ★ Moser Hall – Schwebel Auditorium
- ★ F-1 Lot – Visitor parking
- ★ Stadium Club

