

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke )  
Energy Ohio, Inc., for Approval of its 2021 ) Case No. 20-1444-EL-POR  
Energy Efficiency and Demand Side )  
Management Portfolio of Programs and )  
Cost Recovery Mechanism. )

In the Matter of the Application of Duke ) Case No. 20-1445-EL-ATA  
Energy Ohio, Inc., for Approval of Tariff )  
Amendments )

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**DIRECT TESTIMONY OF  
TRISHA A. HAEMMERLE  
ON BEHALF OF  
DUKE ENERGY OHIO, INC.**

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October 9, 2020

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**I. INTRODUCTION AND PURPOSE OF TESTIMONY**

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

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

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

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

9 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**  
10 **QUALIFICATIONS.**

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

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

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

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

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

**II. OVERVIEW OF THE PROPOSED PILOT PORTFOLIO PLAN**

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

17 A. There are two main components of Duke Energy Ohio's application. First, Duke  
18 Energy Ohio is filing its pilot program portfolio plan of four proposed residential  
19 EE and DSM programs, pursuant to Rule 4901:1-39-04. The programs are described  
20 in detail in the testimony of Company witness Rick Mifflin.

21 The second element of the Company's Portfolio Plan, pursuant to Rule  
22 4901:1-39-06, is the Company's proposed cost recovery mechanism: a rider, to be

1 titled Rider DSM. Rider DSM will allow the Company to (1) recover its program  
2 costs; and (2) a 4.5% after tax Joint Benefit Recognition Mechanism that, for the  
3 limited purpose of this pilot portfolio, will be based on the system benefits associated  
4 with the total avoided costs resulting from the transmission and distribution savings  
5 from customer participation in the Company's portfolio of approved programs. The  
6 total of \$7,767,050 in avoided transmission and distribution costs comprises less  
7 than half of the total avoided costs of \$18,033,004. At this time, the Company is not  
8 requesting to recover lost distribution revenues via Rider DSM because residential  
9 customers are subject to the Company's decoupling rider, Rider DDR (Distribution  
10 Decoupling Rider), which was approved, in Case Nos. 17-1263-EL-SSO, *et al.*, to  
11 continue through the end of the Company's current electric security plan (ESP).  
12 However, in the case that a change in rate design or elimination of the Company's  
13 Rider DDR should occur, Duke Energy Ohio requests the ability to adjust Rider  
14 DSM to ensure that it continues to be made whole for the lost distribution revenues,  
15 *i.e.*, the negative financial impact EE and DSM will have in the absence of Rider  
16 DDR.

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

20 A. First, electric distribution utilities are uniquely qualified and in the best position to  
21 systematically capture efficiency gains in the use of electricity and maximize those  
22 gains for the benefit of all customers. Duke Energy Ohio has a long history of  
23 delivering cost effective EE and DSM programs to its customers since 1992 and

1           thereby becoming customers' source for EE. Duke Energy Ohio understands  
2           changes in customer preferences and EE advancements that will allow the Company  
3           to continue to accommodate new technologies and design new and innovative  
4           program offerings.

5                     Second, residential customers are often overlooked in the competitive EE  
6           marketplace because their individual savings are small. Furthermore, they  
7           themselves often lack the knowledge, engagement, expertise and in many cases the  
8           necessary capital to pursue EE measures available in the marketplace. Program  
9           participation can provide insight into other conservation measures and offerings the  
10          customer may be eligible for through current and future offerings.

11                    Third, residential customers face economic challenges under the present  
12          COVID-19 pandemic that make it essential to minimize energy costs where possible.  
13          Residential customers are spending more time at home, and likely seeing increased  
14          usage during a time when many are unemployed or under-employed. All customers,  
15          not only program participants, benefit when the Company's overall load is reduced  
16          or load from peak times is shifted because this translates into the suppression of  
17          market prices for energy and capacity.

18                    Fourth, EE measures reduce the Company's need to purchase capacity. As  
19          it has done in the past, Duke Energy Ohio plans to continue to offer current planning  
20          year EE resources that qualify for the auction. Only resources that appear to be cost  
21          effective relative to the required incremental costs of Evaluation, Measurement, and  
22          Verification (EM&V) and auction administration will be offered. The auction  
23          proceeds will be reflected in the net benefit realized by customers in the form of a

1 credit or reduction in program costs. Duke Energy Ohio has sold 88.2 MWs of EE  
2 and DSM in the PJM 2021 – 2022 auction. Duke Energy Ohio anticipates entering  
3 the 2022 – 2023 auction once FERC allows auctions to continue.

4 Fifth, two of the Company’s four EE programs will actually spur  
5 participation in market-based offerings, thus benefiting the EE marketplace.  
6 Participants in the MyHER program receive actionable EE tips which, among other  
7 things, inform them of how they could benefit from investments in various EE  
8 measures available in the market. The engagement provided by the MyHER  
9 program empowers participants to be savvy consumers in the market rather than  
10 steering them to a particular brand or make of EE measure, which any similar  
11 program available in the market would be likely to do. The Pay for Performance  
12 Weatherization program enables customers who would otherwise likely lack market  
13 access entirely, to access EE measures available in the market through agencies who  
14 select EE measures for installation in these customers’ homes. The program  
15 motivates the agencies to select the most cost-efficient measures, as reimbursement  
16 is based on kWh savings. Thus, the proposed pilot portfolio programs fosters  
17 participation in the market for EE measures.

18 Finally, Duke Energy Ohio has a long history of delivering cost effective EE  
19 and DSM programs to its customers, who have come to expect and rely on them.  
20 The Company (or a predecessor) has been providing such programs to customers,  
21 with Commission approval, since 1992, or sixteen years before any statutory  
22 obligation to do so existed. Over the past nearly thirty years, Duke Energy Ohio has  
23 demonstrated that it has become recognized as its customers’ trusted source for EE

1 and DSM. The current programs have been approved through December 31, 2020.  
2 Although there is not currently a statutory requirement to offer EE and demand  
3 response beyond 2020, Duke Energy Ohio believes that its customers have come to  
4 rely on its EE and DSM programs to help them save energy, manage bills and  
5 become more sustainable for over a decade and that it is in customers' and the state  
6 of Ohio's best interest for the Company to offer programs that can continue to  
7 deliver savings and benefits to its customers.

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

10 A. The Company's programs have benefited and continue to benefit both program  
11 participants and the Company's customers generally. As demonstrated in Table 2 in  
12 Section IV below, the overall portfolio of the four programs and both of the two  
13 proposed programs which do not focus on low income customers pass the Ratepayer  
14 Impact Measure Test (RIM)<sup>1</sup>, which indicates that over time the rates of both  
15 program participants and non-participants will be lower because of the program  
16 being offered. Not only do program participants reduce their energy costs, they also  
17 provide energy and capacity benefits which will benefit the entire system, including  
18 non-participating customers. Reductions in energy demand reduces rates by  
19 enabling the Company to avoid additional capital expenditures associated with  
20 increased load, such as new substations, transformers, and power lines which may  
21 lead to market price suppression over time. Finally, reducing load reduces emissions

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<sup>1</sup> Also known as the Non-Participant Test.



1 associated with generating electricity, which generates environmental benefits for  
2 everyone in the Company's service territory.

3 **Q. WHY IS THE COMPANY PROPOSING A PILOT PORTFOLIO?**

4 A. Although the Company is no longer required to produce a specific amount of energy  
5 savings annually, the Company believes that EE programs are a necessity for its  
6 customers, both to help them manage and reduce their electric bills and to minimize  
7 unnecessary use and waste of energy and resources. Furthermore, EE in the  
8 residential sphere depends on an overall awareness and good habits that are built  
9 gradually over time. Thus, the Company is proposing a pilot that, at an extremely  
10 low cost, will allow the participation of the vast majority of its electric residential  
11 customers. Furthermore, the proposed pilot drives market participation, with two of  
12 four programs driving the installation of measures selected by either customers  
13 (MyHER) or agencies (the Pay for Performance Weatherization program). As for the  
14 Power Manager program, it provides new customers an opportunity to receive bill  
15 credits that reduce overall energy costs, but primarily is an efficient use of equipment  
16 that has already been installed and will continue to provide bill credits directly to  
17 customers who have come to expect them.

18 **Q. HOW WILL THE COMPANY ASSESS THE PILOT PORTFOLIO**  
19 **PERFORMANCE?**

20 A. The Company will consider the pilot successful, if the participating customers  
21 continue to realize efficiency savings and lower energy bills. In order to provide  
22 transparency around the on-going performance of the pilot, the Company will take  
23 additional actions beyond its comprehensive annual rider reconciliation filing

1 associated with the portfolio. First, the Company will take actions to continue to  
2 engage its Community Partnership Collaborative on a quarterly basis to keep  
3 interested stakeholders informed regarding ongoing pilot performance and garner  
4 input regarding programmatic enhancements. Second, the Company will make a  
5 formal mid-year performance update report with the Commission no later than  
6 August 15, 2021, that will provide actual performance details for the first six months  
7 of the pilot and will include customer participation, KWH savings and KW savings  
8 achieved and program expenditures.

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

12 A. In its application, Duke Energy Ohio is proposing a pilot portfolio of programs to  
13 be offered to its customers in 2021 that is small in scope and narrowly tailored; an  
14 exclusively residential customer-focused portfolio comprised of four programs that  
15 it is currently offering to its customers that was approved on September 27, 2017 in  
16 Case No. 16-576-EL-POR, as listed in Table 1. Collectively, participants in these  
17 programs comprise over half of the Company's residential customers. The  
18 Company proposes a budget of \$5,545,689 for program costs and also proposes a  
19 4.5% after-tax Joint Benefit Recognition Mechanism based on the system benefits  
20 that only account for the transmission and distribution costs avoided as a result of  
21 the programs in the portfolio, as detailed below and in the other testimonies. The  
22 amount of the Joint Benefit Recognition Mechanism associated with this pilot is  
23 projected to be \$449,014.

<b>Table 1</b>
<b>Residential Programs</b>
My Home Energy Report (MyHER) Low Income Neighborhood Power Manager® Low Income Weatherization - Pay for Performance

1 **Q. HOW DOES THIS PILOT PORTFOLIO COMPARE TO THE CURRENT**  
2 **APPROVED PORTFOLIO?**

3 A. First, the proposed voluntary pilot portfolio is small in scale and focuses on meeting  
4 needs that cannot be met by the market, specifically for residential customers. The  
5 Company has offered the four requested residential programs for years and  
6 customers have relied on Duke Energy Ohio to be a trusted source and an industry  
7 leader in EE. For comparison, the approved budget for the Company for 2020 was  
8 \$46,895,800, over seven times the current proposed budget. Second, the Joint  
9 Benefit Recognition Mechanism that is being proposed with this pilot portfolio  
10 allows customers and Duke Energy Ohio to jointly recognize the benefits that are  
11 realized by the utility system. The mechanism motivates the Company to maximize  
12 the avoided transmission and distribution costs that are realized by customers from  
13 the portfolio of programs. Over 94% of joint transmission and distribution benefits  
14 are realized by customers with less than 6% being retained by Duke Energy Ohio.  
15 While there are additional system benefits realized associated with avoided energy  
16 and capacity, the Joint Benefit Recognition Mechanism only considers the avoided

1 transmission and distribution benefits costs that are realized by all Duke Energy  
2 Ohio residential customers regardless of generation service provider.

3 **Q. WHY IS THE JOINT BENEFIT RECOGNITION MECHANISM**  
4 **APPROPRIATE AND NECESSARY?**

5 A. The programs offered all meet a need that cannot otherwise be met through market-  
6 based approaches. First, the two low-income programs help customers who  
7 represent a customer base underserved by the market due to their relative lack of  
8 purchasing power, among other things. With residents being home more often and  
9 the impact of COVID-19, this demographic benefits from EE and the resulting  
10 savings that will be realized on their bills.

11 Second, the Power Manager program has been a successful program for  
12 many years. With over 47,000 load controlling devices currently installed on  
13 residential air conditioning units, continuing to offer this program is a low-cost  
14 benefit to customers. The customers receive a monthly credit for allowing the  
15 Company to enable the customer's air conditioner to be cycled off and on during a  
16 Power Manager<sup>®</sup> event. The capacity performance achieved through Power  
17 Manager<sup>®</sup> is bid into the PJM auctions which helps offset the cost of the program.  
18 Because this program utilizes devices that are *already* in the field, its benefits could  
19 not be efficiently replicated via a market-based approach.

20 Third, the MyHER program is a low-cost wide-reaching program designed  
21 to educate, engage and empower customers to become more energy efficient and  
22 save energy; resulting in lower energy bills. A periodic engaging report that  
23 compares a customer's energy use to similar and energy efficient residences in the

1 same geographical area based upon the age, size and heating source of the home is  
2 sent to over 350,000 residential customers. The reports then empower the customers  
3 to become more efficient by providing them with targeted actionable EE  
4 recommendations as well as inform them of efficiency actions they may elect to take  
5 through efficiency opportunities provided in the competitive market. Duke Energy  
6 Ohio is in a unique position to offer customers MYHER, because of the long-  
7 standing relationship it has with customers through providing electric bills and  
8 distribution service. This relationship creates a unique level of trust which is critical  
9 in the engagement of customers around energy usage and the program's  
10 effectiveness and cannot be replicated in the market.

11 **Q. IS THE JOINT BENEFIT RECOGNITION MECHANISM NARROWLY**  
12 **TAILORED TO PROMOTE THE POLICIES IN R.C. 4928.02?**

13 A. Yes. The Joint Benefit Recognition Mechanism is narrowly tailored to promote at  
14 least three of the policies in R.C. 4928.02. First, the Joint Benefit Recognition  
15 Mechanism only reflects a small portion of the system benefits associated with  
16 transmission and distribution costs avoided as a result of the programs. Thus, it is  
17 narrowly tailored to ensure that retail electric service is “efficient”<sup>2</sup> and “reasonably  
18 priced”<sup>3</sup> and reflects the benefits only associated with the transmission and  
19 distribution system that directly benefits all customers. Second, by permitting the  
20 Company to offer programs that serve needs that could not otherwise be met through  
21 market-based approaches, the Joint Benefit Recognition Mechanism “provide[s a]

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<sup>2</sup> O.R.C. 4928.02(A).

<sup>3</sup> *Id.*

1 coherent, transparent means of giving appropriate incentives to technologies that can  
2 adapt successfully to potential environmental mandates.”<sup>4</sup> And finally, by  
3 permitting the Company to offer two low-income programs, the Joint Benefit  
4 Recognition Mechanism allows the Company to further the policy of “[p]rotect[ing]  
5 at-risk populations.”<sup>5</sup>

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

8 A. Yes. Duke Energy Ohio regularly solicits feedback and program suggestions from  
9 stakeholders as part of its Community Partnership Meetings (EE Collaborative),  
10 which has helped to design the portfolio included in this application. Specifically,  
11 the Company solicited and received feedback on the Market Potential Study that was  
12 used by the Duke Energy Ohio to inform its portfolio of programs.

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

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

19 **Q. PLEASE DISCUSS THE ROLE OF THE DUKE ENERGY OHIO**  
20 **COMMUNITY PARTNERSHIP COLLABORATIVE AS IT RELATES TO**

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<sup>4</sup> O.R.C. 4928.02(J).

<sup>5</sup> O.R.C. 4928.02(L).

1           **THE OPERATION OF THE COMPANY’S PROPOSED PORTFOLIO OF**  
2           **PROGRAMS.**

3    A.    The Duke Energy Ohio EE Collaborative comprises interested parties and  
4           stakeholders. Regular participants include the Office of the Ohio Consumers’  
5           Counsel, People Working Cooperatively, Ohio Hospital Association, Natural  
6           Resource Defense Council, and the Commission’s Staff. The Collaborative has a  
7           long and successful history with EE and DSM in Ohio.

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

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

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

19    A.    Duke Energy Ohio is proposing a new rider, Rider DSM, under which the Company  
20           would recover the following:

- 21           1.    The recovery of the actual costs incurred by Duke Energy Ohio to deliver  
22                   the approved portfolio of EE and DSM programs. EM&V costs would also  
23                   be included in the event Duke Energy Ohio needs to contract vendors to

1 evaluate the programs. The testimony of Company witness James E.  
2 Ziolkowski (Jim) explains how the calculation of such costs will include a  
3 credit for auction proceeds obtained from offering qualifying EE resources  
4 in the PJM Capacity Auction.

5 2. A Joint Benefit Recognition Mechanism of 4.5% after-tax, calculated to  
6 reflect only the system benefits associated with the avoided transmission and  
7 distribution costs resulting from customer participation in the Company's  
8 program portfolio.

9 3. Finally, in order to alleviate potential concerns associated with the cost  
10 associated with the pilot, the Company commits that the total amount that  
11 would be sought to be recovered from customers associated with the pilot  
12 will not exceed \$7.0 million and that the Company will limit program  
13 participation if necessary to comply with this cap.

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

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

21 First, the EE marketplace is dynamic, with both customer needs and  
22 available technologies varying year to year. The ability to review and adjust  
23 program design and scope, as well as size, based on recent outcomes facilitates cost-



1 effectiveness. Incorporating EE programs into base rates means that adjustments  
2 can only occur in base rate cases, which are often separated by six or more years,  
3 and therefore do not provide the same ability to rapidly pivot for the most up-to-date  
4 customer needs.

5 Second, rider recovery is consistent with the Company's past practice, even  
6 prior to statutory mandates. Prior to the enactment of the first statutory EE mandate,  
7 State Senate Bill 221, the Company recovered costs of its EE programs under Rider  
8 DSM.<sup>6</sup> Since SSB 221, the Company has recovered such costs under Rider SAW,  
9 and then Rider EE/PDR.<sup>7</sup> However, HB 6 appears to preclude the continuing use of  
10 Rider EE/PDR for EE programs, other than for reconciling programs offered  
11 pursuant to the state mandates, beyond 2020. Accordingly, the Company proposes  
12 to once again use a Rider DSM to recover for EE programs.

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

15 A. No, the Company will not make changes in 2021.

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

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<sup>6</sup> *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, *et al.*, Finding & Order, pp. 4-5 (July 11, 2007).

<sup>7</sup> *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, *et al.*, Opinion and Order, pp. 18, 42-43 (December 17, 2008) (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, Opinion & Order, pp. 6-7, 20 (August 15, 2012) (authorizing creation of Rider EE/PDR).

1 A. As mentioned previously, Duke Energy Ohio witness Rick Mifflin will provide a  
2 description of the mass market (residential) customer programs that are included in  
3 the Company's portfolio. Finally, Duke Energy Ohio witness Jim Ziolkowski will  
4 discuss the recovery of the new portfolio costs into the Rider DSM rate recovery  
5 mechanism, including the timing of true-up filings.

**III. EVALUATION, MEASUREMENT, AND VERIFICATION**

6 **Q. PLEASE PROVIDE AN EXPLANATION OF EM&V.**

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

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

14 A. Aside from complying with Commission Rules and Orders, Duke Energy Ohio  
15 believes that successful, reliable and cost-effective EE and DSM programs require  
16 EM&V activities for several reasons. First and foremost, reliably measuring savings  
17 achieved from EE and DSM programs provides certainty for resource planning and  
18 provides accountability to customers and shareholders. Second, properly executed  
19 evaluation activities support program improvements. Accurately understanding  
20 savings estimates and program efficacy enables Duke Energy Ohio to drive  
21 increased energy savings through improved design, including insights on the  
22 targeting and marketing of specific programs to improve overall participation and

1           how to most cost-effectively generate kW and kWh yield from our EE and DSM  
2           investments. In 2019, the Commission hired Evergreen Economics to update the  
3           State of Ohio Technical Resource Manual (TRM) that was originally filed on August  
4           6, 2010 and updated by Michaels Energy on September 23, 2019 and filed in Case  
5           No. 19-02-EL-UNC on November 29, 2019. The Commission has not ruled on the  
6           TRM to date. Duke Energy Ohio will develop an EM&V schedule for each program  
7           as needed if the TRM is not approved by the time of program implementation.

8       **Q.    WHAT ARE THE COMPANY’S PROJECTIONS OF COST FOR EM&V?**

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

11      **Q.    WHO ARE THE EVALUATORS FOR DUKE ENERGY OHIO?**

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

17      **Q.    HOW DID DUKE ENERGY OHIO CHOOSE THESE EVALUATORS?**

18      A.    In 2014, Duke Energy Ohio issued a request for proposals (RFP) to provide EM&V  
19      services for its EE and DSM programs. The bidders were scored on project  
20      management skills, submitted quality plans, experience, and consistency with  
21      industry standards and best practices, among other criteria. The top scoring  
22      candidates, Navigant, Opinion Dynamics Corp and Nexant were then invited to  
23      provide proposals, including cost projections, for each DSM program to be

1 evaluated. The evaluator for each program was selected based on the thoroughness  
 2 and quality of the proposal, cost, and experience in evaluating similar programs.  
 3 This comprehensive approach to selection has ensured competitive bidding, quality  
 4 control, and well-managed EM&V. This same process would be in place if Duke  
 5 Energy Ohio is required to employ evaluators to conduct EM&V.

**IV. COST EFFECTIVENESS**

6 **Q. IS THE COMPANY’S PROPOSED EE PORTFOLIO COST- EFFECTIVE?**

7 A. Yes. Duke Energy Ohio’s EE portfolio in this proposed pilot is cost effective. In  
 8 fact, the Company’s portfolio of programs is highly cost-effective, having overall  
 9 cost effectiveness scores of above 2.0 under each of the four standard industry-  
 10 accepted cost effectiveness tests. These high scores indicate that the portfolio  
 11 delivers over double the benefit to cost ratio required to break even under each of  
 12 the different perspectives on cost effectiveness. The program participants, the utility  
 13 system, and even non-participant customers will benefit greatly from Duke Energy  
 14 Ohio offering the portfolio of programs. Table 2 below provides cost effectiveness  
 15 scores for each program and the overall portfolio:

**Table 2<sup>8</sup>**

Program/Portfolio Cost Effectiveness - 2021				
Program	UCT	TRC	RIM	PCT
<b>Residential Programs</b>				
Low Income Neighborhood Program	0.64	0.64	0.54	2.21
Low Income Weatherization - Pay for Performance	1.76	8.16	0.93	
My Home Energy Report	2.00	2.00	1.15	
Power Manager®	7.95	16.85	7.95	
<b>Total</b>	<b>3.18</b>	<b>3.76</b>	<b>2.06</b>	<b>45.79</b>

<sup>8</sup> Programs without a Participant Test Score (PCT) are programs without participant costs, resulting in a null participant score.

1 **Q. HOW DID THE COMPANY DETERMINE COST-EFFECTIVENESS?**

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

V. **CONCLUSION**

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 A. Yes.