



GREAT LAKES SYMPOSIUM
ON **SMART GRID** AND THE
NEW ENERGY ECONOMY
September 22-25, 2014

TECHNICALLY CO-SPONSORED BY



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EVENT PROGRAM

8:00-8:30 am (Expo. Center)

Breakfast

8:30-9:30 am (McCormick Ballroom)

Opening Remarks and Introduction to Smart Grid Initiatives:

- **Terry Donnelly**, Executive Vice President and Chief Operating Officer, ComEd

Keynote Session: Cyber Security for Energy Delivery Systems

- **Dr. Carol Hawk, Manager**, U.S. Department of Energy

9:35-10:45am (McCormick Ballroom)

Plenary Session: Resilient Power Grids

Chair: Steve Johanns, CEO, Veriown Energy

- **Terry Donnelly**, Executive Vice President and Chief Operating Officer, ComEd
- **Wanda Reder**, Vice President, Power Systems Solutions, S&C Electric
- **Math Bollen**, STRI, Sweden (European Perspective)

10:45-11:00 am (Expo. Center)

Coffee Break

11:00-12:30 pm (Hermann Lounge)

Panel Session: Smart Street Lighting

Chair: Dan Gabel, Manager, Smart Grid and Technology , ComEd

- **Dan Gabel**, Manager, Smart Grid and Technology , ComEd
- **Mel Gehrs**, Consultant, Silver Spring Networks
- **Steve Davis**, President, The Will Group
- **Bob Myers**, Managing Deputy Commissioner, Chicago Department of Transportation

11:00-12:30 pm (McCormick Ballroom)

Panel Session: The Human and Technology Elements in the Energy Equation

Chair: Clare Butterfield, Program Director, Illinois Science and Energy Innovation Foundation

- **Anna Markowski**, Community Projects Manager, Elevate Energy
- **Sarah Moskowitz**, Outreach Director, Citizen's Utility Board
- **Rev. Brian Sauder**, Executive Director Faith in Place
- **Yann Kulp**, VP, Residential Energy Solutions Prosumer North America, Schneider Electric
- **Sara Hochman**, Managing Director, Energy Foundry

12:30-1:30 pm (Expo. Center)

Luncheon: The Renewable Energy Academic Collaboration Hub (R.E.A.C.H. Consortium) and, The Emerging Energy Technology Electronic Market (E.E.T.E.M.)

Chair: Phil Fisher, Founder, R.E.A.C.H. Consortium

- **Mohammad Shahidehpour**, VP, R.E.A.C.H. Consortium
- **Michael Garvin**, Program Director, E.E.T.E.M.
- **Thomas A. Rietz**, Professor of Finance, University of Iowa

- **The Honorable Litesa Wallace**, Representative, Illinois House 67th District
- **Lloyd Hyde**, Honorary Consul General of Jamaica in Chicago
- **Cristal Thomas**, Deputy Governor, State of Illinois (invited)
- **The Honorable Danny K. Davis**, Congressman, IL 7th District

1:30-3:30 pm (McCormick Ballroom)

Plenary Session: Center for Smart Grid Applications, Research, and Technology

Chair: Carol Bartucci, Director, IT, Smart Grid Initiatives, ComEd

- **Tom Hulsebosch**, Manager, Energy & Utilities and Sustainability Practices, West Monroe Partners
- **Dave Roberts and Mike Mihuc**, OSISOft
- **Scott Blackburn**, VP of Client Delivery , Silver Spring Networks
- **Patrick Burgess**, Project Manager, Smart Grid Lab Partnership, Illinois Institute of Technology

3:30-3:45 pm (Expo. Center)

Coffee Break

3:45-5:30 pm (McCormick Ballroom)

Panel Session: Renewable Energy Economics and Resilience

Chair: Tom Hulsebosch, West Monroe Partners

- **Marc Lopata**, President, Azimuth Energy
- **Vijay Bhavaraju**, Senior Manager, Eaton Corporation
- **John Mueller**, CEO and Chairman, G&W Electric Company
- **Tao Hong**, Professor, University of North Carolina
- **Aaron Joseph**, Deputy Sustainability Officer, Office of the Mayor, City of Chicago

3:45-5:30 pm (Hermann Lounge)

Panel Session: Microgrid Design and Operation

Chair: Jianhui Wang, Argonne National Laboratory

- **A Novel Microgrid Demand-Side Management System for Manufacturing Facilities;** Terance J. Harper, William J. Hutzler, N. Athula Kulatunga, and J. Christopher Foreman, Purdue University; Aaron L. Adams, Alabama A&M University
- **Using a Battery Energy Storage System to Enhance Stability in an Islanded Microgrid;** Stephen M. Cialdea, John A. Orr, Alexander E. Emanuel, Tan Zhang, Worcester Polytechnic Institute
- **A High-availability and Fault-tolerant Distributed Data Management Platform for Smart Grid Applications,** Ni Zhang, Yu Yan, Shengyao Xu, and Wencong Su, University of Michigan-Dearborn

5:30-6:30 pm (Expo. Center)

Networking Reception

8:00-8:30 am (Expo. Center)

Breakfast: Women in Power - Importance of Diversity and Inclusion in Energy Industry

8:30-10:00 am (McCormick Ballroom)

Plenary Session (In conjunction with Breakfast): Women in Power - Importance of Diversity and Inclusion in Energy Industry

Chair: Dr. Shay Bahramirad, Manager, Smart Grid and Technology, ComEd

- **Michelle Blaise**, Senior Vice President, Technical Services, ComEd
- **The Honorable Sue Rezin**, Minority Spokesperson, Senate Energy Committee, and Senator, 38th District
- **Carrie Hightman**, Executive Vice President and Chief Legal Officer, Nisource
- **Dr. Anne Evens**, CEO, Elevate Energy
- **The Honorable Ann McCabe**, Commissioner, Illinois Commerce Commission

10:05-10:45 am (McCormick Ballroom)

Keynote Session: The Honorable Doug Scott, Chairman, Illinois Commerce Commission

10:45-11:00 am (Expo. Center)

Coffee Break

11:00-12:30 pm (McCormick Ballroom)

Panel Session: Community Microgrid Implementation

Chair: David Chiesa, Director of Microgrids and Commercial & Industrial Market Segment, S&C Electric Company

- **Paul Gogan**, Manager, Electric Distribution Reliability & Planning, WE Energies
- **John Kelly**, PEER Program Lead, Green Building Certification Institute
- **Philip Barton**, Microgrid and Advanced Reliability Program Director, Schneider Electric
- **Parviz Famouri**, Professor, Lane Department of Computer Science & Electrical Engineering, West Virginia University

11:00-12:30 pm (Hermann Lounge)

Panel Session: Smart Grid Workforce Development

Chair: Marcia Lochmann, Director of College Partnerships, Illinois Green Economy Network

- **David Loomis**, Professor of Economics, Director, Center for Renewable Energy, Executive Director, Institute for Regulatory Policy Studies Illinois State University
- **Robert Clark**, Professor of HVACR and Facilities, College of DuPage
- **Chris Miller**, Professor of Industrial Technology, Heartland Community College
- **Marcia Lochmann**, Director of College Partnerships, Illinois Green Economy Network

12:30-1:30 pm (Expo. Center)

Luncheon Speaker: The Honorable Don Harmon, Senator, 39th District, Illinois

1:30-3:30 pm (McCormick Ballroom)

Plenary Session Public-Private Collaborations: municipal, academic, and industry perspectives

Chair: Caralynn Nowinski, Executive Director, UI LABS

- **Joe Svachula**, VP, Distribution Engineering and Smart Grid, ComEd
- **David Pope**, Past-President, Village of Oak Park
- **Jeff Malehorn**, CEO, World Business Chicago
- **Kim Nelson**, Executive Director, US State and Local Government Solutions, Microsoft

3:30-3:45 pm (Expo. Center)

Coffee Break

3:45-5:30 pm (McCormick Ballroom)

Panel Session: Municipal Aggregation as a Channel for Smart Grid Deployment

Chair: Mark Pruitt, Galvin Center for Electricity Innovation, IIT

- **Brittany Gifford**, Smart Grid Program Manager, City of Chicago
- **Curt Volkmann**, Clean Energy Specialist, Environmental Law & Policy Center
- **Sharon Hillman**, Executive Vice President Regulatory Affairs and Business Development, MC² Energy Services

3:45-5:30 pm (Hermann Lounge)

Panel Session: Resource Scheduling and Demand Response

Chair: Dr. Mohammad Khodayar, Southern Methodist University

- **Stochastic Day-Ahead Resource Scheduling for Economic Operation of Residential Green House**, Xuanchen Liu, Yi Guo, Jingwei Xiong, Wencong Su, University of Michigan-Dearborn
- **Demand Shaping Through Load Shedding and Shifting Using Day-Ahead and Real-Time Prices**, Rodrigo A. Carrasco, Columbia University, Oannis Akrotirianakis, and Amit Chakraborty Siemens Corporation
- **Energy Pricing and Dispatch for Smart Grid Retailers: A Two-stage Two-level Optimization Approach**, Wei Wei, Feng Liu, and Shengwei Mei, Tsinghua University, China
- **Mains Operation by Using Learning Mechanisms in a Semi-Decentralized Control Architecture**, Sebastian Kochanek and Hartmut Schmeck, Institute for Applied Computer Science and Formal Description Methods (AIFB), Karlsruhe Institute for Technology (KIT), Karlsruhe, Germany

5:30-6:30 pm (Expo. Center)

Networking Reception

8:00-8:30 am (Expo. Center)

Breakfast

8:30-9:10 am (McCormick Ballroom)

Keynote Session: Fidel Marquez Jr., Senior Vice President, Legislative and External Affairs and Chief Governmental and Community Relations Officer, ComEd

9:15-10:45 am (McCormick Ballroom)

Plenary Session: Overcoming Challenges - Demand Response & Peak Load Reduction

Chair: Heather Langford, Director, LEED, U.S. Green Building Council

- **Farid Katiraei**, Executive Advisor - Director of *Renewables* and Sustainability, Quanta Technology
- **Heather Langford**, Director, LEED, USGBC
- **Ella Sung**, Grid Integration Group, Lawrence Berkeley National Laboratory
- **Martin Rovers**, Director of Energy Services and Solutions, Power Stream, Ontario, Canada.
- **Russell Carr**, Senior Engineer, Arup, San Francisco, CA
- **Peter Sopher**, Energy Policy Analyst, Environmental Defense Fund

10:45-11:00 am (Expo. Center)

Coffee Break

11:00-12:30 pm (McCormick Ballroom)

Panel Session: DG/Microgrid and Communications

Chair: Dr. Amin Khodaei, University of Denver

- **Jim McClanahan**, Senior Principal, West Monroe Partners
- **Alfonso Valdes**, Managing Director, Smart Grid Technologies, University of Illinois at Urbana-Champaign
- **Zhu Han**, Professor, University of Houston
- **Richard Harada**, Business Development Manager, Siemens
- **Vladimir Koritarov**, Deputy Director, Center for Energy, Environmental, and Economic Systems Analysis, Argonne National Laboratory

11:00-12:30 pm (Hermann Lounge)

Paper Session: Smart Grid Implementation

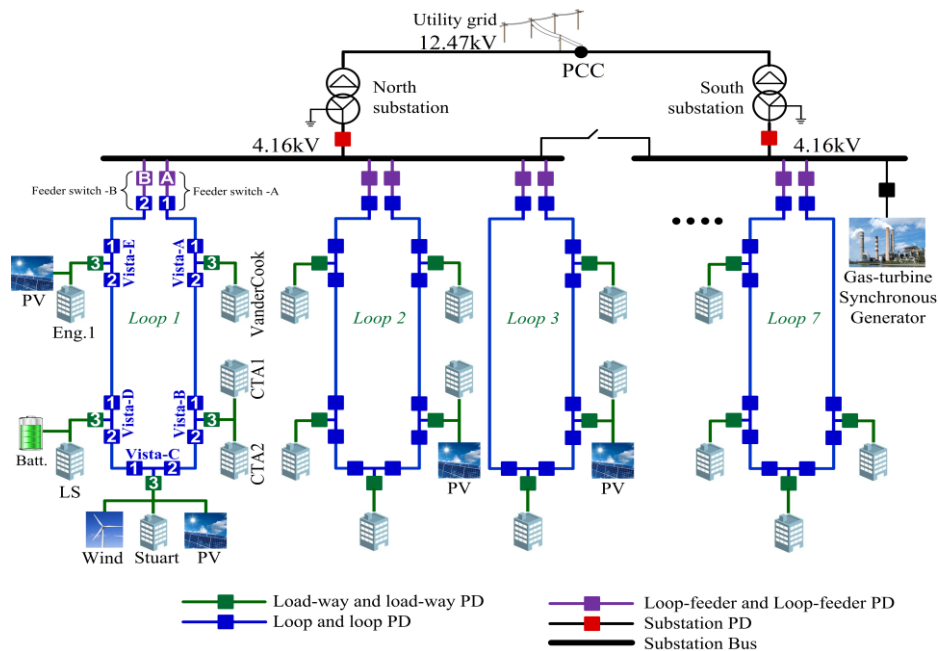
Chair: Dr. Lei Wu, Clarkson University

- **Data Life Cycles in Future Residential Multi-Commodity Energy Management Systems**, Fabian Rigoll, Christian Gitte, and Hartmut Schmeck, Institute AIFB, Karlsruhe Institute of Technology, Germany
- **Smart Meters and Dynamic Pricing Need Each Other**, David Becker, Elevate Energy, Chicago
- **CIGRE/CIRED C4.24 – power quality in the future grid – first introduction**
Math H.J. Bollen and Sarah K. Rönnerberg, Luleå University of Technology, Electric Power Engineering Group, Skellefteå, Sweden, and Francisc Zavoda, IREQ, Montreal, Canada
- **Deriving Benefits from Smart Grid Investment**, Jeremy Laundergan, MSE, PMP, Director, Utility Services Consulting, EnerNex
- **Unified Control Fatigue Distribution and Active Power in Wind Farms**, Yongxin Su, Bin Duan, C.H. Duan and F.T. Liu, Xiangtan University, China

12:30-1:30 pm (Expo. Center)

Concluding Lunch

IIT Microgrid: Hierarchical Overview



Short Courses, Monday September 22, 2014

Hermann Auditorium

3241 South Federal Street, Chicago, IL 60616

Cybersecurity Technology and Applications

Manimaran Govindarasu, Iowa State University 8:30 - 10:00

Nipesh Patel, Silver Spring Networks 10:00 - 11:00

Kevin Jin, Illinois Institute of Technology 11:00 - 12:00

Lunch Break 12:00 - 1:00

Saman Zonouz, Rutgers University 1:00 - 2:30

Paul Cotter, West Monroe Partners 2:30 - 3:30

Dave Roberts, OSIsoft 3:30 - 4:30

Mehdi Ganji, Smart Home Demonstration & Applications, Robert W. Galvin Center for Electricity Innovation 4:30-5:30

Symposium Planning and Organization**General Chair, 2014 Symposium**

Mohammad Shahidehpour

Robert W. Galvin Center for Electricity Innovation

Illinois Institute of Technology

Symposium Planning Committee

Mohammad Shahidehpour, IIT

Jianhui Wang, Argonne National Laboratory

Shay Bahramirad, ComEd

Symposium Local Organizing Committee (Galvin Center, IIT)

Annette Lauderdale, Finances

Wei Tian, Web Master

Monica Ochaney, Marketing

Mehdi Ganji, Scheduling

Wenlong Gong, Registration

Symposium Technical Committee

Wanda Reder, S&C Electric Company

Dan Gabel, ComEd

Zuyi Li, Galvin Center for Electricity Innovation, IIT

Amin Khodaei, University of Denver

Steve Johanns, Veriown Energy

Mohammad Khodayar, Southern Methodist University

Cong Liu, Argonne National Lab

Saeed Kamalinia, S&C Electric Company

Kaveh Aflaki, ComEd

Mark Pruitt, Galvin Center for Electricity Innovation, IIT

Farrokh Aminifar, University of Tehran

Ayden Noohi, S&C Electric Company

Yong Fu, Mississippi State University

Heather Langford, LEED, U.S. Green Building Council

Phil Fisher, New Generation Power, U.S. Virgin Islands

Ghazale Haddadian, Illinois Institute of Technology

Marcia Lochmann, Illinois Green Economy Network

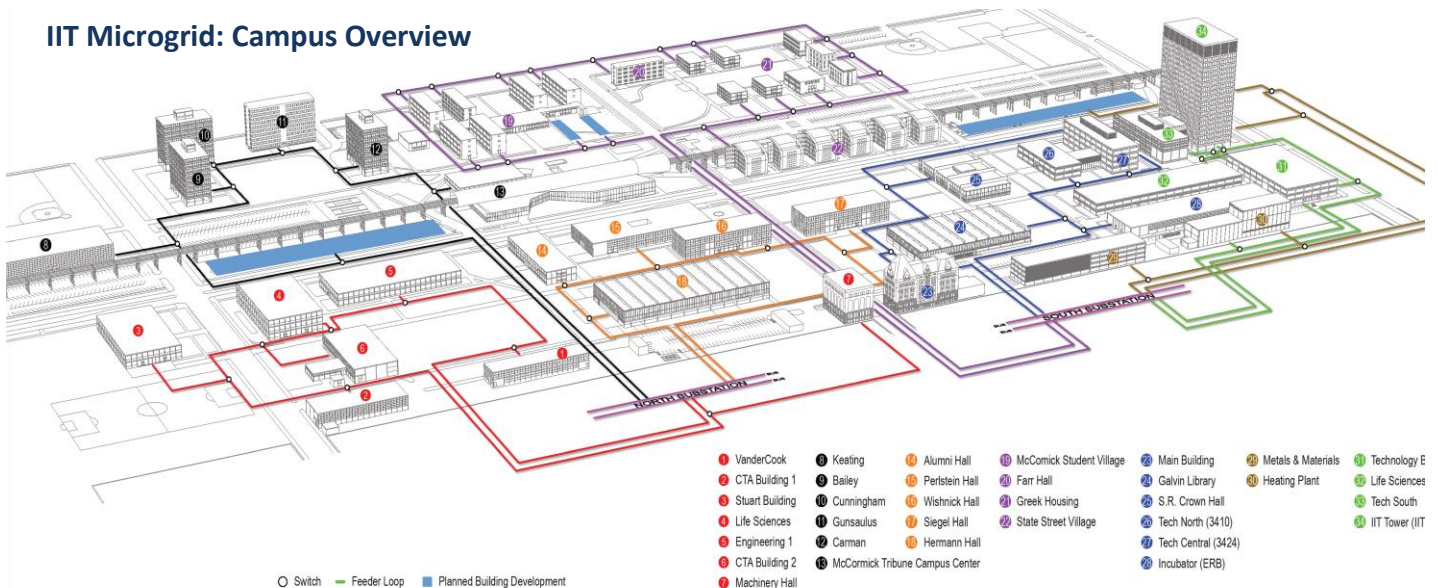
John Shen, Illinois Institute of Technology

Lei Wu, Clarkson University

Wencong Su, University of Michigan-Dearborn

Carol Bartucci, ComEd

Tom Hulsebosch, West Monroe Partners

IIT Microgrid: Campus Overview

	Monday September 22, 2014	
8:00-8:30 a.m.	Breakfast	
8:30 a.m.-4:30 p.m.	Short Course: Cybersecurity Technology and Applications	
	TUESDAY September 23, 2014	
8:00-8:30 a.m.	Breakfast	
8:30-9:10 a.m.	Opening remarks and Introduction to Smart Grid Initiatives: Terry Donnelly, Executive Vice President and Chief Operating Officer, ComEd Keynote Session: Dr. Carol Hawk, Manager, Cyber Security for Energy Delivery Systems, U.S. Department of Energy	
9:15-10:45 a.m.	Plenary Session: Resilient Power Grids	
10:45-11:00 a.m.	Coffee Break	
11:00 a.m.-12:30 p.m.	Panel Session: Smart Street Lighting	Panel Session: The Human and Technology Elements in the Energy Equation
12:30-1:30 p.m.	Luncheon: The Renewable Academic Collaboration Hub (R.E.A.C.H. Consortium) and, The Emerging Energy Technology Electronic Market (E.E.T.E.M.)	
1:30-3:30 p.m.	Plenary Session: Center for Smart Grid Applications, Research, and Technology	
3:30-3:45 p.m.	Coffee Break	
3:45-5:30 p.m.	Panel Session: Renewable Energy Economics and Resilience	Paper Session: Microgrid Design and Operation
5:30-6:30 p.m.	Networking Reception	
	Wednesday September 24, 2014	
8:00-8:30 a.m.	Breakfast: Women in Power - Importance of Diversity and Inclusion in Energy Industry	
8:30-10:00 a.m.	Panel Session (In conjunction with Breakfast): Women in Power - Importance of Diversity and Inclusion in Energy Industry	
10:00-10:45 a.m.	Keynote Session: The Honorable Doug Scott, Chairman, Illinois Commerce Commission	
10:45-11:00 a.m.	Coffee Break	
11:00 a.m.-12:30 p.m.	Panel Session: Community Microgrid Implementation	Panel Session: Smart Grid Workforce Development
12:30-1:30 p.m.	Luncheon Speaker: The Honorable Don Harmon, Senator, 39th District, Illinois	
1:30-3:30 p.m.	Plenary Session: Public-Private Collaborations: municipal, academic, and industry perspectives	
3:30-3:45 p.m.	Coffee Break	
3:45-5:30 p.m.	Panel Session: Municipal Aggregation as a Channel for Smart Grid Deployment	Paper Session: Resource Scheduling and Demand Response
5:30-6:30 p.m.	Networking Reception	
	Thursday September 25, 2014	
8:00-8:30 a.m.	Breakfast	
8:30-9:10 a.m.	Keynote Session: Fidel Marquez Jr., Senior Vice President, Legislative and External Affairs and Chief Governmental and Community Relations Officer, ComEd	
9:15-10:45 a.m.	Plenary Session: Overcoming Challenges - Demand Response & Peak Load Reduction	
10:45-11:00 a.m.	Coffee Break	
11:00 a.m.-12:30 p.m.	Panel Session: DG/Microgrid and Communications	Paper Session: Smart Grid Implementation
12:30-1:30 p.m.	Concluding Lunch	