DIRECT TESTIMONY OF MICHAEL GOLDENBERG
SENIOR STRATEGY AND COLLABORATION MANAGER
DUKE ENERGY BUSINESS SERVICES LLC
ON BEHALF OF
DUKE ENERGY INDIANA, LLC
CAUSE NO. 43955 DSM-4 BEFORE THE
INDIANA UTILITY REGULATORY COMMISSION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Michael Goldenberg, and my business address is 1000 E. Main Street, Plainfield, Indiana 46168.

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

A. I am employed by Duke Energy Business Services LLC. Duke Energy Business Services LLC is an affiliate of Duke Energy Indiana, LLC ("Duke Energy Indiana" or "Company"). My title is Senior Strategy and Collaboration Manager.

Q. WHAT DUTIES AND RESPONSIBILITIES DO YOU HAVE IN YOUR CURRENT POSITION?

A. As Senior Strategy and Collaboration Manager, I have responsibilities for Duke Energy Indiana Energy Efficiency initiatives including compliance, filings and the Company's Oversight Board.

Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND.

A. I have a B.S. Degree from American University and a Master's Degree in Business Management and Finance from Cornell University.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.

A. I have held various positions within the Company's Marketing and Sales areas since my employment in 1990. After starting with Public Service Indiana as a National Accounts Executive, I moved to Manager, Commercial Sales for PSI Energy. Following that position, I took on responsibility for the Company's first foray into Demand Side Management ("DSM") as Manager, DSM Operations, that oversaw the procuring of vendors, administration of all program management, implementation, and vendor management. After the Cinergy merger, I became Director, Products and Services with responsibility for all regulated and non-regulated products and services. I continued in this position following the Duke Energy merger and managed the energy efficiency ("EE") and non-regulated portfolio across the Company's five (5) jurisdictions. As Senior Strategy and Collaboration Manager, I work with our Program Management, Rates, Evaluation, Measurement, & Verification ("EM&V"), Analytics, and Legal staffs on the Company's Indiana products and services along with managing the Oversight Board.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will briefly describe proposed Senate Enrolled Act No. 412 ("SEA 412") and the effect it will have on this year's energy efficiency proposal, as well as the outcome of our opt-out that resulted from Senate Enrolled Act No. 340 ("SEA 340"). I will then go on to describe the programs and budgets in Duke Energy

Indiana's 2017-2019 Plan. I will then discuss the Company's proposed cost recovery mechanism for program costs, lost revenues and performance incentives. My testimony will address a handful of other issues, including proposed changes to its oversight board, EM&V plans and how Duke Energy Indiana's Plan meets the requirements of Ind. Code. § 8-1-8.5-10. Finally, I will introduce the other witnesses in this proceeding.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I will be sponsoring Petitioner's Exhibit 1-A, which is a complete description of each EE program, along with each EE program's cost breakdown and cost effectiveness scores.

Q. PLEASE SUMMARIZE WHAT RELIEF IS BEING SOUGHT IN THIS PROCEEDING.

A. Duke Energy Indiana is seeking approval of its reconciliation of costs approved in Cause No. 43955 DSM-2 for the 2015 program year, as well as approval under Ind. Code. § 8-1-8.5-10 of its 2017-2019 Plan, which consists of goals, programs, program budgets and costs, and EM&V procedures. Duke Energy Indiana also seeks minor modifications to its Oversight Board ("OSB").

II. ENERGY EFFICIENCY FRAMEWORK

Q. PLEASE DESCRIBE THE ENERGY EFFICIENCY FRAMEWORK FOR THIS PROCEEDING.

A. There have been significant changes in the framework for energy efficiency over the past few years. In 2014, the Indiana General Assembly enacted SEA 340, codified at Ind. Code § 8-1-8.5-9 ("Section 9"), which allowed certain large customers to opt out of participation of utility-sponsored EE. SEA 340 also eliminated both savings targets and the third-party administrator for jurisdictional electric utility-sponsored energy efficiency programs as established in Cause No. 42693 S1.

In 2015, the General Assembly enacted SEA 412, codified at Ind. Code §§ 8-1-8.5-3, 8-1-8.5-10 ("Section 10"), that created the current paradigm guiding energy efficiency in Indiana. This filing is made pursuant to Section 10.

Section 10 requires the electric utility to submit an Energy Efficiency Plan ("Plan") to the Indiana Utility Regulatory Commission ("Commission") at least one (1) time every three (3) years, beginning in 2017 and that the filing. The Plan is to include goals, programs, program budgets, program costs, and procedures for independent EM&V. Section 10 provides that if the Commission finds Duke Energy Indiana's Plan to be reasonable, it will allow the recovery of certain energy efficiency program costs including actual program costs, reasonable lost revenues, and reasonable financial incentives. Lastly, Section 10 allows for a retail rate adjustment mechanism to recover program costs, lost revenues and incentives based on a reasonable forecast with reconciliation of any variance between forecasted and actual program costs.

Once a utility has filed a Plan for approval, the Commission must make a determination of overall reasonableness, taking into consideration the following factors laid out in I.C. § 8-1-8.5-10(j):

> (1) Projected changes in customer consumption of electricity resulting from the implementation of the plan.
>
> (2) A cost and benefit analysis of the plan, including the likelihood of achieving the goals of the energy efficiency programs included in the plan.
>
> (3) Whether the plan is consistent with the following:
> (A) The state energy analysis developed by the Commission under section 3 of this chapter.
> (B) The electricity supplier's most recent long range integrated resource plan submitted to the Commission.
>
> (4) The inclusion and reasonableness of procedures to evaluate, measure, and verify the results of the energy efficiency programs included in the plan, including the alignment of the procedures with applicable environmental regulations, including federal regulations concerning credits for emission reductions.
>
> (5) Any undue or unreasonable preference to any customer class resulting, or potentially resulting, from the implementation of an energy efficiency program or from the overall design of a plan.
>
> (6) Comments provided by customers, customer representatives, the office of utility consumer counselor, and other stakeholders concerning the adequacy and reasonableness of the plan, including alternative or additional means to achieve energy efficiency in the electricity supplier's service territory.
>
> (7) The effect, or potential effect, in both the long term and the short term, of the plan on the electric rates and bills of customers that participate in energy efficiency programs compared to the electric rates and bills of customers that do not participate in energy efficiency programs.

(8) The lost revenues and financial incentives associated with the plan and sought to be recovered or received by the electricity supplier.

(9) The electricity supplier's current integrated resource plan and the underlying resource assessment.

(10) Any other information the Commission considers necessary.

Q. PLEASE EXPLAIN HOW SECTION 10 INFLUENCED THIS FILING.

A. Given that Section 10 requires that the goals presented in the Plan to be consistent with the most recent Integrated Resource Plan ("IRP") submitted to the Commission and that the draft Commission rules on both IRP and DSM contemplate a three (3) year IRP cycle, Duke Energy Indiana is proposing a three year Plan with this filing to sync with its November 2015 IRP submission. The proposed Plan will run from 2017 through 2019. The next IRP is planned to be submitted to the Commission in November, 2018. That IRP will address an updated Plan for 2020 -2023.

Q. HOW HAS THE COMPANY'S ELIGIBLE LOAD BEEN IMPACTED BY THE OPT OUT/OPT IN PROVISION OF SEA 340?

A. Yes. Overall, the Company's participation in its energy efficiency program from large customers has been substantially reduced. Approximately eighty-three percent (83%) of the eligible load of commercial and industrial customers have opted out, which is approximately fifty percent (50%) of total Commercial and Industrial ("C&I") load. For 2016, one customer opted back in. Annually with

input from the Oversight Board, we promote our energy efficiency programs in the opt out communication sent to eligible customers.

III. DUKE ENERGY INDIANA PLAN FOR 2017-2019

Q. PLEASE DESCRIBE HOW THE COMPANY'S THREE-YEAR PLAN WAS DEVELOPED.

A. Duke Energy Indiana's proposed Plan was designed by our program managers considering the state of the EE market in our service territory, past program success, and the addition of new programs to continue to grow the EE opportunities for our eligible customers. The last IRP submitted to the Commission was submitted in 2015. Duke Energy Indiana designed its Plan to be consistent with the EE that was included in its most recent IRP in terms of target energy and demand reduction achievement. Mr. Scott Park's Testimony speaks to the specifics of the 2015 IRP.

As will be discussed below, Duke Energy Indiana is proposing to bring a few new programs into the portfolio primarily in 2019. As discussed in Mr. Park's Testimony, the KWh and KW savings associated with this proposed 2017-2019 EE Portfolio, including these new products, is consistent with what was modeled in the 2015 IRP. In addition, given the passage of time, the program managers continued to update the proposed Plan with the addition of a few new programs and EM&V results have been received for some EE programs, changing the energy savings estimates. Due to these updates, Duke Energy Indiana

performed a separate analysis to be sure that the proposed Plan for 2017–2019 would have been selected as a cost effective resource option in the 2015 IRP, as submitted. Mr. Park's Testimony confirms that the new EE proposed portfolio is consistent with the portfolio that was selected by the 2015 IRP as part of the optimal resource plan.

Q. WHAT ARE THE COMPANY'S GOALS FOR ITS 2017-2019 ENERGY EFFICIENCY PLAN?

A. The Company's 2017 -2019 Plan is designed to offer a robust set of energy efficiency programs for both residential and non-residential customers that will reduce its kilowatt-hour sales by an average of approximately 1.1% of eligible retail sales each year over the three-year plan[1]. The targeted energy reductions planned to be achieved are:

Year	KWH Gross Free Riders @ Plant
2017	201,144,061
2018	191,487,598
2019	197,643,452
Total	590,275,111

Q. WHAT IS THE LIKELIHOOD THAT DUKE ENERGY INDIANA WILL ACHIEVE ITS TARGETS?

A. Based on past performance and our expert program manager's experience with the energy efficiency market in our service territory, the Company believes that it

[1] Eligible load is total retail load excluding non-residential customers who have opted out as of the 1/1/2016 opt-out date.

can reasonably achieve the goals for 2017–2019, factoring in that eighty-three percent (83%) of eligible non-residential load has opted out.

Q. PLEASE SUMMARIZE WHAT PROGRAMS DUKE ENERGY INDIANA PROPOSES IN THIS PROCEEDING.

A. The following is a listing of the programs included in the portfolio for this filing. A complete description of each program, cost breakdown and cost effectiveness scores can be found in Petitioner's Exhibit 1-A. Duke Energy Indiana seeks

Commission approval to offer the following programs:

Duke Energy Indiana 2017 - 2019 Energy Efficiency Programs	
Residential	**Non-Residential**
*Smart $aver® Residential	Smart $aver® Non-Residential
Agency Assistance Portal	Small Business Energy Saver
Energy Efficiency Education for Schools	Power Manager® for Business
Low Income Neighborhood	Smart $aver® Non-Residential Performance Incentive
Low Income Weatherization	
Multi-Family Energy Efficiency Products & Services	
My Home Energy Report	
Residential Energy Assessments	
Power Manager®	
**Bring Your Own Thermostat	
**Energy Efficient Appliances	
**Manufactured Homes	
**Multi Family Retrofits	
**Residential New Construction	
**Multi-Family My Home Energy Report	
Key: * Modified Program ** New Product Development Program	

Q. HOW DID DUKE ENERGY INDIANA CHOOSE THESE PROGRAMS?

A. The 2017-2019 Plan contains all of the same programs approved by the Commission in Cause No. 43955 DSM-3 ("DSM-3"), with the exception of the Appliance Recycling Program, as well as some proposed new programs. The

Duke Energy EE program managers reviewed the existing portfolio of programs and suggested new programs, as well. The savings targets were developed based on our deep experience in the EE market in the Duke Energy service territory. The ultimate proposed portfolio is a combination of commercialized successful programs that have been offered by the Company for more than twenty (20) plus years, some of which have been modified due to changes in standards and technology upgrades, along with some new programs. The new programs are designed to keep moving utility-sponsored EE into untapped markets and using new technologies. They represent the Company's ongoing effort to develop and commercialize new programs and is discussed later in my testimony.

Q. WHY HAS THE APPLIANCE RECYCLING PROGRAM BEEN REMOVED FROM THE PORTFOLIO?

A. JACO, the vendor under contract to Duke Energy, both here in Indiana and across the Company's other five (5) jurisdictions, filed for bankruptcy in 2015 and ceased operations in that same year. Within the same timeframe, the program EM&V report showed that both the refrigerator and freezer measures were barely passing cost effectiveness testing. We explored moving to another vendor; however, the pricing from JACO was significantly lower than current pricing quotes received from other vendors. As such, with a new vendor, the program failed cost effectiveness for inclusion in this filing. The Company continues to seek other avenues to make the program cost effective; however, to date, we have

not been successful in this undertaking. It should be noted that we do offer a refrigerator replacement component in our Low Income Weatherization Program.

Q. WHAT NEW OR MODIFIED PROGRAMS ARE INCLUDED IN THIS FILING?

A. The Company is offering new or modified programs to both Residential and C&I customers.

For C&I customers, the following program was modified:

- Smart $aver® Non-residential – Within the Smart $aver® Non-residential Program, the Performance Incentive Program was added. This program provides a mechanism to promote energy efficiency measures not eligible under the Company's Smart $aver® Prescriptive or Custom programs. Pay for Performance has been designed to complement the Company's Smart $aver® Prescriptive or Custom programs, and would encourage the implementation of energy conservation measures that have more uncertainty associated with energy or demand savings results. The program will expand the set of available technologies that can be incentivized and will specifically focus on promoting the adoption of emerging technologies or energy efficiency measures that include operational changes that have a higher uncertainty in the predicted energy savings than would be allowed under the current Custom Incentive program. To minimize

the risk of the savings prediction, the incentive will be split with a portion paid based on the predicted savings and a portion based on the actual savings achieved.

For Residential customers, the following program was modified:

- Smart $aver® Residential - Under the Smart $aver® umbrella, the HVAC program has been in the Company's portfolio since it started offering DSM in the early 1990s. The program provides customers incentives for purchasing and installing high-efficiency products and services. The primary measures in the Program, incentives for high efficiency HVAC systems, are no longer cost effective due to the recent federal mandates that increased minimum efficiency standards for heat pumps, as well as the Company's decreasing avoided costs. To overcome this issue, the Company is proposing to market the incentives directly to our customers via program collateral and on the ground personnel to ensure they are considering energy efficiency, program incentives, and the benefits behind a managed contractor network during the purchasing process for these products and services.

For Residential customers, the following programs were added:

- Bring Your Own Thermostat ("BYOT") - BYOT provides residential Demand Response ("DR") load management using the customers' own "smart" 2-way communicating thermostats instead of traditional load

control switches. BYOT is intended as a first phase of an engagement platform where customers with Advanced Metering Infrastructure ("AMI") meters and who already own and use "smart" thermostats will have the opportunity to view, monitor, and engage with their energy usage.

- Residential Energy Efficient Appliances - Customers are offered rebates on qualified energy efficiency appliances and devices purchased through various methods and channels. The efficiency of the units will be based on Energy Star or similar standards and may include appliances such as electric water heaters, refrigerators, clothes washers, electronics, televisions, computers and controls for water heaters, lighting and thermostats.
- Residential Manufactured Homes - Offers owners of manufactured housing incentives to improve the energy efficiency of their homes. Customers living in manufactured housing may receive rebates when they implement one or more of the qualifying improvements. These may include HVAC equipment and services, duct, and/or thermal boundary improvements.
- Multi-Family Retrofits - Offers Property Managers incentives to improve the energy efficiency of their existing rental properties by performing building envelope improvements and increasing HVAC

efficiency via equipment upgrades and/or services. The program may include rebates for high efficiency HVAC equipment and services, as well as envelope measures to improve building thermal characteristics and seal penetrations to reduce energy consumption and improve comfort.

- Residential New Construction - The Residential New Construction program offers incentives to builders of new single family homes and new multi-family properties constructed to higher efficiency standards than existing building codes. Builders may use a combination of construction techniques, equipment, and materials to achieve the higher energy savings.
- Multi-Family My Home Energy Report - Multi Family My Home Energy Report ("MyHER") is an expansion of the MyHER program and provides customers with a comparison of their energy usage to similar multifamily residences in the same geographical area based upon the age, size and heating source of the home. The program will target residential customers living in multifamily dwellings with a specific number of months of energy usage history, that have a single meter, a mailing address within the same state as the service address, are not on a fixed payment plan and have a registered email address. The Multi Family MyHER program will send out four (4)

paper reports and eight (8) email reports throughout the year typically skipping shoulder months.

Q. PLEASE PROVIDE FURTHER DETAILS ON THE BYOT PROGRAM.

A. Bring Your Own Thermostat ("BYOT") - BYOT provides residential Demand Response ("DR") load management using the customers' own "smart" 2-way communicating thermostats instead of traditional load control switches. BYOT is intended as a first phase of an engagement platform where customers with AMI meters and already own and use smart thermostats will have the opportunity to view, monitor, and engage with their energy usage.

In BYOT, since the customers own their own "smart" thermostat, the utility is able to avoid the costs of hardware and installation associated with traditional DR methods. Duke Energy Indiana is partnering with a third-party vendor who has contracts with multiple thermostat manufacturers to offer demand response through aggregation of the different thermostat models. Through use of the "smart" thermostats, the utility can verify how many thermostats are connected to the network at any given time and determine which thermostats are participating in DR events as opposed to opting-out. After rollout of the program, the Company will also be investigating offering BYOT qualifying smart thermostats through the Duke Energy On-Line Store to customers who are interested in the program, but do not currently own a smart, 2-way communicating thermostat.

In the second phase, the Company is developing and evaluating a Smart Meter Usage App ("SMUA") which will encourage customers to make behavioral changes to use less energy and save money. The possible program design may offer optional energy monitoring hardware through which customers would be able to see their real time usage data, allowing them to engage further by having a deeper understanding of their consumption behavior. A pilot offer of the SMUA to validate the offer's cost effectiveness would be discussed with the Oversight Board at the appropriate time.

Q. FOR SMART $AVER® HVAC RESIDENTIAL, HOW DO THE CHANGES MAKE THE PROGRAM COST EFFECTIVE?

A. Duke Energy Indiana will be using a managed contractor network. Under this program design, Duke Energy Indiana will earn fees from participating trade allies for referrals generated through this channel that result in sales for their Company. The fee structure will be set such that fees for energy efficiency measures will be lower than fees for non-efficient or non-qualifying products and services; thereby, encouraging sales of qualifying, high efficiency products and services. The fees earned by Duke Energy Indiana for the referral will offset program costs, which will effectively sustain program cost effectiveness, while providing customers with additional value, benefits, and services.

Q. WHAT CONSTITUTES A MANAGED CONTRACTOR NETWORK?

A. The Smart $aver® Residential – HVAC Program leverages a network of contractors, to offer and perform the qualifying installation or service in customer homes. Contractor participation in the program is completely voluntary. Once a contractor successfully registers and joins the Managed Contractor network, Duke Energy Indiana Program Managers oversee the network of Managed Contractors in order to provide quality service and experience to customers. The Managed Contractor network is managed on criteria such as application efficiency, quality assurance results, customer satisfaction, training attendance, as well as, other criteria designed to ensure a high-quality experience for customers. The network of Managed Contractors is managed consistently and must meet predefined and agreed upon Program requirements or risk being removed from the network.

Q. CAN A CUSTOMER USE A TRADE ALLY WHO IS NOT PART OF THE MANAGED NETWORK AND STILL RECEIVE THE INCENTIVES FOR THE SMART $AVER® RESIDENTIAL HVAC PROGRAM?

A. Yes. Customers who want to use a trade ally who is not participating in the managed network have that option, as long as the trade ally has successfully registered for the program. No offsetting fee will be earned by the Company for these products and services.

Q. WHY IS IT IMPORTANT TO KEEP THE SMART $AVER® RESIDENTIAL HVAC PROGRAM IN THE PORTFOLIO?

A. HVAC systems are traditionally the largest source of residential energy consumption. The addition of the managed network is critical to keeping the program in the portfolio by sustaining HVAC measures' cost effectiveness. The Company also believes that the benefits of the managed network will provide our customers with additional value and assistance.

Q. WHY IS DUKE ENERGY INDIANA INCLUDING NEW PRODUCT DEVELOPMENT ("NPD") PROGRAMS IN THIS FILING?

A. For over twenty years, Duke Energy Indiana has been researching and developing new programs and approaches to increasing and tracking customer participation through its New Product Development process. Programs such as the Personalized Energy Report and CFL Coupon Program, which were part of past portfolios, resulted from the process and have since transitioned into the very successful programs such as MyHomeEnergy Report ("MyHER") and the Free Light Emitting Diode ("LED") programs. With ongoing changes in codes, standards, and technology, it is vitally important that the Company keep on the forefront of these changes, while also seeking to develop concepts that can be delivered cost effectively and will appeal to our many customer segments.

Q. PLEASE EXPLAIN THE PROCESS FOR NEW PRODUCT DEVELOPMENT.

A. Duke Energy Indiana uses what is known as a stage gate approach for the development of new program offers. This industry-standard process is designed

to limit investment to only the most promising product ideas through a stepped approach that includes reviews or "gates" along the way for approval to move forward. Before a program can move forward in the development process, it must exhibit a potential for success in terms of customer acceptance, customer value, operational feasibility and cost effectiveness. Those programs in development that do not meet, or are unable to be modified to meet these goals, are removed from the development process to give consideration for those offers that demonstrate a higher potential for success. With each development gate, the level of analysis and scrutiny deepens to assure the program's viability.

The product development process can take from six (6) to twelve (12) months to reach the implementation phase, depending on the complexity of the program. Duke Energy Indiana uses a three (3) stage development process: Concept, Evaluation, and Implementation, with "gates" or decision points made following the Concept and the Evaluation stages. At these two points, a Gate meeting is held with internal stakeholders to review the program's progress and make a decision on whether the program should continue in the development process. The internal stakeholder approvers for an Energy Efficiency or Demand Response program include Program Management, Financial, Regulatory and Market Analysis leadership. If the stakeholders agree with and support the design, financial and performance of the offer, they will give their approval for it to move ahead in the process. The stakeholders may require that additional work

be done to further establish the program's viability, and the program undergoes further analysis. Finally, the decision may be made to stop work completely if there is no evidence that the program would be cost effective. The Programs included in this filing are in the final steps of the Evaluation gate and all information point towards successful implementation.

Q. WHY HAS THE COMPANY INCLUDED PROGRAMS IN ITS PROPOSED PLAN THAT ARE STILL IN THE EVALUATION STAGE?

A. Although the Company has been using the NPD process for years, in the past, these programs would have been filed independently as they became finalized through the NPD process. Given that we are proposing a three-year Plan, we reasonably believe that these products will be ready for commercialization within the three year period. So, for this filing, our approach is to include programs nearing the last gate of the Company's NPD Process, which are designed to expand energy efficiency program offerings and rebates to new customer segments and new technologies in a timely manner. The detail provided for these programs (budget, participation and cost effectiveness) is no different than what is included for all other programs. By including the programs in this filing, Duke Energy Indiana will be able to expedite taking these programs to market by receiving approval to offer them should they pass through all of the stage gates without the need for additional regulatory filings.

Q. HOW WILL NEW PRODUCT DEVELOPMENT PROGRAMS BE VETTED BEFORE COMMERCIALIZATION?

A. Even though these programs are near the end of the NPD process, they must still be approved at the Evaluation gate. When these offers are ready for commercialization, Duke Energy Indiana will thoroughly review the program with its Oversight Board before offering them to customers.

Q. WHAT IF ANY OF THESE NEW PRODUCT DEVELOPMENT PROGRAMS ARE NOT ULTIMATELY COMMERCIALIZED?

A. Although it is not anticipated, if any of these programs in the final analysis fail to achieve cost effectiveness, then it will not be brought forward for implementation. All funds specifically intended for implementation will be included in the annual reconciliation.

Q. WHAT DEMAND RESPONSE PROGRAMS ARE INCLUDED IN DUKE ENERGY INDIANA'S PLAN?

A. The Company has two (2) residential demand response ("DR") programs and one (1) non-residential program. For residential customers, we continue to offer our very successful Power Manager® program that now is available to both single family and apartment dwellers. The other residential DR program is BYOT, one of our NPD programs explained previously. For non-residential, customers can sign up for our Power Manager® for Business program.

Q. WHY IS DUKE ENERGY INDIANA PROPOSING TO INCLUDE DEMAND RESPONSE PROGRAMS IN ITS PLAN?

A. For the last thirteen years, Duke Energy Indiana has offered successful DR programs. Most recently, in Cause No. 43955 DSM-3, the Commission approved the addition of an electric water heating load control as a measure to the existing Power Manager® program, in addition to Power Manager® for Apartments, which focuses on the apartment renter market. Also in DSM-3, the Commission approved Power Manager® for Business that targeted smaller commercial customers not included in Duke Energy Indiana's Rider 70 tariffed offering. This program includes a "smart" thermostat option that serves as both a demand response switch for event based cycling of HVAC equipment, as well as, an energy efficiency engagement platform that allows the customer to more efficiently use their HVAC equipment, by use of web or mobile application. This program will complement the market transformation taking place that is being facilitated by technological advances that are blurring the lines between energy efficiency and demand response programs.

Q. WHY IS IT APPROPRIATE TO INCLUDE DR IN THE COMPANY'S PLAN?

A. Section 10 does not preclude demand response programs from a Plan. Although Ind. Code § 8-1-8-5-10(h) specifies the four (4) components that a utility's Plan shall include, it does not prohibit a utility from including demand response

programs in a Plan. Furthermore, although Ind. Code § 8-1-8-5-10(d) clearly delineates that energy efficiency programs do not include demand response programs, there is no language that would suggest that demand response programs may not be included in a utility company's Plan. To the contrary, one could interpret the criterion for consideration of a utility's Plan contained in Ind. Code § 8-1-8-5-10(j)(3)(B) to read that demand response programs should be included in the Plan, since the peak demand reductions associated with them have been factored into Duke Energy Indiana's most recent long range IRP submitted to the Commission. Moreover, the Commission's rules provide for cost recovery, lost revenues and incentives, for both conservation and demand side management (or demand response) programs. See 170 IAC 4-8-1 and 170 IAC 4-8-3.

Additionally, the Commission has approved demand response in Vectren's Section 10 proceeding approved last March in Cause No. 44645, Final Order, page 19 (March 23, 2016), as well as in Duke Energy Indiana's DSM proceedings in the past.

Q. ARE ALL PROGRAMS INCLUDED IN THE PROPOSED PLAN COST EFFECTIVE?

A. As discussed in the testimony of Jean P. Williams, all programs except the Low Income Weatherization Program are cost effective under the Utility Cost Test ("UCT"). Due to the high cost of weatherization and little to no customer contribution required, low-income weatherization programs in general struggle to

be cost-effective. This program offers a Tier 1 and Tier 2 grouping of measures depending upon the need of the customer's home. Additionally, there is two hundred and fifty dollars ($250.00) allotted for health and safety for every home included in Tier 2. The program also includes a refrigerator replacement component. Even though the program does not pass the UCT, the Company believes there are benefits to bringing these needed improvements to low-income customers and offering energy efficiency programs to this group of customers, especially where, as here, the entire Energy Efficiency Program portfolio remains cost effective under the UCT.

Q. ARE THERE INDIVIDUAL ENERGY EFFICIENCY MEASURES IN OTHER PROGRAMS THAT DO NOT PASS COST EFFECTIVENESS USING THE UTILITY COST TEST OTHER THAN THE LOW INCOME WEATHERIZATION PROGRAM?

A. Yes. There are two (2) programs that have some measures below 1.0 UCT. These two programs are Smart $aver® Non-Residential Prescriptive and Smart $aver® Residential, both of which contain multiple measures within the program.

Q. WHY ARE THESE MEASURES INCLUDED IN THE PROGRAMS IF THEY DO NOT PASS COST EFFECTIVENESS?

A. Although each of the programs contain measures that are not cost effective on a stand-alone basis, when the entirety of the measures contained in each of the

programs are evaluated, each of the two (2) programs are cost effective. Let me explain the rationale for each of the programs where these situations exist.

- Smart $aver® Non-Residential Prescriptive - This program has three hundred and thirty-eight (338) measures in total and a UCT of 2.79. Of that number, eighteen (18) fail. In general, the Company believes it is reasonable to include these measures if the overall program and portfolio remain cost effective under the UCT . There are five (5) categories with failing measures, lighting, compressors, chillers and cool roofs. It is important to offer our customers a comprehensive program and these measures round out certain technologies that overall have passing scores and ensure a comprehensive program that can serve all segments of the commercial and industrial market.
- Smart $aver® Residential – The standard HVAC equipment measures are not cost effective under the UCT. The cost effectiveness of these long-standing measures continues to erode due to the recent federal mandates that increased minimum efficiency standards for heat pumps. As explained in detail above, the Company has proposed the creation of a referral channel for customers in which eligible, high-performing trade allies will pay Duke Energy Indiana a fee for referrals that result in sales. These fees are paid by the trade ally and are used to offset program costs and result in cost effective HVAC

equipment measures known as "referred HVAC measures". However, the Company will not require customers to utilize the specified trade allies who are part of the referral network in order to ensure that all customers have access to incentives on the largest single energy user in their home. It is anticipated that a significant number of customers will use the referral channel which will result in an overall cost effective program. Additionally, both the "smart" thermostat and quality installation measures do not pass the UCT when considered individually. However, these measures offer customers a more complete suite of energy saving products at the time of HVAC system purchase, while providing additional assurance of proper installation and tools for managing usage on an ongoing basis which may be forfeited, in whole or in part, if not taken advantage of at the time a new HVAC system is installed.

Q. PLEASE PROVIDE PROGRAM BUDGETS FOR EACH OF THE PROGRAMS INCLUDED IN THE PLAN.

A. Total program budgets for the 2017 – 2019 Plan are included below. In addition, Ms. Karen K. Holbrook has included Exhibit 4-H that has the amounts for each program by year.

Duke Energy Indiana 2017 - 2019 Energy Efficiency Programs			
Residential			
	*Smart $aver® Residential	$	29,914,469
	Agency Assistance Portal	$	525,585
	Energy Efficiency Education Program for Schools	$	1,968,403
	Low Income Neighborhood	$	1,869,093
	Low Income Weatherization	$	5,644,088
	Multi-Family EE Products & Services	$	466,147
	My Home Energy Report	$	9,538,403
	Residential Energy Assessments	$	2,716,664
	Power Manager®	$	8,755,525
	**Bring Your Own Thermostat	$	1,123,653
	**Energy Efficient Appliances	$	45,729
	**Manufactured Home Retrofit	$	68,586
	**Multifamily Retrofit	$	124,206
	**Residential New Construction	$	723,648
	**Multifamily My Home Energy Report	$	779,527
Total Residential		**$**	**64,263,725**
Non-Residential			
	Smart $aver® Non-Residential	$	25,744,621
	Power Manager® for Business	$	2,793,020
	Small Business Energy Saver	$	15,853,042
	*Non-Residential Smart $aver® Performance Incentive Program	$	1,278,743
Total Non-Residential		**$**	**45,669,426**
Total Portfolio		**$**	**109,933,151**
	Market Potential Study	$	300,000
Total Market Potential Study		**$**	**300,000**
Grand Total 2017-2019 Portfolio		**$**	**110,233,151**
** Modified Program ** New Product Development Program			

Q. WHAT IS THE STATUS OF THE MARKET POTENTIAL STUDY ("MPS") THAT WAS APPROVED IN CAUSE NO. 43955 DSM-3?

A. The Company and its OSB agreed to delay the start of the MPS until early 2017. The OSB delayed the start of the MPS so the results would be as current as possible for use in developing the energy efficiency portion of the Company's

IRP which will be submitted in late 2018. No costs were incurred for the MPS in 2016.

IV. COST RECOVERY INCLUDING LOST REVENUES AND PERFORMANCE INCENTIVES

Q. WHAT COST RECOVERY IS DUKE ENERGY INDIANA SEEKING?

A. The Company is seeking to recover program costs (both direct and indirect costs, including the cost of EM&V), lost revenues, and a performance incentive. As discussed in more detail in Ms. Dean's Testimony, Duke Energy Indiana proposes to continue to use its Rider 66-A, initially approved in Cause No. 43955 and most recently approved in the Company's DSM-3 filing, which is reconciled annually, to recover costs associated with its Plan.

Q. WHAT IS THE TOTAL PROGRAM COSTS THAT DUKE ENERGY INDIANA SEEKS TO RECOVER?

A. For all of the programs included in the Plan, the total program cost for the 2017–2019 period, which includes direct and indirect costs, EM&V, and other recoveries, including incentives and lost revenues, the total program costs is $197,632,578. These costs can be broken down as follows:

Duke Energy Indiana		
Cost Category	2017-2019 Revenue Requirement	
Direct Administrative	$	38,887,186
Indirect Administrative	$	9,931,390
Customer Incentives	$	57,734,182
EM&V	$	3,680,392
Company Incentives	$	10,950,352
Lost Revenues	$	76,449,075
Total	**$**	**197,632,578**

Q. WHAT LEVEL OF LOST REVENUES IS DUKE ENERGY INDIANA SEEKING TO RECOVER IN THIS PROCEEDING?

A. The Company is requesting lost revenue cost recovery for the life of the measure of the programs approved in its Plan, as approved in DSM-1. Ms. Karen K. Holbrook Exhibit 4-H has the lost revenue amounts for each program by year.

Q. WHY IS THE COMPANY SEEKING LOST REVENUES?

A. Customers receive the benefits of energy efficiency in two (2) forms: First, in the form of the immediate bill savings participants see associated with lower consumption, and second, in the form of lower electric rates realized by all customers associated with the delay or avoidance of the need for future generation resources. At the same time, the promotion of energy efficiency causes utilities to experience a reduction in the recovery of their fixed costs absent the recovery of lost revenues. Lost revenues are a mechanism to make a utility whole between rate cases.

Q. PLEASE EXPLAIN HOW THE COMPANY IS EXPERIENCING LOST REVENUES.

A. Lost revenues is a term used to describe the negative effect that offering energy efficiency programs can have on a utility's ability to recover its fixed costs and earn its allowed return. Under the traditional regulatory framework, such as the one employed here in Indiana, a utility generally recovers both its variable costs (*e.g.*, fuel) and fixed costs (*e.g.*, plant costs) through volumetric rates paid by its customers, a price per kilowatt hour. The volumetric price is determined by dividing the utility's total test period costs (or revenue requirement) by the annual sales level realized at the time rates were set. If actual sales vary from the level that was estimated in determining the volumetric rate, all else being equal, the utility will either over or under recover the level of test period fixed costs approved by the Commission, because unlike variable costs, the fixed costs do not vary with sales.

The lost revenue calculation is the product of the amount of reduced kilowatt-hour and kilowatt sales resulting from the energy efficiency programs and the fixed cost portion of the volumetric price. This calculation allows the Company to recoup the fixed costs that it would have recovered through volumetric rates had it not incurred reduced sales due to energy efficiency programs. Otherwise, there is a strong disincentive for a utility to aggressively offer energy efficiency programs.

Q. IS DUKE ENERGY INDIANA'S PROPOSAL FOR LOST REVENUES CONSISTENT WITH SECTION 10?

A. Yes. Consistent with Ind. Code § 8-1-8.5-10(o)(2), if the Commission finds Duke Energy Indiana's Plan to be reasonable, then the Commission must approve reasonable lost revenues. The Company's proposal for life of measure (or until the next base rate case, if earlier) is reasonable because it matches the period over which the Company will experience a deficit in fixed cost recovery due to the savings from the energy efficiency programs, which will occur over the life of each measure or until the new lower level of sales can be worked into a base rate case.

Q. PLEASE EXPLAIN WHY A PERFORMANCE INCENTIVE IS APPROPRIATE.

A. First, Section 10 provides that if the Commission finds the Plan to be reasonable, then a utility is entitled to a reasonable financial incentive. Furthermore, as provided in the Commission's rules: "The regulatory framework attempts to eliminate or offset the regulatory or financial bias against DSM, or in favor of a supply-side resource . . . ."[2] Shareholder incentives help to put demand side resources on an equal footing as supply side resources. Additionally, shareholder incentives provide an incentive to pursue cost-effective energy efficiency. The

[2] 170 Ind. Admin. Code 4-8-3.

American Council for an Energy Efficient Economy supports the need for shareholder incentive:

> Utilities face key financial disincentives and barriers to investments in energy efficiency. Consequently, leading states have enacted regulations and policies to create new business models for their investor-owned utilities – models that eliminate the financial disincentives that prevent utilities from saving energy and provide incentives for developing successful and effective energy efficiency programs.[3]

The recovery of a performance incentive is important as it puts investments in energy efficiency on a level playing field with investments in traditional supply-side resources. The need for a performance incentive associated with EE programs is related to the traditional regulatory framework that the Company operates under in Indiana. Under this traditional regulatory framework, a utility earns a return on the capital it invests in supply side assets, so if the regulatory framework is to eliminate or offset the financial bias against DSM, a utility needs to be able to earn a return on its investment in energy efficiency. Although a utility's ability to recover lost revenues will mitigate the disincentive for a utility to offer energy efficiency programs to its customers, only permitting a utility to collect an incentive on energy efficiency programs will truly eliminate the economic preference to invest in supply-side investments rather than demand-side investments.

Q. WHAT INCENTIVE STRUCTURE IS DUKE ENERGY INDIANA REQUESTING IN THIS PROCEEDING?

[3] http://www.aceee.org/topics/utility-regulation-and-policy.

A. The Company is proposing a cost- plus tiered-incentive structure, based on energy saving achievements for the portfolio for each program year, as measured by EM&V relative to impacts achieved. The incentive will be calculated at a portfolio level, as a percentage of program costs incurred, including associated EM&V costs, for incentive-eligible programs, using the total energy savings achievement level for the portfolio of eligible programs. The total potential incentives over the three (3) year period for incentive-eligible programs that are included in this filing are as follows:

Duke Energy Indiana				
Target Achievement	2017-2019 (Gross MWh at the Meter)		Pre-Tax Rate of Return	Pre-Tax Return on Costs
Greater than 110%	≥	601,059	11.0%	$ 12,092,647
100-110%	≥	546,417	10.5%	$ 10,950,352
90-100%	≥	491,776	9.5%	$ 10,443,649
80-90%	≥	437,134	8.5%	$ 9,344,318
Less Than 80%	<	437,134	0.0%	$ -

Ms. Holbrook's Petitioner's Exhibit 4-H shows forecasted incentive amounts at the 100% target achievement level for the portfolio for each program year. The incentive contribution for each program is also shown.

Q. IS THE COMPANY PROPOSING THAT ALL PROGRAMS BE ELIGIBLE FOR INCENTIVES?

A. No. The Company's proposed incentive mechanism excludes the Low Income Weatherization program from the calculation, as well as any pilot programs added to the portfolio through the end of 2019. Programs that pass UCT may have

individual measures that fail, but if the entire program passes the UCT, then it is still included in the incentive calculation.

Q. ARE YOU PROPOSING THAT THE NEW PRODUCT DEVELOPMENT PROGRAMS RECEIVE A PERFORMANCE INCENTIVE?

A. Yes. If New Product Development programs are approved by the OSB and commercialized in the market place, they should be treated as all other cost effective programs in the portfolio and be included in the performance incentive calculation.

V. OVERSIGHT BOARD, EM&V AND REQUIREMENTS WITH SECTION 10

Q. IS DUKE ENERGY INDIANA MAINTAINING ITS OSB?

A. Yes. The Duke Energy Indiana OSB meets monthly with four (4) quarterly in-person meetings and eight (8) phone calls. At each meeting, the OSB reviews the previous month's scorecard that presents the performance of each program in the portfolio. The Company's Program Managers lead the discussion regarding program performance and the background information on year-to-date performance and what is expected for the remainder of the year. During the quarterly in-person meetings, the OSB has a more in-depth meeting to review EM&V draft reports and other substantive issues that are more conducive to speaking in-person.

Q. DOES THE COMPANY PROPOSE ANY CHANGES TO ITS OSB BYLAWS?

A. Yes. Similar to what has been approved by the Commission for the Oversight Boards of the other electric utilities, Duke Energy Indiana is proposing that the OSB can approve new programs if the budgets are within the ten percent (10%) discretionary spending limit that was approved by the Commission in DSM-3. Currently, the OSB can approve spending within the ten percent (10%) cap for existing programs, but does not have the authority to approve new programs that the Company would like to add to the portfolio.

Q. WHAT IS THE COMPANY'S PLAN CONCERNING EM&V FOR THE 2017-2019 PORTFOLIO OF PROGRAMS?

A. Duke Energy Indiana is committed to continue the use of independent EM&V vendors as it is currently doing. Ms. Jean P. Williams will discuss the Company's EM&V plan and procedures in her testimony.

Q. DOES DUKE ENERGY INDIANA'S PLAN PRESENTED IN THIS PROCEEDING MEET THE REQUIREMENTS OF SECTION 10?

A. Yes. Duke Energy Indiana is proposing an Plan that includes energy efficiency goals that are reasonably achievable, consistent with its 2015 IRP, and designed to save 1.1% of eligible retail sales each year over the three year plan. Additionally, Duke Energy Indiana is an electricity supplier and it is proposing a Plan to implement energy efficiency improvements. The Plan includes program budgets and costs, including the direct and indirect costs of energy efficiency programs, the costs associated with EM&V program results, and the recovery of lost

revenues and a performance (financial) incentive. The Plan also includes independent EM&V for the programs, as required in I.C. § 8-1-8.5-10(j)(4).

Specifically, the Company's Plan does meet the requirements of Section 10 by including the following requirements:

- This filing constitutes Duke Energy Indiana's Plan for 2017-2019; therefore, meeting the requirement that it file a Plan to the Commission at least one (1) time every three (3) years.
- On page 8 of my Direct Testimony, I outline the projected changes in customer consumption of electricity resulting from the implementation of the Plan and the likelihood of achieving the goals.
- The Direct Testimony of Ms. Williams provides a cost and benefit analysis of the Plan.
- The Plan as proposed herein is consistent with the Company's November 2015 long range Integrated Resource Plan submitted to the Commission, as discussed in the Direct Testimony of Mr. Scott Park.
- Ms. Williams testifies that the Plan includes procedures to evaluate, measure, and verify the results of the energy efficiency programs included in the Plan, including the alignment of the procedures with applicable environmental

regulations, including federal regulations concerning credits for emission reductions.

- The Plan design described in my testimony, the cost effectiveness testing described in Ms. Williams' Direct Testimony, and the rate-making and cost allocation process described in Ms. Dean's Testimony provide support that the Plan does not demonstrate undue preference to any customer class resulting, or potentially resulting, from the implementation of an energy efficiency program or from the overall design of a Plan.
- Comments will be provided by customers, customer representatives, the Office of Utility Consumer Counselor, and other stakeholders concerning the adequacy and reasonableness of the Plan, including alternative or additional means to achieve energy efficiency in the electricity supplier's service territory, in prefiled testimony or comments directed to the Commission responding to this filing.
- Ms. Williams will present the effect, or potential effect, in both the long term and the short term, of the Plan on the electric rates and bills of customers that participate in energy efficiency programs compared to the electric rates and bills of customers

that do not participate in energy efficiency programs in her Direct Testimony using cost-effectiveness calculations.

- My testimony reflects the lost revenues and financial incentives associated with the Plan and sought to be recovered or received by the electricity supplier.
- Mr. Park's Testimony will discuss the electricity supplier's current Integrated Resource Plan and the underlying resource assessment.

Q. HAS THE COMPANY PROVIDED A COPY OF THIS PETITION AND PLAN TO THE OFFICE OF UTILITY CONSUMER COUNSELOR, AS REQUIRED UNDER I.C. § 8-1-8.5-10(i)(1)?

A. Yes.

Q. HAS THE COMPANY POSTED AN ELECTRONIC COPY OF THIS PETITION AND PLAN ON THE COMPANY'S WEBSITE, AS REQUIRED UNDER I.C. § 8-1-8.5-10(i)(2)?

A. Yes. It can be located at: https://www.duke-energy.com/our-company/investors/regulatory-information

VI. OTHER WITNESSES IN THIS PROCEEDING

Q. ARE THERE OTHER DUKE ENERGY INDIANA WITNESSES IN THIS PROCEEDING?

A. Yes. Other Duke Energy Indiana witnesses will discuss the following:

- Mr. Scott Park will describe the Company's 2015 IRP analyses and how the proposed Plan is consistent with Duke Energy Indiana's preferred EE resource portfolio from the 2015 IRP (Petitioner's Exhibit 2).
- Ms. Jean P. Williams will provide an overview of EM&V and how it factors into the true up and estimates of portfolio costs. She will also provide an update on EM&V costs, cost-effectiveness results, and how those results factor into the cost plus mechanism (Petitioner's Exhibit 3).
- Ms. Karen K. Holbrook will be discussing the process for developing revised true-ups for 2012, 2013 and 2014 to reflect EM&V received since the DSM-3 filing; actual costs, lost revenue and performance incentives for the 2015 reconciliation; and the proposed costs, lost revenues, and performance incentives for the 2017-2019 portfolio. (Petitioner's Exhibit 4).
- Ms. Amy B. Dean will cover the Company's development of the rates to be billed in 2017 based on the reconciliations and projections in Ms. Karen Holbrook's Testimony, and the development of the prices used for lost revenues included in this filing (Petitioner's Exhibit 5).

VII. CONCLUSION

Q. IS DUKE ENERGY INDIANA'S PLAN IN THE PUBLIC INTEREST?

A. Yes. Duke Energy Indiana's 2017–2019 Plan integrates experience based upon more than twenty (20) years of offering energy efficiency programs to its customers and promoting the efficient use of energy. The Plan aligns the Company's interests with those of its customers by offering programs for all market segments and including a wide spectrum of opportunities to lower consumption. Participating customers can become more educated regarding how they consume energy, become more energy efficient and help conserve our natural resources. Our portfolio of programs is consistent with the IRP submitted in November 2015, and as a result, is designed to lower emissions and delay the need to build additional generation in the Duke Energy Indiana service territory into the future. We have also looked out a few years and included programs which are in the final stages of development and can reach new markets and underserved customers. The Plan reflects cost effective DSM programs, which can assist customers to manage their energy bills and also act as a resource for meeting the Company's future generation requirements.

Q. WAS PETITIONER'S EXHIBIT 1-A PREPARED BY YOU OR AT YOUR DIRECTION?

A. Yes.

Q. DOES THIS CONCLUDE YOUR PREPARED TESTIMONY AT THIS TIME?

A. Yes, it does.

VERIFICATION

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information and belief.

Signed: _____ Dated: 11/22/2016
Michael Goldenberg

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Agency Assistance Portal</u></td><td>The Agency Assistance Portal assists low-income customers in reducing energy costs through providing energy efficiency bulbs to eligible customers. Customers participating in this program will receive a package of 12 LED bulbs delivered to the customer’s home.
Customers are eligible for this program if they apply for the federally funded Low Income Home Energy Assistance Program (LIHEAP) through a low-income agency. This program is available to both homeowners and renters occupying single family and multi-family dwellings with electric service provided by Duke Energy.
By utilizing local agencies where low-income customers seek assistance, Duke Energy can target customers most in need for energy savings.</td></tr>
<tr><td>Program Objectives</td><td>The primary goal for this program is to help low-income customers save energy and money on their utility bills by using energy efficient lighting. Duke Energy will utilize low income agencies who distribute LIHEAP funds to administer this program.</td></tr>
<tr><td>Marketing Plan</td><td>The marketing strategy for this program will focus on utilizing the low-income agencies as the primary method of informing customers. Duke Energy will provide table tents and posters for agencies to place on display within their offices.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>KWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>1,056,518</td><td>1,056,518</td><td>1,0556,518</td><td>3,169,554</td></tr>
<tr><td>KW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>104</td><td>104</td><td>104</td><td>312</td></tr>
</table>
</td></tr>
<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td>6,726</td><td>6,858</td><td>7,002</td><td>20,586</td></tr>
<tr><td>Admin - Indirect</td><td>15,197</td><td>15,789</td><td>13,519</td><td>44,506</td></tr>
<tr><td>Customer Incentives</td><td>128,495</td><td>128,495</td><td>128,495</td><td>385,485</td></tr>
<tr><td>EM&V</td><td>35,000</td><td>35,004</td><td>5,004</td><td>75,008</td></tr>
<tr><td>Total by Year</td><td>185,418</td><td>186,146</td><td>154,020</td><td>525,585</td></tr>
</table>
</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>1.61</td><td>1.61</td><td>0.61</td><td>>1.00</td></tr>
</table>
</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>5.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
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</table>

Program Description **<u>Low Income Neighborhood</u>**	The Low Income Neighborhood program, known as the Neighborhood Energy Saver Program, or NES, assists low-income customers in reducing energy costs through energy education and installation of energy efficient measures. The primary goal of this program is to empower low-income customers to better manage their energy usage. Customers participating in this program will receive a walk-through energy assessment and one-on-one education. Additionally, the customer receives a comprehensive package of energy efficient measures. Each measure listed below is installed or provided to the extent the measure is identified as energy efficiency opportunity based on the results of the energy assessment. 1. Energy Efficient Bulbs - Up to 15 LED bulbs to replace incandescent bulbs. 2. Electric Water Heater Wrap and Insulation for Water Pipes. 3. Electric Water Heater Temperature Check and Adjustment. 4. Faucet Aerators - Up to three low-flow faucet aerators. 5. Showerheads - Up to two low-flow showerheads. 6. Wall Plate Thermometer –one per home. 7. HVAC Winterization Kits – Up to three winterization HVAC kits for wall/window air conditioning units along with education on the proper use, installation and value of the winterization kit as a method of stopping air infiltration. 8. HVAC Filters - A one-year supply of HVAC filters will be provided along with instructions on the proper method for installing a replacement filter. 9. Refrigerator Magnet – highlighting the top 10 energy tips. 10. Air Infiltration Reduction Measures - Weather stripping, door sweeps, caulk, foam sealant and clear patch tape will be installed to reduce or stop air infiltration around doors, windows, attic hatches and plumbing penetrations. Targeted low-income neighborhoods qualify for this program if approximately 50% of the households have incomes of <200% of the Federal Poverty Guidelines. Duke Energy analyzes electric usage data to prioritize neighborhoods that have the greatest need and highest propensity to participate. While the goal is to serve neighborhoods where the majority of residents are low-income, this program is available to all Duke customers in the defined neighborhood. This program is available to both homeowners and renters occupying single family, manufactured housing and multi-family dwellings in the target neighborhoods with electric service provided by Duke Energy. The community approach offered by this program offers the following benefits: • Community involvement raises awareness of energy efficiency opportunities

<table>
<tr><td></td><td>

Community leaders provide a trusted voice
Greater acceptance is possible when neighbors and friends go through this program together
Efficiencies are gained by working in the same close proximity for longer periods of time
More resources are available to the individual participants to meet their needs
Enrolling is simple
Implementation of measures is fast and easy
Timely tracking and reporting of activity

</td></tr>
<tr><td>Program Objectives</td><td>The primary goal for this program is to empower low-income customers to better manage their energy bills. Duke Energy will engage low-income customers on a personal basis using a grass roots marketing approach to gain their trust. Crucial steps include providing customers with free energy saving measures and educating them on how to manage their energy needs. After a one-on-one education session, energy efficiency technicians provide customers with leave-behind materials to emphasize the measures installed, the importance of each measure, and how to maintain the measure.</td></tr>
<tr><td>Marketing Plan</td><td>The marketing strategy for this program will focus on a grassroots approach. Below are some of the marketing strategies Duke Energy may utilize to meet participation goals:
- Direct mail
- Door-to-door canvassing
- Door hangers
- Yard signs
- Press releases
- Flyers
- Social media
- Community presentations and partnerships
- Inclusion in community publications such as newsletters, etc.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
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</table>
<table>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>310</td><td>310</td><td>310</td><td>929</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct	164,954	169,279	170,965	505,198
Admin - Indirect	58,543	62,515	53,638	174,696
Customer Incentives	355,945	366,625	366,625	1,089,195
EM&V	50,000		50,004	100,004
Total by Year	629,442	598,419	641,232	1,869,093

Program Cost Effectiveness

UCT	TRC	RIM	PCT
1.17	1.17	0.64	>1.00

Program Measure Life

7.0	*Note: Measure life is based on kWh weighted average

Program Description **<u>Low Income Weatherization</u>**	The Low Income Weatherization program is designed to help Duke Energy Indiana income-qualified customers reduce their energy consumption and lower their energy cost. This Program will specifically focus on owner occupied, single family homes meeting income qualification levels based on DOE standards (*i.e.*, income below 200% of the federal poverty level). This program will provide direct installation of weatherization and energy-efficiency measures including refrigerator and furnace replacement. Duke Energy will utilize the Indiana Housing and Community Development Authority (IHCDA) to administer the program, partnering with the current Indiana Community Action Association weatherization network. This program will operate on a tier system, based on an annual KWH/sq. ft. consumption. Tier 1 services are as follows: • Electric Heating System Tune-up & Cleaning • Electric Heating System repair up to $600 • Water Heater Wrap for electric water heaters • Water Heater Pipe Wrap • Cleaning / replacing electric dryer vents • Energy Efficient Light Bulbs • Water saving shower heads and aerators • Weather-stripping doors & windows • Energy Education Tier Two services are all Tier One Services plus: • Additional cost effective measures using the National Energy Audit Tool ("NEAT") audit where the energy savings pay for the measure over the life of the measure as determined by a standard heat loss/economic calculation. Such items can include but are not limited to attic insulation, air sealing, wall insulation, crawl space insulation, floor insulation, duct sealing. • In addition, up to $750 can be spent on a home for Health & Safety issues which may prevent them from receiving weatherization assistance. However, the Health & Safety component must average no more than $250 per home. In addition, refrigerator replacement will be available to income-eligible customers whose refrigerators test to be inefficient or >10 years old, including renters.
Program Objectives	This program will educate customers on their energy usage and identify other opportunities that can help reduce energy consumption and lower energy costs. The program is designed to provide additional weatherization assistance monies to the agencies, allowing them to install more energy-saving measures and/or serve more homes.
Marketing Plan	The marketing strategy for this program will utilize low income and non-profit agencies that provide weatherization services as the primary method for providing weatherization assistance to eligible customers. Additional marketing will include direct mail, flyers and direct contact between agencies and customers.

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Projected Savings

kWh	2017	2018	2019	Total kWh
	738,888	738,888	738,888	2,216,663
kW	2017	2018	2019	Total kW
	154	154	154	461

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct	223,032	223,032	223,032	669,096
Admin - Indirect	186,945	194,038	165,965	546,948
Customer Incentives	1,440,348	1,440,348	1,440,348	4,321,044
EM&V	104,000		3,000	107,000
Total by Year	1,954,325	1,857,418	1,832,345	5,644,088

Program Cost Effectiveness

UCT	TRC	RIM	PCT
0.37	0.37	0.30	>1.00

Program Measure Life

14.0	*Note: Measure life is based on kWh weighted average

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Energy Efficiency Education</u></td><td>The Energy Efficiency Education Program for Schools is available to students enrolled in public and private schools who reside in households served by Duke Energy Indiana. The current curriculum administered by The National Theatre for Children (NTC) targets K-8 grade students. The primary goal of this program is to educate students on the importance of energy conservation and teach them how to lower energy bills in their homes. This program includes both an energy saving curriculum for the school classroom and an Energy Efficiency Starter kit at no cost to the participating student household.</td></tr>
<tr><td>Program Objectives</td><td>The Program provides principals and teachers with an innovative curriculum that educates students about energy, resources, how energy and resources are related, ways energy is wasted and how to be more energy efficient. The centerpiece of the curriculum is a live theatrical production focused on concepts such as energy, renewable fuels and energy efficiency performed by two professional actors. Teachers receive supportive educational material for classroom and student take home assignments. The workbooks, assignments and activities meet state curriculum requirements.

Students are encouraged to complete a home energy survey with their family (included in their classroom and family activity book) to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption. The kit is available at no cost to all student households at participating schools, including customers and non-customers. Program participation is driven by student households that elect to receive the Energy Efficiency Starter Kit.</td></tr>
<tr><td>Marketing Plan</td><td>The National Theatre for Children is responsible for all marketing campaigns and outreach. NTC utilizes direct mail and email sent directly to principals to market the Program.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
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<tr><td>Program Budget</td><td>
<table>
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<tr><td>Admin - Direct</td><td>408,787</td><td>352,405</td><td>352,875</td><td>1,114,067</td></tr>
<tr><td>Admin - Indirect</td><td>66,838</td><td>61,123</td><td>52,327</td><td>180,287</td></tr>
<tr><td>Customer Incentives</td><td>185,913</td><td>171,568</td><td>171,568</td><td>529,049</td></tr>
<tr><td>EM&V</td><td>70,000</td><td>5,004</td><td>69,996</td><td>145,000</td></tr>
<tr><td>Total by Year</td><td>731,538</td><td>590,100</td><td>646,766</td><td>1,968,403</td></tr>
</table>
</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>1.77</td><td>1.77</td><td>0.84</td><td>>1.00</td></tr>
</table>
</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>7.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Multifamily Energy Efficiency Products & Services</u></td><td>The Multifamily Energy Efficiency Products & Services program will allow Duke Energy Indiana to utilize an alternative delivery channel which targets multifamily apartment complexes. Often times, neither property managers/owners or tenants are motivated to make energy efficiency improvements because they either don’t pay the electric bill or the residence is considered temporary. This Program bridges this gap by educating property managers/owners about benefits and provides a low cost/no cost solution for improving the efficiency of the apartments. Franklin Energy is the implementation vendor who delivers this program.</td></tr>
<tr><td>Program Objectives</td><td>This program’s objective is the installation energy efficient measures including:
• LED Lighting
• Kitchen Faucet Aerators*
• Bathroom Faucet Aerators*
• Showerheads*
• Hot Water Pipe wrap*
*Water measures are only available if water is heated electrically

Measures are installed by program crews during scheduled direct install visits and the crews are accompanied by property personnel. Franklin Energy installers carry tablets to keep track of what is installed in each apartment.
After installations are complete, Quality Assurance (“QA”) inspections are conducted on approximately 20% of properties that completed installations in a given month. The QA inspections are conducted by an independent third party.</td></tr>
<tr><td>Marketing Plan</td><td>Promotion of this program is primarily focused on personalized outreach to targeted property managers/owners where each unit is individually metered and has electric water heat. Program collateral stresses the benefits of this program to property managers that are motivated by higher occupancy rates, lower water bills and lower tenant turnover. In addition, tenants will be informed about this program benefits and how it will help reduce their energy costs.
Once enrolled, this program provides property managers with a variety of marketing tools to create awareness of this program to their tenants. This includes Program letters to each tenant informing them of what is being installed and when the installation will take place. Tenants are provided an educational leave-behind brochure when the installation is complete. The brochure provides additional details on the installed measures as well as a tear-off customer satisfaction survey to fill out and mail back to Duke Energy to provide valuable Program feedback. Additionally, once the installation is complete the property will receive a complementary window cling highlighting the participation in the program.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>503,669</td><td>503,699</td><td>405,310</td><td>1,412,647</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>43</td><td>43</td><td>35</td><td>122</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
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Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct	52,999	53,693	48,043	154,735
Admin - Indirect	9,490	9,931	7,303	26,725
Customer Incentives	31,442	31,442	25,152	88,036
EM&V	95,650	5,101	95,900	196,651
Total by Year	189,581	100,167	176,398	466,147

Program Cost Effectiveness

UCT	TRC	RIM	PCT
1.79	1.79	0.71	>1.00

Program Measure Life

11.5	*Note: Measure life is based on kWh weighted average

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Residential Energy Assessments</u></td><td>Residential Energy Assessments is a free in-home assessment designed to help customers reduce energy usage and energy cost. A Building Performance Institute (”BPI”) certified energy specialist completes a 60 to 90 minute walk through assessment of the home and analyzes energy usage specific to the home to identify energy saving opportunities. As part of the assessment, the energy specialist reviews and provides a customized report to the customer that identifies actions the customer can take to increase energy efficiency in their home. The recommendations may range from behavioral changes to equipment modifications that can save energy and reduce 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 and water measures, outlet/switch gaskets, weather stripping and energy saving tips.</td></tr>
<tr><td>Program Objectives</td><td>The primary goal is to empower customers to better manage their energy usage. Example recommendations might include the following:
Turning off vampire load equipment when not in use
Turning off lights when not in the room
Using energy efficient lighting in light fixtures
Using a programmable thermostat to better manage heating and cooling usage
Replacing older equipment
Adding insulation and sealing the home</td></tr>
<tr><td>Marketing Plan</td><td>This program targets Duke Energy residential customers that own a single family home with at least 4 months of billing history. Program participation is primarily driven through bill inserts and targeted mailings; however, for those who elect to receive offers electronically, email marketing will be used to supplement. Additional channels include but are not limited to mass media, billboards, community events, and online awareness via the Duke Energy website as well as through online services.</td></tr>
<tr><td>Program Projected Savings</td><td><table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>2,107,445</td><td>2,318,612</td><td>2,387,874</td><td>6,813,931</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>223</td><td>245</td><td>252</td><td>719</td></tr>
</table></td></tr>
<tr><td>Program Budget</td><td><table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td>649,427</td><td>664,305</td><td>681,824</td><td>1,995,556</td></tr>
<tr><td>Admin - Indirect</td><td>83,892</td><td>88,627</td><td>77,836</td><td>250,356</td></tr>
<tr><td>Customer Incentives</td><td>97,021</td><td>95,443</td><td>98,291</td><td>290,756</td></tr>
<tr><td>EM&V</td><td>110,000</td><td>9,996</td><td>60,000</td><td>179,996</td></tr>
<tr><td>Total by Year</td><td>940,341</td><td>858,371</td><td>917,952</td><td>2,716,664</td></tr>
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</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Cost Effectiveness	UCT	TRC	RIM	PCT
	2.41	2.41	1.06	>1.00
Program Measure Life	11.3	*Note: Measure life is based on kWh weighted average		

Program Description **Smart Saver® Residential**	Free LED Program The Free LED program is designed to increase the energy efficiency of residential customers by offering customers LEDs to install in high-use fixtures within their homes. The LEDs are offered through an on-demand ordering platform, enabling eligible customers to request LEDs and have them shipped directly to their homes. Eligibility and participation limits are based on past participation in the CFL program and other Duke Energy programs distributing lighting. The maximum number of bulbs available for each customer is 15, but customers may choose to order less. Bulbs are available in 3, 6, 8, 12 and 15 pack and include 9 watts dimmable LEDs. Customers have the flexibility to order and track their shipment through three separate channels: Telephone Customers may call a toll-free number to access the Interactive Voice Response ("IVR") system which provides prompts to facilitate the ordering process. Both English and Spanish-speaking customers may easily validate their account, determine their eligibility and place their LED order over the phone. Duke Energy Web Site Customers can go online to complete the ordering process. Eligibility rules and frequently asked questions are also available. Online Services ("OLS") Customers who participate in the Online Services program are encouraged to order their LEDs through the Duke Energy web site, if they are eligible. Specialty Lighting The Duke Energy Savings Store is an extension of the on-demand ordering platform enabling eligible customers to purchase specialty bulbs and have them shipped directly to their homes. The Savings Store offers a variety of CFLs and Light Emitting Diodes lamps ("LEDs") including; Reflectors, Globes, Candelabra, 3 Way, Dimmable and A-Line type bulbs. Duke Energy incentive levels vary by bulb type and the customer pays the difference, including shipping. The amount of specialty bulbs each customer can purchase is restricted by an account limit, but customers may choose to order more without the Duke Energy incentive. Currently, residential customers can check eligibility and shop for specialty bulbs through four separate channels: Duke Energy Web Site Customers can go online to visit the Saving Store and purchase specialty bulbs. Frequently asked questions and a savings calculator are available to help customers understand how much they can save and how sustainable they can be by purchasing and using CFL and LED lighting. Online Services Customers enrolled in the Company's Online Services may visit the Savings Store and purchase specialty bulbs. Upon login, eligible customers are intercepted with the Savings Store offer. Customers can choose to "Shop Now" or "No Thanks". Additional links within OLS are also available for customers to access the Savings Store. Telephone Customers may call a toll free number to contact the programs third-party

vendor, Energy Federation Inc. ("EFI",) directly to place their orders.

Mail-In

Customers who receive a mail-in order form may mail their order form and payment to the fulfillment vendor for processing.

The Savings Store is managed by a third party vendor, Energy Federation Inc. ("EFI"). EFI is responsible for maintaining the Savings Store website and fulfilling customer purchases. The Savings Store landing page provides information about the store, lighting products, account information and order history. Support features include a toll free number, package tracking and frequently asked questions. An educational tool is available to help customers with their purchase decisions. The interactive tool provides information on bulb types, application types, savings calculator, lighting benefits, understanding watts versus lumens (includes a video) and recycling/safety tips. Each wireframe within the educational tool provides insight on the types of bulbs customers can purchase and/or provides answers to questions they have about the products or savings.

Duke Energy residential customers with an active residential account are eligible to participate and must agree to terms and conditions, including the condition that all bulbs will be installed at the accounts premise address, to participate in this program.

Retail Lighting

This upstream, buy-down retail-based lighting program works through lighting manufacturers and retailers to offer discounts to Duke Energy customers selecting incentivized LEDs and energy-efficient fixtures at the shelf for purchase at the register. Retailers, such as, but not limited to, Home Depot, Lowe's, Sam's Club, Walmart and Costco will be evaluated at the store level for possible inclusion in this program.

This program encourages customers to adopt energy efficient lighting through incentives on a wide range of LED products, including Reflectors, Globes, Candelabra, 3 Way, Dimmable and A-Line type bulbs, as well as fixtures. Customer education is imperative to ensure customers are purchasing the correct bulb for the application in order to obtain high satisfaction with energy efficient lighting products, ensuring subsequent energy efficient purchases.

The incentive amount varies by product type and the customer pays the difference as well as any applicable taxes. Pack limits will be in place and enforced to the best of the retailers' ability.

Ecova is the implementation vendor for the Retail program. Ecova will utilize a field team to promote and monitor the program at the participating retail locations. A toll free call center and website will be hosted by Ecova to provide program information to Duke Energy customers. The website will include a retailer locator where customers can enter their zip code and search for retailers and specific bulb and fixture types in their area. A tool available to customers is an interactive savings calculator, which will explain the different types of lighting technologies, help guide customers to the appropriate bulb/s for their application and provide an estimate of energy and monetary savings. Eligible program participants include Duke Energy residential customers.

	Save Energy and Water Kit The Save Energy and Water Kit ("SEWK") is designed to increase the energy efficiency of residential customers by offering customers energy efficient Water Fixtures and Insulated Pipe Tape to install in high-use fixtures within their homes. These energy saving devices will be offered to eligible customers and by opting in, customers can have these devices shipped directly to their homes, free of charge. Eligibility is based on past campaign participation (including this Program and any other programs offering energy efficient water devices that Duke Energy has offered to Indiana customers) and the customer must have an electric water heater. Customers receive a kit with varying amounts, based on the size of the home, of the following devices: bath and kitchen aerators, state-of-the-art shower heads and insulated pipe tape. The kit also includes directions and items to help with installation. This programs implementation vendor is EFI, who will receive and fulfill orders and provide support for damaged and missing orders. EFI will maintain a call center for this program to answer questions and take orders.
Program Objectives	Free LED Program The primary objective of this program is to demonstrate a commitment to high customer satisfaction by enabling customers to order a product that will allow them to save energy and money through a user-friendly, multi-channel platform. The benefits of providing three distinct channels include: • Improved customer experience • Advanced inventory management • Simplified program coordination • Enhanced reporting • Increased program participation • Reduced program costs Specialty Lighting The primary goal for this program is to help customers lower their energy bills and to remove inefficient equipment from the electric grid. This program educates customers about energy consumption related to lighting and how it compares to high efficiency alternatives. This program provides discounted lighting products for residential customers to help them reduce their energy usage while maintaining comfortable lighting atmosphere. Lighting education assists customers in determining the best application for lighting alternatives and emerging technologies. Retail Lighting The primary goals for this program are to help customers lower their energy bills and to remove inefficient equipment from the electric grid. This program educates customers about energy consumption attributed to lighting and how to reduce their consumption by using high efficiency alternatives. Save Energy and Water Kit The overall strategy of this program is to reach residential customers who have not adopted energy efficient water devices and water heating pipe insulation. Duke Energy will educate customers on the benefits of using energy efficient water devices and saving the energy used to heat water, while addressing barriers for consumers

	who have not participated in this program.
Marketing Plan	<u>Free LED Program</u> Marketing strategies to generate awareness of the program may include use of: • OLS Intercepts • IVR Intercepts • Bill Inserts/Messaging • Direct Mail (such as BRCs and New Customer Letters) • Social Media • Email Blasts <u>Specialty Lighting</u> This program will implement an integrated approach to marketing which may include, but not limited to: • Direct mail • OLS Intercepts • Bill inserts/messaging • Community/trade events • Digital and broadcast media <u>Retail Lighting</u> This program will implement an integrated marketing plan which may include, but is not limited to: • Point of Purchase materials at the participating retailer locations • Duke Energy and Program website • General Awareness Campaigns o Bill Inserts o Email o Digital advertising o Paid advertising/mass media o Out of Home advertising • Advertised events at key retailers including: o Direct mail o Email o Paid advertising/mass media (radio, newspaper, etc.) o Social media o In Store materials (fliers, bag stuffers, posters, banners, etc.) • Community outreach events (home shows, sporting events, cultural events, etc.) These marketing efforts are designed to create customer awareness of this program, to educate customers on energy saving opportunities and to emphasize the convenience of Program participation. Additionally, marketing efforts related to advertised in-store events are designed to motivate customer participation. <u>Save Energy and Water Kit</u> Duke Energy will market the SEWKP program through various promotional channels which may include direct mail, email and through an online store.

Program Description	<u>HVAC Equipment</u> The HVAC Equipment program offers prescriptive incentives to residential customers for the purchase and installation of energy efficient measures designed to help customers improve the efficiency of their HVAC. As a result of increased federal energy efficiency standards for baseline (SEER rating) and higher cost for energy efficient equipment, the Company will implement modifications to offer a cost-effective Program. Modifications include a tiered incentive structure for HVAC equipment, two optional add-on measures, and a new referral channel component for eligible trade allies. Three incentive levels will be made available for customers replacing HVAC equipment, based on the efficiency rating of the new unit installed, along with two add-on optional efficiency measures, a smart thermostat and quality installation. Customers can choose to combine these optional add-on measures with the HVAC equipment replacement that will further improve the efficiency of the HVAC system. The smart thermostat is a programmable Wi-Fi enabled thermostat to help customers monitor and manage their HVAC from their smart device, and must be purchased and programmed as part of the HVAC equipment installation. The purpose of the quality installation option is to provide quality assurance and document that the new HVAC equipment is performing within at least 90% of the manufacturer guidelines. <u>Attic Insulation and Air Sealing</u> Program incentives are provided to customers that have a trained participating contractor to seal and insulate the home's attic. Trained technicians utilize diagnostic equipment and proven procedures to identify and seal attic penetrations to improve the homes comfort and to reduce energy bills. After the sealing process is complete, attic insulation is installed to provide protection from higher attic temperatures. Trade allies submit incentive applications following successful completion of insulation and air sealing within the attic. The attic insulation and air sealing incentive is available one time per household. <u>Duct Sealing</u> Program incentives are provided to customers that have a certified contractor seal the home's duct system to reduce air leakage. Trained technicians utilize diagnostic equipment and proven procedures to seal leaks which can reduce energy bills and improve comfort. Trade allies submit incentive applications following successful completion of duct sealing measure. The duct sealing incentive will be paid one time per duct system. <u>Heat Pump Water Heater</u> Program incentives are provided to encourage the adoption and installation of high efficiency heat pump water heaters in existing residences with electric water heating. Duke Energy served homeowners currently residing in or building a single family residence, condominium, or duplex home are eligible for this program. Duke Energy program personnel establish relationships with plumbing contractors and national home improvement retailers who interface directly with residential customers. Incentives are paid directly to the customer following the installation of a qualified heat pump water heater by a participating contractor and approval of a completed application.

	Variable-Speed Pool Pump Program incentives are provided to encourage the adoption and installation of energy efficient, variable-speed pool pumps for the main filtration of in-ground residential swimming pools. Duke Energy served homeowners currently residing in or building a single family residence with an in-ground swimming pool are eligible for this program. Duke Energy program personnel establish relationships with pool professionals who interface directly with residential customers. Incentives are paid directly to the customer following the installation of a qualified variable-speed pool pump by a participating contractor and approval of a completed application. Referral Channel The referral component of the Program is a new delivery channel that provides a free referral service to customers to enhance program awareness and participation. The service simplifies the customer's decision-making around energy efficiency purchases and takes the guesswork out of finding reliable, qualified contractors with competitive offers. This delivery channel supports the Company's role as an energy efficiency program administrator while building trusted partnerships with customers and HVAC and home performance contractors as well as home builders ("Trade Allies") who interface directly with residential customers. The Referral Channel offers high achieving Trade Allies in the Program the ability to receive referral services. The Referral Channel establishes designations between registered Trade Allies as referred or non-referred. As part of the Program, the Company will generate leads for qualified, referred Trade Allies by identifying prospective customers with interest in eligible incentivized energy efficiency upgrades and/or subsequent non-incentivized services. Trade Ally eligibility to participate in the referral channel will be based upon previous registration in one or more of the Program incentive measures, and meeting minimum performance requirements which demonstrates their active engagement and promotion of the Program. Performance criteria include such metrics as quantity and accuracy of qualifying rebate applications submitted, customer service rating, and quality assurance. Trade Allies who meet the performance criteria may elect to opt-in to participate in the referral channel. These Trade Allies will be able to receive referrals from the Company when requested by a customer. Customers will have the option of contacting one or more of the referred Trade Allies. For those referrals that result in a closed sale, the Trade Ally will pay the Company a set fee, structured in a manner that encourages sales of qualifying, high efficiency products and services. These fees received by the Company for closed sales from the referral channel are paid back into the program to improve cost effectiveness. Duke Energy will continue to pay the customers of the referred and non-referred Trade Allies an energy efficiency incentive for qualifying eligible measures.
Program Objectives	Program objectives include promoting energy savings and increased customer satisfaction through offering prescriptive incentives to residential customers for the purchase and installation of energy efficient measures designed to help customers improve the efficiency of their HVAC system, building shell, in-ground swimming pool filtration, and water heating.

Duke Energy Indiana Energy Efficiency Program Description & Information
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<table>
<tr><td>Marketing Plan</td><td>
<u>General Program Awareness</u>
Marketing of the HVAC equipment and services is primarily targeted to Trade Allies and new home builders. Trade Allies are important to the program success because they interface with the customer during the equipment purchase decision- making event which can have a significant impact on annual energy usage. Program information including Trade Ally enrollment forms will be available on Duke Energy’s website. The majority of trade ally marketing is conducted through personal outreach activities such as: face-to-face, phone, electronic and direct mail. By increasing the overall awareness of the Program and the participation of Trade Allies, it ensures more customers are discussing the benefits of the Program at time of purchase. Trade Ally engagement is supplemented with general customer awareness.

Referral Delivery Channel
Several broad based marketing campaigns will be leveraged to increase the awareness of the Program. The marketing campaigns may leverage channels such as TV, radio, out of home and print which will be in addition to the traditional channels (email, bill insert, bill messaging) the Program has historically communicated through and will promote the benefits of the referral channel to customers for home energy efficiency improvements. Customers will have access to a Duke Energy representative to discuss topics such as energy usage, benefits of energy efficient equipment, expected pricing and savings, and other energy efficiency programs.

These marketing efforts are designed to create customer awareness of the Program, to educate customers on energy saving opportunities and to emphasize the convenience of Program participation.
</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>69,889,736</td><td>52,210,914</td><td>47,271,335</td><td>169,371,985</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>6,795</td><td>5,059</td><td>4,514</td><td>16,368</td></tr>
</table>
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<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td>3,102,617</td><td>2,100,383</td><td>1,902,198</td><td>7,105,198</td></tr>
<tr><td>Admin - Indirect</td><td>1,216,461</td><td>918,790</td><td>744,773</td><td>2,880,024</td></tr>
<tr><td>Customer Incentives</td><td>7,721,078</td><td>5,775,889</td><td>5,562,289</td><td>19,059,256</td></tr>
<tr><td>EM&V</td><td>315,000</td><td>100,000</td><td>454,992</td><td>869,992</td></tr>
<tr><td>Total by Year</td><td>12,355,155</td><td>8,895,062</td><td>8,664,252</td><td>29,914,469</td></tr>
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<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>3.08</td><td>3.03</td><td>0.84</td><td>15.67</td></tr>
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</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>12.3</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>My Home Energy Report</u></td><td>My Home Energy Report (MyHER) program provides customers with a comparison of their energy usage to similar single family residences in the same geographical area based upon the age, size and heating source of the home. Specific energy saving recommendations are provided to encourage energy saving behavior. The paper reports are mailed 8 times a year for single family dwellings. Multifamily dwellings receive a combination of 4 paper reports and 8 electronic reports throughout the year. MyHER Interactive, a portal, provides similar information as the printed report but also provides the ability to create a savings plan, see how energy is used in the home by end use, provides an energy expert to respond to customer questions and delivers weekly email challenges. MyHER Interactive customers also receive email versions of their reports.</td></tr>
<tr><td>Program Objectives</td><td>Generate kWh savings, increase customer satisfaction and educate customers on other Energy Efficiency offers from Duke Energy.</td></tr>
<tr><td>Marketing Plan</td><td>The paper report MyHER program is an opt out program that automatically creates and sends reports for eligible customers. The MyHER Interactive portal is an opt in program and is marketed through messages in the printed report and email marketing campaigns. Sweepstakes offers are used to encourage enrollment on the Interactive Portal.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>61,225,640</td><td>62,581,419</td><td>62,623,268</td><td>186,430,328</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>15,238</td><td>15,576</td><td>15,586</td><td>46,400</td></tr>
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<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td>3,047,929</td><td>3,037,678</td><td>3,039,324</td><td>9,124,931</td></tr>
<tr><td>Admin - Indirect</td><td>342,553</td><td>354,354</td><td>303,250</td><td>1,000,157</td></tr>
<tr><td>Customer Incentives</td><td></td><td></td><td></td><td></td></tr>
<tr><td>EM&V</td><td>110,000</td><td>11,364</td><td>71,478</td><td>192,841</td></tr>
<tr><td>Total by Year</td><td>3,500,482</td><td>3,403,395</td><td>3,414,052</td><td>10,317,930</td></tr>
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<tr><td>Program Cost Effectiveness</td><td>
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<tr><td>1.35</td><td>1.35</td><td>0.66</td><td>>1.00</td></tr>
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</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>1.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
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</td></tr>
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Program Description **Power Manager®**	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. A load control switch is attached to the outdoor air conditioning unit of participating customers. For water heaters, the switch is installed on or near the appliance. The device enables Duke Energy Indiana to cycle central air conditioning systems off and on when the load on Duke Energy Indiana's system reaches peak levels. The water heater switch will enable Duke Energy Indiana to cycle off electric water heaters during times of high electric demand—year round. Power Manager® is offered to residential customers that have a functional central air-conditioning system with an outside compressor unit. Customers must agree to have the control device installed on their A/C system and to allow Duke Energy Indiana to control their A/C system during Power Manager® events. If the customer also has an electric water heater, the customer may choose to also have a control device installed on or near that appliance and allow Duke Energy Indiana to control the appliance during Power Manager® events. Customers residing in single family homes participating in this Program receive a one-time enrollment incentive and a bill credit for each Power Manager® event. Customers who select Option A, which cycles their air conditioner to achieve a 1.0 kW load reduction, receive a $25 credit at installation. Customers selecting Option B, which cycles their air conditioner to achieve a 1.5 kW load reduction, receive a $35 credit at installation. The bill credit provided for each cycling event is based on: the kW reduction option selected by the customer, the number of hours of the control event and the value of electricity during the event. For each control season (May through Sept), customers will receive a minimum of $7.50 for Option A and $10 for Option B in credits. For water heaters, participating customers receive a one-time incentive of $5 and a bill credit for each Power Manager® event. Annually, customers will receive a minimum of $6 in event credits. Additionally, the Power Manager® program has a specific offer focused on customers who are tenants in apartment complexes/communities—marketed as Power Manager® for Apartments. The program is offered to property/managers/owners of individually metered apartment units that have a functional central air-conditioning unit with an outside compressor unit. The landlord must agree to have the control device installed on the A/C system and to allow Duke Energy Indiana to control the A/C system during Power Manager® events and enroll tenants in the program. In addition, if the apartments have electric water heaters, the property managers/owners will be offered the opportunity to have load control switches installed on those appliances and enroll the tenants in this program. The property managers/owners will receive an annual incentive for each air conditioning unit receiving a load control switch. This incentive is $5 per air conditioning switch installed. The purpose of these incentives revolves around the fact that the landlord owns the equipment, controls access to the equipment and the maintenance of the equipment. Communication about maintenance events and that a switch has been disconnected is very valuable for persistence of these measures. The

<table>
<tr><td></td><td>most efficient way to deliver this Program (and provide savings in kW to Duke Energy and in dollars to Customers) is via these property managers/owners. The property manager/owners will receive a one-time enrollment incentive of $5 for each water heater switch installed.

Additionally, the Customers (tenants) participating in this Program receive bill credits for each Power Manager® event. Customers will receive a minimum of $10.00 annually for their participation in the air conditioning part of this program. Customers who also have a water heater switch installed on their unit will receive a minimum of $6.00 annually in bill credits. After installation of the switch(es), tenants will be notified of their Program eligibility and given the opportunity to opt-out of participation.</td></tr>
<tr><td>Program Objectives</td><td>The objective of the Power Manager® program is to provide customer bill savings to customers through reducing their usage during times of high system loads or high wholesale energy prices. This program delivers direct savings to participating customers in the form of bill credits as well as reduces rates for all customers by providing a cheaper capacity option than building generation for the small number of hours that the program impacts. For the apartment complex marketplace, the program also provides property manager/owners incentives to provide apartment units that will have lower monthly operating costs for their tenants.</td></tr>
<tr><td>Marketing Plan</td><td>Customers are informed of the program via the program website and associate brochure on the Duke Energy Indiana website (as of this writing, found at http://www.duke-energy.com/indiana/savings/power-manager.asp). Customer recruitment is focused primarily on outbound telemarketing, and supplemented by email and direct mail solicitations. Door-to-door canvassing is being used in other Duke Energy operating companies for similar programs, and will be evaluated and potentially added to the marketing mix, if appropriate.

Power Manager® for Apartments is marketed through personalized outreach to targeted property managers/owners with individually metered units. Program collateral will stress the benefits of this program to property managers that are motivated by higher occupancy rates and providing lower electric costs for their tenants. It is also planned to leverage opportunities, contacts and learnings from the Residential Multifamily Energy Efficiency Program.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>66,464</td><td>70,150</td><td>73,623</td><td>210,238</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin – Direct	1,691,622	1,883,016	1,914,631	5,489,269
Admin – Indirect	198,632	242,620	251,712	692,964
Customer Incentives	601,760	660,701	705,835	1,968,296
EM&V	390,000	75,000	139,996	604,996
Total by Year	2,882,014	2,861,337	3,012,174	8,755,525

Program Cost Effectiveness

UCT	TRC	RIM	PCT
5.23	7.44	5.23	>1.00

Program Measure Life

1.0	*Note: Measure life is based on kWh weighted average

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Bring Your Own Thermostat</u></td><td>Bring Your Own Thermostat (BYOT) provides residential Demand Response (DR) load management using the customers' own "smart" 2-way communicating thermostats instead of traditional load control switches. It is intended for customers who already use smart thermostat, allowing the utility to avoid the costs of hardware and installation associated with traditional DR methods. The utility can verify how many thermostats are connected to the network at any given time, and determine which thermostats are participating in DR events as opposed to opting-out. Since it was first introduced in 2012, over a dozen utilities have implemented, or are planning to implement BYOT pilot programs in the United States. Duke Energy is partnering with a third party vendor who has contracts with multiple thermostat manufacturers to offer demand response through aggregation of the different thermostat models.</td></tr>
<tr><td>Program Objectives</td><td>The program goals are to add kW savings during peak periods by adding new customers without the time and cost of installing a traditional DR switch. In addition the program expects to reach new customers who have not traditionally participated in demand response.</td></tr>
<tr><td>Marketing Plan</td><td>The program will be marketed to customer through participating device manufacturers who offer utility branded marketing and enrollment services. One of the significant advantages of Smart Thermostats is its ability to have two way communication. Agreements with the aggregation vendor and the thermostat manufacturers include the ability to send messages to device owners inviting them to participate in their utility's DR program. Communication may include, but is not limited to messages on the unit, email and text messages. Interested customers are brought into the enrollment system which can vary by manufacturer. In addition to the unit manufacturer communication, the company may use a number of channels including, but not limited to online marketing direct mail and social media.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td></td><td>9,021</td><td>13,235</td><td>22,257</td></tr>
</table>
</td></tr>
<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td></td><td>306,793</td><td>476,117</td><td>782,910</td></tr>
<tr><td>Admin – Indirect</td><td></td><td>38,833</td><td>59,391</td><td>98,224</td></tr>
<tr><td>Customer Incentives</td><td></td><td>100,343</td><td>142,176</td><td>242,519</td></tr>
<tr><td>EM&V</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total by Year</td><td></td><td>445,968</td><td>677,684</td><td>1,123,653</td></tr>
</table>
</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>3.42</td><td>4.06</td><td>3.42</td><td>>1.00</td></tr>
</table>
</td></tr>
</table>

Program Measure Life	1.0	*Note: Measure life is based on kWh weighted average

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Energy Efficient Appliance</u></td><td>The Energy Efficient Appliance program offers customers rebates on qualified energy efficiency appliances and devices purchased through various methods and channels. The efficiency of the units will be based on Energy Star or similar standards and may include appliances such as electric water heaters, refrigerators, clothes washers, electronics, televisions, computers and controls for water heaters, lighting and thermostats.</td></tr>
<tr><td>Program Objectives</td><td>The goal of this program is to offer customers rebates on additional energy saving technologies beyond HVAC equipment, lighting and water saving measures to large appliances, electronics and other technologies that impact plug load within their homes. Through this program, customers can achieve deeper savings while at the same time receiving an incentive from Duke Energy to offset part of the cost of buying equipment designed to use less energy.</td></tr>
<tr><td>Marketing Plan</td><td>The program will be marketed through a number of channels including but not limited to retail point of sale, E-commerce online marketing, direct mail, email and social media.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td></td><td></td><td>128,133</td><td>128,133</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td></td><td></td><td>15</td><td>15</td></tr>
</table>
</td></tr>
<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td></td><td></td><td>26,730</td><td>26,730</td></tr>
<tr><td>Admin - Indirect</td><td></td><td></td><td>4,149</td><td>4,149</td></tr>
<tr><td>Customer Incentives</td><td></td><td></td><td>14,850</td><td>14,850</td></tr>
<tr><td>EM&V</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total by Year</td><td></td><td></td><td>45,729</td><td>45,729</td></tr>
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</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>1.09</td><td>1.02</td><td>0.56</td><td>4.35</td></tr>
</table>
</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>8.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Description **<u>Manufactured Home</u>**	The Manufactured Home program offers owners of manufactured housing incentives to improve the energy efficiency of their homes. Customers living in manufactured homes may receive rebates when they implement one or more of the qualifying improvements. These may include HVAC equipment and services, duct and/or thermal boundary improvements.
Program Objectives	Expand the opportunity for additional energy efficiency savings by including manufactured homes eligible for rebates on energy saving improvements.
Marketing Plan	The program will be marketed to builders and developers through personal outreach, training seminars and trade organization meetings.

Program Projected Savings

kWh	2017	2018	2019	Total kWh
			93,905	93,905
kW	2017	2018	2019	Total kW
			20	20

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct			28,440	28,440
Admin - Indirect			6,222	6,222
Customer Incentives			33,924	33,924
EM&V				
Total by Year			68,586	68,586

Program Cost Effectiveness

UCT	TRC	RIM	PCT
1.10	1.02	0.65	2.55

Program Measure Life

15.0	*Note: Measure life is based on kWh weighted average

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Multi Family Retro Fit</u></td><td>The Multi Family Retro Fit program offers Property Managers incentives to improve the energy efficiency of their existing rental properties by performing building envelope improvements and increasing HVAC efficiency via equipment upgrades and/or services. The program may include rebates for high efficiency HVAC equipment and services as well as envelope measures to improve building thermal characteristics and seal penetrations to reduce energy consumption and improve comfort.</td></tr>
<tr><td>Program Objectives</td><td>Expand the opportunity for energy efficiency savings by including multifamily residential unit properties eligible for rebates on qualifying energy improvements.</td></tr>
<tr><td>Marketing Plan</td><td>The program will be marketed to Property Managers, Building Owners and Property Management companies using direct mail, email and direct selling techniques.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td></td><td></td><td>146,536</td><td>146,536</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td></td><td></td><td>5</td><td>5</td></tr>
</table>
</td></tr>
<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td></td><td></td><td>62,502</td><td>62,502</td></tr>
<tr><td>Admin – Indirect</td><td></td><td></td><td>11,268</td><td>11,268</td></tr>
<tr><td>Customer Incentives</td><td></td><td></td><td>50,436</td><td>50,436</td></tr>
<tr><td>EM&V</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total by Year</td><td></td><td></td><td>124,206</td><td>124,206</td></tr>
</table>
</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>1.06</td><td>1.04</td><td>0.64</td><td>3.26</td></tr>
</table>
</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>15.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table>
</td></tr>
</table>

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

<table>
<tr><td>Program Description

<u>Residential New Construction</u></td><td>The Residential New Construction program offers incentives to builders of new single family homes and new multi-family properties constructed to higher efficiency standard than existing building codes. Builders may use a combination of construction techniques, equipment and materials to achieve the higher energy savings.</td></tr>
<tr><td>Program Objectives</td><td>To improve the efficiency of single family and multi-family building stock by building efficiency into the construction process. The program seeks to raise builders' awareness of efficient building practices and ultimately incorporate those into their standard building processes.</td></tr>
<tr><td>Marketing Plan</td><td>The program will be marketed to builders and developers through personal outreach, training seminars and trade organization meetings.</td></tr>
<tr><td>Program Projected Savings</td><td>
<table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td></td><td></td><td>756,174</td><td>756,174</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td></td><td></td><td>86</td><td>86</td></tr>
</table>
</td></tr>
<tr><td>Program Budget</td><td>
<table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin - Direct</td><td></td><td></td><td>132,996</td><td>132,996</td></tr>
<tr><td>Admin - Indirect</td><td></td><td></td><td>65,652</td><td>65,652</td></tr>
<tr><td>Customer Incentives</td><td></td><td></td><td>525,000</td><td>525,000</td></tr>
<tr><td>EM&V</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total by Year</td><td></td><td></td><td>723,648</td><td>723,648</td></tr>
</table>
</td></tr>
<tr><td>Program Cost Effectiveness</td><td>
<table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>1.07</td><td>1.02</td><td>0.59</td><td>2.47</td></tr>
</table>
</td></tr>
<tr><td>Program Measure Life</td><td>
<table>
<tr><td>25.0</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table>
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</table>

Program Description **Power Manager® for Business**	Power Manager® for Business is a non-residential program that 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. Customers who opt for the thermostat will have the ability to manage their thermostat remotely via computer, tablet or smartphone. The thermostat comes with presets designed to help the business manager/owner set an efficient schedule that works for their business. This realizes additional benefits in the form of EE impacts/savings. Customers then select one of three levels of summer demand response ("DR") participation, and earn an incentive based upon that selection. Both thermostat and switch customers have the same DR participation options, and receive the same DR incentives. Power Manager® for Business will be offered to business customers with qualifying air conditioning systems, summer weekday energy usage and broadband/Wi-Fi internet. Customers must agree to have the control device installed on their A/C system and to allow Duke Energy Indiana to control their A/C system during Power Manager® events. Qualifying air conditioning systems include: Individual split air conditioning systems Rooftop Units Packaged terminal air conditioners ("PTACs") Customers participating in this Program receive an incentive based on upon the level of demand response cycling they select: 30% cycling: $50 per DR summer season (per device) 50% cycling: $85 per DR summer season (per device) 75% cycling: $135 per DR summer season (per device The incentive will be paid out after installation of the device(s) and then annually. Devices are installed at the customer premise at no charge to the customer.
Program Objectives	The objective of the Power Manager® for Business program is to provide customer bill savings to customers through reducing their usage during times of high system loads or high wholesale energy prices. This program delivers direct savings to participating customers in the form of bill credits as well as reduces rates for all customers by providing a cheaper capacity option than building generation for the small number of hours that the program impacts. In addition, this program is reaching a subset of the customer base that previously has not been well-served by similar demand response programs (too small for PowerShare® and not eligible for the residential Power Manager® program).
Marketing Plan	Power Manager® for Business will be marketed through targeted direct mail campaigns, targeted e-mail campaigns, outbound telemarketing, on Duke Energy Indiana's Web site and via cross selling with the Small Business Energy Saver Program. Direct sales via doo-to-door outreach will also be evaluated for potential inclusion as a future marketing channel.

Duke Energy Indiana Energy Efficiency Program Description & Information
2017-2019

Program Projected Savings

kWh	2017	2018	2019	Total kWh
	228,544	1,048,722	1,184,190	2,461,455
kW	2017	2018	2019	Total kW
	1,044	5,773	10,894	17,711

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct	690,889	375,213	459,249	1,525,351
Admin - Indirect	72,089	64,679	82,699	219,467
Customer Incentives	141,532	300,473	399,896	841,901
EM&V	30,300		176,000	206,300
Total by Year	934,811	740,366	1,117,843	2,793,020

Program Cost Effectiveness

UCT	TRC	RIM	PCT
2.05	3.01	1.77	>1.00

Program Measure Life

8.0	*Note: Measure life is based on kWh weighted average

Program Description **<u>Small Business Energy Saver</u>**	The purpose of Duke Energy's Small Business Energy Saver (SBES) program is to reduce energy usage through the direct installation of energy efficiency measures within qualifying small and medium non-residential customer facilities. SBES is designed to offer a convenient, turn-key process for non-residential customers to make facility energy efficiency improvements. Many small and medium business owners lack the time, upfront capital, or technical expertise to facilitate the retrofit or replacement of older equipment within their facilities. The SBES program effectively removes these barriers by offering a turn-key energy efficiency offering which facilitates the direct installation of energy efficiency measures, and minimizes financial obstacles with significant upfront incentives from Duke Energy Indiana which offset the cost of projects. Participants may be in owner-occupied or tenant facilities with owner permission. All aspects of SBES are managed by a Duke Energy-authorized program vendor. Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from Duke Energy. Upon receiving the results of the energy assessment, if the customer decides to move forward with the proposed energy efficiency project, the customer makes the final determination of which measures will be installed. The energy efficiency measure installation is then scheduled at a convenient time for the customer and the measures are installed by a Duke Energy-authorized vendor electrical subcontractor. The SBES program incentive amount is calculated per project, based upon the estimated energy savings of the energy efficiency improvements and the conditions found within the customer's facility. Incentivized measures address major end-uses in lighting, refrigeration, and heating ventilation and air conditioning (HVAC) applications. Lighting measures such as high performance T8 and T5 fluorescent new fixtures and ballasts, high performance T8 and T5 retrofit kits, interior and exterior light emitting diode (LED) fixtures, screw-in LED lamps; LED exit signs; and occupancy sensors may be offered. All lighting measures offered are Consortium for Energy Efficiency ("CEE"), ENERGY STAR, or Design Lights Consortium ("DLC") qualified products. Refrigeration measures may include new electronically commutated ("EC") motors, anti-sweat heater controls, evaporator fan controls, LED refrigeration case lighting, beverage machine/novelty cooler controls, and automatic door closers for walk-in freezers. HVAC upgrades such as unitary, split systems, and air sourced heat pumps and programmable thermostats may be included. In anticipation of technological advancements, Duke Energy Indiana proposes the flexibility to incentivize additional cost effective measures where appropriate within the lighting, refrigeration and HVAC fields. In order to encourage participation within this hard-to-reach customer segment, Duke Energy Indiana provides an upfront customer incentive for up to 80 percent of the total cost of installed measures. Incentives will be provided based on Duke Energy Indiana's cost effectiveness modeling to ensure cost effectiveness over the life of the measures. Duke Energy Indiana's incentive payment for any installed measures will be paid directly to the program vendor upon verification that the energy efficiency measure(s) have been installed. The program vendor is only compensated by Duke

<table>
<tr><td></td><td>Energy Indiana for energy savings produced through the installation of energy efficiency measures. All project costs above the incentive amount will be the responsibility of the customer and paid based upon payment terms arranged between the customer and program vendor. The program vendor will offer interest-free extended payment options to the customer, to further minimize any financial barriers to participation.</td></tr>
<tr><td>Program Objectives</td><td>The objective of the Small Business Energy Saver (SBES) program is to enable the direct installation of high efficiency equipment in existing small and medium non-residential facilities by removing common barriers to energy efficiency program participation.</td></tr>
<tr><td>Marketing Plan</td><td>This program may be promoted through various marketing channels that include, but are not limited to:
Direct mail (letters and postcards to qualifying customers)
Duke Energy Indiana website
Community outreach events
Small Business Group outreach events
Paid advertising/mass media
Social media promotions
Marketing efforts will be designed to create customer awareness of this program, to educate customers on energy saving opportunities and to emphasize the convenience of participation in SBES.</td></tr>
<tr><td>Program Projected Savings</td><td><table>
<tr><td>kWh</td><td>2017</td><td>2018</td><td>2019</td><td>Total kWh</td></tr>
<tr><td></td><td>20,308,661</td><td>20,308,661</td><td>20,308,661</td><td>60,925,983</td></tr>
<tr><td>kW</td><td>2017</td><td>2018</td><td>2019</td><td>Total kW</td></tr>
<tr><td></td><td>4,548</td><td>4,548</td><td>4,548</td><td>13,643</td></tr>
</table></td></tr>
<tr><td>Program Budget</td><td><table>
<tr><td>Total Program Budget</td><td>2017</td><td>2018</td><td>2019</td><td>Total by Line Item</td></tr>
<tr><td>Admin – Direct</td><td>763,493</td><td>736,310</td><td>737,849</td><td>2,237,651</td></tr>
<tr><td>Admin – Indirect</td><td>454,548</td><td>466,687</td><td>463,554</td><td>1,384,789</td></tr>
<tr><td>Customer Incentives</td><td>4,005,708</td><td>3,963,216</td><td>3,961,677</td><td>11,930,602</td></tr>
<tr><td>EM&V</td><td>150,000</td><td>50,000</td><td>100,000</td><td>300,000</td></tr>
<tr><td>Total by Year</td><td>5,373,749</td><td>5,216,213</td><td>5,263,080</td><td>15,853,042</td></tr>
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<tr><td>Program Cost Effectiveness</td><td><table>
<tr><td>UCT</td><td>TRC</td><td>RIM</td><td>PCT</td></tr>
<tr><td>2.56</td><td>1.94</td><td>0.91</td><td>3.15</td></tr>
</table></td></tr>
<tr><td>Program Measure Life</td><td><table>
<tr><td>10.3</td><td>*Note: Measure life is based on kWh weighted average</td></tr>
</table></td></tr>
</table>

Program Description **Smart $aver® Non-residential Incentive**	The Smart $aver® Non-residential Incentive Program provides incentives to commercial, industrial, and institutional consumers for installation of energy efficient equipment in applications involving new construction, retrofit, and replacement of failed equipment. This program also uses incentives to encourage maintenance of existing equipment in order to reduce energy usage. Incentives are provided based on Duke Energy Indiana's cost effectiveness modeling to assure cost effectiveness over the life of the measure. All non-residential customers served by Duke Energy in Indiana on a non-residential rate to which the Energy Efficiency Revenue Adjustment is applicable are eligible for the Smart $aver® program, except for those customers that choose to opt-out of the Duke Energy Program. This program is delivered to customers through three incentive categories: Prescriptive, Custom and Performance. **Prescriptive Incentives** Prescriptive Incentives are pre-determined, fixed incentives for common energy efficiency equipment. Pre-approval is not required; eligibility requirements and incentive amounts are published on the application form posted to the Duke Energy Indiana website. This program promotes prescriptive incentives for the following technologies – lighting, HVAC, pumps, variable frequency drives, food services, process equipment, and information technology equipment. Equipment and incentives are predefined based on current market assumptions and Duke Energy's engineering analysis. The eligible measures, incentives and requirements for both equipment and customer eligibility are listed in the applications posted on Duke Energy's Business and Large Business websites for each technology type. Duke Energy will investigate providing a limited quantity of low-cost energy efficient equipment directly to eligible Nonresidential customers, at no cost to the customer, through this program or in partnership with other Duke Energy programs. Standards continue to change and new, more efficient technologies continue to emerge in the market. The Company expects that new measures will be added to the program to increase participation and provide customers a broader suite of products. Prescriptive Incentives are offered to customers through multiple channels, including an application form (paper and electronic), the online Energy Efficiency Store, and Midstream network. Additional channels may be added in the future, in order to reach as many customers as possible. **Custom Incentives** Unlike Prescriptive Incentive Program measures, Custom Incentives require approval prior to the customer's decision to implement the project. Proposed energy efficiency measures may be eligible for Custom Incentives if they clearly reduce electrical consumption and/or demand. There are two potential approaches for applying for Custom Incentives; Classic Custom and Custom to Go. Application

documents vary slightly depending on the approach taken. The two approaches differ in terms of the method by which energy savings are calculated. Customers eligible for the Custom to Go calculations approach may elect to apply under the Classic Custom approach if that is their preference.

The following application forms are located on the Duke Energy website under Smart $aver Custom Incentives (Business and Large Business tabs). These forms may be completed and returned to the program via e-mail or through use of the Online Application Portal.

- Custom Application – Administrative Information
- Energy Savings Calculations & Basis
    - Classic Custom Approach (> 700,000 kWh or no applicable Custom to Go calculator)
        - Variable Frequency Drives
        - Energy Management Systems (HVAC)
        - Compressed Air Systems
        - Lighting
        - General (for technologies not listed above)
    - Custom to Go Calculators (< 700,000 kWh and applicable Custom to Go calculator)
        - Variable Frequency Drives (Fans & Pumps)
        - HVAC/Energy Management Systems
        - Compressed Air Systems
        - Lighting

The Smart $aver Custom Incentive team continues to explore additional program enhancements designed to increase program participation. These include an approach to expediting application approval time, and a separate approach to assist in performing energy savings calculations.

Performance Incentives

Duke Energy Indiana's $mart Saver Performance Incentive provides a mechanism to promote energy efficiency measures not eligible for Smart $aver Prescriptive or Custom Incentive payments. $mart Saver Performance Incentive has been designed to complement the Company's Smart $aver Prescriptive and Custom measures, and would encourage the implementation of energy conservation measures which are characterized, at the time of conception, by a degree of uncertainty associated with the end result. The types of measures that will be covered by $mart Saver Performance Incentive will include some combination of unknown building conditions or system constraints, coupled with uncertain operating, occupancy, or production schedules. The specific type of measures will be included in the contract with the Customer.

In order to receive payment under this program, the customer must submit an application before making a decision to implement the project. An estimated total project savings will be calculated and agreed to by the applicant and the Company. $mart Saver Performance Incentive incentives will be based on the published incentive rate schedule. In order to manage risk, incentives under Performance Incentive will be divided into two separate payments. The first payment will be

	made upon completion of the project, and following a review and approval by the company. This first payment will be based on a portion of the initial estimated total savings for the project. At this point, a measurement period will begin to verify actual savings. A second incentive payment will be made as savings are confirmed and will be equal to the applicable Pay–for-Performance incentive rate multiplied by the verified savings amount. The percentage of payment made for the initial incentive versus the verified incentive payment amount will be made on a project-by-project basis according to the measure of uncertainty assigned to the project. Due to the different types of projects, and the range of variables involved with these different categories of energy efficiency measures, the program Evaluation, Measurement & Verification will be performed separately for Prescriptive, Custom and Performance measures.
Program Objectives	Commercial, industrial, and institutional customers can have significant energy consumption, but may lack knowledge and understanding of the benefits of high efficiency alternatives. The Smart $aver Incentive Program is designed to meet the needs of Duke Energy customers that have opportunities for electrical energy savings projects, whether the project involves common energy efficiency equipment or more complicated or alternative technologies. The financial incentives help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the Prescriptive Incentives offered in the Program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products, including sometimes directly providing the incentive to customers. The Custom Incentives and Performance Incentives offer options to encourage customers to implement energy efficiency measures that are not included in the list of Prescriptive Incentives.
Marketing Plan	This program is promoted directly to Nonresidential customers via targeted marketing material and communications, including direct mail, email, and online channels. Additionally, information about incentives is communicated through, but not limited to, the following; • Energy efficient equipment collateral and tool kits • New construction tool kit • Trade ally outreach • Duke Energy Large Account Managers • Duke Energy Business Energy Advisors • Duke Energy Energy Efficiency Engineers • Duke Energy workshops/webinars • Company website Optional energy assessments are available to identify and/or evaluate energy efficiency projects and measures. The scope of an energy assessment may include but is not limited to facility energy audit, new construction/renovation energy performance simulation, system energy study and retro-commissioning service. Payments are available to offset a portion of the costs of a qualifying energy

assessment. The Company may vary the percentage of energy assessment payment based on the facility size, age, equipment, and other criteria that could affect the amount of energy efficiency opportunities identified. All, or a portion of, the energy assessment payment may be contingent on the customer implementing a minimum amount of cost effective energy efficiency measures within a set timeframe.

Program Projected Savings

kWh	2017	2018	2019	Total kWh
	41,636,758	47,271,994	57,094,258	146,003,010
kW	2017	2018	2019	Total kW
	6,001	6,669	7,815	20,485

Program Budget

Total Program Budget	2017	2018	2019	Total by Line Item
Admin - Direct	2,554,239	2,636,467	2,421,262	7,611,969
Admin - Indirect	724,960	796,373	823,625	2,344,958
Customer Incentives	5,052,178	5,382,987	5,928,668	16,363,833
EM&V	311,000	81,000	310,604	702,604
Total by Year	8,642,378	8,896,828	9,484,159	27,023,364

Program Cost Effectiveness

UCT	TRC	RIM	PCT
2.78	1.30	0.88	2.13

Program Measure Life

12.9	*Note: Measure life is based on kWh weighted average