

CHP in Ohio

AEP Ohio's Recently Launched CHP Program

**THE
UNIVERSITY OF
ILLINOIS
AT
CHICAGO**



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Acknowledgements

- Trish Demeter, Ohio Environmental Council
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 - (614) 487-7506
- Michelle Cross, AEP Ohio
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 - 330-438-7028



Agenda

- Overview of Ohio policy discussions that could influence/impact CHP deployment, or project economics
- Share resources on how to engage and stay updated on Ohio policy discussions
- Learn about AEP Ohio's Combined Heat & Power and Waste Heat Recovery Program

CHP and WHP + Ohio's Clean Energy Standards

- Enables utilities to offer rebates and incentives for CHP and WHP, and for WHP to obtain RECs
- Freeze on Standards ended with veto of House Bill 554
- New legislative proposal in 2017 to modify standards
- House Bill 114:
 - reduces EE target from 22.5% by 2027 down to 17.2%
 - converts RPS to voluntary goals



Source: "CHP/WHP & Ohio's Policy Horizon," Trish Demeter, OEC, May 24, 2017

Utility EE Programs

- Recent PUCO orders + recent law changes are impacting efficiency programs
- Good news: Each utility is offering, or planning to offer, a specific CHP/WHP rebate
- Concerning news: Efficiency program spending caps could greatly reduce the available funding for rebates and incentives



Source: "CHP/WHP & Ohio's Policy Horizon," Trish Demeter, OEC, May 24, 2017

Grid Modernization

- “PowerForward is the PUCO’s review of the latest in technological and regulatory innovation that could serve to enhance the consumer electricity experience.”
- Report/Guidance Doc Expected in 2018
- Get updates: powerforward@puco.ohio.gov

PowerForward

Ohio | Public Utilities
Commission



Source: “CHP/WHP & Ohio’s Policy Horizon,” Trish Demeter, OEC, May 24, 2017

Ohio CHP Connection

OHIO CHP CONNECTION

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OHIO CHP CONNECTION
Solutions together.

- Webinars
- News
- Policy & Regulatory Issues
- Case Studies

www.chpconnection.org

The screenshot shows the 'About' page of the Ohio CHP Connection website. The 'About' section is titled 'About' and contains two paragraphs of text. The first paragraph is under the heading 'WHAT IS THE OHIO CHP CONNECTION?' and describes the organization as a voluntary network of CHP and WHP vendors, developers, technical experts, and policy advocates. The second paragraph states the organization's commitment to reducing regulatory and policy barriers, improving efficiency, reducing emissions, and increasing power reliability. A 'LEARN MORE' button is located below the text. The 'Contact' section is titled 'Contact' and includes a 'LOCATION' section with the address '1145 Chesapeake Ave. Suite I, Columbus, Ohio 43212' and a 'CONTACT' section with the email 'mleppa@theoec.org' and phone number '(614) 487-7506'. There is also a 'Stay Connected' section with a sign-up form for email updates. The website is viewed in a browser window with multiple tabs open, and the system tray at the bottom shows the date as 5/23/2017 and the time as 12:53 PM.



What is Combined Heat and Power?

As Defined by SB 310

- Combined Heat and Power is “the coproduction of electricity and useful thermal energy from the same fuel source...”
 - “...designed to achieve thermal-efficiency levels of at least sixty percent”
 - “...with at least twenty percent of the system's total useful energy in the form of thermal energy”*

*Source legislature.state.oh.us



Source: “AEP Ohio CHP and WER Program,” Michelle Cross, AEP Ohio, May 24, 2017

What is Waste Energy Recovery?

As Defined by SB 310

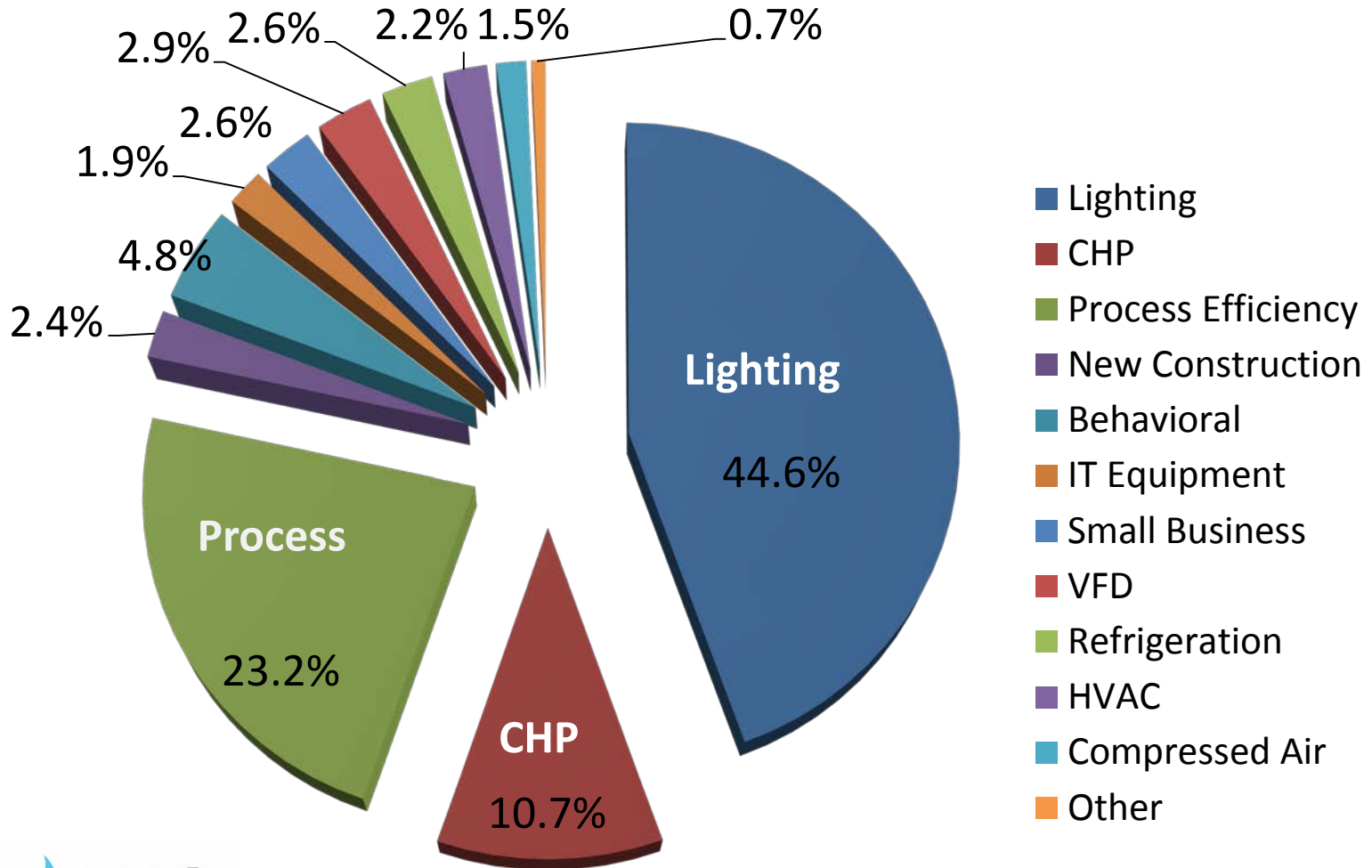
- Waste Energy Recovery is the “generation of electricity through the conversion of energy [from]...”
 - Exhaust Heat
 - Reduction of pressure in gas pipelines before gas is distributed through the pipeline

*Source legislature.state.oh.us



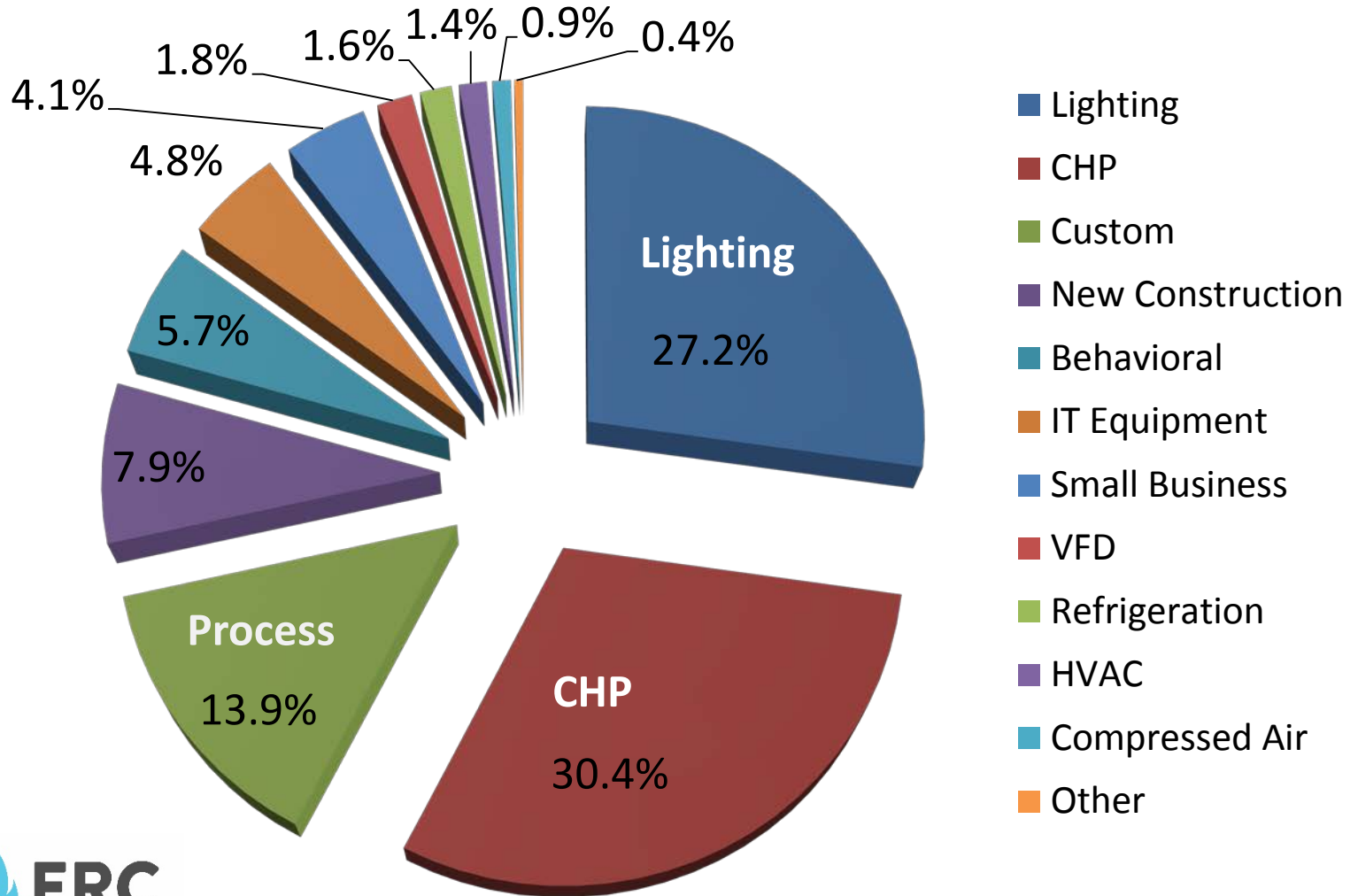
Source: “AEP Ohio CHP and WER Program,” Michelle Cross, AEP Ohio, May 24, 2017

AEP Ohio 2016 kWh Savings for Business Customers



Source: "AEP Ohio CHP and WER Program," Michelle Cross, AEP Ohio, May 24, 2017

2017 to 2020 kWh Savings Plan for Business Customers



Source: "AEP Ohio CHP and WER Program," Michelle Cross, AEP Ohio, May 24, 2017

AEP Ohio's CHP Program

AEP Ohio is offering incentives to customers for eligible CHP projects

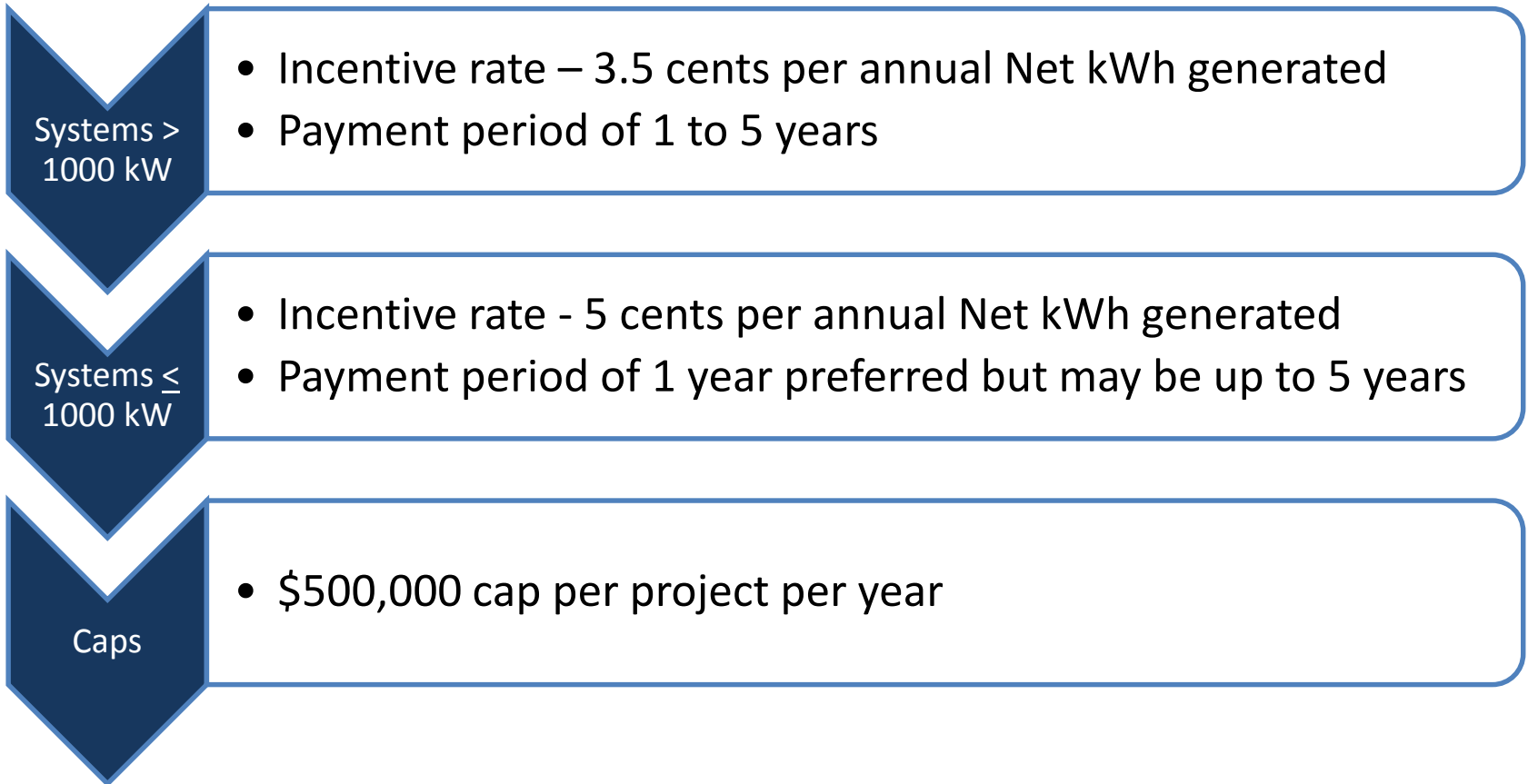


- AEP Ohio distribution customer
- Targeting Industrial and Institutional
- Minimum generation of 500,000 kWh per year
- Design of 8000 minimum run hours per year



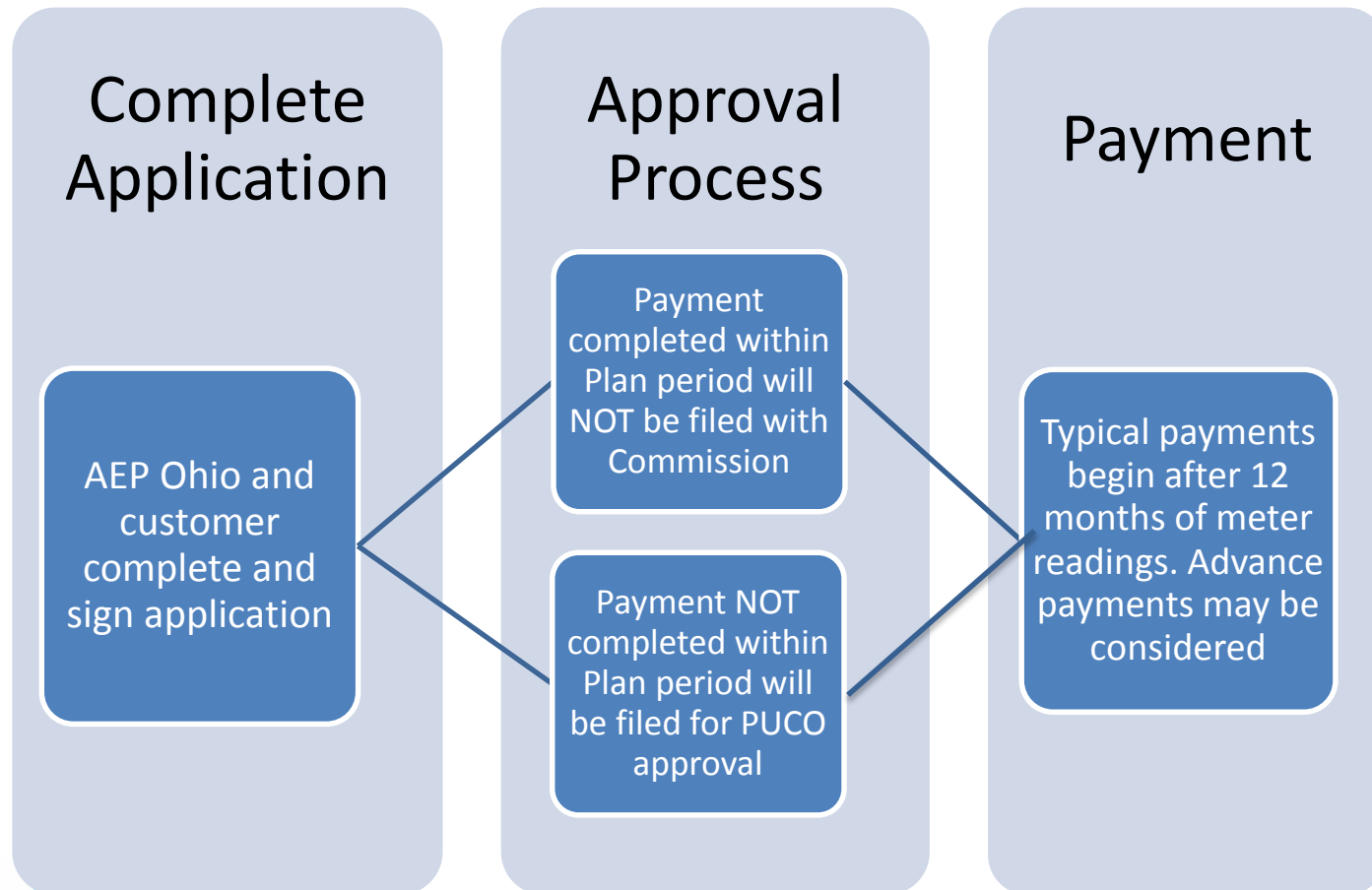
Source: "AEP Ohio CHP and WER Program," Michelle Cross, AEP Ohio, May 24, 2017

AEP Ohio CHP Program Incentives



Source: "AEP Ohio CHP and WER Program," Michelle Cross, AEP Ohio, May 24, 2017

AEP Ohio CHP Program Process



Source: "AEP Ohio CHP and WER Program," Michelle Cross, AEP Ohio, May 24, 2017

Incentive per NET kWh generated

- Electric meter ANSI C-12.20 and accuracy $\pm 0.5\%$
- Parasitic losses will be removed from gross kWh generation
 - Meter may be located to measure the net of the parasitic losses
 - Estimated from the DOE Uniform Method Protocol if unable to measure 3-6%



Project Screenings

- Visit aepohio.com/solutions for information regarding
 - High level checklist to determine project viability
 - Link to free screening
 - OMA link for manufacturers
 - US DOE link for all customer segments
 - Additional feasibility studies recommended



Thank You

- Contact Information:
 - Cliff Haefke, Energy Resources Center, University of Illinois at Chicago
 - US DOE Midwest CHP Technical Assistance Partnership
 - (312) 355-3476, chaefk1@uic.edu
- Other Contacts:
 - Ohio Environmental Council
 - Trish Demeter, TDemeter@theOEC.org, (614) 487-7506
 - Ohio AEP
 - Michelle Cross, mcross@aep.com, 330-438-7028
 - Ohio Manufacturing Association (Go Sustainable Energy, LLC)
 - John Seryak, jseryak@gosustainableenergy.com, (614) 268-4263 x302

