

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Ohio)	
Edison Company, The Cleveland Electric)	Case No. 16-0743-EL-POR
Illuminating Company and The Toledo)	
Edison Company for Approval of Their)	
Energy Efficiency and Peak Demand)	
Reduction Program Portfolio Plans for 2017)	
through 2019)	

**DIRECT TESTIMONY OF
TRISH DEMETER ON BEHALF OF
OHIO ENVIRONMENTAL COUNCIL AND
ENVIRONMENTAL DEFENSE FUND**

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1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Trish Demeter. My business address is 1145 Chesapeake Avenue, Suite I,
4 Columbus, Ohio 43212.

5 **Q. BY WHO ARE YOU CURRENTLY EMPLOYED, AND WHAT IS YOUR JOB**
6 **TITLE?**

7 A. I am employed by the Ohio Environmental Council (“OEC”) as the Managing Director of
8 Energy Programs.

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
10 **YOUR RELEVANT PROFESSIONAL EXPERIENCE.**

11 A. I earned a B.A. in English Literature from Wittenberg University. In my current position
12 at OEC, I manage our energy team, which includes advocating for policies that promote
13 clean energy and energy efficiency, mitigate climate change, and secure stronger public
14 health safeguards for oil and gas operations. I regularly work with private businesses,
15 decision makers, allies, environmental partners and other energy stakeholders to advance
16 common objectives on energy policy. Prior to joining OEC in 2011, I was a legislative
17 liaison for the Ohio Department of Natural Resources, a policy aide in the Ohio Senate,
18 and a field consultant on political campaigns. I have been involved in environmental,
19 energy and conservation policy for over 15 years. Since 2011, I have facilitated the Ohio
20 Coalition for Combined Heat and Power, which is a voluntary coalition of combined heat
21 and power (“CHP”)/waste heat to power (“WHP”)/waste energy recovery (“WER”)
22 developers and vendors, technical experts, manufacturers, and policy advocates. This

1 coalition works to identify and articulate market and regulatory barriers to CHP/WER
2 deployment in Ohio, and occasionally works together to advance policy solutions, offer
3 joint comments on draft rules, and advocate for policies that encourage a better market
4 for CHP/WER projects in Ohio. Additionally, I have presented at several conferences,
5 webinars and conventions as an expert on Ohio CHP/WER policy and programs, such as
6 the POWER GEN International convention in 2013 in Orlando, FL, and the CHP
7 Association's Spring Forum in 2012, among others.

8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

9 A. I am testifying on behalf of the Ohio Environmental Council ("OEC") and Environmental
10 Defense Fund ("EDF"), intervenors in this case.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to review what Ohio Edison Company, The Cleveland
13 Electric Illuminating Company and The Toledo Edison Company (the "Companies" or
14 "FirstEnergy") have submitted in their Energy Efficiency Peak Demand Reduction
15 Program Portfolio Plans for 2017 through 2019, and analyze how the Companies should
16 change or improve the submitted plan to benefit Ohioans by incentivizing and increasing
17 energy efficiency in our State.

18
19 **II. CHANGES AND IMPROVEMENTS TO FIRST ENERGY'S PROPOSED**
20 **ENERGY EFFICIENCY AND PEAK DEMAND REDUCTION**
21 **PORTFOLIO PROGRAM PLAN**
22

1 **Q. ARE YOU FAMILIAR WITH THE COMPANIES' PROPOSED ENERGY**
2 **EFFICIENCY AND PEAK DEMAND REDUCTION PORTFOLIO PROGRAM**
3 **PLAN?**

4 A. Yes.

5 **Q. PLEASE EXPLAIN WHAT PARTS OF FIRST ENERGY'S PROGRAM PLAN**
6 **NEED TO BE CHANGED AND/OR IMPROVED.**

7 A. There are several changes and improvements that can be made to the proposed program
8 plan to benefit the citizens and businesses of Ohio. First, the Commission should not
9 permit FirstEnergy to financially benefit by including savings calculations from shared
10 savings programs that FirstEnergy has no material role in producing. Second, FirstEnergy
11 should commit to combined heat and power/waste energy recovery systems by including
12 a fully outlined program in which FirstEnergy can benefit from shared savings.

13
14 **III. THE COMMISSION SHOULD NOT PERMIT FIRST ENERGY TO**
15 **INCLUDE SHARED SAVINGS CALCULATIONS IN ITS BENCHMARK**
16 **CALCULATIONS WHICH THE COMPANIES HAVE NO MATERIAL**
17 **ROLE IN PRODUCING**

18
19 **Q. PLEASE EXPLAIN HOW THE COMMISSION SHOULD CHANGE FIRST**
20 **ENERGY'S PROPOSED PROGRAMS AS THEY RELATE TO SHARED**
21 **SAVINGS.**

1 A. The Commission should reject any part of the Companies' plan which permits
2 FirstEnergy to recoup shared savings from programs where they have no material role in
3 producing the energy savings. The purpose of shared savings is to incentivize
4 FirstEnergy to go above and beyond its benchmark energy savings requirements.
5 Permitting FirstEnergy to include calculations from programs where it had no role in
6 producing the energy savings is illogical to the goal that shared savings incentivizes the
7 Companies to work harder to achieve energy efficiency over and above their benchmark
8 goals. It rewards the Companies for doing nothing more than simply surveying their
9 customers for recent actions taken by them to save energy.

10 **Q. WHICH PROGRAMS SHOULD NOT BE INCLUDED AS SHARED SAVINGS**
11 **BENEFITS TO FIRST ENERGY?**

12 A. FirstEnergy should not be permitted to include savings from the Customer Action
13 Programs, the Mercantile Customer Program, the Energy Special Improvement District
14 ("ESID") program, or any other programs creating savings that FirstEnergy had no
15 material role in producing.

- 16 ● The Customer Action Program ("CAP") (for residential and small C/I) captures
17 energy savings and peak demand reductions achieved by actions *taken by*
18 *customers outside of utility-administered programs.*
- 19 ● The Mercantile Customer Program also includes a Customer Action Program
20 shared savings component which would inappropriately award savings to the
21 Companies for energy efficiency actions taken by mercantile customers that the
22 Companies have no role in creating.

- The ESID program captures savings from Ohio townships and municipalities that create energy special improvement districts to offer their constituents Property Assessed Clean Energy (“PACE”) financing to install qualified energy improvements pursuant to R.C. 1710.061. FirstEnergy adds nothing to this already-existing PACE financing opportunity, and implementing the ESID program per FirstEnergy’s proposal is merely allowing FirstEnergy to claim shared savings on programs that are wholly designed, and administered by a local governmental entity.

None of these programs were designed to incentivize FirstEnergy to achieve additional levels of efficiency. These programs, as well as any other program that FirstEnergy proposes in its plan that would permit it to share in savings that it has no material role in producing, should not be approved by the Commission.

Q. WHY SHOULD THESE PROGRAMS BE EXCLUDED FROM SHARED SAVINGS?

- A.** As I explained above, permitting FirstEnergy to essentially earn bonuses on efficiency programs that it did not help create flies in the face of the intent of shared savings, which is to encourage the utility to go above and beyond the minimal annual savings benchmark. FirstEnergy should not be financially rewarded for the efforts taken by others.

IV. FIRST ENERGY SHOULD INCLUDE A FULL COMBINED HEAT AND POWER/WASTE ENERGY RECOVERY PROGRAM IN ITS PROPOSAL

1
2 **Q. DOES FIRST ENERGY INCLUDE A COMBINED HEAT AND POWER/WASTE**
3 **ENERGY RECOVERY PROGRAM IN ITS PROPOSED PLAN?**

4 A. No. FirstEnergy merely mentions in its Mercantile Customer Program section that its
5 customers “may file applications under the Mercantile Customer Program” which will be
6 “rebated per the Commission’s direction.” (Application at 74.) FirstEnergy should
7 improve its commitment to combined heat and power/waste energy recovery by including
8 a fully outlined program that would send a clear market signal to both their customers
9 and project developers in terms of what the utility is willing to offer by way of rebates
10 and incentives, expected timelines and processes that the customer can anticipate and
11 understand. A transparent process and program guidelines could lead to new CHP/WER
12 project development in FirstEnergy territory, and develop a program in which the
13 Companies could also benefit from participating in shared savings.

14 **Q. WHY SHOULD FIRST ENERGY INCLUDE A CHP/WER PROGRAM IN ITS**
15 **PORTFOLIO PLAN?**

16 A. The average efficiency of fossil-fueled power plants in the United States is 33 percent
17 and has remained virtually unchanged for four decades. This means that two-thirds of the
18 energy in the fuel is lost—vented as heat—at most power plants in the United States. By
19 using waste heat recovery technology to capture a significant proportion of this wasted
20 heat, CHP systems typically achieve total system efficiencies of 60 to 80 percent for
21 producing electricity and thermal energy, with some even approaching 90% efficiency.¹

¹ U.S. Environmental Protection Agency, *Combined Heat and Power*, <https://www.epa.gov/chp/chp-benefits> (accessed Sept. 13, 2016).

1 Because CHP is more efficient, less fuel is required to produce a given energy output
2 than with separate heat and power. WER systems are able to use wasted heat to create
3 energy that would otherwise have to be produced by another source, thereby reducing
4 costs to customers and using less resources. FirstEnergy should include a program to
5 encourage CHP/WER installation by mercantile and industrial customers that would
6 allow it to recover shared savings, making it a win-win situation for the utility and its
7 customers.

8 **Q. DOES OHIO POLICY SUPPORT CHP/WER SYSTEMS?**

9 A. Yes. Ohio law provides that CHP qualifies as an efficiency measure under the state's
10 Energy Efficiency Resource Standard ("EERS"), while WER can qualify as both an
11 efficiency measure under EERS² or as a renewable resource under the state's Renewable
12 Portfolio Standard ("RPS")³.

13 **Q. HAVE ANY OTHER UTILITIES INCLUDED CHP/WER PROGRAMS IN**
14 **THEIR PORTFOLIO PLANS OR OTHERWISE?**

15 A. Yes. Dayton Power & Light ("DP&L") has implemented a CHP program with success.
16 Currently, customers who install CHP/WER systems are offered an incentive of
17 \$0.08/kWh generated and \$100/kW capacity. The incentives are capped at 50% of total
18 cost, or \$500,000, for systems 500 kW and smaller, and terms for larger systems are
19 negotiable. DP&L also offered funding for feasibility studies so that eligible customers
20 could truly assess whether or not their facility was a good candidate for a CHP system.
21 DP&L has included a version of the program in its EE/PDR portfolio plan for 2017-2019

² O.R.C. Sections 4928.66 (A)(1)(a), 4928.66 (A)(2)(c), and 4928.66 (A)(2)(d)(iii).

³ O.R.C. Sections 4928.01 (A)(37)(a)(xi), and 4928.01 (A)(38)(a).

1 as well (PUCO Case No. 16-0649-EL-POR). American Electric Power has also included
2 a CHP/WER program plan in its filing for 2017-2019 (Case No. 16-0574-EL-POR).
3 Other states have implemented successful programs that have shown success in attracting
4 new CHP/WER projects by offering incentives that significantly impact a customer's
5 ability to finance and meet desired return-on-investment timelines. For example, the
6 Illinois Department of Commerce and Economic Opportunity launched a CHP incentive
7 pilot program for public sector building owners that offered a production incentive of
8 \$0.08/kWh for CHP systems at or above 70% system efficiency, and a still-robust
9 incentive of \$0.06/kWh for systems achieving efficiencies between 60%-70%. The state
10 also offered design and construction incentives in addition to the production incentive.⁴

11 **Q. WHAT KIND OF IMPACT WOULD INCREASED USE OF CHP/WER**
12 **SYSTEMS HAVE ON OHIO?**

13 A. Due to the state's large manufacturing base, Ohio has enormous technical potential for
14 energy captured through CHP/WER, yet ranks in the bottom portion of the country for
15 taking advantage of the technologies. There are currently only 54 sites in Ohio with CHP
16 systems installed⁵, while Ohio has 7,288 MW of CHP technical potential capacity
17 identified at 13,194 sites across the state.⁶ Because of this huge potential, incentivizing
18 customers to install CHP/WER technologies is vital to increasing Ohio's efficiency

⁴ Illinois Dept. of Comm. and Economic Opportunity, *Public Sector Combined Heat and Power (CHP) Pilot Program*, <https://www.illinois.gov/dceo/whyillinois/TargetIndustries/Energy/Pages/CHPprogram.aspx> (accessed Sept. 13, 2016).

⁵ U.S. DOE Combined Heat and Power Installation Database, *Combined Heat and Power Installations in Ohio*, <https://doe.icfwebservices.com/chpdb/state/OH> (accessed Sept. 13, 2016).

⁶ U.S. Dept. of Energy, *Combined Heat and Power (CHP) Technical Potential in the U.S.*, Mar. 16, 2016, at 69, <http://energy.gov/sites/prod/files/2016/04/f30/CHP%20Technical%20Potential%20Study%203-31-2016%20Final.pdf> (accessed Sept. 13, 2016).

1 through these systems. A recent study done by the Alliance for Industrial Efficiency
2 determined that if Ohio achieved an annual 1.5% energy savings per year through 2030
3 relative to forecasted industrial sector electricity sales from U.S. Energy Information
4 Administration's 2013 Annual Energy Outlook and installed just a *portion* of its technical
5 potential for new CHP projects, Ohio's 2030 Annual CO₂ reductions with industrial
6 energy efficiency and CHP would be 10,277,039 tons, saving these customers
7 \$12,525,000 by 2030.⁷

8 **Q. PLEASE DESCRIBE AN IDEAL CHP/WER PROGRAM PLAN FOR**
9 **INCLUSION IN FIRST ENERGY'S PROPOSED PORTFOLIO PLAN.**

10 A. The intent of Senate Bill 315 was to attract new CHP and Waste Energy Recovery
11 (WER) projects to Ohio, in an effort to close the gap between Ohio's great potential for
12 CHP and the state's actual deployment. When these technologies were added to the list
13 of qualified energy efficiency technologies that could be used toward a utility's annual
14 energy savings benchmark, a finer point was placed on the intent of SB 315, and that is to
15 increase the energy efficiency opportunities for customers best suited for CHP and WER
16 systems.

17 In order to incentivize customers to install CHP/WER systems, it must be clear to
18 customers what incentives are available. To that end, OEC/EDF recommend the
19 establishment of a clear incentive range with (a) a minimum incentive that is adequate
20 enough to send a clear signal to customers considering a CHP or WER system for their
21 facility, (b) a range that awards greater incentives to projects that achieve higher

⁷ The Alliance for Industrial Efficiency, *State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency*, Sept. 2016, at 9, 13.

1 efficiencies, and (c) an incentive payment schedule that is both clear, and within a
2 reasonable timeframe so as to allow the customer to include the incentive in their near-
3 term investment timelines. Per SB 315, in order for a CHP/WER system to qualify for an
4 incentive, the system must achieve at least 60% thermal efficiency and 20% of its useful
5 energy produced must be thermal energy. In order to incentivize customers to install the
6 most efficient systems possible, OEC/EDF advocate for implementing a sliding scale for
7 incentive payments under which customers would receive higher incentive payments for
8 systems that are more efficient. The minimum incentive offered by the Companies
9 should be robust enough—in the \$0.04/kWh - \$0.05/kWh range—to impact a potential
10 project's overall cost and return on investment timeline. The maximum incentive in the
11 range should be in keeping with what the Companies offer for other efficiency measures
12 installed by this same customer class, i.e., institutional and governmental customers,
13 manufacturing customers, and commercial customers. These three elements—a minimum
14 incentive that is adequate enough to drive interest in Ohio's CHP/WER market, an
15 established incentive range that strongly encourages customers to design and install the
16 most efficient systems, and an incentive maximum that conforms to the Companies' other
17 per kilowatt-hour incentives offered for efficiency measures installed by commercial,
18 industrial and institutional customers—will ensure that the Company is spending its
19 program dollars on well-deserving projects.

20 **V. CONCLUSION**

21 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

22 **A.** Yes.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing has been served upon all parties of record by electronic mail this 13th day of September, 2016.

/s/ Miranda Leppla

Miranda Leppla

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Summary: Testimony DIRECT TESTIMONY OF TRISH DEMETER ON BEHALF OF OHIO ENVIRONMENTAL COUNCIL AND ENVIRONMENTAL DEFENSE FUND
electronically filed by Mr. Trent A Dougherty on behalf of Ohio Environmental Council and Environmental Defense Fund