

May 24, 2017

Columbus, OH

Combined Heat And Power Workshop Applauded As A Success

A workshop on Combined Heat and Power and Waste Heat to Power for Industrial, Institutional, and Commercial Facilities was presented at the Fawcett Center at Ohio State University in Columbus Ohio on May 24th 2017, to a packed house. Sponsored by OCIEE and hosted by AEP, the course offered insights about on-site electric power generation and Ohio's new CHP Incentive Rebate program.

<http://www.ohiociee.org/workshops/2017-05-24/>

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. Similarly, **Waste Heat to Power (WHP)** is the process of capturing heat discarded by existing processes, such as kilns, furnaces, ovens, turbines, engines, and other equipment and using that heat to generate electricity. Both approaches represent cost-effective, near-term opportunities to improve a facility's energy, environmental, and economic future.

Participants were welcomed with opening remarks from Manny Anunike, Energy Specialist with the Ohio Development Services Agency's Office of Energy and Redevelopment, Larry Boyd, Manager of OCIEE and Andy McCabe, Manager of Business Programs for AEP Ohio and host of the event. AEP Ohio recently launched their "Combined Heat & Power and Waste Energy Recovery Program" offering incentive rebates of \$0.035 per kWh recovered.

Clifford Haefke, Director and Graeme Miller, (pictured right), 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. More than two-thirds of the fuel used to generate power in the US is lost as Heat. CHP recaptures

heat of generation; increasing energy efficiency, and reducing greenhouse gas emissions by up to 55%. Graeme explained the premise behind CHP, along with the basic system requirements and showcased CHP capacity in the US and the State of Ohio.

The day was packed with speakers from a diverse set of backgrounds including government, private institutions and industry.



Trish Demeter, (pictured left) Managing Director of Energy Programs for the Ohio Environmental Council spoke about [Ohio's policy advocacy and initiatives](#) that include working to transition the power sector towards cleaner sources of electricity, growing investments in energy efficiency, modernizing the grid and securing stronger public health safeguards around oil and gas operations.

Steven Giles, (pictured right) Vice President of Alternative Energy for Hull & Associates, Inc., a diversified alternative energy developer in Ohio, presented considerations for [making a business case for CHP](#), including financial investments, risks, regulatory considerations, and strategies for making the economics work.



Greg Steenrod, (pictured left) 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 offers stand-alone capability, low maintenance and clean exhaust, making these systems advantageous to many facilities.

Kevin Abke, (pictured right) 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, stressing that if >50% of available thermal energy can be used on an annual basis, CHP makes good economic sense.



Dr. Eric Maxeiner, (pictured left) Director of Applications and Business Development for Echogen Power Systems presented a short course on [Waste Heat to Power \(WHP\)](#). As compared to CHP, WHP converts thermal energy to electricity (often most convenient), whereas CHP keeps the heat as heat (most efficient). The two types of WHP are 1) Combined cycle, which captures exhaust heat and adds to engine output and is also called bottoming cycle or exhaust heat recovery (EHR) and 2) Waste heat

recovery, which captures heat from an unrelated process, typically an industrial process such as a furnace or kiln.

Following a short lunch, the workshop showcased three detailed, real-life case studies.

[Case Study #1: DTE Marietta @ Solvay Specialty Polymers, Marietta, Ohio \(8 MW combustion turbine\)](#), presented by Michael Larson, (pictured right) DTE Energy Services.



[Case Study #2: CHP at the Dublin Community Recreation Center \(248 kW reciprocating engine\)](#), presented by Mark Drabick, (pictured right) IGS CNG Services.



[Case Study #3: CHP Microturbine Projects](#), presented by Greg Steenrod, (pictured right) GEM Energy.



The program concluded with an overview of working with the utilities. Speakers included:

Michelle Cross, (pictured right) AEP Ohio speaking [about AEP Ohio's New CHP Incentive Rebate Program](#); <http://www.midwestchptap.org/events/20170524/9WorkingwithUtilities.pdf>



Lyle Garrison, (pictured right) Dayton Power & Light speaking about [DP&L's CHP Incentive Rebate Program and CHP Electric Interconnection Requirements](#);



Richard Ricks, (pictured right) Columbia Gas speaking about [Natural Gas Interconnection of CHP Technologies](#).



Another [CHP Workshop will be offered in Toledo Ohio on June 27th, 2017](#), at the Seagate Convention Centre and will include two facility tours. [On-line registration](#) is now open and attendance is limited to the first 50 registrants.