

GLOBALCON 2017

**Energy, Power, & Facility Management
Strategies & Technologies**

**Philadelphia, Pennsylvania, USA
22 – 23 March 2017**

ISBN: 978-1-5108-4660-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by AEE Energy Books
All rights reserved.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact AEE Energy Books
at the address below.

AEE Energy Books
3168 Mercer University Drive
Atlanta, Georgia 30341
USA

Phone: (770) 279-4388
Fax: (770) 381-9865

kat@aeecenter.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

CHAPTER 1	Atypical Financing Strategies: What You Need to Know	1
	<i>Catherine Luthin, President, Luthin Associates, Inc.</i>	
CHAPTER 2	A 10-Year Study: How Energy Projects Have Triggered Tax Savings for Building Owners and Designers	8
	<i>Daniel Audette, C.E.M., LEED GA, Senior Energy Engineer, Energy Tax Savers</i>	
CHAPTER 3	New Technology Solutions to Maximize Rebates & Incentives Dollars	24
	<i>Lee Levitt, Chief Revenue Officer and Stephen Moritz, President & CEO, Ecentiv Energy</i>	
CHAPTER 4	Transforming Towns and Cities into Sustainable-Energy Communities	28
	<i>Samantha Sojka, Associate Program Administrator, Eversource</i>	
CHAPTER 5	Development, Financing and Management of CHP & Microgrids	39
	<i>Benjamin Parvey II, CEO, Blue Sky Power</i>	
CHAPTER 6	NZ+RNG: The Pathway to a Cleaner City	48
	<i>Joe Annotti, Senior Associate, Gladstein, Neandross and Associates</i>	
CHAPTER 7	New LNG Markets	239
	<i>Raymond M. Snyder, P.E., Senior Vice President, Gas Management, PGW</i>	
CHAPTER 8	Resiliency and Efficiency: Optimization the Integration of a CHP into an Academic Medical Center	252
	<i>Adam Vesterholt, P.E., Energy Manager and John A. Bartlik, P.E., Senior Director, Energy Management, NYU Langone Medical Center</i>	
CHAPTER 9	Utility Financial Options that Led to Success Stories	272
	<i>Sherif W. Youssef, P.E., C.E.M., Director, Sales & Marketing, PGW</i>	
CHAPTER 10	Storage-enabled Microgrid for Enhanced Security	278
	<i>Nandini Mouli, Ph.D., President/CEO, e Sai LLC</i>	
CHAPTER 11	Improving Building Operations & Proving Value through Automated M&V	287
	<i>Jennifer Jackson, C.M.V.P., Director of Product Management, BuildingIQ</i>	
CHAPTER 12	IPMVP-New Tools and References for M&V Geeks and the People who Put Up with Them	294
	<i>Kevin Warren, P.E., C.E.M., LEED AP, Principal, Warren Energy Engineering, LLC</i>	
CHAPTER 13.1	UMMC ASC Retro-Cx and Energy Study	307
	<i>Scott Petit, CxA, C.E.M., LEED AP O+M, Vice President and Kevin Spates, CxA, C.E.M., Commissioning Project Manager, WSP Parsons Brinckerhoff</i>	
CHAPTER 13.2	UMMC ASC Retro-Cx and Energy Study	311
	<i>Scott Petit, CxA, C.E.M., LEED AP O+M, Vice President and Kevin Spates, CxA, C.E.M., Commissioning Project Manager, WSP Parsons Brinckerhoff</i>	
CHAPTER 14.1	A Practical Guide to IoT Implementation in Commercial/Industrial Buildings	327
	<i>Jason Choong, Chief Technology Officer-Daintree powered by GE</i>	
CHAPTER 14.2	A Practical Guide to IoT Implementation in Commercial/Industrial Buildings	333
	<i>Jason Choong, Chief Technology Officer-Daintree powered by GE</i>	

- CHAPTER 15 Turning Data into Energy Dollars: Leveraging Internet of Things Data Beyond the Dashboard** 340
William Kenworthy, President and Archie Gupta, Founder/CEO, Infer Energy
- CHAPTER 16 Optimizing Energy Usage with Cognitive Weather-Intelligence** 346
Carrie Gillespie, Energy Lead, IBM, The Weather Channel
- CHAPTER 17 Using Data Analytics to Improve Energy Efficiency in Buildings** 357
John Petze, Principal, SkyFoundry, LLC
- CHAPTER 18 Water Conservation Equals Energy Conservation** 367
Daniel Marmer, P.E., Energy Engineer, CLEAResult
- CHAPTER 19 Energy Management and Efficiency at an Academic Medical Center** 375
Kevin Kanoff, C.E.M., Building Systems Analyst, Penn State Health Milton S. Hershey Medical Center
- CHAPTER 20 There's a Powerful Source of Energy in Every Building: Harnessing the Power of Habit to Reduce Energy Use** 381
Todd Rogers, C.E.M., President, Energy Training Solutions
- CHAPTER 21 Moving Toward High Performance Tenant Spaces** 394
Donald Haas, General Manager, Brandywine Realty Trust
- CHAPTER 22 ENERGYSTAR Benchmarking with PECO Smart Energy Usage Data Tool (PSEUDT)** 397
Michael P. O'Leary, C.E.M., Manager, Energy Efficiency Programs, PECO
- CHAPTER 23 Energy Benchmarking and Citywide Energy Planning** 406
Rich Freeh, City Energy Project Manager, City of Philadelphia Office of Sustainability
- CHAPTER 24 Energy Benchmarking, Energy Efficiency Among Large Commercial Properties** 413
William Shoard, Ph.D., P.E., C.E.M., LEEDAP, President, Accredited Energy Consulting Services, LLC
- CHAPTER 25 New Low Hanging Fruit: Breakthroughs in Air Flow Management Spark New Trend in Commercial Building Energy Savings Strategies** 429
April Lemmert, National Accounts Sales Manager, AeroSeal LLC
- CHAPTER 26 Photo Voltaic (PV), Variable Frequency Drives (VFD), and Light Emitting Diode (LED) Risks and Mitigations in Energy Saving Projects** 441
Mohamed Elgazzar, P.E., General Engineer, Federal Aviation Administration
- CHAPTER 27 kW Demand Reduction for HVAC Roof Top Units, Data Centers, Air Cooled Chillers** 446
Richard J. Costello, P.E., C.E.M., M.S.E.M., B.S.M.E., President, Acela Energy Group, Inc.
- CHAPTER 28 MACH Energy Survey Reveals Best Practices and Priorities for CRE Energy Management** 447
Jon Moeller, CEO, MACH Energy, Inc.
- CHAPTER 29 Pre-packaged Modular Cogeneration Systems** 449
Vishnu Barran, P.E., Senior Business Development Manager, ENERGRudox, Inc.