

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

IN THE MATTER OF THE)
APPLICATION OF OHIO POWER)
COMPANY FOR APPROVAL OF ITS)
ENERGY EFFICIENCY AND PEAK) CASE NO. 16-574-EL-POR
DEMAND REDUCTION PROGRAM)
PORTFOLIO PLAN FOR 2017)
THROUGH 2020.)

IN THE MATTER OF THE)
APPLICATION OF)
DUKE ENERGY OHIO, INC. FOR) CASE NO. 16-576-EL-POR
APPROVAL OF ITS 2017-2019)
ENERGY EFFICIENCY AND)
PEAK DEMAND REDUCTION)
PROGRAM PORTFOLIO PLAN.)

IN THE MATTER OF THE)
APPLICATION OF THE OHIO EDISON)
COMPANY, THE CLEVELAND)
ELECTRIC ILLUMINATING) CASE NO. 16-743-EL-POR
COMPANY, AND THE TOLEDO)
EDISON COMPANY FOR APPROVAL)
OF THEIR ENERGY EFFICIENCY)
AND PEAK DEMAND REDUCTION)
PROGRAM PORTFOLIO PLANS FOR)
2017 THROUGH 2019.)

IN THE MATTER OF THE)
APPLICATION OF THE DAYTON)
POWER AND LIGHT COMPANY FOR)
APPROVAL OF ITS ENERGY) CASE NO. 17-1398-EL-POR
EFFICIENCY AND PEAK DEMAND)
REDUCTION PROGRAM PORTFOLIO)
PLAN FOR 2018-2020.)

**COMMENTS
BY
THE ENERGY RESOURCES CENTER
LOCATED AT THE UNIVERSITY OF ILLINOIS AT CHICAGO
(ERC)**

On October 23, 2019, the Commission requested that comments be filed with regard to whether the state's annual electric efficiency savings requirement, as modified by House Bill 6, should continue once the 17.5 percent statutory cap has been met. Further, the Commission asked whether it is appropriate for electric distribution utilities to continue ratepayer funded efficiency programs after the cap has been met. In response to these inquiries, the Energy Resources Center, located at the University of Illinois at Chicago (ERC), respectfully submits the following comments.

Who We Are

The ERC is an interdisciplinary public service, research, and special projects organization that works to improve energy efficiency and the environment. The ERC provides expertise in the areas of energy efficiency, distributed generation, utilities billing management, and biofuels and bioenergy. Originally created to be a "fast response" team of experts, the ERC currently provides technical assistance, sophisticated modeling capabilities, educational outreach, and program implementation across the public and private sectors. The ERC is committed to providing the most comprehensive and up-to-date solutions to the energy and environmental problems affecting institutional, industrial, residential, and commercial sectors.

The ERC currently operates and manages the US DOE's Midwest Combined Heat and Power Technical Assistance Partnership (CHP TAP). Through experience working on the CHP TAP, ERC staff has an immense and detailed knowledge of Combined Heat and Power (CHP) and Waste Energy Recovery (WER) technologies and related policies. To wit, since 2011 the ERC has served as a technical expert, providing unbiased technical information on CHP and Waste Energy Recovery technologies to the Governor's Office, the Public Utility Commission of Ohio (PUCO), and other Ohio stakeholders. Our work helped inform the Commission on how to implement a CHP efficiency program.¹

What is Combined Heat and Power?

Combined heat and power (CHP), also known as cogeneration, is the concurrent production of electricity or mechanical power and useful thermal energy (heating and/or cooling) from a single source of energy. It is a type of distributed generation, which, unlike central station generation, is located at or near the point of consumption. CHP comprises a suite of technologies that can use a variety of fuels to generate electricity or power at the point of use, allowing the heat that would normally be lost in the power generation process to be recovered to provide needed heating and/or cooling.

CHP technology can be deployed quickly, cost-effectively, and with few geographic limitations, and can use a variety of fuels, both fossil- and renewable-based. CHP has been employed for many years, mostly in industrial, large commercial, and institutional applications. It may not be widely recognized outside industrial, commercial, institutional, and utility circles, but it has been providing highly-efficient electricity and process heat to some of the most vital industries and largest employers, urban centers, and campuses in the United States. It is reasonable to expect CHP applications to operate at 65-75% efficiency, a large improvement over the national average of ~50% for these services when separately provided.

¹ <http://www.chptap.org/Data/projects/OhioCleanEnergyStandards-Profile.pdf>

CHP Incentives in Ohio

In March 2014, AEP Ohio issued its Energy Efficiency/Peak Demand Reduction (EE/PDR) Plan for 2015-2019, which proposed a CHP and waste energy recovery program for large, high efficiency projects. The program was made eligible by Ohio's energy reforms passed in 2012 (SB 315) and was renewed in the company's 2017-2020 EE/PDR Plan, with 8 projects identified between 2015-2020. From 2017 through 2020, an estimated 106,000 MWh generated by CHP per year will count toward AEP Ohio's energy efficiency goals.²

According to AEP Ohio, at least 8 projects will have been provided incentives by the end of the 2020 program, including (among others): Krayton Polymers in Belpre; Solvay Polymers in Marietta; and Sofidel Paper in Circleville. While these projects generate a large amount of energy savings for AEP Ohio to claim in meeting its efficiency targets, these projects also – more importantly – provide a great deal of benefits to the individual sites, their communities, and to AEP Ohio ratepayers.

CHP Benefits in Ohio

CHP positively impacts the health of local economies and supports national policy goals in a number of ways. Specifically, CHP can enhance our energy security by reducing our national energy requirements and helping businesses weather energy price volatility and supply disruptions. It can advance our environmental goals by reducing emissions of harmful pollutants; improve business competitiveness by increasing energy efficiency and by managing costs; increase resiliency of our energy infrastructure by limiting congestion and offsetting transmission losses; diversify energy supply by enabling further integration of domestically-produced and renewable fuels; and improve energy efficiency by capturing heat that is normally wasted.

The CHP systems that were installed due to AEP Ohio energy efficiency incentives help businesses save in energy costs, which in turn increases competitive advantage, which in turn bolsters jobs creation and employment. According to Al Wanosky, the Utilities Manager at Solvay Marietta, “[Our] cogeneration project has provided a reliable, efficient, economic energy supply solution to the Solvay complex to insure that our plant can meet its production goals.”³ As a distributed resource able to continue generation through outages or disasters, CHP can help increase grid resiliency, which is a benefit enjoyed by all ratepayers and Ohio citizens. For example, the Dublin Rec Center has such capabilities. Should the local electric utility, AEP Ohio, go offline, the Dublin Rec Center CHP system is able to disconnect from the electric grid and function as an emergency generator, providing power and thermal energy for the Community Center. According Brian Ashford, Director of Facilities Management in the City of Dublin, “We are very happy with the CHP system. It allows the City of Dublin to save money while providing increased energy resiliency and reliability. And all at no initial cost to the city or taxpayers.”⁴

² <http://www.chptap.org/Data/projects/OhioAEPCHPWasteEnergyRecovery-Profile.pdf>

³ http://www.chptap.org/Data/projects/Solvay_Specialty_Plastics-Project_Profile.pdf

⁴ http://www.chptap.org/Data/projects/DublinRecCenter-Project_Profile.pdf

While CHP provides a vast array of benefits to the utility, end-users, ratepayers and communities, these systems come with a large upfront capital expenditure. For private businesses, investing in non-core business related equipment is usually burdened with a requirement of a 2-3 year payback, at best. Though the lifetime benefits of CHP frequently and significantly outweigh the costs, the capital expenditure required along with simple project paybacks above a 2-3 threshold make implementing these projects difficult without utility assistance. Importantly, under a simple cost/benefit calculation where the complete societal benefits of CHP are included in the analysis, CHP will nearly always score high, which underscores the need and justification for utility incentives supporting the implementation of CHP.

Calculating CHP Incentives

Unlike many other energy efficiency measures, CHP systems require one year of operation in order to provide accurate measurement and verification of the energy savings. This year of operation is necessary to ensure that CHP is meeting the stated fuel efficiency thresholds required under law and regulation.

If the Commission were to eliminate the energy efficiency programs and incentives before the end of the already-approved 2017-2020 plans, such a decision would punish ratepayers who have made a good faith effort to secure CHP incentives by the end of the 2020 program. There are currently four CHP projects operating within the one-year O&M window, three of which for whom the O&M window will continue deep into the 2020 year. Ending the energy efficiency incentive program before the pre-approved program end date would significantly reduce or possibly eliminate the level of incentives payable to these sites. Sites which have incorporated the full amount of energy efficiency incentive payments into their financial and cash-flow analysis under the very fair assumption that these resources would be available. To the eliminate efficiency portfolio standard incentives before the already stated program end date would be to take away financial resources from sites that have played by all of the rules.

Recommendation

The Energy Resources Center asks the PUCO to consider that energy efficiency incentives continue to be made available for CHP projects throughout the full duration of the 2017-2020 energy efficiency program cycle.

Respectfully submitted,

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Summary: Comments Comments of the Energy Resources Center located at the University of Illinois at Chicago electronically filed by Mr. Graeme Miller on behalf of Energy Resources Center and Mr. Graeme Miller