DUKE ENERGY OHIO EXHIBIT_____

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of its 2021 Energy Efficiency and Demand Side Management Portfolio of Programs and Cost Recovery Mechanism.	)))))	Case No. 20-1013-EL-POR
In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of Tariff Amendments	)))	Case No. 20-1114-EL-ATA

DIRECT TESTIMONY OF

TRISHA A. HAEMMERLE

ON BEHALF OF

DUKE ENERGY OHIO, INC.

June 3, 2020

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Trisha A. Haemmerle. My business address is 139 East Fourth Street, Cincinnati, Ohio 45202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Duke Energy Business Services, LLC (DEBS), as Senior Manager, Strategy and Collaboration. DEBS provides various administrative and other services to Duke Energy Ohio, Inc., (Duke Energy Ohio or the Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL QUALIFICATIONS.

A. I graduated from Ohio University with a Bachelor's Degree in Marketing. I started my career with Cinergy in 1997. I worked for Cinergy and Duke Energy from 1997 to 2010 developing, managing, and analyzing survey activities, as well as market research projects. Starting in 2009, I also managed the coordination of verification for the energy efficiency (EE) and demand side management (DSM) programs. I assumed my current position in 2010.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO?

A. Yes, I submitted testimony in support of Duke Energy Ohio's application for recovery of program costs, lost distribution revenue and performance incentives related to its EE and DSM programs, Case Nos. 14-457-EL-RDR, 15-534-EL-RDR, 16-0664-EL-RDR, 17-781-EL-RDR, 18-397-EL-RDR, 19-622-EL-RDR, and 20-613-EL-RDR.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe Duke Energy Ohio's proposed new voluntary portfolio of EE and DSM to offer its customers beginning in 2021 and the associated requested regulatory recovery. My testimony will explain how the Company's EE and DSM programs benefit all customers in the Company's service area and how customers have grown to expect them over the past nearly thirty years. My testimony will also provide an overview of Evaluation, Measurement and Verification (EM&V) that will be conducted for the portfolio's programs; introduce our current independent third-party evaluators and explain how they were selected; and provide the projected cost-effectiveness results for Duke Energy Ohio's proposed 2021 portfolio, as well as a preview of its plans for 2022. Finally, my testimony will describe the Company's proposed mechanism for cost recovery and explain why such recovery is appropriate and necessary.

II. OVERVIEW OF THE PROPOSED PORTFOLIO PLAN

Q. WHAT ARE THE ELEMENTS OF DUKE ENERGY OHIO'S PORTFOLIO PLAN FILING?

A. There are two main components of Duke Energy Ohio's application. First, Duke Energy Ohio is filing its program portfolio plan of proposed cost-effective EE and DSM programs, pursuant to Rule 4901:1-39-04. The programs are described in detail in the testimony of Company witnesses Greg Tiernan and Rick Mifflin.

The second element of the Company's Portfolio Plan, pursuant to Rule 4901:1-39-06, is the Company's proposed cost recovery mechanism: a rider, to be

titled Rider DSM. The elements of Rider DSM will be similar to those of the existing Rider EE-PDR, which was approved in Case Nos. 11-4393-EL-RDR, 13-0431-EL-POR, and 16-576-EL-POR, and allows the Company to recover its program costs, as well as a shared savings performance incentive associated with its portfolio of approved programs and lost distribution margins from certain non-residential customers. In the case that a change in rate design or elimination of the Company's revenue decoupling rider should occur, Duke Energy Ohio requests the ability to adjust the rider to ensure that it continues to be made whole for the negative financial impact EE and DSM will have.

Q. WHY IS IT IMPORTANT FOR THE COMPANY TO CONTINUE TO OFFER EE AND DSM PROGRAMS AND RECEIVE APPROVAL OF ITS PROPOSED PORTFOLIO OF PROGRAMS?

A. First, electric distribution utilities are uniquely qualified and in the best position to systematically capture efficiency gains in the use of electricity and maximize those gains for the benefit of all customers. Duke Energy Ohio has a long history of delivering cost effective EE and DSM programs to its customers since 1992 and thereby becoming customers' source for energy efficiency. Duke Energy Ohio understands changes in customer preferences and energy efficiency advancements that will allow the Company to continue accommodate new technologies and design new and innovative program offerings. Furthermore, the company has established relationships with the various trade allies who support program implementation, which helps build customer trust.

Second, residential and small-to-medium size business customers are often overlooked in the competitive EE marketplace because their individual savings are small. Furthermore, they themselves often lack the expertise and capital to pursue EE measures. For small-to-medium businesses, the programs offer customers an opportunity to replace aging, inefficient equipment that is near the end of its useful life with new more efficient technology. The interaction between the customer and the program administrator will create customers who are more aware and engaged in energy usage and energy issues within their facilities. Program participation can provide insight into other conservation measures and offerings the customer may be eligible for through current and future offerings.

Third, both residential and non-residential customers face economic challenges under the present COVID-19 pandemic that make it essential to minimize energy costs where possible. Residential customers are spending more time at home, and likely seeing increased usage during a time when many are unemployed or under-employed. At the same time, many businesses have seen reduced revenues due to pandemic-related safety measures and therefore need to streamline their operations to eliminate any unnecessary costs, including energy costs. All customers, not only program participants, benefit when the Company's overall load is reduced because this translates into reduced needs for capital investments (which would otherwise become part of base rates).

Fourth, EE measures reduce the Company's need to purchase capacity. As it has done in the past, Duke Energy Ohio plans to continue to offer current planning year EE resources that qualify for the auction. Only resources that appear to be cost

effective relative to the required incremental costs of EM&V and auction administration will be offered. The auction proceeds will be reflected in the net benefit realized by customers in the form of a credit or reduction in program costs. Duke Energy Ohio has sold 88.2 MWs of EE and DSM in the PJM 2021 – 2022 auction. Duke Energy Ohio anticipates entering the 2022 – 2023 auction once FERC allows auctions to continue.

Finally, Duke Energy Ohio has a long history of delivering cost effective EE and DSM programs to its customers, who have come to expect and rely on them. The Company (or a predecessor) has been providing such programs to customers, with Commission approval, since 1992, or sixteen years before any statutory obligation to do so existed. Over the past nearly thirty years, Duke Energy Ohio has demonstrated that it has become recognized as its customers' trusted source for EE and DSM. The current programs have been approved through December 31, 2020. Although there is not a statutory requirement to offer energy efficiency and demand response beyond 2020, Duke Energy Ohio believes that its customers have come to rely on its EE and DSM programs to help them save energy, manage bills and become more sustainable for over a decade and that it is in customers' and the state of Ohio's best interest for the Company to offer programs that can continue to deliver savings and benefits to its customers.

Q. HOW DO EE AND DSM PROGRAMS BENEFIT NON-PARTICIPANT CUSTOMERS?

A. The Company's programs have benefited and continue to benefit both program participants and the Company's customers generally. As demonstrated in Table 2 in

Section IV below, the majority of programs pass the Ratepayer Impact Measure Test (RIM)[1], which indicates that over time the rates of both program participants and non-participants will be lower because of the program being offered. Not only do program participants reduce their energy costs, they also provide energy and capacity benefits which will benefit the entire system, including non-participating customers. Reductions in energy demand reduces rates by enabling the Company to avoid additional capital expenditures associated with increased load, such as new substations, transformers, power lines and may lead to market price suppression over time. Finally, reducing load reduces emissions associated with generating electricity, which generates environmental benefits for everyone in the Company's service territory.

Q. AT A SUMMARY LEVEL, PLEASE DESCRIBE THE PORTFOLIO OF PROGRAMS THAT THE COMPANY IS PROPOSING IN THIS APPLICATION.

A. In its application, Duke Energy Ohio is proposing a portfolio of programs to be offered to its customers in 2021 that is a scaled version of the portfolio of programs that it is currently offering to its customers that was approved on September 27, 2017 in Case No. 16-576-EL-POR. The Company seeks approval to continue offering the programs listed in Table 1. The Company proposes a budget of $17,313,713 for program costs and a total budget of $21,445,626 (including lost revenues) for the portfolio, as detailed below and in the other testimonies.

[1] Also known as the Non-Participant Test.

Table 1
Residential Programs
Smart $aver® Residential Residential Energy Assessments My Home Energy Report (MyHER) Energy Efficiency Education for Schools Low Income Neighborhood Power Manager® Low Income Weatherization - Pay for Performance
Non-Residential Programs
Business Energy Saver PowerShare® Power Manager® for Business

Q. HOW DOES THIS PORTFOLIO COMPARE TO THE CURRENT APPROVED PORTFOLIO?

A. The proposed portfolio has been scaled down considerably from the current approved portfolio and re-oriented to focus primarily on residential customers. The Company has offered some of the requested residential programs since 2006 and customers have relied on Duke Energy Ohio to be a trusted source and an industry leader in EE. For comparison, the approved budget for the Company for 2020 was $46,895,800, over double the current proposed budget.

Q. HAS THE COMPANY SOLICITED INPUT FROM STAKEHOLDERS REGARDING POTENTIAL PORTFOLIO MODIFICATIONS?

A. Yes. Duke Energy Ohio regularly solicits feedback and program suggestions from stakeholders as part of its Community Partnership Meetings (EE Collaborative), which has helped to design the portfolio included in this application. Specifically,

the Company solicited and received feedback on the Market Potential Study that was used by the Company to inform its portfolio of programs.

Q. DOES THE COMPANY HAVE ANY PILOT PROGRAMS THAT WERE ADDED TO ITS EXISTING PORTFOLIO THAT WOULD CONTINUE UNDER ITS NEW PORTFOLIO?

A. No. The Company does not currently have any pilot programs to offer outside of an approved portfolio for 2021.

Q. DOES THE PROPOSED PORTFOLIO INCLUDE ANY PROGRAMS ASSOCIATED WITH SMART GRID OR TRANSMISSION AND DISTRIBUTION?

A. No, the proposed portfolio only reflects programs that target energy and capacity savings associated with EE and DSM that occurs behind the meter and are directly tied to participating customers.

Q. PLEASE DISCUSS THE ROLE OF THE DUKE ENERGY OHIO COMMUNITY PARTNERSHIP COLLABORATIVE AS IT RELATES TO THE OPERATION OF THE COMPANY'S PROPOSED PORTFOLIO OF PROGRAMS.

A. The Duke Energy Ohio Community Partnership Collaborative (Collaborative) comprises interested parties and stakeholders. Regular participants include the Office of the Ohio Consumers' Counsel, People Working Cooperatively, Ohio Hospital Association, Natural Resource Defense Council, and the Commission's

Staff. The Collaborative has a long and successful history with EE and DSM in Ohio.

Duke Energy Ohio currently engages with the Collaborative to review program changes, as well as to preview potential program additions to its portfolio. This allows the Company to offer new program measures expeditiously and to respond to market conditions and technology developments, and innovations in efficiency measures.

Duke Energy Ohio looks forward to continuing to work with this Collaborative to create a transparent EE and DSM process and to realize the benefits of input from the diverse perspectives of the group.

Q. PLEASE DESCRIBE THE RECOVERY MECHANISM AND INCENTIVE THAT THE COMPANY IS PROPOSING FOR THE PORTFOLIO OF PROGRAMS PROPOSED IN THIS APPLICATION.

A. Duke Energy Ohio is proposing a cost recovery mechanism that is similar to the mechanism approved in Case No. 16-576-EL-POR. The mechanism would be a new rider, Rider DSM, under which the Company would recover the following:

1. The recovery of the actual costs incurred by Duke Energy Ohio to deliver the approved portfolio of EE and DSM programs. EM&V costs would also be included in the event Duke Energy Ohio needs to contract vendors to evaluate the programs. The testimony of Jim Ziolkowski explains how the calculation of such costs will include a credit for auction proceeds obtained from offering qualifying EE resources in the PJM Capacity Auction.

2. The recovery of lost distribution margins from those customers not included in the Company's distribution revenue decoupling rider approved in Case No. 11-5905-EL-RDR.

3. The ability to earn an eight percent shared savings incentive for programs that are cost effective.

The Company incentive is calculated as a percentage of the net system benefits (avoided costs less the program costs) generated by the Company's portfolio of EE and DSM programs for that year. The net system benefits will be calculated in a manner consistent with the calculation of the Utility Cost Test.

Q. PLEASE EXPLAIN WHY RIDER RECOVERY IS APPROPRIATE AND NECESSARY FOR EE AND DSM PROGRAMS.

A. The current EE rules clearly contemplate that both the Commission and Company will evaluate programs and determine cost recovery on an annual basis and authorize the Company to propose a "rate adjustment mechanism for recovery of costs," as long as the Company demonstrates "why such recovery is appropriate and necessary."

First, the EE marketplace is dynamic, with both customer needs and available technologies varying year to year. The ability to review and adjust program design and scope, as well as size, based on recent outcomes facilitates cost-effectiveness. Incorporating EE programs into base rates means that adjustments can only occur in base rate cases, which are often separated by six or more years, and

therefore do not provide the same ability to rapidly pivot for the most up-to-date customer needs.

Second, rider recovery is consistent with the Company's past practice, even prior to statutory mandates. Prior to the enactment of the first statutory EE mandate, State Senate Bill 221, the Company recovered costs of its EE programs under Rider DSM.[2] Since SSB 221, the Company has recovered such costs under Rider SAW, and then Rider EE/PDR.[3] However, HB 6 appears to preclude the continuing use of Rider EE/PDR for EE programs, other than for reconciling programs offered pursuant to the state mandates, beyond 2020. Accordingly, the Company proposes to once again use a Rider DSM to recover for EE programs.

Third, a rider is more transparent and more equitable, in that it will permit separate charges for residential and non-residential customers and avoid cross-subsidy from one to the other or vice versa.

Finally, a rider will permit the Company to avoid a disproportionate rate impact to the largest-usage customers, as explained in more detail in the testimony of James Ziolkowski.

Q. WHY IS IT APPROPRIATE AND NECESSARY TO INCLUDE A SHARED SAVINGS INCENTIVE IN THE COMPANY'S COST RECOVERY MECHANISM?

[2] *In the Matter of the Application for Recovery of Costs, Lost Margin, and Performance Incentive Associated with the Implementation of Electric Residential Demand Side Management Programs by The Cincinnati Gas & Electric Company*, Case No. 06-91-EL-UNC, pp. 4-5 (July 11, 2007).

[3] *See In the Matter of the Application of Duke Energy Ohio, Inc., for approval of an Electric Security Plan*, Case No. 08-920-EL-SSO, Opinion and Order, pp. 18, 42-43 (approving establishment of Rider DR-SAW); *In the Matter of the Application of Duke Energy Ohio, Inc. for an Energy Efficiency Cost Recovery Mechanism and for Approval of Additional Programs for Inclusion in its Existing Portfolio*, Case No. 11-4393-EL-RDR, pp. 6-7, 20 (August 15, 2012) (authorizing creation of Rider EE/PDR).

A. Shared savings offers an economic incentive to counterbalance the revenue losses that a utility would otherwise suffer from the successful implementation of EE and DSM measures. Successful EE and DSM programs both reduce the sales of electricity and defer the need for investment in new utility facilities, thereby reducing the amount of such investments over time and thereby reducing the return on such investments that a utility collects. Absent a shared savings incentive, utility offered EE programs would be contrary to the utility business model and its financial interests. Shared savings, however, offset this inherent disincentive.

Q. PLEASE EXPLAIN DUKE ENERGY OHIO'S PROPOSED SHARED SAVINGS INCENTIVE IN GREATER DETAIL FOR 2021.

A. Consistent with the current mechanism, the incentive that the Company would be eligible to earn is calculated based upon the net system benefits that are delivered by Duke Energy Ohio's approved portfolio of programs. The Company's shared savings incentive structure is designed to incentivize the Company for offering cost effective programs. The level of shared savings incentive requested is a fixed 8 percent of the after-tax net benefit based on the actual energy savings achieved.

This shared savings mechanism allows Duke Energy Ohio an opportunity to recover its costs and earn a reasonable incentive for offering cost effective programs. Under this approach, if the Company's programs do not deliver cost effective energy and capacity savings, it will not earn an incentive and in the case that it is successful in delivering cost effective savings and the Company earns an incentive, customers keep the vast majority of the net benefits realized.

Q. IS THE SHARED SAVINGS INCENTIVE MECHANISM EFFECTIVE IN INCENTIVIZING DUKE ENERGY OHIO TO OFFER THE MOST COST EFFECTIVE PORTFOLIO IN 2021?

A. Yes. The fact that the shared savings mechanism only allows the Company to earn a shared savings incentive on the net benefit associated with the cost effectiveness of a program for a given year will help to ensure that the Company will continue to strive to achieve as much EE as possible and, even more importantly, it motivates the Company to maximize cost effectiveness.

Q. DOES THE COMPANY PLAN TO MAKE ANY CHANGES TO THE PORTFOLIO DURING THE 2021 PROGRAM YEAR?

A. No, the Company will not make changes in 2021. The Company is filing the portfolio ahead of the September 1, 2020 deadline to facilitate approval before the portfolio would go into effect on January 1, 2021. While the Company's filing provides a preview of its plans for 2022, it reserves the right to make modifications prior to requesting approval next year.

Q. WHAT ADDITIONAL INFORMATION SUPPORTS DUKE ENERGY OHIO'S REQUEST FOR APPROVAL OF ITS EE AND DSM PORTFOLIO PLAN?

A. As mentioned previously, Duke Energy Ohio witnesses Rick Mifflin and Greg Tiernan, will provide a description of the mass market (residential) and non-residential customer programs that are included in the Company's portfolio. Finally, Duke Energy Ohio witness James E. Ziolkowski will discuss the recovery of the

new portfolio costs into the Rider DSM rate recovery mechanism, including the timing of true-up filings.

III. EVALUATION, MEASUREMENT, AND VERIFICATION

Q. PLEASE PROVIDE AN EXPLANATION OF EM&V.

A. EM&V of EE and DSM programs involves documenting program benefits, or impacts, and program effectiveness. Measurement and verification encompasses data collection, monitoring, and analysis associated with the calculation of gross energy and demand savings from individual sites or projects and can be a subset of program evaluation.

Q. WHY IS EM&V AN IMPORTANT COMPONENT OF EE AND DSM PROGRAMS?

A. Aside from complying with Commission Rules and Orders, Duke Energy Ohio believes that successful, reliable and cost-effective EE and DSM programs require EM&V activities for several reasons. First and foremost, reliably measuring savings achieved from EE and DSM programs provides certainty for resource planning and provides accountability to customers and shareholders. Second, properly executed evaluation activities support program improvements. Accurately understanding savings estimates and program efficacy enables Duke Energy Ohio to drive increased energy savings through improved design, including insights on the targeting and marketing of specific programs to improve overall participation and how to most cost-effectively generate kW and kWh yield from our EE and DSM investments. In 2019, the Commission hired Evergreen Economics to update the State of Ohio Technical Resource Manual (TRM) that was originally filed on August

6, 2010 and updated by Michaels Energy on September 23, 2019 and filed in Case No. 19-02-EL-UNC on November 29, 2019. The Commission has not ruled on the TRM to date. Duke Energy Ohio will develop an EM&V schedule for each program as needed if the TRM is not approved by the time of program implementation.

Q. WHAT ARE THE COMPANY'S PROJECTIONS OF COST FOR EM&V?

A. If Duke Energy Ohio is required to perform EM&V on the programs, the costs are projected to be at or below 5 percent of program costs.

Q. WHO ARE THE EVALUATORS FOR DUKE ENERGY OHIO?

A. Duke Energy Ohio contracted with three evaluators for its EE and DSM process and impact evaluations for the 2017 – 2020 portfolio. The evaluators are Navigant Consulting, Inc., Opinion Dynamics Corp. and Nexant, Inc. In the event Duke Energy Ohio is required to perform EM&V on the programs, the current evaluators would be considered for any future evaluations.

Q. HOW DID DUKE ENERGY OHIO CHOOSE THESE EVALUATORS?

A. In 2014, Duke Energy Ohio issued a request for proposals (RFP) to provide EM&V services for its EE and DSM programs. The bidders were scored on project management skills, submitted quality plans, experience, and consistency with industry standards and best practices, among other criteria. The top scoring candidates, Navigant, Opinion Dynamics Corp and Nexant were then invited to provide proposals, including cost projections, for each DSM program to be evaluated. The evaluator for each program was selected based on the thoroughness and quality of the proposal, cost, and experience in evaluating similar programs. This comprehensive approach to selection has ensured competitive bidding, quality

control, and well-managed EM&V. This same process would be in place if Duke Energy Ohio is required to employ evaluators to conduct EM&V.

IV. COST EFFECTIVENESS

Q. IS DUKE ENERGY OHIO'S PROPOSED EE PORTFOLIO COST EFFECTIVE?

A. Yes. Duke Energy Ohio's EE portfolio is cost effective. Table 2 below provides cost effectiveness scores for each program and the overall portfolio:

Table 2*

Program/Portfolio Cost Effectiveness - 2021

Program	1	UCT	TRC	RIM	PCT
Residential Programs					
Energy Efficiency Education Program for Schools		3.32	3.20	1.54	16.35
Home Energy Comparison Report		2.00	2.00	1.15	
Low Income Neighborhood Program		0.64	0.64	0.54	2.21
Power Manager®		7.95	16.85	7.95	
Residential Energy Assessments		1.23	1.24	0.73	52.49
Smart $aver® Residential		3.30	1.93	1.27	4.77
Low Income Weatherization - Pay for Performance		1.76	8.16	0.93	
Total		3.03	2.53	1.53	6.80
Non-Residential Programs					
Power Manager® for Business		2.31	3.42	2.31	
PowerShare®		2.63	11.80	2.63	
Business Energy Saver		2.49	1.71	1.41	3.42
Total		2.51	2.39	1.69	3.75
Overall Portfolio Total		2.83	2.48	1.58	5.51

1 - Expected PJM credits have not been included in cost effectiveness.

*Programs without a Participant Test Score (PCT) are programs without participant costs resulting in a null participant score.

Q. HOW DID THE COMPANY DETERMINE COST EFFECTIVENESS?

A. The company utilized the DSMore^{TM} model to determine the value of the Avoided Costs of each measure and compared these benefits with the expected program costs, including EM&V, to determine cost-effectiveness. The Commission and Duke Energy's stakeholders are familiar with DSMore^{TM}, as Duke Energy Ohio has relied on DSMore^{TM} to evaluate its EE and DSM programs for over a decade.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.