

SYRACUSE CENTER OF EXCELLENCE

The 11th Annual Symposium on Environmental & Energy Systems

**“Unleashing the Clean Economy:
Regional Innovations for
Sustainable Communities”**

THURSDAY, SEPTEMBER 22

7:40-8:15 a.m.

Registration & Networking Breakfast

8:15-8:30 a.m.

Welcome

Ed Bogucz, Executive Director, SyracuseCoE

8:30-9:45 a.m.

Plenary: Partnerships for Sustainable Communities

Roy Kienitz, Under Secretary for Policy, U.S. Department of Transportation

Plenary: The Great Lakes Vision Plan

Eric Keune, AIA, Skidmore, Owings & Merrill

9:45-10:00 a.m.

Break

10:00-12:00 p.m.

Workshop 1

TRACK A: Community Based Innovations, Communities Leading the Charge: Case Studies on Going Green

“Green Core Company Credential for CNY,” Frank Cetera, Onondaga Small Business Development Center at Onondaga Community College

“Ten Percent Challenge,” Melissa Everett, Sustainable Hudson Valley

“OCRRA Amboy Food Composting Site,” Greg Gelewski, Onondaga County Resource Recovery Agency

Moderator: Amanda Westerdahl, Environmental Finance Center

TRACK B: Seeding Regional Innovations, Public Sector Funding Opportunities

Cathy Pokines, U.S. Small Business Association

Gary Pereira, U.S. Department of Agriculture, Rural Development

David Reaske, New York Business Development Corporation

Ronald Rausch, NYS Department of Agriculture and Markets

Moderator: Linda Hartsock, CenterState CEO

TRACK C: Vacant Properties to Vibrant Communities: What the Land Bank Bill Means for NY

A Technical Assistance Partnership Forum Featuring Public Infrastructure Funding Updates

Dominic Robinson, Northside Urban Partnership, CenterState CEO

Ben Walsh, Office of Neighborhood and Business Development, City of Syracuse

Tracy Sigouin, USDA Rural Development

Moderator: Melissa Young, Environmental Finance Center

12:00-1:00 p.m.

Lunch Keynote: Unleashing the Clean Economy...Deployment of Technology is Key

Ed Reinfurt, Division Director for Science, Technology and Innovation, Empire State Development Corp.

1:00-3:00 p.m.

Workshop 2

TRACK A: Community Based Innovations, Green Infrastructure Workshop

“Case Studies of Green Infrastructure Projects Performed under the Onondaga County Green Improvements Fund,” Kyle Thomas, Natural Systems Engineering, PLLC

“An Introduction to Porous Pavement,” Erin Reynolds, Klepper, Hahn & Hyatt

“Use of Green Infrastructure to Reduce Stormwater Runoff,” Mallory Squier, Syracuse University

Co-Authors: Cliff Davidson, Payle Bujanovic, Carli Flynn-Syracuse University

“Evaluation of the Effectiveness of Two Urban Rain Gardens for Pollutant Removal and Stormwater Source Control,” Dimitar Todorov, Utica College

Co-Authors: George Segre, Charles Driscoll, Mario Montesdeoca-Syracuse University; Aimee Clinkhammer, Syracuse Center of Excellence

Moderator: Matthew Millea, Onondaga County

TRACK B: Energy-Efficient Innovations for Green Data Centers

“Thermal Management Applied to Data Centers with a Focus on Energy Efficiency,” Roger R. Schmidt, IBM Fellow

“Importance of Experiments in Characterizing Data Center Thermal Environments,” Yogendra Joshi, Georgia Institute of Technology

*"Cogeneration Systems for Powering and Cooling Data Centers: The Green Data Center at Syracuse University,"
Ezzat Khalifa, EQS STAR Center, Syracuse University*

Moderator: Chris Sedore, Syracuse University

TRACK C: (Continued) Vacant Properties to Vibrant Communities: What the Land Bank Bill Means for NY

A Technical Assistance Partnership Forum Featuring Public Infrastructure Funding Updates

Jennifer Congdon, Technical Advisory Services, NYS Environmental Facilities Corporation

Suzanna Randall, NYS Environmental Facilities Corporation

Daniel Buyer, NYS Homes and Community Renewal

NYS Department of State (invited)

Moderator: Melissa Young, Environmental Finance Center

3:00-3:30 p.m.

Break and Poster Competition Judging

Judges: Mark Glauser, Cliff Davidson-Syracuse University; Bob DelZoppo, SRC; R. Leland Davis, O'Brien & Gere

General Poster Viewing

3:30-5:00 p.m.

Plenary: The Clean Economy as a Driver for Regional Innovation and Economic Growth

Amy Liu, Senior Fellow, Co-Director/ Co-Founder of the Metropolitan Policy Program at The Brookings Institution

Plenary: Regional Economic Development Opportunities for New York State

Ed Bogucz, Executive Director, Syracuse Center of Excellence

Panel: New York State Consortia

NY-BEST, Cathy Hill, CooperHill

NY Smart Grid Consortium, David Manning

SUNY Albany, US PV Manufacturers Consortium, Pradeep Haldar, SUNY Albany

NYS Advanced Building Consortia, Ed Bogucz, Syracuse Center of Excellence

Moderator: Ed Bogucz, Syracuse Center of Excellence

5:00 p.m.

Power Networking Reception - sponsored by GDF SUEZ

Student Poster Competition Winners Announced - sponsored by O'Brien & Gere and SRC

General Poster Viewing

FRIDAY, SEPTEMBER 23

7:45-8:15 a.m.

Registration & Networking Breakfast

8:15-8:30 a.m.

Welcome

Ed Bogucz, Executive Director, Syracuse Center of Excellence

8:30-9:00 a.m.

Plenary: Technology and the Management of Fresh Water in the Hudson Valley

John Cronin, Director and CEO, Beacon Institute for Rivers and Estuaries

9:00-10:00 a.m.

Session 1

TRACK A: Resource Innovations, Unique Approaches to Sustainable Materials Management

"Mortality Composting," Mary Schwarz, Cornell Waste Management Institute

*"Effectiveness of Post-Consumer Food Waste as a Means for Nutrient Recovery and Waste Reduction when
Used as a Fish Feed in an Aquaponic System," Michael Amadori, SUNY ESF*

"Heat Transfer from Organics," Jean Bonhotal, Cornell Waste Management Institute

Moderator: Melissa Young, Environmental Finance Center

TRACK B: Energy Innovations, Energy Policy

"To Be, or Not to Be, Nuclear -- That is the Question," Eric Thacher, Clarkson University

"The Politics of Renewable Energy Portfolio Standards," Stephen Bird, Clarkson University

Co-Author: Mark Huber, Clarkson University

*"Future Transportation Fuels: Near, Mid, and Long Term Alternatives," Barry Carr, Central New York
Clean Communities*

Moderator: Chris Gorman, National Grid

TRACK C: Advanced Building Innovations, Case Studies in Commercial Green Buildings

*"Crowne Plaza Copenhagen Towers: Probably the World's Greenest Hotel," Jens Norgaard, Grundfos Commercial
Building Services*

"Target Net Zero: Designing GSA's First Net Zero Landmark Modernization," Roger Chang, Westlake Reed Leskosky

"St. Joseph's Health Center Renovation Project," Kevin Flegal, St. Joseph's Hospital

Moderator: Jason Benedict, King + King Architects

10:00-10:15 a.m.

Break

10:15-11:30 a.m.

Session 2

TRACK A: Resource Innovations, Deconstruction Strategies

"A Systems Approach to Vacant Properties Using Deconstruction and Biological Processes," *Elysa Smigelski and Adam Maurer, SUNY ESF*

"Rightsizing Community Deconstruction Development," *Paul Crovella, SUNY ESF*

Moderator: Rob Englert, D-Build

TRACK B: Energy Innovations, Advanced Energy Technologies

"Energy Cost Reduction in a Micro-Grid with Distributed Sources Using Optimized Power Scheduling Planning Process," *Chenrui Jin, Syracuse University*

Co-Author: *Prasanta Ghosh, Syracuse University*

"An Optimized Design Strategy for Small Horizontal Axis Wind Turbines," *Benjamin Kanya, Clarkson University*

Co-Author: *Ken Visser, Clarkson University*

"Performance and Reliability Analysis of a Wind-Solar-Fuel Cell Hybrid Power System," *Zach Iverson, Clarkson University*

Co-Authors: *Aijit Achuthan, Pier Marzocca, Daryush Aidun-Clarkson University; Ken Caird, GE Energy Services*

Moderator: Orrin MacMurray, C&S Companies

TRACK C: Advanced Building Innovations, Indoor Environmental Quality

"Use of Emission Signatures to Identify Major Sources of Volatile Organic Compound (VOC) Emissions in a Building: Possibilities and Limitations," *Kwang Hoon Han, Syracuse University*

Co-Authors: *Jianshun Zhang, Bing Guo-Syracuse University; Henrik Knudsen, Aalborg University; Pawel Wargocki, University of Denmark*

"Measurements and Computational Modeling of Airflow Around an UVGI Device," *Behtash Tavakoli, Clarkson University, Srikar Kaligotla, Syracuse University*

Co-Authors: *Mark Glauser, Syracuse University; Goodarz Ahmadi, Clarkson University*

"Simulations of an Office Environment to Improve Understanding of Indoor Air Quality," *Michael Brazell, Clarkson University*

Co-Author: *Brian Helenbrook, Clarkson University*

"Using Human Activity Patterns to Evaluate the Impact of Flooring Type of Exposures to PM 2.5," *Lisa Bramwell, Clarkson University*

Co-Authors: *Steven Foti, Sumona Mondal, Jing Qian, Andrea Ferro-Clarkson University*

Moderator: R. Leland Davis, O'Brien & Gere

11:30-12:30 p.m.

Lunch Keynote: The Role of Consortia in Fostering Innovations in Regional Economics

Frank Murray, President and CEO, NYSERDA

12:30-1:30 p.m.

Session 3

TRACK A: Resource Innovations, Air Quality

"Role of Vehicular Traffic and Vegetation in Controlling Carbon Fluxes in a City Landscape," *Shannon Buckley, SUNY ESF*

Co-Authors: *Myron Mitchell, Patrick McHale-SUNY ESF*

"Characterization and Heterogeneity of Urban Course Particules in Syracuse, NY," *Pramod Kumar, Clarkson University*

Co-Authors: *Philip Hopke, Suresh Saja-Clarkson University; Gary Casuccio, Traci Lersch, Roger West-RJ Lee Group*

"Speciated Mercury at Marine, Coastal and Inland Sites in New England: Temporal Variability," *Huiting Mao, SUNY ESF*

Moderator: David Coburn, Onondaga County

TRACK B: Energy Innovations, Integrated Design Approach for IEQ and Building Energy Efficiency

"Virtual Design Studio- Part I: Design Process," *Michael Pelken, Syracuse University*

Co-Authors: *Jianshun Zhang, Daniel Rice, Wei Feng, Y. Chen-Syracuse University; Lixing Gu, Florida Solar Energy Center; Hugh Henderson, CDH Energy*

"Virtual Design Studio- Part II: Platform Design," *Jensen Zhang, Syracuse University*

Co-Authors: *Michael Pelken, Daniel Rice, Wei Feng, Y. Chen-Syracuse University; Lixing Gu, Florida Solar Energy Center; Hugh Henderson, CDH Energy*

"Iterative Design Process for Low-Cost High Performance House," *Timothy Stenson, Syracuse University*

Moderator: Suresh Santanam, Syracuse Center of Excellence

TRACK C: Advanced Building Innovations, Energy Efficiency in Residential Homes

"Deep Retrofit Projects in Utica, NY," *Greg Pedrick, NYSERDA, Ellis Guiles, Tag Mechanical*

"Measured Performance Data for the From the Ground Up Houses," *Hugh Henderson, CDH Energy*

"Measured Performance from Home Headquarters House on Woodland Ave," *Hugh Henderson, CDH Energy; Kevin Stack, Northeast Green Building Consulting; Terry Brennan, Camroden Associates*

Moderator: Greg Pedrick, NYSERDA

1:00-3:00 p.m.

Special Session - sponsored by NYSERDA

TRACK D: Bridge NY

Upstate companies propose innovations to a screening panel of reviewers, including prospective early adopters and investors, for demonstration and deployment in the New York City market and beyond.

Moderator: Cathy Hill, Cooper Hill

1:30-1:45 p.m.

Break

1:45-3:15 p.m.

Session 4

TRACK A: Resource Innovations, Water Pollution Panel

"Buoy-Borne, Real-Time Sensing And Time-Resolved Sampling of Hydrophobic Organic Chemicals In Onondaga Lake," *John Hassett, SUNY ESF*

Co-Authors: *Robyn Oakes, Jennifer Croskrey, Michelle Giardono, Dara Salley-SUNY ESF; David O'Donnell, Upstate Freshwater Institute*

"Examination of Suspended Sediment Behavior in the Upper and Lower Hudson River Using the River and Estuary Observatory Network," *William Kirkey, Clarkson University*

Co-Authors: *Temitope Ojo, C. Fuller, R. Nelson, James Paley- Clarkson University; James Bonner, M. Islam-Clarkson University and Beacon Institute*

"The Role of Small-Scale and Large-Scale Mixing as a Source of Mercury to the Upper Mixed Water of Onondaga Lake," *Svetoslava Todorova, Syracuse University*

"Effects of Persulfate Chemical Oxidation on Sorption and Desorption of Cd and Ch from Soils and on Groundwater Quality," *Kawalpreet Kaur, Clarkson University*

Moderator: Lisa Cleckner, Finger Lakes Institute

TRACK B: Energy Innovations, Biomass Panel

Charlie Niebling, New England Wood Pellets

Michael Hagin, Honeywell Building Solutions

Nathan Russell, NYSERDA

David Dungate, ACT Bioenergy

Mike Kelleher, SUNY ESF

Moderator: Dan Conable, NY Biomass Energy Alliance

TRACK C: Advanced Building Innovations, Sustainable Architecture Panel

"Building in Nature's Image- Ecological Performance Standards as Key Structures in Innovation Ecosystems & Advanced Building Design and Technologies," *Kevin Stack and Josh Stack, Northeast Green Building Consulting*

"Design From the Outside In- An Approach to Green Building," *Ian Shapiro, Taitem Engineering, PC*

"Energy and Architecture," *Pete Larson, Ashley McGraw Architects*

Moderator: Cliff Davidson, Syracuse University

3:30 p.m.

Optional Tours

Tours start promptly at each tour location at 3:30 p.m. Volunteers will meet participants in the parking lot at each tour site to direct them to the tour guide. For more information, visit the Registration table.

Green Data Center at Syracuse University

Guide: Mark Weldon, Syracuse University

Address: Adjacent to 621 Skytop Road, Syracuse, NY

Syracuse Center of Excellence Headquarters Building

Guide: Suresh Santanam, Syracuse Center of Excellence

Address: 727 E. Washington Street, Syracuse, NY

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Diversity

ESF offers students 22 undergraduate and 30 graduate degree programs to choose from, including environmental chemistry, engineering, landscape architecture, natural resources management, and wildlife science.

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SUNY-ESF

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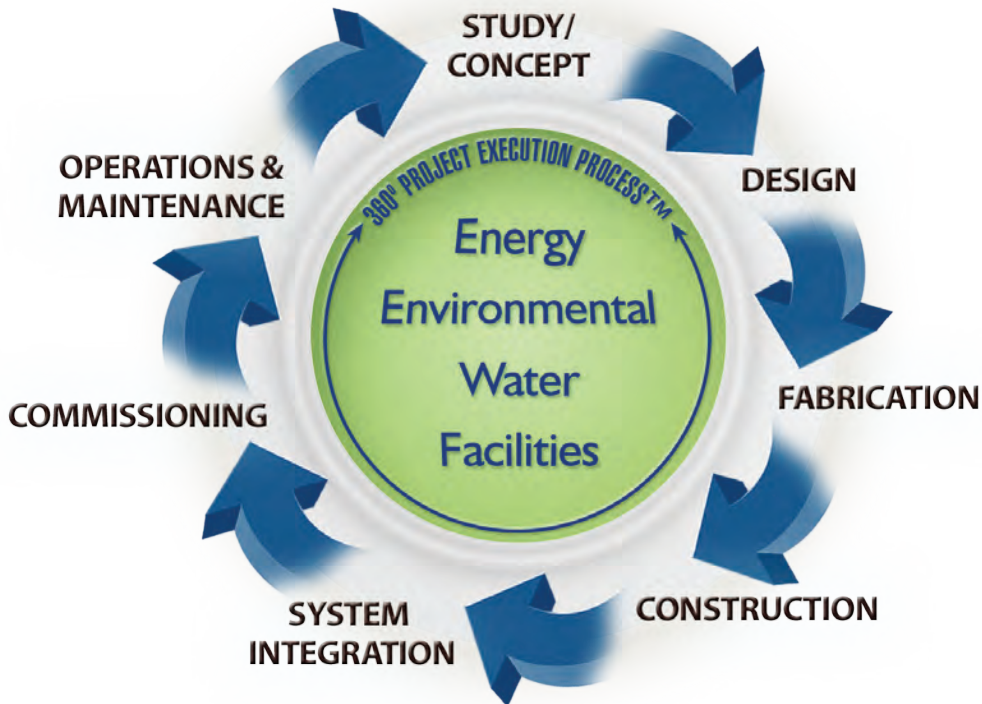
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