

June 27, 2017

Toledo, OH

Toledo CHP Workshop Showcases the Seagate Convention Centre  
& Huntington Center



Columbia Gas of Ohio, a NiSource company, hosted a workshop on Combined Heat and Power (CHP) for Industrial, Institutional, and Commercial Facilities at the Seagate Convention Centre in Toledo, Ohio on June 27, 2017.

**Combined Heat and Power (CHP)**, also referred to as cogeneration, provides an opportunity to generate on-site electric power and useful thermal energy from a single fuel source. CHP represents a cost-effective, near-term opportunity to improve a facility's energy, environmental, and economic future.

Sponsored by OCIEE, [the course](#) is designed to provide insights and advantages about on-site electric power generation. The Seagate Centre and Huntington Center are both among a growing list of facilities in Ohio that have capitalized on the advantages of CHP.



The day was packed with speakers from a diverse set of backgrounds including government, private institutions and industry. Opening the session were representatives from The Ohio Development Services Agency and OCIEE.



Manny Anunike, Energy Specialist with the Ohio Development Services Agency's Office of Energy and Redevelopment (Pictured Left) and Larry Boyd, Manager of OCIEE (Pictured Right) provided welcoming remarks to the audience.

Clifford Haefke, (pictured right), Director Energy Policy Analyst at the Energy Resources Center (ERC), University of Illinois at Chicago introduced the audience to the Department of Energy's (DOE) [CHP Technical Assistance Partnership \(TAP\) program](#), which is tasked with promoting and assisting in transforming the market for CHP, WHP and district energy or microgrid with CHP throughout the United States.



The ERC manages the Midwest TAP, providing key services, which include: Market Opportunity Analysis, Education and Outreach and Technical Assistance. In a presentation entitled [CHP: A Concept](#), John Cuttica, (pictured left) a TAP consultant, explained that more than two-thirds of the fuel used to generate power in the US is lost as Heat. CHP recaptures heat of generation, thus increasing energy efficiency and reducing greenhouse gas emissions by up to 55%. Cuttica's presentation provided an overview of the basic system requirements and showcased CHP capacity in the US and the State of Ohio.

Dr. Jay Balasubramanian, (pictured left) Operations Manager for Thermal Power Distributed Energy Systems Group for Siemens, discussed his personal experiences supporting a team dedicated to helping public and private sector companies make smart, sustainable investment in distributed energy systems. His presentation, "[CHP: The](#)



[Business Case – Developing A CHP Project](#)” outlined primary considerations for qualifying CHP opportunities, which include economics, thermal loads & site conditions.



Greg Steenrod, (pictured left holding a turbine), Vice President of Business Development for GEM Energy, gave students a short course on [MicroTurbines](#). These simple systems have only one moving part and do not require liquids, oils, or coolant due to their air bearing technology. Thus, there is no oil consumption or disposal, resulting in cleaner exhaust emission. Microturbines

are extremely quiet, require only a simple interconnection and offer stand-alone capability, low maintenance and clean exhaust.



In a presentation entitled “[CHP Technologies – Combustion Turbines](#)” John Green, (pictured right), a Mechanical Equipment Consultant for Lathrop-Trotter Company, defined CHP as the “simultaneous production of two useful forms of energy from the same source.” As the Ohio representative for Solar Turbines, a Caterpillar Company, Green showcased a variety of CHP systems, with associated data about energy use with and without CHP installation.

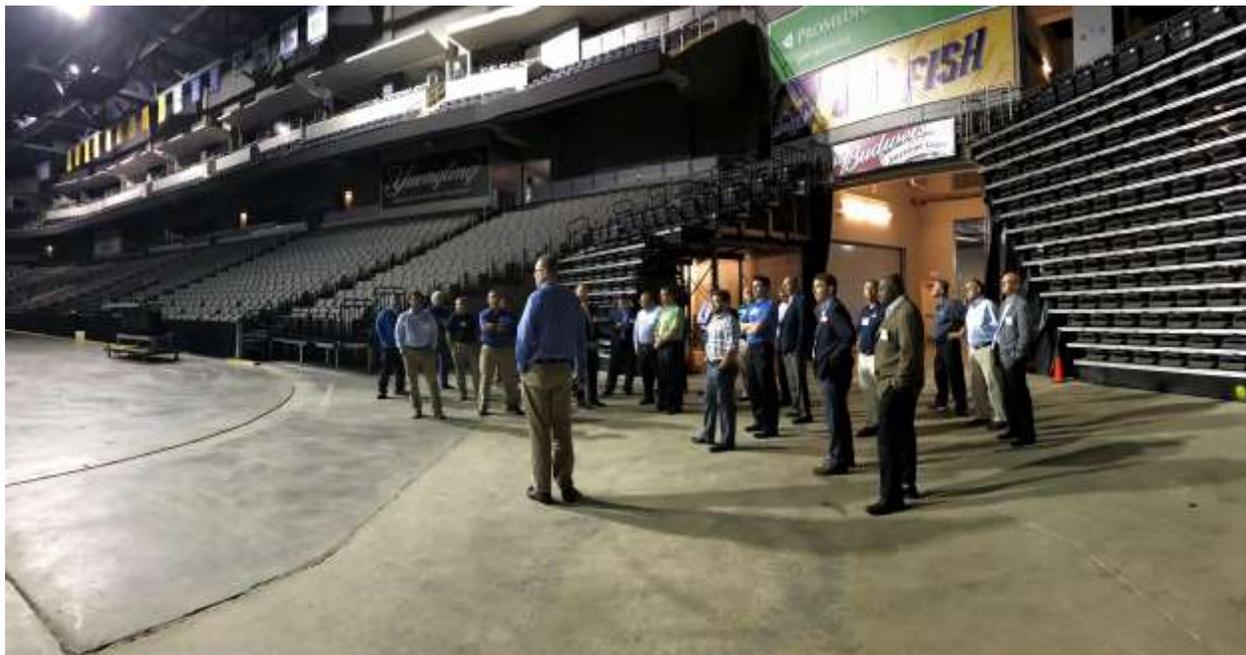


Kevin Abke, (pictured left) Representative for Ohio CAT's line of Electric Power Generation equipment presented a session on [CHP and Tri Generation with Reciprocating Engine Generator sets](#), including details for a thorough business case analysis. Among its many benefits, when evaluating costs, Abke emphasized the value and importance of the backup generation provided by CHP as a way to improved power supply security.

Following a short lunch, workshop participants were [introduced to the Seagate and Huntington facilities](#) by James “JT” Thielman, (on the right facing the audience) and Greg Steenrod, (on the left side) GEM Energy, including a tour of the Huntington Center, and its fully operational CHP facility. The Seagate Centre was built in 1987 in the heart of downtown Toledo. The facility encompasses 25 meeting rooms and 75,000 square feet of column free exhibit space, hosting some 500 plus events annually including over 50 conventions, a number of industry trade shows, local consumer shows, concerts and other entertainment events.



The Centre is co-located with the Huntington Center, a state-of-the-art, 8,000 plus seat multi-purpose arena (pictured below) built in 2007 at a cost of \$105 million dollars and home to the Toledo Walleye ECHL ice hockey team.



Both facilities are operated by SMG, a worldwide entertainment and conference venue management company, and both utilize CHP technology. In 2005, SMG commissioned GEM Energy to install four Capstone 65KW turbines in the Seagate Centre and after several years of successful results, commissioned a similar system in the Huntington Center in 2009. Workshop participants were given the opportunity to interact with experienced facility operators, such as Stephen Marquez of GEM Energy (shown in the

picture on the right below) and tour the operational CHP system as part of the overall training experience.



Returning to the classroom, the workshop resumed with highlights of two other important CHP success stories. The first [Case Study: DTE Marietta @ Solvay Specialty Polymers, Marietta, Ohio \(8 MW combustion turbine\)](#), was presented by Michael Edison, (pictured right) DTE Energy Services.



The second [Case Study: CHP at the Dublin Community Recreation Center \(248 kW reciprocating engine\)](#), was presented by Matt Highland and Mike Gatt, both of IGS Generation.

The program concluded with an overview of CHP in Ohio and working with the utilities. Cliff Haefke returned to the podium to discuss [AEP Ohio's CHP Incentive Rebate Program](#).

Lyle Garrison, (pictured right), Program Manager for Dayton Power & Light (DP&L) presented information about [DP&L's CHP Incentive Rebate Program and CHP Electric Interconnection Requirements](#).





Darin King, Major Account Manager at Columbia Gas Ohio, a NiSource company, spoke to the audience about [Natural Gas Interconnection of CHP Technologies](#). Following Darin's presentation, Cliff Haefke wrapped up the session with a reminder that more information and consultation is available from the US DOE Midwest CHP Technical Assistance Partnership.