

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke)	
Energy Ohio, Inc., for Approval of its)	Case No. 16-576-EL-POR
Energy Efficiency and Peak Demand)	
Reduction Portfolio of Programs.)	

**DUKE ENERGY OHIO, INC.'S AMENDED APPLICATION
FOR ENERGY EFFICIENCY AND PEAK DEMAND REDUCTION
PORTFOLIO OF PROGRAMS**

I. Introduction

Now comes Duke Energy Ohio, Inc., (Duke Energy Ohio) pursuant to R.C. 4928.66, as amended by Substitute Senate Bill Number 310 (SB310) and Rule 4901:1-39-04, Ohio Administrative Code (O.A.C.), and submits its amended proposed portfolio of energy efficiency and demand reduction programs. Duke Energy Ohio is an electric distribution utility as defined in R.C. 4928.01(A)(6), and is therefore required by R.C. 4928.66, *et seq.*, to implement energy efficiency and peak demand reduction programs designed to achieve energy savings.

Duke Energy Ohio submitted its initial energy efficiency and peak demand reduction portfolio for approval by the Public Utilities Commission of Ohio (Commission) on June 15, 2016. The Company was granted a waiver to file the Market Assessment Study by August 15, 2016. This application provides an update to the initial portfolio filed earlier this year.

II. Discussion

A. Background, History and Executive Summary

With this Amended Application, the Company seeks approval pursuant to 4901:1-39-04, O.A.C., for portfolio comprised of the previously filed energy efficiency and peak demand reduction programs as well as new measures and one new program. In support of its Amended

Application, Duke Energy Ohio also submits testimony in this proceeding that discusses the amendments necessitated by the adoption of recommendations in the Market Assessment Study. Duke Energy Ohio witness Trisha A. Haemmerle provides an overview of the Application, and the relevant incentive and recovery mechanism. Ms. Haemmerle's testimony also describes the details of the amended portfolio with respect to cost effectiveness. Duke Energy Ohio witness Kevin A. Bright explains the additional measures and program.

This application supplements the portfolio filed on June 15, 2016 and includes only updates to what was previously filed. For clarity, the following tables provide a complete list of the programs filed in the initial June application.

In addition to the tables below, updated program summaries for each program, including a third new proposed program, are available in Appendix A.

B. Residential Programs

Prior Program Name	New Program Name	Program Description
Energy Efficiency Education Program for Schools	Energy Efficiency Education Program for Schools	The Energy Education Program for Schools is designed to educate students on the value of energy efficient behavior, promote on-site school audits and encourage students to install energy efficiency measures in the home.
Home Energy Comparison Report	My Home Energy Report (MyHER)	Compares household electric usage to similar, neighboring homes, and provides recommendations to lower energy consumption
Low Income Neighborhood Program	Low Income Neighborhood Program	Takes a non-traditional approach to serving income-qualified areas of the Duke Energy Ohio service territory by providing weatherization services, home audits and installation of energy efficiency measures.
Residential Energy Assessments	Residential Energy Assessments	A free on-site energy audit designed to help residential customers realize cost savings on their monthly energy bills through a more energy efficient home.
Smart Saver® Residential	Smart Saver® Residential	Offers customers a variety of energy conservation measures designed to increase energy efficiency in their homes.
Weatherization Pilot	Pay for Performance Weatherization	The Low Income Weatherization Pay for Performance program is designed to help Duke Energy Ohio income-qualified customers reduce their energy consumption and lower their energy cost.
Power Manager	Power Manager®	Residential Load Control Program
NEW PROGRAM	Power Manager® for Apartments	Residential Load Control Program

C. Non-Residential Programs

Prior Program Name	New Program Name	Program Description
Smart \$aver® Prescriptive	Smart \$aver® Prescriptive	Provides incentives to commercial and industrial consumers for installation of high efficiency equipment in applications involving new construction, retrofit, and replacement of failed equipment.
Smart \$aver® Custom	Smart \$aver® Custom	The purpose of this program is to encourage the installation of high efficiency equipment in new and existing nonresidential establishments
Small Business Energy Saver	Small Business Energy Saver	The purpose of this program is to reduce energy usage through the direct installation of energy efficiency measures within qualifying small non-residential customer facilities
PowerShare®	PowerShare®	Duke Energy Ohio's Non-Residential Peak Load Management Program
NEW PROGRAM	Power Manager® for Business	Duke Energy Ohio's Non-Residential Peak Load Management Program

The portfolio of programs above, along with one new program proposed herein, represent a comprehensive peak demand reduction and energy efficiency plan of action. The approach being pursued through the continuation of existing programs, introduction of new proposed programs and the addition of multiple new measures will provide market access for cost-effective demand reduction and energy efficiency for all customer classes. In addition to the Company proposed programs, Duke Energy Ohio also offers the Self-Direct program available to qualifying Mercantile customers.

Implementation of Duke Energy Ohio's portfolio of programs is expected to enable Duke Energy Ohio to meet or exceed the statutory benchmarks for peak demand reduction and energy efficiency for the timeframe of this portfolio, January 1, 2017 – December 31, 2019.

In compliance with the requirements of 4901:1-39, O.A.C, Duke Energy Ohio completed a Market Assessment study. The Market Assessment study prepared by Nexant addresses any potential gaps in Duke Energy Ohio's program offerings. Duke Energy Ohio requested a waiver in these proceedings for Rule 4901:1-39-04(A) and requested an October 15, 2016 due date. The Commission granted the waiver effective to June 15, 2016. This expedited date did not allow enough time for Nexant to complete the Market Assessment study that is utilized to ensure that the Company's portfolio is consistent with changes made to the methodology for counting of energy efficiency savings that were instituted with the passage of Ohio SB310 in 2014. Duke Energy Ohio requested an extension to file the assessment of potential study to October 15, 2016 along with the opportunity to adjust the portfolio with the results from the study, including the historical performance versus the baselines. On June 13, 2016, the Commission ordered the Market Assessment study to be filed on August 15, 2016.¹ Duke Energy Ohio filed the study on August 15, and is filing this Amended Application to integrate the findings into its programs. These changes were discussed in detail with the Duke Energy Community Partnership (Collaborative).

¹ *In the Matter of the Application of Duke Energy Ohio, Inc., for a Waiver*, Case No. 16-1017-EL-WVR, Entry (June 13, 2016).

Duke Energy Ohio submits the following pursuant to Rule 4901:1-39-03, O.A.C., that states as follows with respect to Program Planning Requirements:

(A) Assessment of potential.

Prior to proposing its comprehensive energy efficiency and peak-demand reduction program portfolio plan, an electric utility is required to conduct an assessment of potential energy savings and peak-demand reduction from adoption of energy efficiency and demand-response measures within its certified territory, which are to be included in the electric utility's program portfolio filing pursuant to rule 4901:1-39-04 of the Administrative Code. An electric utility may collaborate with other electric utilities to co-fund or conduct such an assessment on a broader geographic basis than its certified territory. However, such an assessment must also disaggregate results on the basis of each electric utility's certified territory. Such assessment shall include, but not be limited to, the following:

(1) *Analysis of technical potential.* Each electric utility shall survey and characterize the energy-using capital stock located within its certified territory and quantify its actual and projected energy use and peak demand. Based upon the survey and characterization, the electric utility shall conduct an analysis of the technical potential for energy efficiency and peak-demand reduction obtainable from applying alternate measures.

Duke Energy Ohio contracted with Nexant to perform a Market Potential Study which includes an analysis of technical potential based on the current state of energy-using equipment located in the Duke Energy Ohio territory. This Market Potential study was filed on August 15, 2016 and the results of this study will be used to further refine the EE and DR portfolio submitted by the Company in this filing.

(2) *Analysis of economic potential.*

For each alternate measure identified in its assessment of technical potential, the electric utility shall conduct an assessment of cost-effectiveness using the Total Resource Cost test.

As part of the Market Potential Study referenced above, Nexant provided an analysis of the Economic Potential as calculated using the total resource cost test.

(3) Analysis of achievable potential.

For each alternate measure identified in its analysis of economic potential as cost-effective, the electric utility shall conduct an analysis of achievable potential. Such analysis shall consider the ability of the program design to overcome barriers to customer adoption, including, but not limited to, appropriate bundling of measures.

As part of the Market Potential Study referenced above, Nexant provided an analysis of a set of bundled measures that will be designed to overcome barriers to customer adoption.

(4) For each measure considered, the electric utility shall describe all attributes relevant to assessing its value, including, but not limited to potential energy savings or peak-demand reduction, cost, and non-energy benefits.

This information was included within the final version of the Market Potential Study. Duke Energy Ohio used this information to adjust the portfolio with the results from the study including the historical performance versus the baselines.

4901:1-39-04(C) (2) Stakeholder Participation

As noted above, Duke Energy Ohio works closely and cooperatively with external stakeholders through the Collaborative process. The Company's energy efficiency Collaborative first began in 1992. Since that time, the Company has continued to engage with its Collaborative members on the design and operation of existing programs as well as ideas for new programs. Duke Energy Ohio seeks to obtain consensus approval from the Collaborative on proposals to be filed with the Commission. This same approach was employed in the development of the Company's current programs, which were filed and subsequently approved by the Commission for implementation through December 31, 2016, and is being used with respect to the portfolio of programs that the Company is requesting approval of in this application. Duke Energy has

had meetings with external stakeholders and multiple Duke Energy Collaborative meetings to discuss the portfolio.

4901:1-39-04 (C) (3) Other Public Utilities' Programs

Although Duke Energy Ohio does not coordinate its programs with the other public utilities, it does participate in ongoing dialogue with some of the other utilities to understand both the successes and challenges associated with each company's portfolios of programs. The Company does coordinate the design and implementation of its programs with its affiliate utility located in Northern Kentucky as well as with all other utility affiliates of Duke Energy (Duke Energy Kentucky, Duke Energy Indiana, and Duke Energy Carolinas).

4901:1-39-04 (C) (4) Existing Programs

Duke Energy Ohio began implementation of its existing programs on August 15, 2012. The Company provided the response to the requested items for each of the existing previously approved programs as well as a description of two proposed programs and additional information as required by O.A.C. 4901:10-39-04(C)(5) in the initial application. The initial application also described how Duke Energy Ohio will implement Mercantile Self-Direct, T&D projects, and Smart Grid programs.

4901:1-39-04 (B) - Cost Effectiveness of Programs

The cost-effectiveness tests were recalculated to adjust for the results from the Market Assessment Study for each program filed in June 2016.

Table 1:

Program/Portfolio Cost Effectiveness - 2017-2019				
Program	UCT	TRC	RIM	PCT
Residential Programs - EE				
Energy Efficiency Education Program for Schools	3.22	4.51	1.56	
Home Energy Comparison Report	1.73	1.73	1.06	
Low Income Neighborhood Program	0.64	1.34	0.54	
Power Manager®	7.46	15.10	7.46	
Power Manager® for Apartments	2.08	3.14	2.08	
Residential Energy Assessments	1.44	1.58	0.90	
Smart Saver Residential	2.19	2.11	1.10	5.35
Low Income Weatherization - Pay for Performance	5.71	5.71	1.85	
Total	3.45	4.01	2.07	8.48
Non-Residential Programs				
Mercantile Self-Direct	3.69	0.73	1.66	1.24
Power Manager® for Business	3.07	4.84	2.92	
PowerShare®	2.71	10.52	2.71	
Small Business Energy Saver	3.05	1.82	1.81	2.53
Smart Saver Non Residential Custom	2.81	0.80	1.46	1.47
Smart Saver Non Residential Performance Incentive Program	3.34	1.19	1.60	2.16
Smart Saver Non Residential Prescriptive	2.32	1.47	1.38	2.47
Total	2.77	1.49	1.70	2.13
Overall Portfolio Total	3.12	2.30	1.89	3.17

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

D. New Proposed Programs

The Company proposed two new programs within the June 2016 application. The residential program is called “Power Manager® for Apartments” and the non-residential program is called “Power Manager® for Business”. Both programs were presented to the Collaborative in the second quarter 2016 meeting and outlined in the initial application. With this Amended

Application, Duke Energy Ohio is requesting an additional new non-residential program: Smart Saver® Non-Residential Performance Incentive Program.

Information related to the new proposed program is discussed in the testimony of Duke Energy Ohio witness Kevin A. Bright, included with this Amended Application.

E. Description and Regulatory Requirements for the New Program

The June 15, 2016 portfolio included program descriptions for each program filed. Below is the description for the newest proposed program, Smart Saver® Non-Residential Performance Incentive.

The following responds to Rule 4901:1-39-03(B)(1) through (B)(13), O.A.C.

Program Design Criteria:

Smart Saver® Non-Residential Performance Incentive Program:

(1) Cost Effectiveness

	Utility Test	TRC Test	RIM Test	Participant Test
	3.34	1.19	1.60	2.16

(2) The program benefits are greater than program costs, and thus lowers overall electric rates for non-participating customers in the non-residential class.

(3) This program offering broadens the availability of incentives for measures we have been unable to cost effectively and practically offer through either the Smart Saver® Prescriptive or Custom programs.

(4) Regarding the basis for calculating energy savings and peak demand reduction, the technical review feature of the program serves to uniquely evaluate each project for its energy and capacity savings estimates using reasonable assumptions and calculation

methodology as well as advanced statistical analysis. The unique feature of the program is the ability to measure actual performance and award a total incentive based on verified savings amounts. Participants are defined as 1 kWh. Based on the projected participation, the forecasted energy and peak demand reduction associated with the Smart Saver[®] Performance Incentive program are summarized in the table below:

	2017	2018	2019
kW	72	367	1,394
kWh	631,258	3,213,603	12,213,526
Participants	588,871	2,997,816	11,393,413

(5) The program team will provide periodic reports to participants during the performance measurement period. This periodic reporting may enable customers to gain better control and develop more robust protocols, should they choose to do so, for maintaining facility operations.

(6) Given the nature of the program, the Smart Saver[®] Performance Incentive program is solely targeted at non-residential customers. The intention is that this program will help improve the opportunity for this non-residential customer group to participate in energy efficiency programs. Less sophisticated non-residential customers, who cannot support engineering analysis of more complex projects will also benefit from the measured savings approach.

(7) The Smart Saver[®] Performance Incentive program will primarily benefit retrofitting and retro-commissioning of existing capital stock—the existing base of businesses in the Duke Energy Ohio service area. There is also the potential for participation for new business built in the service area to participate.

(8) Potential to integrate the proposed program with similar programs offered by other utilities, if such integration produces the most cost-effective result and is in the public interest.

(9) The program design will facilitate bundling of energy efficiency measures as the results of multiple measures can be verified during the performance phase of the program. Duke Energy does not foresee integration of this program with any offered by other utilities, but will seek to make the simultaneous operation of this program with other non-residential programs as seamless as possible.

(10) This program leverages equipment, installation and software vendors already used in Ohio. The intent is to broaden participation to new vendors who provide the types of measures typically not incentivized through Duke Energy Ohio's existing non-residential programs, specifically those vendors specializing in retro-commissioning.

(11) The design of this program should promote adoption of additional energy efficiency measures that were hard to provide incentives for under our existing non-residential programs.

(12) This program was developed based on the several years of experience with the existing non-residential Smart Saver[®] Custom program in Duke Energy Ohio. This program will share many of the same internal resources as the Custom program, which will speed our ability to deliver the program to customers.

(13) The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.

F. Baselines

Pursuant to Revised Code 4928.66(a), Duke Energy Ohio presents the following with respect to the calculation of its baseline and benchmarks:

S.B. 310 Percentage EE/PDR Benchmarks:

Table 2 provides the cumulative percentage EE/PDR Benchmarks
Table 2:²

Year	Energy Consumption MWh	Peak Demand MW
2017	7.20%	7.00%
2018	8.20%	7.75%
2019	9.20%	8.50%

Table 3 provides the Duke Energy Ohio S.B. 310 EE and PDR Reduction Requirements

Table 3:³

Year	Energy Efficiency Benchmarks Percentage	Cumulative Required Energy Efficiency Savings MWh	Peak Demand Reduction Benchmarks Percentage	Cumulative Required Peak Demand Reductions MW
2017	7.20%	1,489,662	7.00%	303.7
2018	8.20%	1,692,875	7.75%	334.6
2019	9.20%	1,896,470	8.50%	365.4

² As defined in R.C. 4928.66.

³ Table 3 is based on the 2016 Long-Term Forecast Report, *In the Matter of the Long-Term Forecast and Resource Plan of Duke Energy Ohio, Inc.*, Case No. 16-588-EL-FOR, Application, (March 18, 2016).

G. Cost Recovery

Duke Energy Ohio proposes to recover the costs and any lost revenues incurred to deliver energy efficiency and peak demand reduction and the ability to earn an incentive, based upon its ability to exceed its efficiency savings targets that are required of all electric distribution customers by Ohio law. In the case that Duke Energy Ohio reaches the required level of energy savings, it shall be eligible to retain a percentage of the after-tax net system benefits (avoided costs less the costs of delivering the efficiency) achieved from the portfolio of programs as an incentive. The Company's after-tax shared savings incentive shall entitle it to 10% of the after-tax net benefit, which means that 90% of the benefit achieved will be retained by Duke Energy Ohio's customers.

The incentive that the Company is eligible to earn will be calculated on a shared savings pool which is based upon the net system benefits that are delivered by Duke Energy Ohio's approved portfolio of programs in a given year, excluding any impacts from the Self-Direct Mercantile Program, as well as the benefits realized through smart grid and transmission and distribution investments.

The proposed 10% after-tax shared savings mechanism proposed by the Company is consistent with other incentive mechanisms that have been approved by the Commission. Should the Commission elect to place an incentive cap on Duke Energy Ohio's shared savings incentive, it believes that an after-tax incentive at \$10 million annually would be appropriate.

III. Conclusion

Consistent with the information provided above as supported by the Company witnesses in testimony included with the initial application and this Amended Application and supporting

testimony, Duke Energy Ohio respectfully requests that the Commission approve the cost recovery mechanism proposed, along with the new energy efficiency and peak demand reduction programs for inclusion within its existing portfolio. The Company believes that it is important the Commission approve the Company's application as close to January 1, 2017 as possible, in order to ensure that the Company has an approved portfolio of programs and associated cost recovery mechanism in place so as to avoid interruption in the offering of programs to customers since its existing portfolio terminates on December 31, 2016. A prolonged delay in approval will negatively impact Duke Energy Ohio's ability to achieve its 2017 SB310 benchmarks and will negatively affect customers' ability to become more efficient and take control of their energy bills.

Respectfully submitted,

Duke Energy Ohio, Inc.



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CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing was delivered by U.S. mail (postage prepaid), personal delivery, or electronic mail, on this 14th day of October 2016, to the following parties.


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Smart \$aver® Residential	
Program Description	This program includes measures for lighting, HVAC Equipment and Services, Save Water and Energy Kits, and Multifamily products and services.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 1,009,178
	2018: 2,050,379
	2019: 2,955,537
Estimated Impacts*	2017: 37,571,275 kWh; 4,224 kW
	2018: 75,104,324 kWh; 8,484 kW
	2019: 111,594,952 kWh; 12,685 kW
Program Participation Requirements	Duke Energy Ohio served homeowners or renters currently residing or building a single family residence, condominium, duplex, apartment, or mobile home. The Multifamily Energy Efficiency Products & Services program is available to Duke Energy Ohio served apartments on a residential rate.
Marketing Approach	Including but not limited to: Email, Bill Messages, Bill Envelopes, Social Media, Direct Mail, Printed Collateral, Earned Media, Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$7,879,154
	2018: \$7,726,410
	2019: \$7,065,579
Participant Costs (if any)	Varies by Measure
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Residential Energy Assessments	
Program Description	Residential Energy Assessments is a free in-home assessment designed to help customers reduce energy usage and energy cost. Customers receive an Energy Efficiency Kit with a variety of measures that can be directly installed by the energy specialist at the time of the assessment. The kit may include measures such as energy efficient lighting, low flow water measures, outlet/switch gaskets, weather stripping and energy saving tips.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 17,500
	2018: 35,175
	2019: 53,025
Estimated Impacts*	2017: 2,050,716 kWh; 241 kW
	2018: 4,121,938 kWh; 484 kW
	2019: 6,213,668 kWh; 729 kW
Program Participation Requirements	Available to individually metered residential customers receiving concurrent service from the Company. On-site assessments are only available to owner-occupied single family residences with at least 4 months of billing history.
Marketing Approach	Targeted mailings to pre-qualified residential customers. E-mail marketing will be used when targeted customers have elected to receive offers electronically. Home Energy House Call program information and an online assessment request form is available on Duke Energy Ohio's website.
Program Implementation	Third Party Vendors
Program Budget**	2017: \$1,033,319
	2018: \$1,057,844
	2019: \$1,063,925
Participant Costs (if any)	Not applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

My Home Energy Report (MyHER)	
Program Description	The My Home Energy Report ("MyHER") is an energy efficiency program based on behavioral science to motivate energy efficient behavior. This program uses peer group of homes of similar size, age, type of heating fuel and geography to highlight the customer's variance in energy use when compared to the "Average Home" and "Efficient Home" of the peer group to engage the customer.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 400,052
	2018: 400,853
	2019: 401,661
Estimated Impacts*	2017: 97,847,412 kWh; 25,019 kW
	2018: 98,463,103 kWh; 25,177 kW
	2019: 98,559,874 kWh; 25,201 kW
Program Participation Requirements	The audience is Duke Energy Ohio customers who are identified through demographic information as likely to decrease energy usage in response to the information contained in the My Home Energy Report document. These customers reside in individually-metered, single-family residences and multi-family residences receiving concurrent service from the company.
Marketing Approach	The Program will be marketed through direct mail. The reports are also available to customers on-line or via mobile channels.
Program Implementation	Third Party Vendors
Program Budget**	2017: \$4,622,106
	2018: \$4,708,403
	2019: \$4,745,667
Participant Costs (if any)	Not applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Energy Efficiency Education for Schools	
Program Description	The Energy Efficiency Education Program for Schools is available to students K-8 enrolled in public and private schools, who reside in households served by Duke Energy Ohio. The primary goal of this program is to educate students on the importance of energy conservation and teach them how to save energy in their homes. This program includes both an energy saving curriculum for the school classroom and an Energy Efficiency Starter kit provided to participating student household at no direct cost.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 6,000
	2018: 12,000
	2019: 18,000
Estimated Impacts*	2017: 3,209,568 kWh; 863kW
	2018: 6,419,136 kWh; 1,727 kW
	2019: 9,628,704 kWh; 2,590 kW
Program Participation Requirements	Eligible participants include Duke Energy Ohio residential customers who reside in households with school-age children enrolled in public and private schools.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Earned Media, Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$503,192
	2018: \$506,039
	2019: \$507,834
Participant Costs (if any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Power Manager®	
Program Description	Power Manager® is a residential load control program. It is used to reduce electricity demand by controlling residential air conditioners and electric water heaters during periods of peak demand.
Program Objectives	Regarding the basis for the load impacts of Power Manager and PowerShare, which have been evaluated annually for several years, Duke Energy Ohio has contracted third-party EM&V consultants to provide annual evaluations. These evaluations follow recommended industry practices, PJM guidelines, and/or are based on primary data collected from DR devices attached to the customers' air conditioner, data loggers, and interval/AMI meters.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 45,477
	2018: 46,894
	2019: 48,188
Estimated Impacts*	2017: Not Applicable kWh; 48,589 kW
	2018: Not Applicable kWh; 49,800 kW
	2019: Not Applicable kWh; 50,859 kW
Program Participation Requirements	This program is available to Duke Energy Ohio residential customers residing in owner-occupied, single-family residences with functioning outdoor air conditioning and/or eligible water heaters.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Telemarketing, Other Duke Energy program promotion
Program Implementation	Third Party Vendors
Program Budget**	2017: \$2,058,344
	2018: \$1,984,209
	2019: \$2,039,294
Participant Costs (if any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency and demand response measures and customer engagement will advance the adoption of energy efficiency and demand response measures and behavior.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Low Income Neighborhood	
Program Description	The Duke Energy Ohio Neighborhood Program takes a non-traditional approach to serving income-qualified areas of the Duke Energy Ohio service territory. The program engages targeted customers with personal interaction in a familiar setting. Ultimately, the program aims to reduce energy consumption by directly installing measures and educating the customer on better ways to manage their energy bills.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 1,339
	2018: 2,678
	2019: 4,017
Estimated Impacts*	2017: 600,001 kWh; 184kW
	2018: 1,200,001 kWh; 367 kW
	2019: 1,800,002 kWh; 551 kW
Program Participation Requirements	This program will be available to income qualified homeowners and renters occupying single family and multi-family dwellings in the target neighborhoods that have electric service provided by Duke Energy Ohio.
Marketing Approach	Including but not limited to: Door Hangers, Social Media, Direct Mail, Press Releases, Community Partnerships, Community Publications.
Program Implementation	Third Party Vendors
Program Budget**	2017: \$587,106
	2018: \$588,437
	2019: \$590,590
Participant Costs (If any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Low Income Weatherization - Pay for Performance	
Program Description	The Low Income Weatherization - Pay for Performance program is designed to help Duke Energy Ohio income-qualified customers reduce their energy consumption and lower their energy cost. The weatherization program will also educate customers on their energy usage and other opportunities that can help reduce energy consumption and lower energy costs. Duke Energy will partner with the Ohio Home Weatherization Assistance Program to provide customers with weatherization services and other energy efficient measures such as refrigerators, water saving devices and efficient lighting. Agencies will be reimbursed a set fee per measure installed in Duke Energy customers' homes based on the average kWh savings per measure.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 15,685
	2018: 31,369
	2019: 47,054
Estimated Impacts*	2017: 5,679,331 kWh; 1,209 kW
	2018: 11,358,662 kWh; 2,417 kW
	2019: 17,037,993 kWh; 3,626 kW
Program Participation Requirements	This program will be available to income qualified homeowners and renters occupying single family and multi-family dwellings that have electric service provided by Duke Energy Ohio.
Marketing Approach	The marketing strategy for this program will focus on utilizing low income agencies as the primary method for recruiting and informing customers of this program. Additional marketing will include mailers, flyers and direct contact between agencies and customers.
Program Implementation	Third Party Vendors
Program Budget**	2017: \$890,149
	2018: \$893,994
	2019: \$896,213
Participant Costs (if any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Smart \$aver® Non-Residential Prescriptive	
Program Description	The Smart \$aver® Non-Residential Prescriptive Incentive provides incentives to commercial and industrial consumers for installation of energy efficient equipment in applications involving new construction, retrofit, and replacement of failed equipment.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 673,524
	2018: 1,361,402
	2019: 2,062,941
Estimated Impacts*	2017: 44,235,694 kWh; 6,170 kW
	2018: 89,476,710 kWh; 12,484 kW
	2019: 135,769,291 kWh; 18,951 kW
Program Participation Requirements	All non-residential customers served by Duke Energy in Ohio are eligible for the Smart \$aver® program. Although customers may choose to opt-out of the Duke Energy program and energy efficiency rider.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Newsletters, Account and Segment Managers, Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$6,661,057
	2018: \$6,814,433
	2019: \$6,961,985
Participant Costs (if any)	Varies by Measure
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Smart Saver® Non-Residential Custom	
Program Description	Duke Energy's Smart Saver® Non-Residential Custom Incentive offers financial assistance to qualifying commercial, industrial and institutional customers to enhance their ability to adopt and install cost effective electrical energy efficiency projects.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 15,702
	2018: 28,735
	2019: 42,159
Estimated Impacts*	2017: 23,557,184 kWh; 2,689 kW
	2018: 43,109,647 kWh; 4,921 kW
	2019: 63,248,684 kWh; 7,220 kW
Program Participation Requirements	All non-residential customers served by Duke Energy in Ohio are eligible for the Smart Saver® program. Although customers may choose to opt-out of the Duke Energy program and energy efficiency rider.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Newsletters, Account and Segment Managers, Trade Allies, and Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$3,008,863
	2018: \$2,659,400
	2019: \$2,751,076
Participant Costs (if any)	Varies by Measure
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Small Business Energy Saver	
Program Description	The objective of the Small Business Energy Saver is to enable the installation of high efficiency equipment in existing small non-residential facilities.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 24,713,200
	2018: 48,601,700
	2019: 69,695,700
Estimated Impacts*	2017: 26,257,838 kWh; 5,907 kW
	2018: 51,639,429 kWh; 11,617 kW
	2019: 74,051,858 kWh; 16,659 kW
Program Participation Requirements	Non-residential small business customers served by Duke Energy in Ohio are eligible for the Small Business Energy Saver Program.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Newsletters, Account and Segment Managers, Trade Allies, and Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$5,252,572
	2018: \$5,098,983
	2019: \$4,524,267
Participant Costs (if any)	Varies by Measure
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

PowerShare®	
Program Description	PowerShare® is Duke Energy Ohio's demand response program offered to commercial and industrial customers. The program offers various options for customers to choose from.
Program Objectives	Regarding the basis for the load impacts of Power Manager and PowerShare, which have been evaluated annually for several years, Duke Energy Ohio has contracted third-party EM&V consultants to provide annual evaluations. These evaluations follow recommended industry practices, PJM guidelines, and/or are based on primary data collected from DR devices attached to the customers' air conditioner, data loggers, and interval/AMI meters.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 43,100
	2018: 30,000
	2019: 30,000
Estimated Impacts*	2017: Not Applicable kWh; 46,203 kW
	2018: Not Applicable kWh; 32,160 kW
	2019: Not Applicable kWh; 32,160 kW
Program Participation Requirements	All non-residential customers who are able to meet the load shedding requirements.
Marketing Approach	Including but not limited to: Account and Segment Managers
Program Implementation	Third Party Vendors
Program Budget**	2017: \$3,029,934
	2018: \$2,423,793
	2019: \$2,447,707
Participant Costs (if any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency and demand response measures and customer engagement will advance the adoption of energy efficiency and demand response measures and behavior.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program are provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Power Manager® for Apartments	
Program Description	Power Manager® for Apartments is a residential load control program focused on Apartment Complexes/Communities. It is used to reduce electricity demand by controlling residential air conditioners and/or electric water heaters during periods of peak demand.
Program Objectives	Regarding the basis for the load impacts of Power Manager and PowerShare, which have been evaluated annually for several years, Duke Energy Ohio has contracted third-party EM&V consultants to provide annual evaluations. These evaluations follow recommended industry practices, PJM guidelines, and/or are based on primary data collected from DR devices attached to the customers' air conditioner, data loggers, and interval/AMI meters.
Customer Class	Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 94
	2018: 476
	2019: 915
	2017: Not Applicable kWh; 67 kW
Estimated Impacts*	2018: Not Applicable kWh; 399 kW
	2019: Not Applicable kWh; 792 kW
Program Participation Requirements	This program is available to Duke Energy Ohio residential customers residing in apartments with functioning outdoor air conditioning and/or eligible water heaters.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Other Duke Energy program promotion
Program Implementation	Third Party Vendors
Program Budget**	2017: \$116,217
	2018: \$141,115
	2019: \$185,045
Participant Costs (if any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency and demand response measures and customer engagement will advance the adoption of energy efficiency and demand response measures and behavior.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Power Manager® for Business	
Program Description	Provides business customers with the opportunity to participate in demand response, earn incentives and realize optional energy efficiency benefits. This program is designed as a flexible offer that provides small-to-medium size business customers with options on device types as well as level of demand response participation. Customers first select the type of device from two available options: thermostat or switch.
Program Objectives	Regarding the basis for the load impacts of Power Manager and PowerShare, which have been evaluated annually for several years, Duke Energy Ohio has contracted third-party EM&V consultants to provide annual evaluations. These evaluations follow recommended industry practices, PJM guidelines, and/or are based on primary data collected from DR devices attached to the customers' air conditioner, data loggers, and interval/AMI meters.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 138
	2018: 1,625
	2019: 3,745
Estimated Impacts*	2017: 62,631 kWh; 270 kW
	2018: 739,414 kWh; 3,430 kW
	2019: 1,705,046 kWh; 10,489 kW
Program Participation Requirements	This program is available to eligible Duke Energy Ohio small and medium commercial establishments.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Other Duke Energy program promotion
Program Implementation	Third Party Vendors
Program Budget**	2017: \$531,272
	2018: \$454,686
	2019: \$691,685
Participant Costs (If any)	Not Applicable
Market Transformation Activities	The Company believes promoting investment in energy efficiency and demand response measures and customer engagement will advance the adoption of energy efficiency and demand response measures and behavior.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

Smart Saver® Non-Residential Performance Incentive Program	
Program Description	The purpose of this program is to encourage the installation of high efficiency equipment in new and existing non-residential establishments.
Program Objectives	Regarding the basis for the load impacts, DSM analysts and program managers determine the impact estimates using recognized industry standards such as IPMVP and UMP, information from DSM consultants including Morgan Marketing Partners and CleaResults, TRMs, and other utility third-party EM&V results of similar programs. Duke Energy requires all contracted third-party EM&V consultants to review the ex-ante savings for each program as a separate deliverable of each evaluation and uses the impact results of the evaluations to update the program and measure impacts.
Customer Class	Non-Residential
Duration	2017 - 2019
Estimated Program Participation*	2017: 588,871
	2018: 3,586,687
	2019: 14,980,100
Estimated Impacts*	2017: 631,258 kWh; 72 kW
	2018: 3,844,861 kWh; 439 kW
	2019: 16,058,537 kWh; 1,833 kW
Program Participation Requirements	Non-residential business customers served by Duke Energy in Ohio are eligible for the Smart Saver® Non-Residential Performance Incentive Program.
Marketing Approach	Including but not limited to: Email, Social Media, Direct Mail, Printed Collateral, Newsletters, Account and Segment Managers, Trade Allies, and Other Duke Energy collaboration efforts
Program Implementation	Third Party Vendors
Program Budget**	2017: \$227,863
	2018: \$423,755
	2019: \$1,213,835
Participant Costs (if any)	Varies by Measure
Market Transformation Activities	The Company believes promoting investment in energy efficiency measures and customer engagement will advance the adoption of energy efficiency measures and behavior. The Company will continue to examine the level of free ridership in each of these programs as a potential indicator of market transformation.
Description of Evaluation, Measurement, and Verification	The EM&V plans for each program were provided in Exhibit TAH1.

*Cumulative impacts and participants

**Program budget does not include EM&V costs

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Summary: Amended Application Duke Energy Ohio, Inc.'s Amended Application for Energy Efficiency and Peak Demand Reduction Portfolio of Programs electronically filed by Dianne Kuhnell on behalf of Duke Energy Ohio, Inc. and Spiller, Amy B. and Watts, Elizabeth H.