

**Monday** October 29, 2012

BioCycle.net  
**BIOCYCLE**

Presents The 12<sup>th</sup> Annual Conference On

## Renewable Energy From Organics Recycling

### Keynote Speakers



**Mark Hague**

Acting Deputy Regional Administrator,  
U.S. EPA Region 7



**Allison Costa**

U.S. EPA AgSTAR



**John Farrell**

Institute for Local Self-Reliance

## OPENING PLENARY

Grand Ballroom A B C

9:00 AM — 10:15 AM

### Accelerating The Pace

Moderator:  
Nora Goldstein, BioCycle

Renewable Energy  
And Organics Recycling –  
Making The Connections  
**Mark Hague**, Acting Deputy Regional  
Administrator, U.S. EPA Region 7

Coffee 10:15 AM — 11:00 AM

### TRACK 1

Grand Ballroom A

11:00 AM — 12:15 PM

#### Emerging AD Industry

Moderator: Steve Fishman, U.S. EPA Region 7

Bright Future: Overview Of U.S. Anaerobic  
Digestion Market

**Paul Greene**, O'Brien & Gere

Building An Anaerobic Digestion Industry

**Mel Kurtz**, quasar energy group

Organics Technology Investments

**Susan Robinson**, Waste Management

BUFFET LUNCH 12:15 PM — 1:30 PM

1:45 PM — 3:30 PM

#### Biogas To Fleet Fuel

Moderator: Peter Taglia, Peter Taglia Energy & Environmental  
Consulting LLC

Organic Residuals To Renewable Fuels –  
Building The Infrastructure

**Joanna Underwood**, Energy Vision

Small-Scale Biogas To CNG Opportunities

**Chris Voell**, BioCNG

Fueling Dairy Fleet With Renewable Natural Gas

**Bernie Sheff**, UTS Residuals Processing, LLC

REFRESHMENTS 3:30 PM — 4:15 PM

4:15 PM — 6:00 PM

#### Financing And Revenue Opportunities

Moderator: Paul Greene, O'Brien & Gere

What Deals Are Getting Done?

**Mary Bacon**, Ewing Bemis & Co.

Biogas Financial Incentives Post Section 1603

**Audrey Louison**, Mintz, Levin

Raising Capital For Biogas Projects

**Douglas Ross**, Cleantech Law Partners

Market Drivers, Opportunities For Commercial  
Anaerobic Digesters

**Kelly Sarber**, Strategic Management

RECEPTION 6:00 PM — 7:00 PM

# OPENING PLENARY

Grand Ballroom A B C

9:00 AM — 10:15 AM

Biodigester Market  
Development –  
Next Steps  
Allison Costa, U.S. EPA AgSTAR

The Missing Piece In America's  
Clean, Local Energy  
Transformation  
John Farrell, Institute For Local Self-Reliance

**NOTE:** Descriptions of  
presentations are available at  
[BioCycleEnergy.com](http://BioCycleEnergy.com). Speaker  
biographies begin on page 10,  
listed alphabetically by last name.

Coffee

10:15 AM — 11:00 AM

Grand Ballroom D E F

## TRACK 2

Grand Ballroom B

## TRACK 3

Grand Ballroom C

11:00 AM — 12:15 PM

### Building Markets For Digester Products

Moderator: Scott Hernandez, Climate Action Reserve

Market Potential: Products, Coproducts  
From Anaerobic Digestion

Jerry Bingold, Innovation Center for U.S. Dairy

Current AD Fiber Usage And Values  
Ron Alexander, R. Alexander Associates, Inc.

Recovering Nutrients From High Solids Digestate  
Young Eum, BKT Co., Ltd.

### Biorefineries, Sustainable Energy Crops

Moderator: Liz Christiansen, University of Iowa

Integrated Biorefineries For Western U.S.:  
Tapping Underutilized Biomass  
William J. Orts, USDA ARS-WRRRC

Integrated Farm-Based Biorefining Converts Agricultural  
Wastes Into Value-Added Products  
Wei Liao, Michigan State University

Flood Mitigation Via Growth Of Perennial Energy Crops  
Nathan Young, University of Iowa/Iowa Flood Center

BUFFET LUNCH

12:15 PM — 1:30 PM

Grand Ballroom D E F

1:45 PM — 3:30 PM

### Farm Digester Projects, Economics

Moderator: Byron Murray, Missouri Department of Natural Resources

Farm Digesters In Minnesota

Kevin Hennessy, Minnesota Department of Agriculture

Modular Digester On Dairy Farm  
Amber Blythe, BIOFerm Energy Systems

Evaluating Economics Of Swine Waste Digestion  
Joel Burken, Missouri University of Science & Technology

Analysis Of Wet Versus Dry Fermentation  
Alessandro Chiumenti, University of Udine, Italy

### Cogeneration Systems And Heat Exchange

Moderator: Steve Fishman, U.S. EPA Region 7

Fundamentals Of Heat Exchange With IC Engine  
David McCallum, GE Gas Engines

External Heat Exchangers In AD Systems  
Susan Hammock, Alfa-Laval

Internal Heat Exchangers In AD Systems  
Meik Schubert, BRUGG Rohrsysteme GmbH

Heat Exchange Systems – Case History  
Kevin Jankowski, Applied Technologies, Inc.

REFRESHMENTS

3:30 PM — 4:15 PM

Grand Ballroom D E F

4:15 PM — 6:00 PM

### Food Waste Management

Moderator: Gayle Hubert, U.S. EPA Region 7

Food Waste Management Trends In The U.S.  
Nora Goldstein, BioCycle

Connecting The Dots In A Food Generator's  
Sustainability Program  
Robin Sweere, Sweere Consulting

Curbside Organics And AD Feasibility Study  
George Dreckmann, City of Madison (WI) Streets Division

Schools As Laboratories Of Organics Recycling Innovation  
John Jaimez, Hennepin County Department of Environmental Services

### Codigestion At Wastewater Treatment Plants

Moderator: Scott Hernandez, Climate Action Reserve

Lessons Learned: Suitable Substrates In WWTP Digester  
David Henderson, West Lafayette (IN) WWTU  
Luke Werner, Kennedy/Jenks Consultants

Compatibility Of Organic Waste Streams With Digester  
Operations  
David Parry, CDM Smith

Biosolids Management Evolution – Composting  
To Green Energy  
Annette Berger, KB Compost Services

Operational Challenges And Solutions To Managing  
Digesters Receiving Substrates  
Timothy Shea and Todd Williams, CH2M Hill

RECEPTION

6:00 PM — 7:00 PM

Grand Ballroom D E F

Monday October 29, 2012

## TRACK 1 Grand Ballroom A

## TRACK 2 Grand Ballroom B

8:30 AM — 10:15 AM

### Digester System Optimization, Selection

Moderator: Douglas Ross, Cleantech Law Partners

System Failure Analysis, Corrective Actions And BMPs  
**Joe Tesar**, Quantalux, LLC

**Dana Kirk**, Michigan State University

Analysis, Troubleshooting To Put Digester Back On Track  
**Bernie Sheff**, UTS Residual Processing, LLC

Lessons Learned In System Procurement, Start-Up  
**Jimmy Daniels and Terry Smith**, Hampton Feedlot

Large-Scale AD Integration Optimizes Project Success  
**Shane Chrapko**, Himark BioGas

### Utilities And Power Markets

Moderator: Peter Taglia, Peter Taglia Energy & Environmental Consulting, LLC

Purchasing Power From On-Farm Digesters  
**Neil Kennebeck**, Dairyland Power Cooperative

Facilitating Digester Development In Sacramento County  
**Marco Lemes**, Sacramento Municipal Utility District

Biosourced Electricity: Utilities' Perspective  
**Jay Hasheider**, Columbia Water and Light

COFFEE

10:15 AM — 11:00 AM

Grand Ballroom D E F

11:00 AM — 12:15 PM

### Biogas Utilization: Municipal, Industrial Wastewater Treatment

Moderator: Jim Callier, U.S. EPA Region 7

National WWTP Biogas Data Project  
**Yinan Qi**, Black & Veatch

Lessons Learned In Biogas Utilization  
**Kenneth Gambaro**, Metropolitan St. Louis Sewer District

AD Treatment Of Brewery Wastewater  
**Steve Pennington**, Anheuser-Busch

### Biomass Assessments

Moderator: George Fletcher, Missouri Department of Natural Resources

Strategic Bioenergy Feedstock Assessment  
**Gary Radloff**, Wisconsin Bioenergy Initiative

Evaluation of Sustainable Biomass Sources To Produce Fuel And Power  
**Ferman Milster**, University of Iowa

Livestock Manure Production And Utilization Data Analysis  
**Mark Jenner**, Biomass Rules

BUFFET LUNCH

12:15 PM — 1:30 PM

Grand Ballroom D E F

1:45 PM — 3:30 PM

### Managing Anaerobic Digestion Systems

Moderator: Dennis Totzke, Applied Technologies Inc.

Managing AD Systems For Profitable Performance  
**Dennis Totzke**, Applied Technologies, Inc.

Substrate Testing, Tracking Influent Streams For Acceptable Digestibility  
**Fred Roland**, Agresource, Inc.

Case Study 1: Dane County (WI) Community Digester  
**Monte Lamer**, Clear Horizons

Case Study 2: Vir-Clar Farms, Fond du Lac, WI  
**Grant Grinstead**, Northern Biogas

### European Experience And Insights

Moderator: Ming Xu, Missouri Department of Natural Resources

Integrating Partial Digestion Into Composting Operation  
**Norma McDonald**, Organic Waste Systems, Inc.

Anaerobic Digestion Of SSO – Lessons Learned From Europe  
**Ljupka Arsova**, Gershman, Brickner & Bratton Inc.

Compostable Bags At European AD Facilities – Technologies, Pretreatment  
**Rhodes Yepsen**, Novamont N.A.

Managing Urban Organics Via Anaerobic Digestion  
**Michael Niederbacher**, B.T.S. Italia

COFFEE

3:30 PM — 4:15 PM

Grand Ballroom D E F

4:15 PM — 6:00 PM

### University Codigestion Systems

Moderator: Liz Christiansen, University of Iowa

Plug Flow Digester Operations Utilizing Dairy Manure And Food Waste  
**Louis Faivora**, Michigan State University

Codigestion Project Evolution And Design  
**Donna Barlow Casey**, Vermont Technical College

Dry Fermentation On University Campus – First Year Analysis  
**Brian Langolf**, University of Wisconsin – Oshkosh

### Community Energy Systems

Moderator: Gayle Hubert, U.S. EPA Region 7

Creating Clean Energy Innovation Park  
**Serpil Guran**, Rutgers EcoComplex

Anaerobic Digester Installation On Urban Farm  
**Thomas Gratz**, Eisenmann Corporation

AD Of MSW Organics, Production of Biomethane For Heating  
**Roberto Fiume**, Austep

European Developments In Biomethane Grid Injection  
**Piero Mattiolo**, Agroenergy

**TRACK 3**  
Grand Ballroom C

**8:30 AM — 10:15 AM**

**Legislative And Regulatory Developments, Permitting**

Moderator: Jim Callier, U.S. EPA Region 7

State Digester Rule Development  
**Ken Powell**, Kansas Department of Health & Environment

Pitfalls Of Permits  
**Margaret McCauley**, USEPA

Legislative Climate For AD, Biogas Industry  
**Patrick Serfass**, American Biogas Council

**COFFEE 10:15 AM — 11:00 AM**

**11:00 AM — 12:15 PM**

**Codigestion And High Solids AD**

Moderator: Nora Goldstein, *BioCycle*

Codigestion Update – Trends, Systems, Projects  
**Dennis Totzke**, Applied Technologies, Inc.

New Feedstocks For Industrial AD Systems  
**Josh Rapport**, Clean World Partners

Codigestion Substrate Challenges  
**Richard Mattocks**, Biothane  
**Barb Culton**, Kline's Services, Inc.

**LUNCH 12:15 PM — 1:30 PM**

**1:45 PM — 3:30 PM**

**Food And FOG Preprocessing**

Moderator: Scott Hernandez, Climate Action Reserve

FOG Delivery Agreements For Digester Gas Enhancement  
**Ari Elden**, Liquid Environmental Solutions

Depackaging Systems Impact On AD Water Balance  
**Thomas Ferencevic**, Yield Energy Inc.

Food Waste Preprocessing For Anaerobic Digestion  
**Klaus Ruhmer**, BDI-BioEnergy International

**COFFEE 3:30 PM — 4:15 PM**

**4:15 PM — 6:00 PM**

**Organics And Energy Recovery**

Moderator: Douglas Ross, Cleantech Law Partners

Managing Organics Through Renewable Energy Project  
**JD Lindeberg**, Resource Recycling Systems

Minimizing Emissions From Biological Waste Treatment Processes  
**Matthias Kuehle-Weidemeier**, Wasteconsult International

Emerging Strategies For Managing Organic Waste Streams  
**John G. Carlton**, Gershman, Brickner & Bratton Inc.

Food Scraps Management And Resource Recovery  
**Michael Keleman**, InSinkErator

**Tuesday October 30, 2012**

## ALL DAY SITE TOURS

For participants with advanced reservations only.

### TOUR SCHEDULE

8:00 AM	Board bus St. Louis Union Station Hotel
8:15 AM	Depart
8:30 AM – 9:45 AM	Anheuser-Busch Wastewater Treatment Plant
10:30 AM – 12:00 PM	St. Louis Composting Lunch on bus (boxed lunch provided)
1:00 PM – 2:00 PM	Missouri River Wastewater Treatment Plant
2:30 PM	Arrive Lambert-St. Louis International Airport
3:00 PM	Arrive St. Louis Union Station Hotel

#### **Anheuser-Busch Brewery Anaerobic Digestion Of Brewery Wastewater**

The Anheuser-Busch brewery in St. Louis has installed the largest high rate anaerobic system in the world, treating 2.5 million gallons/day of brewery wastewater. Tour of the Bio-Energy Recovery System (BERS) includes high rate reactors that remove 70,000 lbs/day of BOD (80 to 90% removal), saving Anheuser-Busch \$21,000/day. BERS generates 800,000 cubic feet of methane daily, which is combusted in the brewery's Powerhouse and reduces overall fuel consumption by 7.5 percent.

#### **St. Louis Composting Food Waste Processing**

Founded in 1992 by Patrick and Rebecca Geraty, St. Louis Composting has grown into the region's largest compost producer. Its five composting facilities process about 600,000 cubic yards/year of green material, primarily yard trimmings. The BioCycle tour takes place at St. Louis Composting's Belleville, Illinois facility, a 110-acre site. The Belleville facility is permitted to compost source separated food residuals, including materials from grocery stores, restaurants, cafeterias and other generators in the St. Louis region.

#### **Missouri River WWTP, Metropolitan St. Louis Sewer District Treatment, Utilization Of Digester Biogas**

The St. Louis Sewer District's Missouri River Treatment Plant (MRTP) has a current design flow of 28 million gallons/day (mgd), with a peak design flow of 80 mgd. The facility is undergoing a major upgrade, including retrofits of its four anaerobic digesters. The BioCycle Conference tour focuses on MRTP's three Waukesha engines/generators, each rated at 335 kW, as well as a Unison gas conditioning system. Heat recovered from the engines is used to maintain a 98°F process temperature in the anaerobic digesters, and to heat the Administration Building in cold weather.