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TECHNOLOGY CONFERENCE

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“Emerging Federal Regulatory and Legislative Activities that will Impact Manufacturing Energy Managers”

R. Neal Elliott, Ph.D., P.E., American Council for an Energy Efficient Economy

Many federal regulatory actions have or are taking effect, including electric motors and boilers that could have important impacts on industrial energy managers. In addition, there appears to be growing momentum in Congress for passing legislation to promote investment in modernization of US manufacturing. This presentation will summarize recent federal developments and provide suggestions for how energy managers can incorporate this information into their energy planning.



Neal Elliott is the Associate Director for Research of the American Council for an Energy-Efficient Economy (ACEEE), coordinating ACEEE’s overall research efforts. Elliott has been with ACEEE since 1993, founding the Industrial and Agricultural Programs. Elliott is an internationally recognized expert and author on energy efficiency, energy efficiency programs and policies, electric motor systems, combined heat and power and clean distributed energy, analysis of energy efficiency and energy markets, and a frequent speaker at domestic and international conferences.

Prior to joining ACEEE, Elliott was an adjunct associate professor of Civil and Environmental Engineering at Duke University and Senior Engineering Project Manager at the N. C. Alternative Energy Corp. (now Advanced Energy) where he founding director of the Industrial Energy Laboratory. Prior to AEC he worked as N.C.

Wood Assistance Team Leader for the Industrial Extension Service and Department of Wood and Paper Science at North Carolina State University.

Elliott received B.S. and M.S. degrees in Mechanical Engineering from North Carolina State University, and was a Dean’s Fellow and received a Ph.D. from Duke University. He is a registered Professional Engineer in North Carolina and has six patents in the area of thermal storage and produce processing.

“Managing Climate Risk in the Face of Legislative Uncertainty...and Why We Need Distributed Generation”

Peter Garforth, Garforth Consulting llc.

The future impacts of legislation and incentives to reduce greenhouse gas emissions are very unclear in the USA and elsewhere. Major changes could occur quickly or the present stalled situation could continue for an extended period of time. Managing this uncertainty in terms of long term investment decision making for industry is a major challenge.

There are a number of effective strategies that can prepare a site for any eventualities in the strategic cost of carbon. These obviously include deep efficiency measure and also frequently include various approaches to on-site generation of both heat and power using a range of fuels and technologies. The presentation will discuss some of these choices and the decision-making factors that drive specific choices.



Peter Garforth runs a specialist consultancy based in Toledo, Ohio, and Brussels, Belgium. He advises major US and Canadian companies, communities, colleges and universities, and property developers and policy makers on developing competitive approaches that reduce the economic and environmental impact of energy use.

Recent projects include developing community energy and climate plans for the City of Guelph in Ontario, the city of Urumqi in China, Loudoun County in Northern Virginia, and the Town of East Gwillimbury in Ontario. On the university and college side, Garforth International has developed long-term energy plans for four community colleges in Ohio and for California State University in Sacramento. Garforth is also a senior advisor on community energy and climate planning to BC Hydro in British Columbia. He is also advisor to the Corning Incorporated on managing their worldwide energy use for maximum competitive advantage and minimum environmental impact.

He has held senior management roles around the world at Honeywell, Landis & Gyr (now Siemens) and, most recently, was vice-president of Strategy for Owens Corning, the largest US manufacturer of insulation and other materials.

Peter has long been interested in energy productivity as a profitable business opportunity and has a considerable track record establishing successful businesses and programs in the USA, Western and Eastern Europe, Indonesia, India, Brazil and elsewhere. He was the co-chairperson of the International Advisory Committee of the Alliance to Save Energy in Washington, D.C., a founding member of the European Business Council for a Sustainable Energy Future, a member of the Steering Committee on Energy Efficiency Financing of the Russian Federation, and Chairman of the International Institute for Energy Conservation.

He is also past President of the Board of Trustees of Toledo Opera and vice-Chairman of Downtown Toledo Inc, a non-profit organisation dedicated to the revitalisation of Toledo's city centre.

“Selling Energy Management: Top Down or Bottom Up?”

Steven Schultz, 3M

Energy managers often feel the most important criteria for success is support from top management. Since most of us take direction from our supervisors, it seems logical that this would be true. But, is it better to create an operations focused program that provides meaningful benefits to the company? This presentation will offer insight into the development of a sustainable energy program that creates ‘pull’ from both top management and the operations level of a company.



Steven Schultz has global responsibility for 3M's energy management program with the objectives of reducing operating costs, environmental impacts, achieving corporate energy and greenhouse gas reduction goals and positioning 3M for future growth. Mr. Schultz is a Certified Energy Manager with the Association of Energy Engineers and was named a Champion of Energy Efficiency by the American Council for an Energy Efficient Economy.

“The Role of Energy Improvements in Wealth Management”

Christopher Russell, C.E.M., C.R.M., Energy Pathfinder Management Consulting, LLC

Wealth management motivates the investment decisions of businesses and households alike. But while many business leaders understand investment portfolio principles in the context of a 401(k) portfolio, they often fail to apply the same perspective to operations that ride the ebb and flow of business cycles. When revealed for their value relative to a business investment portfolio, energy improvement projects can be better appreciated and more readily accepted. This presentation is organized around a realistic model for business investment. It is a decision-support tool that incorporates risk and return measures that clarify when and how much investment can be devoted to energy efficiency improvements. The use of this framework should lead not just to greater implementation of “energy projects,” but to an investment strategy for sustained business performance.



Christopher Russell currently serves as the energy manager for Howard County, Maryland. He advises North American utilities in the design and conduct of commercial & industrial energy programs, monetizing the connections between modern energy use and business performance. He conducts a series of seminars for the Association of Energy Engineers, including “Justifying Energy Efficiency as a Business Investment,” “Converting Energy Audits to Business Plans,” and “Market Segmentation for Energy Products and Services.” He is the author of “Managing Energy from the Top Down” and “North American Energy Audit Program Best Practices.” Christopher Russell holds an M.B.A. and a Master of Arts degree from the University of Maryland and a B.A. from

McGill University. He is a Certified Energy Manager and a Carbon Reduction Manager. He serves on the Board of Directors of the Fuel Fund of Maryland, and is an Advisory Board member for the Texas A&M Industrial Energy Technology Conference.

“Energy Management at BASF – The Chemical Company”

Thomas Theising, BASF

Many details are available describing technical feasibility, third party financing, performance contracts, or the savings potential of various energy conservation opportunities. The organization and implementation of a do-it-yourself program is what I will present. Having completed approximately 150 energy audits of industrial facilities I have developed a checklist approach to planning an energy audit, preparing the documents, details, schedule, and personnel necessary to perform the audit. In past presentations I have shown the how-to of an audit and the details of tracking the “finished product”, the findings. The methods I have developed have allowed me to maintain an average of 18% annual savings compared to energy cost spending with one-year payback opportunities. The attendees will be shown the details of planning prior to an audit, scheduling during an audit, and the common low/no cost items of recent audits.



Mr. Theising earned a B.S. degree in Electrical Engineering (1981) from The Citadel, Charleston, SC and an M.S. degree in Organization and Management (2001) from Capella University, an online university. During his 28 years with BASF, he has held various engineering positions at five BASF facility locations within North America, responsible for project management, design department supervision, maintenance engineering, environmental operations and energy management.

Since 1992 he has served in his current position of Energy Manager, directing the energy programs at numerous BASF Corporation sites providing internal consulting services. He has provided these services to approximately 125 of BASF's manufacturing sites during his tenure. As a result of this broad background he has experienced a variety of work environments and has been involved in multiple process technologies. The scope of Mr. Theising's responsibilities includes all aspects of energy supply, conversion and process technology and conservation. He has organized and conducted energy audits both internal and external to BASF at more than 150 manufacturing sites.

“Implementation - Everything Depends on Execution - Having Just a Vision is No Solution”

Fred Schoeneborn, FCS Consulting, Inc.

Fred Schoeneborn has extensive experience with industrial energy efficiency - he spent 38 years with Mobil Corporation with management responsibility to include the Global Energy Management Program - a program he created and then managed. Fred has managed hundreds of assessments for many Fortune 100 companies and has witnessed the challenges that implementation of the identified energy efficiency projects represent. Ask most energy managers what their implementation rate is for assessment projects and you are likely to get a disappointed look and a number in the mid teens. There is a variety of reasons why energy assessment implementation rates can be low, but often it is the result of a lack of planning and formation of an implementation strategy at the end of the assessment process. Fred, who has managed hundreds of assessments, will outline a strategy for successful implementation of energy efficiency improvement projects.



During his 38 year career with Mobil Oil Corporation he created and managed a global energy management program. Since 2000 Fred has worked as an independent consultant assisting Fortune 100 companies establish their energy programs. Fred supports the EPA ENERGY STAR program by assisting ENERGY STAR partners in improving their energy efficiency. In addition, he conducts energy assessment workshops for the DOE Oak Ridge National Lab and in 2010 conducted a monthly series of Implementation web-conferences for the DOE Save Energy Now program. In 2005 the ACEEE (American Council for Energy-Efficient Economy) recognized Fred as a “Champion of Energy Efficiency”.

“Applying Energy Management and Reporting Systems in the Current Economic, Business, and Regulatory Environment”

James E. Robinson, P.E., P.Eng., C.E.M., C.E.P., DES Global, LLC

Corporations are challenged to properly respond to the volatile cost of fossil fuel and electrical pricing, GHG management and reporting requirements, and selection of technologies in anticipation of the MACT compliance requirements. This all has to be balanced against the economics of operating facilities and the capabilities of the operating personnel.



James Robinson has 35 years of experience in implementing advanced controls and energy projects in multiple industries with significant returns. Since 1990, his focus is the development of project audit and execution methods to support new technologies that improve plant energy efficiency and productivity. He is an advisor to the IETC, a board member of the PA Smart Energy Initiative, and has published numerous papers in this field from conducting projects and research on an international basis.

“The Watergy Approach: Smart Strategies for Improving Energy Efficiency for Water Utilities and Municipalities”

R. Bruce Lung, Alliance to Save Energy

Water and energy costs are inextricably linked and can be significant. In the U.S., the energy required to extract, treat, and convey water accounts for an estimated 3% of the country’s total energy consumption, accounting for approximately 290 million metric tons of carbon emissions per year. In some municipalities, drinking water and wastewater treatment can account for up to 35 percent of their annual energy use. Some studies have estimated that the total U.S. savings potential in the water utility sector can be as much as 31 billion kWh annually. As water becomes scarcer due to drought conditions in some parts of the United States and as electric power rates become more variable, improving efficiency in water and energy use will become indispensable for utility managers and end use customers across a variety of economic sectors.

This workshop will provide valuable insights into the potential for water/wastewater utilities and municipalities to address both water scarcity and energy efficiency simultaneously and achieve significant water and energy efficiency gains. The presentation will focus on opportunities to achieve significant energy and water savings in U.S. water/wastewater utilities, drawing from the Alliance to Save Energy’s Watergy Program. Having been successfully implemented in more than 100 cities and 16 developing countries, Watergy is now being implemented in the U.S. where several water/wastewater utilities have begun assessing their energy use and looking into performing long-needed investments in energy efficiency.



Mr. Lung provides strategic input into and implements the Alliance’s industrial energy efficiency programs. Mr. Lung works with key stakeholders, including the U.S. Department of Energy’s (DOE) Industrial Technologies Program (ITP) and the Lawrence Berkeley National Laboratory (LBNL) to coordinate outreach, analysis, marketing, research, technology delivery, education and programmatic direction for the DOE’s Save Energy Now and Superior Energy Performance programs. Working with the U.S. DOE’s ITP, Mr. Lung manages the Alliance’s Save Energy Now LEADER and ALLY recruitment and communications, and analyzes energy efficiency potential in industrial buildings as well as for existing and emerging industrial technologies. Mr. Lung coordinates workshops on industrial energy efficiency, including the Save Energy Now and ISO 50001

workshops by developing workshop objectives, recruiting speakers, and generating communications tools about the workshops.

Mr. Lung supports the Alliance's participation in the development of the ISO 50001 Energy Management Standard and serves on the board of the Industrial Energy Technologies Conference (IETC). Mr. Lung also works with the Alliance's International Team on the domestic Watergy initiative and is the editor-in-chief of the program's newsletter, the Industrial Spotlight. Finally, Mr. Lung is actively engaged with the Alliance's industrial Associates and coordinates opportunities for them to participate in the Alliance's activities.

“Fostering Manufacturer Collaboration to Drive Industrial Energy Efficiency”

Rick Marsh, Southeast Energy Efficiency Alliance

The Southeast Energy Efficiency Alliance (SEEA) has organized regional manufacturers, utilities, and relevant stakeholders to form a unique regional collaborative effort, called the SEEA Industrial Coalition, which focuses on advancing industrial energy efficiency.

The program features summit style events throughout the year which provide a forum for best practice sharing and elevation of specific project successes. The participating manufacturers have found great value in being able to learn about the experiences of peers in the region. Utilities and other stakeholders value the opportunity to have real-time discussions with manufacturers. Additionally, SEEA coordinates technology and resource-related webinar sessions and updates to participants on resource opportunities between the in-person events.

SEEA has succeeded in uniting the Southeast manufacturing sector and corresponding stakeholders while promoting opportunities, techniques, and resources for achieving energy savings. The presentation will discuss successes to date and highlight the value that a cross-sector, peer-to-peer regional coalition effort can offer. In addition, strategies for replicating peer-to-peer networking in other areas will be addressed.



Rick Marsh leads the industrial energy efficiency initiatives for the Southeast Energy Efficiency Alliance (SEEA) with the primary focus of managing the SEEA Industrial Coalition - a unique regional collaborative effort that is building a greater awareness for energy efficiency opportunities in the Southeast's manufacturing sector. Rick works to unite manufacturers throughout the Southeast region who desire a platform for sharing best practices in energy management. Rick participates in various workgroups that support the Department of Energy's Industrial Technologies Program and serves on the advisory board for the Industrial Energy Technology Conference.

Prior to joining SEEA, Rick was marketing and business development manager with LP Building Products where he focused on expanding the breadth of the company's energy efficiency focused product line. This role began Rick's passion for energy efficiency and introduced him to SEEA's work in the Southeast region.

Rick holds an MBA from the Owen Graduate School of Management at Nashville's Vanderbilt University and a bachelor's degree from James Madison University in Virginia.