



**Vectren South 2021-2023  
Electric Energy Efficiency Plan**

Prepared by:  
Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery  
of Indiana Inc. (Vectren South)

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### List of Acronyms & Abbreviations

<b>Acronym</b>	<b>Description</b>
ARCA	Appliance Recycling Centers of America Inc.
BTU	Building Tune-Up
BYOT	Bring Your Own Thermostat
C&I	Commercial and Industrial
CAC	Central Air Conditioning
CVR	Conservation Voltage Reduction
DLC	Direct Load Control
DR	Demand Response
DSM	Demand Side Management
EAP	Energy Assistance Program
ECM	Electronically Commutated Motors
EDA	Energy Design Assistance
EE	Energy Efficiency
EISA	Energy Independence and Security Act
EM&V	Evaluation, Measurement and Verification
ES	ENERGY STAR
FPL	Federal Poverty Level
H&S	Health & Safety
HEA	Home Energy Assessment
HEMS	Home Energy Management Systems
HERS	Home Efficiency Rating System
HVAC	Heating, Ventilation and Air Conditioning
IQW	Income Qualified & Weatherization
IRP	Integrated Resource Plan
IURC	Indiana Utility Regulatory Commission
kW/kWh	Kilowatt, Kilowatt hour
LED	Light Emitting Diode
MPS	Market Potential Study
MW,MWh	Megawatt, Megawatt hour
NEF	National Energy Foundation
NPV	Net Present Value
O&M	Operations and Maintenance
PCT	Participant Cost Test
PPC	Program Partner Center

<b>Acronym</b>	<b>Description</b>
RIM	Ratepayer Impact Measure
RNC	Residential New Construction
SEM	Strategic Energy Management
TRM	Technical Reference Manual
UCT	Utility Cost Test

## 1. Introduction

Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. (Vectren South), a CenterPoint Energy Company. Vectren South provides energy delivery services to approximately 147,000 electric customers and 112,000 natural gas customers located in Southwestern Indiana. Vectren South is a direct, wholly owned subsidiary of Vectren Utility Holdings, Inc. (“Vectren”), which is a wholly-owned indirect subsidiary of CenterPoint Energy Company, headquartered in Houston, TX. This Vectren South 2021-2023 Electric Demand Side Management (DSM) Plan (“2021-2023 Plan” or “Plan”) describes the details of the electric Energy Efficiency (EE) and Demand Response (DR) programs Vectren South plans to offer in its service territory in 2021-2023.

Vectren South is proposing a 2021-2023 Plan designed to cost effectively reduce energy use by approximately 1.3% of eligible retail sales each year over the three-year plan. The EE savings goals are consistent with Vectren South’s 2019 Integrated Resource Plan (“2019 IRP”), reasonably achievable and cost effective. The Plan includes program budgets, including the direct and indirect costs of energy efficiency programs. The 2021-2023 Plan recommends electric EE and DR programs for the residential and commercial & industrial (C&I) sectors in Vectren South’s service territory. Where appropriate, it also describes opportunities for coordination with some of Vectren South’s gas EE programs to leverage the best total EE and DR opportunities for customers and to share costs of delivery. Vectren South utilizes a portfolio of DSM programs to achieve demand reductions and energy savings, thereby providing reliable electric service to its customers. Vectren’s DSM programs have been approved by the Indiana Utility Regulatory Commission (“Commission” or “IURC”) and implemented pursuant to various IURC orders over the years.

## 2. Vectren South DSM Strategy

Energy efficiency remains at the core of Vectren’s culture as one of the company’s objectives is to partner with customers to help them use energy wisely. Vectren proactively works with its oversight boards in each state it serves to assemble progressive, cost-effective programs that work toward achieving that objective.

Vectren South’s 2019 Integrated Resource Plan (“2019 IRP”) includes EE programs for all customer classes and sets an annual savings target of 1.25% of retail sales for 2021-2023. The framework for the 2021-2023 Plan was modeled at a savings level of 1.3% of retail sales adjusted for an opt-out rate of 77% eligible load, as provided for in Indiana Code § 8-1-8.5-10 (“Section

10”). The IRP load forecast also includes an ongoing level of EE related to codes and standards embedded in the load forecast projections. Ongoing EE and DR programs are also important given the integration of Vectren South’s natural gas and electric EE and DR programs.

#### **A. Integration with Vectren South Gas**

Opportunities exist to gain both natural gas and electric savings from some EE programs and measures. In these instances, energy savings will be captured by the respective utility. For the programs where integration opportunities exist, Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric. Below is a list of programs that Vectren South has identified as integrated:

- Residential Prescriptive
- Residential New Construction
- Home Energy Assessment
- Income Qualified Weatherization
- Energy Efficient Schools
- Residential Behavioral Savings
- Residential Midstream
- Home Energy Management Systems (HEMS)
- Commercial and Industrial (C&I) Prescriptive
- Commercial Midstream
- Commercial and Industrial (C&I) Custom
- Small Business Energy Solutions

## **B. Vectren Oversight Board**

The Vectren Oversight Board (VOB) provides input into the planning and evaluation of Vectren South's EE programs. The VOB was formed in 2010 pursuant to the Final Order issued in Cause No. 43427 and included the Indiana Office of the Utility Consumer Counselor (OUCC) and Vectren South as voting members. The Citizens Action Coalition was added as a voting member of the VOB in 2013 pursuant to the Final Order issued in Cause No. 44318. In 2014, the Vectren South Electric Oversight Board merged with the Vectren South Gas Oversight Board and Vectren North Gas Oversight Board to form one governing body, the VOB. Vectren and the VOB have worked collaboratively over the last several years and Vectren requests to continue the current voting structure.

## **3. Vectren South Planning Process**

Vectren South has offered a variety of EE programs since April 2010 and has engaged in a similar planning process each time a new portfolio is presented to the Commission for approval.

The 2021-2023 Plan was developed in conjunction with the 2019 IRP planning process and therefore the 2019 IRP served as a key input into the 2021-2023 Plan. As such, this process aligns with Indiana Code § 8-1-8.5-10 ("Section 10"), which requires that EE goals be consistent with an electricity supplier's IRP.

Consistent with the 2019 IRP, the framework for the 2021-2023 Plan was modeled at a savings level of 1.3% of retail sales with opt-out assumptions incorporated. Once the level of EE programs to be offered from 2021 through 2023 was established, Vectren South engaged in a process to develop the 2021-2023 Plan. The objective of the planning process was to develop a plan based upon market-specific information for Vectren South's territory, which could be successfully implemented utilizing realistic assessments of achievable market potential.

The program design used the Electric Market Potential Study (MPS) for guidance to validate that the plan estimates were reasonable. While building from the bottom up with estimates from program implementers to help determine participation, this comparison to the MPS allowed the planning team to determine if the results were reasonable.

In 2018, Vectren South engaged GDS Associates, Inc., to conduct an MPS and Action Plan. For this effort, GDS evaluated electric energy-efficiency resources in the residential, commercial, and industrial sectors for the years 2020-2025. The study included a detailed, bottom-up assessment of



the Vectren South market in the Evansville metropolitan area to deliver a projection of baseline electric energy use, forecasts of the energy savings achievable through efficiency measures, and program designs and strategies to optimally deliver those savings. The study assessed various tiers of technical, economic and achievable potential by sector, customer type and measure.

In addition, vendors and other implementation partners who operate the current programs were involved in the planning process by providing suggestions for program changes and enhancements. The vendors and partners also provided technical information about measures to include recommended incentives, estimated participation and estimated implementation costs. This data provided a foundation for the 2021-2023 Plan based on actual experience within Vectren South's territory. These companies also bring their experience operating programs for other utilities. Once the draft version of the 2021-2023 Plan was developed, Vectren South solicited feedback from the VOB for consideration in the final design.

Other sources of program information were also considered. Current evaluations and the Indiana Technical Resource Manual (TRM) were used for adjustments to inputs. In addition, best practices were researched and reviewed to gain insights into the program design of successful EE and DR programs implemented by other utility companies.

VOB feedback was incorporated into the planning process, as applicable.

#### **4. Cost Effectiveness Analysis**

Vectren South's last step of the planning process was the cost benefit analysis. Vectren South retained Mr. Richard Morgan, President of Morgan Marketing Partners, to complete the cost benefit modeling. Utilizing DSMore, the measures and programs were analyzed for cost effectiveness. The DSMore tool is nationally recognized and used in many states across the country to determine cost-effectiveness. Developed and licensed by Integral Analytics based in Newport, KY, the DSMore cost-effectiveness modeling tool takes hourly prices and hourly energy savings from the specific measures/technologies being considered for the EE program, and then correlates both to weather. This tool looks at more than 30 years of historic weather variability to get the full weather variances appropriately modeled. In turn, this allows the model to capture the low probability, but high consequence weather events and apply appropriate value to them. Thus, a more accurate view of the value of the efficiency measure can be captured in comparison to other alternative supply options.

The outputs of DSMore include all the California Standard Practice Manual results including Total Resource Cost (TRC), Utility Cost Test (UCT), Participant Cost Test (PCT) and Ratepayer Impact Measure (RIM) tests. Inputs into the model include the following: participation rates, incentives paid, energy savings of the measure, life of the measure, implementation costs, and administrative costs, incremental costs to the participant of the high efficiency measure, and escalation rates and discount rates. Vectren South considers the results of each test and ensures that the portfolio passes the TRC test as it includes the total costs and benefits to both the utility and the consumer. The model includes a full range of economic perspectives typically used in EE and DSM analytics. The perspectives include:

- Total Resource Cost Test - shows the combined perspective of the utility and the participating customers. This test compares the level of benefits associated with the reduced energy supply costs to utility programs and participant costs.
- Utility Cost Test - shows the value of the program considering only avoided utility supply cost (based on the next unit of generation) in comparison to program costs.
- Participant Cost Test - shows the value of the program from the perspective of the utility's customer participating in the program. The test compares the participant's bill savings over the life of the EE/DR program to the participant's cost of participation.
- Ratepayer Impact Measure Test - shows the impact of a program on all utility customers through impacts in average rates. This perspective also includes the estimates of revenue losses, which may be experienced by the utility as a result of the program.

The cost effectiveness analysis produces two types of resulting metrics:

- Net Benefits (dollars) =  $NPV \sum \text{benefits} - NPV \sum \text{costs}$
- Benefit Cost Ratio =  $NPV \sum \text{benefits} \div NPV \sum \text{costs}$

Cost effectiveness analysis is performed using each of the four primary tests. The results of each test reflect a distinct perspective and have a separate set of inputs demonstrating the treatment of costs and benefits. A summary of benefits and costs included in each cost effectiveness test can be found in Appendix A.

## 5. 2021 - 2023 Plan Objectives and Impact

The framework for the 2021-2023 Plan aligns with Vectren South's 2019 IRP and was designed to reach a reduction in sales of approximately 1.3% of eligible retail sales with opt-out assumptions incorporated. Table 1 below provides an overview of energy savings and demand impacts, participation and budget by the residential and C&I sectors and for the total portfolio. Table 2 provides an overview of budget and energy savings by program and by year.

**Table 1: 2021-2023 Portfolio Summary of Participation, Impacts & Budget**

Program Year	Participants/ Measures	Annual Energy Savings kWh	Annual Demand Savings kW	Res & C&I Direct Program Budget	Cost/Kwh *	Levelized Costs /Kwh**	Indirect Portfolio Level Budget	Other Costs Budget	Portfolio Total Budget Including Indirect & Other
2021	235,332	44,325,438	10,061	\$10,061,209	\$0.23	\$0.03	\$1,046,819	\$400,000	\$11,508,027
2022	225,146	43,961,753	9,571	\$10,092,043	\$0.23	\$0.03	\$1,051,408	\$200,000	\$11,343,451
2023	218,863	43,533,925	10,303	\$10,073,357	\$0.23	\$0.03	\$1,061,922	\$200,000	\$11,335,280

\* Cost per Kwh is calculated by dividing program cost by total savings and does not include carry forward costs related to smart thermostat, BYOT and CVR programs. The cost per kWh excludes indirect and other costs for budget. Including indirect and other costs, the cost per kwh is \$0.26/Kwh.

\*\* Levelized Costs per kWh are consistent with the 2019 IRP.

**Table 2: Vectren South 2021 - 2023 Plan Overview by Program**

	Total Budget (\$)			Total Savings (kWh)			Total Demand (kW)		
	2021	2022	2023	2021	2022	2023	2021	2022	2023
<b>Residential Programs</b>									
Residential Specialty Lighting	\$ 606,656	\$ 546,634	\$ 521,634	5,046,833	4,801,366	4,385,296	698	664	607
Residential Prescriptive	\$ 1,135,825	\$ 960,500	\$ 953,909	1,657,282	1,317,201	1,319,270	866	482	419
Residential New Construction	\$ 88,852	\$ 88,049	\$ 85,065	163,986	188,637	188,637	56	66	66
Home Energy Assessment	\$ 239,713	\$ 256,589	\$ 296,868	550,810	576,574	684,783	52	54	63
Income Qualified Weatherization	\$ 687,423	\$ 707,709	\$ 714,673	485,948	460,780	444,441	102	111	103
Community Based - LED Specialty Bulb Distribution	\$ 168,110	\$ 171,693	\$ 177,923	1,159,285	1,159,285	1,159,285	160	160	160
Energy Efficient Schools	\$ 118,451	\$ 122,451	\$ 102,451	733,118	696,462	661,639	78	74	71
Residential Behavioral Savings	\$ 254,105	\$ 261,391	\$ 268,896	7,020,000	7,100,000	6,790,000	1,350	1,270	1,210
Appliance Recycling	\$ 244,152	\$ 246,902	\$ 249,152	1,322,563	1,250,423	1,082,097	175	165	143
CVR Residential	\$ 354,969	\$ 348,828	\$ 418,537			1,067,954			430
Smart Cycle (DLC Change Out)	\$ 984,328	\$ 1,063,328	\$ 1,142,328	362,577	362,577	362,577	1,140	1,140	1,140
BYOT (Bring Your Own Thermostat)	\$ 126,646	\$ 156,496	\$ 189,246				456	513	570
Residential Midstream	\$ 439,289	\$ 417,849	\$ 498,073	922,215	1,061,351	1,271,737	695	745	938
Home Energy Management Systems	\$ 203,513	\$ 210,513	\$ 220,513	515,000	515,000	515,000	80	80	80
<b>Residential Subtotal</b>	<b>\$ 5,652,032</b>	<b>\$ 5,558,932</b>	<b>\$ 5,839,268</b>	<b>19,939,618</b>	<b>19,489,656</b>	<b>19,932,715</b>	<b>5,908</b>	<b>5,523</b>	<b>6,000</b>
<b>C&amp;I Programs</b>									
Commercial Prescriptive	\$ 2,513,494	\$ 2,431,243	\$ 2,234,780	15,650,556	13,813,073	12,520,261	2,961	2,593	2,695
Commercial Midstream	\$ 15,577	\$ 15,577	\$ 15,577	31,570	31,570	31,570	5	5	5
Commercial Custom	\$ 847,795	\$ 982,471	\$ 933,500	5,509,079	6,677,683	6,221,324	702	892	831
Small Business Energy Solutions	\$ 807,181	\$ 884,304	\$ 878,048	3,194,615	3,949,771	3,952,715	485	558	558
CVR Commercial	\$ 225,130	\$ 219,516	\$ 172,184	0	0	875,340	0	0	214
<b>Commercial Subtotal</b>	<b>\$ 4,409,177</b>	<b>\$ 4,533,111</b>	<b>\$ 4,234,089</b>	<b>24,385,820</b>	<b>24,472,097</b>	<b>23,601,210</b>	<b>4,153</b>	<b>4,048</b>	<b>4,303</b>
<b>Residential &amp; Commercial Subtotal</b>	<b>\$10,061,209</b>	<b>\$10,092,043</b>	<b>\$10,073,357</b>	<b>44,325,438</b>	<b>43,961,753</b>	<b>43,533,925</b>	<b>10,061</b>	<b>9,571</b>	<b>10,303</b>
Portfolio Level Costs Subtotal*	\$ 1,046,819	\$ 1,051,408	\$ 1,061,922						
Other Costs Subtotal**	\$ 400,000	\$ 200,000	\$ 200,000						
<b>DSM Portfolio Total including Other Costs</b>	<b>\$11,508,027</b>	<b>\$11,343,451</b>	<b>\$11,335,280</b>	<b>44,325,438</b>	<b>43,961,753</b>	<b>43,533,925</b>	<b>10,061</b>	<b>9,571</b>	<b>10,303</b>

\*Portfolio level costs include: Contact Center, Online Audit, Outreach & Education, and Evaluation.

\*\*Other Costs include Market Potential Study and Emerging Markets.

## A. Plan Savings

The planned savings goal for 2021-2023 was calculated based on a percentage of forecasted weather normalized electric sales for 2021 to 2023 with a target of 1.3% of eligible retail sales. The forecast is consistent with Vectren South's 2019 IRP sales forecast. Goals are based on gross energy savings with opt-out assumptions incorporated. Table 3 demonstrates the portfolio, residential and C&I energy savings targets at the 1.3% eligible retail sales level. Table 4 demonstrates the portfolio energy and demand savings by program and by year.

**Table 3: Vectren South 2021 - 2023 Plan Portfolio Summary Planned Energy Savings**

Portfolio Summary	Total Savings (kWh)			Total Demand (kW)		
	2021	2022	2023	2021	2022	2023
Residential Total	19,939,618	19,489,656	19,932,715	5,908	5,523	6,000
Commercial & Industrial Total	24,385,820	24,472,097	23,601,210	4,153	4,048	4,303
Portfolio Total	44,325,438	43,961,753	43,533,925	10,061	9,571	10,303

**Table 4: Vectren South 2021 - 2023 Plan Portfolio Planned Energy Savings**

Residential	2021 kWh	2021 kW	2022 kWh	2022 kW	2023 kWh	2023 kW
Residential Specialty Lighting	5,046,833	698	4,801,366	664	4,385,296	607
Residential Prescriptive	1,657,282	866	1,317,201	482	1,319,270	419
Residential New Construction	163,986	56	188,637	66	188,637	66
Home Energy Assessment	550,810	52	576,574	54	684,783	63
Income Qualified Weatherization	485,948	102	460,780	111	444,441	103
Community Based - LED Specialty Bulb Distribution	1,159,285	160	1,159,285	160	1,159,285	160
Energy Efficient Schools	733,118	78	696,462	74	661,639	71
Residential Behavioral Savings	7,020,000	1,350	7,100,000	1,270	6,790,000	1,210
Appliance Recycling	1,322,563	175	1,250,423	165	1,082,097	143
CVR Residential	0	0	0	0	1,067,954	430
Smart Cycle (DLC Change Out)	362,577	1,140	362,577	1,140	362,577	1,140
BYOT (Bring Your Own Thermostat)	0	456	0	513	0	570
Residential Midstream	922,215	695	1,061,351	745	1,271,737	938
Home Energy Management Systems	515,000	80	515,000	80	515,000	80
<b>Residential Total</b>	<b>19,939,618</b>	<b>5,908</b>	<b>19,489,656</b>	<b>5,523</b>	<b>19,932,715</b>	<b>6,000</b>
<b>Commercial &amp; Industrial</b>	<b>2021 kWh</b>	<b>2021 kW</b>	<b>2022 kWh</b>	<b>2022 kW</b>	<b>2023 kWh</b>	<b>2023 kW</b>
Commercial Prescriptive	15,650,556	2,961	13,813,073	2,593	12,520,261	2,695
Commercial Midstream	31,570	5	31,570	5	31,570	5
Commercial Custom	5,509,079	702	6,677,683	892	6,221,324	831
Small Business Energy Solutions	3,194,615	485	3,949,771	558	3,952,715	558
CVR Commercial	0	0	0	0	875,340	214
<b>Commercial &amp; Industrial Total</b>	<b>24,385,820</b>	<b>4,153</b>	<b>24,472,097</b>	<b>4,048</b>	<b>23,601,210</b>	<b>4,303</b>
<b>Portfolio Total</b>	<b>44,325,438</b>	<b>10,061</b>	<b>43,961,753</b>	<b>9,571</b>	<b>43,533,925</b>	<b>10,303</b>

## **B. Plan Budget**

The total planned program budget includes the direct and indirect costs of implementing Vectren South's electric energy efficiency programs. In addition, a budget for other costs are being requested as described below.

**Direct program costs** include three main categories: vendor implementation, program incentives and administration costs. The program budgets were built based upon multiple resources. Program budgets were discussed with program implementers as a basis for the development of this plan. Vendor implementation budgets were estimated using historical data and estimates provided by the current vendors with consideration for MPS costs. This helps to assure that the estimates are realistic for successful delivery. Program incentives were calculated by assigning measures with appropriate incentive values based upon existing program incentives, evaluation results and vendor recommendations. Lastly, administrative costs are comprised of internal costs for Vectren South's management and oversight of the programs. Administrative costs were allocated back to programs based on the percent of savings these programs represent as well as estimated staff time spent on programs.

**Indirect costs** are costs that are not directly tied to a single program, but rather support multiple programs or the entire portfolio. These include: Contact Center, Online Audit, Outreach & Education, and Evaluation, Measurement and Verification (EM&V). These costs are budgeted at the portfolio level.

**Other costs** are also being requested in the 2021-2023 filed plan. Vectren South requests approval to continue funding for Emerging Markets, which is discussed later in the Plan. Emerging Markets funding allows Vectren's EE portfolio to offer leading-edge program designs for next-generation technologies, services, and engagement strategies to growing markets in the Vectren South territory. This funding will not be used to support existing measures or programs, but rather support new program development or new measures within an existing program. Tables 5 through 8 below list the summary budgets by year, program and category.

**Table 5: Vectren South 2021 – 2023 Summary Budgets by Year**

<b>Residential</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Total Budget</b>
Residential Specialty Lighting	\$606,656	\$546,634	\$521,634	\$1,674,924
Residential Prescriptive	\$1,135,825	\$960,500	\$953,909	\$3,050,235
Residential New Construction	\$88,852	\$88,049	\$85,065	\$261,965
Home Energy Assessment	\$239,713	\$256,589	\$296,868	\$793,169
Income Qualified Weatherization	\$687,423	\$707,709	\$714,673	\$2,109,806
Community Based - LED Specialty Bulb Distribution	\$168,110	\$171,693	\$177,923	\$517,727
Energy Efficient Schools	\$118,451	\$122,451	\$102,451	\$343,352
Residential Behavioral Savings	\$254,105	\$261,391	\$268,896	\$784,392
Appliance Recycling	\$244,152	\$246,902	\$249,152	\$740,205
CVR Residential	\$354,969	\$348,828	\$418,537	\$1,122,334
Smart Cycle (DLC Change Out)	\$984,328	\$1,063,328	\$1,142,328	\$3,189,985
BYOT (Bring Your Own Thermostat)	\$126,646	\$156,496	\$189,246	\$472,388
Residential Midstream	\$439,289	\$417,849	\$498,073	\$1,355,211
Home Energy Management Systems	\$203,513	\$210,513	\$220,513	\$634,538
<b>Residential Total</b>	<b>\$5,652,032</b>	<b>\$5,558,932</b>	<b>\$5,839,268</b>	<b>\$17,050,232</b>
<b>Commercial &amp; Industrial</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Total Budget</b>
Commercial Prescriptive	\$2,513,494	\$2,431,243	\$2,234,780	\$7,179,517
Commercial Midstream	\$15,577	\$15,577	\$15,577	\$46,732
Commercial Custom	\$847,795	\$982,471	\$933,500	\$2,763,766
Small Business Energy Solutions	\$807,181	\$884,304	\$878,048	\$2,569,533
CVR Commercial	\$225,130	\$219,516	\$172,184	\$616,829
<b>Commercial &amp; Industrial Total</b>	<b>\$4,409,177</b>	<b>\$4,533,111</b>	<b>\$4,234,089</b>	<b>\$13,176,377</b>
<b>Total Direct Program Costs</b>	<b>\$10,061,209</b>	<b>\$10,092,043</b>	<b>\$10,073,357</b>	<b>\$30,226,609</b>
<b>Indirect Portfolio Level Costs</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Total Budget</b>
Contact Center	\$64,008	\$65,032	\$67,130	\$196,170
Online Audit	\$43,598	\$44,295	\$45,724	\$133,617
Outreach & Education	\$416,560	\$423,225	\$436,877	\$1,276,661
Evaluation	\$522,653	\$518,856	\$512,192	\$1,553,701
<b>Indirect Portfolio Level Costs Subtotal</b>	<b>\$1,046,819</b>	<b>\$1,051,408</b>	<b>\$1,061,922</b>	<b>\$3,160,149</b>
<b>Total Portfolio</b>	<b>\$11,108,027</b>	<b>\$11,143,451</b>	<b>\$11,135,280</b>	<b>\$33,386,758</b>
<b>Other Costs</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Total Budget</b>
Emerging Markets	\$200,000	\$200,000	\$200,000	\$600,000
Market Potential Study	\$200,000	\$0	\$0	\$200,000
<b>Other Costs Subtotal</b>	<b>\$400,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$800,000</b>
<b>DSM Portfolio Total including Other Costs</b>	<b>\$11,508,027</b>	<b>\$11,343,451</b>	<b>\$11,335,280</b>	<b>\$34,186,758</b>

**Table 6: Vectren South 2021 Summary Budgets by Category**

<b>Residential</b>	<b>Administrative</b>	<b>Implementation</b>	<b>Incentives</b>	<b>Total Budget</b>
Residential Specialty Lighting	\$ 112,254	\$ 189,402	\$ 305,000	\$ 606,656
Residential Prescriptive	\$ 40,411	\$ 610,334	\$ 485,080	\$ 1,135,825
Residential New Construction	\$ 5,613	\$ 58,614	\$ 24,625	\$ 88,852
Home Energy Assessment	\$ 5,613	\$ 223,720	\$ 10,380	\$ 239,713
Income Qualified Weatherization	\$ 11,225	\$ 676,198		\$ 687,423
Community Based - LED Specialty Bulb Distribution	\$ 33,676	\$ 134,434		\$ 168,110
Energy Efficient Schools	\$ 22,451	\$ 96,000		\$ 118,451
Residential Behavioral Savings	\$ 11,225	\$ 242,879		\$ 254,105
Appliance Recycling	\$ 44,902	\$ 130,500	\$ 68,750	\$ 244,152
CVR Residential	\$ 41,225	\$ 313,744		\$ 354,969
Smart Cycle (DLC Change Out)	\$ 55,004	\$ 815,764	\$ 113,560	\$ 984,328
BYOT (Bring Your Own Thermostat)	\$ 16,838	\$ 52,288	\$ 57,520	\$ 126,646
Residential Midstream	\$ 5,613	\$ 140,976	\$ 292,700	\$ 439,289
Home Energy Management Systems	\$ 5,613	\$ 197,900		\$ 203,513
<b>Residential Subtotal</b>	<b>\$ 411,663</b>	<b>\$ 3,882,754</b>	<b>\$1,357,615</b>	<b>\$ 5,652,032</b>
<b>Commercial &amp; Industrial</b>				<b>Total Budget</b>
Commercial Prescriptive	\$ 56,127	\$ 752,660	\$ 1,704,707	\$ 2,513,494
Commercial Midstream	\$ 5,613	\$ 4,826	\$ 5,139	\$ 15,577
Commercial Custom	\$ 67,352	\$ 354,804	\$ 425,638	\$ 847,795
Small Business Energy Solutions	\$ 5,613	\$ 239,848	\$ 561,720	\$ 807,181
CVR Commercial	\$ 14,902	\$ 210,228		\$ 225,130
<b>Commercial Subtotal</b>	<b>\$ 149,606</b>	<b>\$ 1,562,366</b>	<b>\$2,697,204</b>	<b>\$ 4,409,177</b>
<b>Residential &amp; Commercial Subtotal</b>	<b>\$ 561,270</b>	<b>\$ 5,445,120</b>	<b>\$4,054,819</b>	<b>\$ 10,061,209</b>
<b>Indirect Costs</b>				<b>Total Budget</b>
Contact Center				\$ 64,008
Online Audit				\$ 43,598
Outreach & Education				\$ 416,560
<b>Portfolio Costs Subtotal</b>				<b>\$ 524,166</b>
<b>Subtotal - Before evaluation</b>				<b>\$ 10,585,374</b>
Evaluation				\$ 522,653
<b>DSM Portfolio Total</b>				<b>\$ 11,108,027</b>
<b>Other Costs</b>				<b>Total Budget</b>
Emerging Markets				\$ 200,000
Market Potential Study				\$ 200,000
<b>Other Costs Subtotal</b>				<b>\$ 400,000</b>
<b>DSM Portfolio Total including Other Costs</b>				<b>\$ 11,508,027</b>

**Table 7: Vectren South 2022 Summary Budgets by Category**

<b>Residential</b>	<b>Administrative</b>	<b>Implementation</b>	<b>Incentives</b>	<b>Total Budget</b>
Residential Specialty Lighting	\$ 112,254	\$ 144,380	\$ 290,000	\$ 546,634
Residential Prescriptive	\$ 40,411	\$ 535,729	\$ 384,360	\$ 960,500
Residential New Construction	\$ 5,613	\$ 53,186	\$ 29,250	\$ 88,049
Home Energy Assessment	\$ 5,613	\$ 240,596	\$ 10,380	\$ 256,589
Income Qualified Weatherization	\$ 11,225	\$ 696,484		\$ 707,709
Community Based - LED Specialty Bulb Distribution	\$ 33,676	\$ 138,017		\$ 171,693
Energy Efficient Schools	\$ 22,451	\$ 100,000		\$ 122,451
Residential Behavioral Savings	\$ 11,225	\$ 250,166		\$ 261,391
Appliance Recycling	\$ 44,902	\$ 137,000	\$ 65,000	\$ 246,902
CVR Residential	\$ 41,225	\$ 307,603		\$ 348,828
Smart Cycle (DLC Change Out)	\$ 55,004	\$ 874,764	\$ 133,560	\$ 1,063,328
BYOT (Bring Your Own Thermostat)	\$ 16,838	\$ 69,388	\$ 70,270	\$ 156,496
Residential Midstream	\$ 5,613	\$ 90,486	\$ 321,750	\$ 417,849
Home Energy Management Systems	\$ 5,613	\$ 204,900		\$ 210,513
<b>Residential Subtotal</b>	<b>\$ 411,663</b>	<b>\$ 3,842,698</b>	<b>\$1,304,570</b>	<b>\$ 5,558,932</b>
<b>Commercial &amp; Industrial</b>				<b>Total Budget</b>
Commercial Prescriptive	\$ 56,127	\$ 820,040	\$ 1,555,076	\$ 2,431,243
Commercial Midstream	\$ 5,613	\$ 4,826	\$ 5,139	\$ 15,577
Commercial Custom	\$ 67,352	\$ 383,785	\$ 531,334	\$ 982,471
Small Business Energy Solutions	\$ 5,613	\$ 265,897	\$ 612,794	\$ 884,304
CVR Commercial	\$ 14,902	\$ 204,614		\$ 219,516
<b>Commercial Subtotal</b>	<b>\$ 149,606</b>	<b>\$ 1,679,163</b>	<b>\$2,704,342</b>	<b>\$ 4,533,111</b>
<b>Residential &amp; Commercial Subtotal</b>	<b>\$ 561,270</b>	<b>\$ 5,521,861</b>	<b>\$4,008,912</b>	<b>\$ 10,092,043</b>
<b>Indirect Costs</b>				<b>Total Budget</b>
Contact Center				\$ 65,032
Online Audit				\$ 44,295
Outreach & Education				\$ 423,225
<b>Portfolio Costs Subtotal</b>				<b>\$ 532,552</b>
<b>Subtotal - Before evaluation</b>				<b>\$ 10,624,595</b>
Evaluation				\$ 518,856
<b>DSM Portfolio Total</b>				<b>\$ 11,143,451</b>
<b>Other Costs</b>				<b>Total Budget</b>
Emerging Markets				\$ 200,000
Market Potential Study				\$ -
<b>Other Costs Subtotal</b>				<b>\$ 200,000</b>
<b>DSM Portfolio Total including Other Costs</b>				<b>\$ 11,343,451</b>



**Table 8: Vectren South 2023 Summary Budgets by Category**

<b>Residential</b>	<b>Administrative</b>	<b>Implementation</b>	<b>Incentives</b>	<b>Total Budget</b>
Residential Specialty Lighting	\$ 112,254	\$ 144,380	\$ 265,000	\$ 521,634
Residential Prescriptive	\$ 40,411	\$ 542,843	\$ 370,655	\$ 953,909
Residential New Construction	\$ 5,613	\$ 50,202	\$ 29,250	\$ 85,065
Home Energy Assessment	\$ 5,613	\$ 280,875	\$ 10,380	\$ 296,868
Income Qualified Weatherization	\$ 11,225	\$ 703,448		\$ 714,673
Community Based - LED Specialty Bulb Distribution	\$ 33,676	\$ 144,247		\$ 177,923
Energy Efficient Schools	\$ 22,451	\$ 80,000		\$ 102,451
Residential Behavioral Savings	\$ 11,225	\$ 257,671		\$ 268,896
Appliance Recycling	\$ 44,902	\$ 148,000	\$ 56,250	\$ 249,152
CVR Residential	\$ 41,225	\$ 377,311		\$ 418,537
Smart Cycle (DLC Change Out)	\$ 55,004	\$ 933,764	\$ 153,560	\$ 1,142,328
BYOT (Bring Your Own Thermostat)	\$ 16,838	\$ 88,388	\$ 84,020	\$ 189,246
Residential Midstream	\$ 5,613	\$ 93,311	\$ 399,150	\$ 498,073
Home Energy Management Systems	\$ 5,613	\$ 214,900		\$ 220,513
<b>Residential Subtotal</b>	<b>\$ 411,663</b>	<b>\$ 4,059,340</b>	<b>\$1,368,265</b>	<b>\$ 5,839,268</b>
<b>Commercial &amp; Industrial</b>				
				<b>Total Budget</b>
Commercial Prescriptive	\$ 56,127	\$ 757,586	\$ 1,421,067	\$ 2,234,780
Commercial Midstream	\$ 5,613	\$ 4,826	\$ 5,139	\$ 15,577
Commercial Custom	\$ 67,352	\$ 366,652	\$ 499,496	\$ 933,500
Small Business Energy Solutions	\$ 5,613	\$ 269,179	\$ 603,256	\$ 878,048
CVR Commercial	\$ 14,902	\$ 157,282		\$ 172,184
<b>Commercial Subtotal</b>	<b>\$ 149,606</b>	<b>\$ 1,555,525</b>	<b>\$2,528,957</b>	<b>\$ 4,234,089</b>
<b>Residential &amp; Commercial Subtotal</b>	<b>\$ 561,270</b>	<b>\$ 5,614,865</b>	<b>\$3,897,222</b>	<b>\$ 10,073,357</b>
<b>Indirect Costs</b>				
				<b>Total Budget</b>
Contact Center				\$ 67,130
Online Audit				\$ 45,724
Outreach & Education				\$ 436,877
<b>Portfolio Costs Subtotal</b>				<b>\$ 549,730</b>
<b>Subtotal - Before evaluation</b>				<b>\$ 10,623,088</b>
Evaluation				\$ 512,192
<b>DSM Portfolio Total</b>				<b>\$ 11,135,280</b>
<b>Other Costs</b>				
				<b>Total Budget</b>
Emerging Markets				\$ 200,000
Market Potential Study				\$ -
<b>Other Costs Subtotal</b>				<b>\$ 200,000</b>
<b>DSM Portfolio Total including Other Costs</b>				<b>\$ 11,335,280</b>

### C. Cost Effectiveness Results

The total portfolio for the Vectren South programs passes the TRC and UCT test for both the Residential and Commercial & Industrial sectors. Table 9 below confirms that all programs pass the TRC at greater than one. In completing the cost effectiveness testing, Vectren South used 6.19% as the weighted average cost of capital (WACC) as approved by the Commission on May 29, 2019 in Cause No. 44910. For the 2021 - 2023 Plan, Vectren South utilized the avoided costs aligned with its 2019 IRP<sup>1</sup> adjusted down for fixed capacity.

**Table 9: Vectren South 2021-2023 Plan Cost Effectiveness Results without Performance Incentive**

Residential	TRC	UCT	RIM	Participant	TRC NPV \$	UCT NPV \$	Levelized Cost/kWh	Cost/kWh
Residential Specialty Lighting	3.19	3.65	0.62	8.51	\$ 3,967,261	\$ 4,193,963	\$0.02	\$0.12
Residential Prescriptive	1.08	1.40	0.65	1.71	\$ 300,270	\$ 1,164,193	\$0.09	\$0.69
Residential New Construction	1.16	2.14	0.74	1.08	\$ 72,542	\$ 281,636	\$0.08	\$0.54
Home Energy Assessment	1.05	1.05	0.35	n/a	\$ 37,257	\$ 37,257	\$0.04	\$0.44
Income Qualified Weatherization	0.46	0.46	0.28	n/a	\$ (1,078,445)	\$ (1,078,445)	\$0.14	\$1.41
Community Based - LED Specialty Bulb Distribution	5.79	5.79	0.66	n/a	\$ 2,336,936	\$ 2,336,936	\$0.01	\$0.15
Energy Efficient Schools	3.67	3.67	0.60	n/a	\$ 865,233	\$ 865,233	\$0.02	\$0.16
Residential Behavioral Savings	1.62	1.62	0.44	n/a	\$ 459,597	\$ 459,597	\$0.03	\$0.04
Appliance Recycling	1.58	1.31	0.39	n/a	\$ 335,377	\$ 214,881	\$0.03	\$0.18
CVR Residential	1.05	1.05	0.51	n/a	\$ 55,675	\$ 55,675	\$0.08	\$0.00
Smart Cycle (DLC Change Out)	2.30	2.01	1.44	n/a	\$ 3,407,118	\$ 3,031,604	\$0.19	\$2.71
BYOT (Bring Your Own Thermostat)	4.76	4.76	4.45	n/a	\$ 1,643,293	\$ 1,643,293	\$1.12	\$0.00
Residential Midstream	1.78	3.38	1.11	1.26	\$ 1,888,023	\$ 3,034,364	\$0.08	\$0.48
Home Energy Management Systems	1.01	1.01	0.43	n/a	\$ 5,611	\$ 5,611	\$0.07	\$0.40
<b>Residential Portfolio</b>	<b>1.79</b>	<b>2.01</b>	<b>0.72</b>	<b>4.53</b>	<b>\$14,295,750</b>	<b>\$16,245,800</b>	<b>\$0.05</b>	<b>\$0.28</b>
Commercial & Industrial	TRC	UCT	RIM	Participant	TRC NPV \$	UCT NPV \$	Levelized Cost/kWh	Cost/kWh
Commercial Prescriptive	2.70	3.71	0.53	4.84	\$ 15,853,125	\$ 18,417,119	\$0.02	\$0.16
Commercial Midstream	2.64	1.77	0.46	0.00	\$ 48,350	\$ 33,814	\$0.02	\$0.49
Commercial Custom	2.23	4.06	0.53	3.85	\$ 5,822,944	\$ 7,947,156	\$0.03	\$0.15
Small Business Energy Solutions	1.96	3.93	0.62	2.45	\$ 4,661,100	\$ 7,084,994	\$0.03	\$0.25
CVR Commercial	1.04	1.04	0.39	n/a	\$ 21,853	\$ 21,853	\$0.05	\$0.00
<b>Commercial &amp; Industrial Total</b>	<b>2.35</b>	<b>3.69</b>	<b>0.54</b>	<b>4.00</b>	<b>\$26,407,372</b>	<b>\$33,504,937</b>	<b>\$0.02</b>	<b>\$0.18</b>
Indirect Portfolio Level Costs					\$ (3,744,371)	\$ (3,744,371)		
<b>Total Portfolio</b>	<b>1.90</b>	<b>2.43</b>	<b>0.58</b>	<b>4.16</b>	<b>\$36,958,750</b>	<b>\$46,006,366</b>	<b>\$0.04</b>	<b>\$0.26</b>

\* Cost per Kwh is calculated by dividing program cost by total savings and do not include carry forward costs related to smart thermostat, BYOT and CVR programs. The cost per kWh excludes indirect and other costs for budget. Levelized cost per kWh is .03 per kWh, excluding IQW and CVR.

**Table 10: Vectren South 2021-2023 Plan Cost Effectiveness Results including Performance Incentive**

Including Performance Incentive	TRC	UCT	RIM	Participant	TRC NPV \$	UCT NPV \$	Levelized Cost/kWh	First Year Cost/kWh
<b>Total Portfolio</b>	<b>1.71</b>	<b>2.13</b>	<b>0.57</b>	<b>4.16</b>	<b>\$32,525,115</b>	<b>\$41,572,731</b>	<b>\$0.04</b>	<b>\$0.29</b>

\* Cost per kWh includes indirect and other costs for budget. Utility Performance Incentive does not include IQW or CVR.

<sup>1</sup> Avoided costs aligned with Vectren South's 2019 IRP, with an adjustment down to fixed capacity cost assumptions.

## **6. New or Modified Program Initiatives**

Vectren South's 2021-2023 filing largely extends the existing momentum of the portfolio of programs from 2019 and 2020 while applying the lessons learned from Vectren's program experience and evaluations as well as making refinements to key data and assumptions as described in this document. Below is a summary which outlines notable changes for the 2021-2023 Plan from previous filings. More in depth details on the following topics can be found within the Program Descriptions portion of this document.

### **A. Residential Specialty Lighting & Community Based LED**

These programs have been modified to remove LED A-line standard bulbs. Both LED specialty and reflector bulbs will continue to be offered.

### **B. Residential Prescriptive**

The Residential Prescriptive program will continue to run mostly unchanged from previous years. One program enhancement will include new delivery mechanisms to complement the existing program design. This expansion will include many of the same measures from Residential Prescriptive to be offered through Residential Midstream, instant rebates and an online marketplace. These additional channels of program delivery will be provided to reach additional customers and markets.

### **C. Residential Behavioral Savings Program**

This program will be expanded to target more customers as identified in the MPS, including a low-income segment, which will motivate customers to act on energy savings tips. The main delivery channel will be targeted mail and email with the addition of specific tips provided to the low-income customer segment.

### **D. Smart Cycle DLC Change Out & BYOT**

Vectren will be partnering with a demand response provider beginning in 2020 that will manage customer enrollments, energy savings, and provide a platform for management of Demand Response (DR) events. Our previous DR provider, Nest, will no longer offer these services and does not have the capability to manage other thermostats in the market such as Ecobee.

## **E. Residential and Commercial Midstream**

Following the successful launch of a Residential Midstream pilot in Q2 2020, Vectren will continue to offer the Residential Midstream program for this 2021-2023 Plan. Midstream measures and savings will continue to shift from prescriptive to midstream based on program performance. The 2020 pilot will include high-efficiency measures such as the Air Source Heat Pump (18 SEER) and Ductless Heat Pump (21 & 23 SEER). Additional measures will be transitioned over the Residential Midstream program during the 2021-2023 Plan period, specifically a Heat Pump Water Heater.

Through midstream incentives, the program aims to influence the equipment that distributors stock, fine-tune incentives to fit desired program outcomes. Because distributors have a large influence on the HVAC equipment that customers eventually install, the pilot will be able to encourage distributors to supply more energy-efficient options. Midstream incentives can be more easily adjusted, as customers receive the discount at the time of equipment purchase, not after a lengthy application process. Because customers receive a discount at the time of purchase, the pilot may influence quicker purchasing decisions.

## **F. Home Energy Management Systems (HEMS)**

The Home Energy Management Systems (HEMS) program is a behavioral program that provides real time energy usage data to encourage customers to take action to reduce energy consumption. The objectives of this program include:

- Motivate customers to save energy by increasing customer awareness and engagement around energy consumption and their utility bill
- Increase customer knowledge of and participation in Company programs including, but not limited to, energy efficiency programs and advanced data analytics
- Deliver energy and demand savings

## **G. Commercial & Industrial Prescriptive**

**C&I Prescriptive** - Program includes a Compressed Air Leak Repair component as suggested in the MPS. The program would offer a compressed air leak study for no cost to the customer if they agree to a predefined customer commitment (e.g. fixing a certain % of the leaks). High usage compressed air industries include food manufacturers, plastics, metals and chemical plants. The

Strategic Energy Management (SEM) program will continue to be offered to select large energy users for program years 2021-2023. Upon enrollment, customers are assigned an energy manager and must undergo a training process that introduces customers to SEM and ISO 50001 concepts and gives them instructions on how to implement energy efficient change within their organization.

A targeted marketing effort will be launched related to food service equipment, offering a bonus incentive to Trade Allies to push the adoption of the equipment to customers. Additionally, the 2019 midstream pilot within Prescriptive will expand beyond just furnaces to cover large HVAC equipment, water heaters and food service equipment. The electric Commercial Prescriptive Program will be offering the addition of Advanced Rooftop Controls.

The program will also take the simple functionality of the Mobile Assessment Tool used in the Small Business Program and expand it into the prescriptive program. This will allow Trade Allies the option of generating a report detailing all the savings opportunities and their associated rebates for any of their Vectren customers.

### **Commercial & Industrial Program Reporting**

Several of the Commercial & Industrial programs have been consolidated to better reflect overall program progress. Multi-Family Retrofit has been combined to the Small Business Energy Solutions program and Commercial New Construction and Building Tune up have been added to the C&I Custom program. Additionally, for scorecard reporting, C&I Programs are reported in total.

## 7. Program Descriptions

### A. Residential Specialty Lighting

The Residential Specialty Lighting Program is a market-based residential EE program designed to reach residential customers through retail outlets. This program has been modified to remove standard A-line LED bulbs and replace with specialty and reflector bulbs. The program consists of a buy-down strategy that provides incentives to consumers to facilitate the purchase of EE specialty lighting products. The overall program goal is to increase the penetration of ENERGY STAR qualified specialty lighting products based on the most up-to-date standards.

**Table 11: Residential Lighting Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Residential Specialty Lighting				
	Number of Measures	115,000	110,000	100,000	325,000
	Energy Savings kWh	5,046,833	4,801,366	4,385,296	14,233,495
	Peak Demand kW	698.0	664.0	606.5	1,968.5
	Total Program Budget \$	606,656	546,634	521,634	1,674,924
	Per Participant Avg Energy Savings (kWh)*	43.9	43.6	43.9	43.8
	Per Participant Avg Demand Savings (kW)*				0.006
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				50%

#### Eligible Customers

Any customer of a participating retailer in Vectren South's electric territory.

#### Marketing Plan

The program is designed to reach residential customers through retail outlets. Proposed marketing efforts include point of purchase promotional activities, the use of utility bill inserts and customer emails, utility web site and social media promotions and coordinated advertising with selected manufacturers and retail outlets.

#### Barriers/Theory

The program addresses the market barriers by empowering customers to take advantage of new lighting technologies through education and availability in the marketplace; accelerating the adoption of proven energy efficient technologies through incentives to lower price; and working with retailers to allow them to sell more high-efficient products.

#### Initial Measures, Products and Services

The measures will include a variety of ENERGY STAR qualified specialty lighting products currently available at retailers in Indiana, including specialty LED bulbs, reflectors and decorative.

**Program Delivery**

Vectren South will oversee the program and partner with CLEAResult to deliver the program.

**Evaluation, Measurement and Verification**

The implementation contractor will verify the paperwork of the participating retail stores. They will also spot check stores to assure that the program guidelines are being followed. A third-party evaluator will evaluate the program using standard EM&V protocols.

## B. Residential Prescriptive

### Program Description

The program is designed to incent customers to purchase energy efficient equipment by covering part of the incremental cost. The program also offers home weatherization rebates to residential customers for attic insulation, wall insulation and duct sealing. If a product vendor or contractor chooses to do so, the rebates can be presented as an “instant discount” to Vectren South residential customers on their invoice.

One program enhancement will include new delivery mechanisms to complement the existing program design. This expansion will include many of the same measures from Residential Prescriptive to be offered through residential midstream, instant rebates and an online marketplace. The online marketplace allows customers to purchase smart thermostats, LED specialty and reflector bulbs, smart power strips and other products with an instant rebate applied. The Instant Rebates will provide Vectren customers the flexibility to receive targeted coupons either in store or via email that can be used at point-of-purchase for smart thermostats, heat pump water heaters and air purifiers.

**Table 12: Residential Prescriptive Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Residential Prescriptive				
	Number of Measures	3,771	3,679	3,792	11,242
	Energy Savings kWh	1,657,282	1,317,201	1,319,270	4,293,754
	Peak Demand kW	865.8	481.6	419.3	1,766.8
	Total Program Budget \$	1,135,825	960,500	953,909	3,050,235
	Per Participant Avg Energy Savings (kWh)*				381.9
	Per Participant Avg Demand Savings (kW)*				0.157
	Weighted Avg Measure Life*				16
	Net To Gross Ratio				68%

### Eligible Customers

Any residential customer located in the Vectren South electric service territory. For the equipment rebates, the applicant must reside in a single-family home or multi-family complex with up to 12 units. Only single-family homes are eligible for insulation and duct sealing remediation measures.

### Marketing Plan

The marketing plan includes program specific materials that will target contractors, trade allies, distributors, manufacturers, industry organizations and appropriate retail outlets in the Heating, Ventilation and Air Conditioning (HVAC) industry. Marketing outreach medium include targeted direct marketing, direct contact by vendor personnel, trade shows and trade associations. Vectren will also use web banners, bill inserts, customer emails, social media outreach, press releases and



mass market advertising. Program marketing will direct customers and contractors to the Vectren South website or call center for additional information.

### **Barriers/Theory**

The initial cost is one of the key barriers. Customers do not always understand the long-term benefits of the energy savings from efficient alternatives. Trade allies are also often reluctant to sell the higher cost items as they do not want to be the high cost bidder. Incentives help address the initial cost issue and provide a good reason for Trade Allies to promote these higher efficient options.

### **Initial Measures, Products and Services**

Details of the measures, savings, and incentives can be found in Appendix B. Measures included in the program will change over time as baselines change, new technologies become available and customer needs are identified.

### **Program Delivery**

Vectren South will oversee the program and will partner with CLEAResult for prescriptive. A Third Party, which has not been identified, will oversee Marketplace and Instant Rebates. Vendors will work with local contractors to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

As part of the Quality Assurance/Quality Control process, the vendor will provide 100% paper verification that the equipment/products purchased meet the program efficiency standards and a field verification of 5% of the measures installed. A third-party evaluator will review the program using appropriate EM&V protocols.

## C. Residential New Construction

### Program Description

The Residential New Construction (RNC) program produces long-term energy savings by encouraging the construction of single-family homes, duplexes, or end-unit townhomes with only one shared wall that are inspected and evaluated through the Home Efficiency Rating System (HERS). Builders can select from two rebate tiers, based on HERS ratings plus an additional rebate if the builder reaches the Platinum eligible HERS rating and installs a tankless water heater. Gold Star homes must achieve a HERS rating of 61 to 63. Platinum Star homes must meet a HERS rating of 60 or less. Additionally, we will continue to deliver energy efficiency kits for new homes being constructed by Habitat for Humanity.

The RNC Program provides incentives and encourages home builders to construct homes that are more efficient than current building codes and address the lost opportunities in this customer segment by promoting EE at the time the initial decisions are being made. The Residential New Construction program will work closely with builders, educating them on the benefits of energy efficient new homes. Homes may feature additional insulation, better windows, and higher efficiency appliances. The homes should also be more efficient and comfortable than standard homes constructed to current building codes.

**Table 15: Residential New Construction Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Residential New Construction				
	Number of Homes	148	171	171	490
	Energy Savings kWh	163,986	188,637	188,637	541,260
	Peak Demand kW	56.1	66.0	66.0	188.0
	Total Program Budget \$	88,852	88,049	85,065	261,965
	Per Participant Avg Energy Savings (kWh)*				1104.6
	Per Participant Avg Demand Savings (kW)*				0.384
	Weighted Avg Measure Life*				23
	Net To Gross Ratio				54%

### Eligible Customers

Any customer or home builder constructing an eligible home in the Vectren South service territory.

### Marketing Plan

In order to move the market toward an improved home building standard, education will be required for home builders, architects and designers as well as customers buying new homes. A combination

of in-person meetings with these market participants as well as other educational methods will be necessary.

**Barriers/Theory**

The Residential New Construction program addresses the primary barriers of first cost as well as builder and customer knowledge. First cost is addressed by program incentives to help reduce the cost of the EE upgrades. The program provides opportunities for builders and developers to gain knowledge and skills concerning EE building practices and coaches them on application of these skills. The HERS rating system allows customers to understand building design and construction improvements through a rating system completed by professionals.

**Incentive Strategy**

Program incentives are designed to be paid to both all-electric and combination homes that have natural gas heating. It is important to note that the program is structured such that an incentive will not be paid for an all-electric home that has natural gas available to the home site. Incentives can be paid to either the home builder or the customer/account holder. Incentives will be based on the rating tier qualification. For all-electric homes, where Vectren South natural gas service is not available, the initial incentives will be:

<b>Tier</b>	<b>HERS Rating</b>	<b>Total Incentive</b>
Platinum Plus	60 or less & install and installs a tankless water heater (.9 energy factor)	\$1,200
Platinum	60 or less	\$1,000
Gold	61 to 63	\$700

For homes with central air conditioning and Vectren South natural gas space heating, the electric portion of the incentive will be:

<b>Tier</b>	<b>HERS Rating</b>	<b>Total Incentive</b>	<b>Gas Portion</b>	<b>Electric Portion</b>
Platinum Plus	60 or less & install and installs a tankless water heater (.9 energy factor)	\$1,200	\$900	\$300
Platinum	60 or less	\$1,000	\$750	\$250
Gold	61 to 63	\$700	\$525	\$175

### **Program Delivery**

Vectren South will oversee the program and will partner with CLEAResult to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory.

### **Evaluation, Measurement and Verification**

Field inspections will occur at least once during construction and upon completion by a certified HERS Rater. As part of the Quality Assurance/Quality Control process, the vendor will provide 100% paper verification that the equipment/products purchased meet the program efficiency standards. A third-party evaluator will evaluate the program using standard EM&V protocols.

## D. Home Energy Assessments

### Program Description

The Home Energy Assessment (HEA) program is designed to produce long term energy and demand savings in the residential market. The program provides direct installation of energy-saving measures such as LED light bulbs, aerators, pipe wrap, water heater set-back and a smart thermostat (if qualified). It also provides a detailed report which educates consumers on ways to reduce energy consumption further.

The contractor will educate the customer while performing installation of appropriate direct install measures during the assessment. A comprehensive leave behind report outlining the results and recommendations is also provided. Duct sealing may be available if needed. In order to receive the duct sealing rebate, customers provide a minimum co-pay of \$100 and the contractor will specify the leak reduction. If the home is eligible for air sealing and/or insulation, the customer will be referred to a program approved insulation contractor..

**Table 16: Home Energy Assessments & Weatherization Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
<b>Residential</b>	<b>Home Energy Assessment</b>				
	Number of Homes	400	420	504	1,324
	Energy Savings kWh	550,810	576,574	684,783	1,812,167
	Peak Demand kW	52.0	54.0	63.0	169.0
	Total Program Budget \$	239,713	256,589	296,868	793,169
	Per Participant Avg Energy Savings (kWh)*				1368.7
	Per Participant Avg Demand Savings (kW)*				0.128
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				75%

### Eligible Customers

Any residential customer located in the Vectren South electric service territory. Any customer that qualifies for the residential low-income weatherization program will be referred to that program and not included in the HEA program. Additional requirements include:

- Home was not built within the last five years;
- How has not had an audit within the last three years; and
- Is owner occupied or authorized non-owner occupied where the occupants have the electric service in their name.
- Building type is single-family, or condo/apartment with four units or less

### Marketing Plan

Proposed marketing efforts include utilizing direct mailers, email blasts, Vectren South online audit tools, bill inserts, social media outreach, as well as other outreach and education efforts and

promotional campaigns throughout the year to ensure participation levels are maintained. The preferred program contractor will also market the program to their current customer base as an additional incentive opportunity for use of their services.

**Barriers/Theory**

The audit requires the customer to select an appointment for the audit to occur. The requirement to be at the appointment can create difficulty for the customer. This program provides customers with some basic improvements to help them save energy and provides the customer with feedback that the customer can use to further improve its energy efficiency such as insulation referral or duct sealing. It is the customer's choice whether they will make the suggested upgrades to save energy.

## **Initial Measures, Products and Services**

Measures available for installation will vary based on the home and include:

- GSL and Specialty LED bulbs/lamps (interior/exterior/candelabra/retrofit – up to 30 bulbs)
- High Efficiency Kitchen and bathroom aerators
- High Efficiency Showerheads (Standard or Handheld)
- Pipe Wrap
- Filter Whistles
- Smart Thermostat
- Water Heater Temperature Setback
- Smart Power Strip
- Duct Sealing/Insulation (requires co-pay)

For customers who elect to move forward with duct sealing, air sealing or attic insulation recommended in the audit report, an instant rebate is available and savings are applied to the HEA.

## **Program Delivery**

Vectren South will oversee the program and partner with a local contractor to deliver the program.

## **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

## **Evaluation, Measurement and Verification**

To assure compliance with program guidelines, field visits with auditors will occur as well as spot check verifications of measure installations. A third-party evaluator will evaluate the program using standard EM&V protocols.

## E. Income Qualified Weatherization

### Program Description

The Income Qualified Weatherization (IQW) program is designed to produce long-term energy and demand savings in the residential market. The program is designed to provide weatherization upgrades to low-income homes that otherwise would not have been able to afford the energy saving measures. The program provides direct installation of energy-saving measures and educates consumers on ways to reduce energy consumption. Customers eligible through the Income Qualified Weatherization Program will have opportunity to receive deeper retrofit measures including refrigerators, attic insulation, duct sealing, air infiltration reduction and installation of new central air conditioner or air source heat pump.

Collaboration and coordination between gas and electric low-income programs along with state and federal funding is recommended to provide the greatest efficiencies among all programs. The challenge of meeting the goals set for this program have centered on health and safety as well as customer cancellations and scheduling. Vectren South is committed to finding innovative solutions to these areas. A health and safety (H&S) budget has been established, and we continue to work on improving methods of customer engagement with various confirmations via phone and email reminders prior to the appointment. Vectren continues to look for ways to do more of a qualitative approach within this program to ensure the maximum savings is reached and H&S issues are addressed appropriately.

**Table 17: Income Qualified Weatherization Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Income Qualified Weatherization				
	Number of Homes	788	735	710	2,233
	Energy Savings kWh	485,948	460,780	444,441	1,391,169
	Peak Demand kW	101.8	111.0	103.5	316.3
	Total Program Budget \$	687,423	707,709	714,673	2,109,806
	Per Participant Avg Energy Savings (kWh)*				623.0
	Per Participant Avg Demand Savings (kW)*				0.142
	Weighted Avg Measure Life*				12
	Net To Gross Ratio				100%

### Eligible Customers

This program is available to residential customer who receive either electric only or gas and electric service from Vectren where Vectren is the homes primary heat source. Homes must be at 5 years or older and have not received an audit within the last three years; and is owner occupied or authorized non-owner occupied where occupants have the service in their name. Eligible homes must be less than 4 total units, and units should not be stacked. The traditional IQW will continue in its current state offering a home audit, direct install measures and air sealing for customers up to 300% of the Federal Poverty Level (FPL). Additionally, deeper measures including weatherization, air conditioner or air source heat pump



replacement will be performed under a “Whole Home IQW” which is offered to customers who qualify with income of up to 200% FPL.

### **Marketing Plan**

Vectren South will provide a list to the implementation contractor of high consumption customers who have received Energy Assistance Program (EAP) funds within the past 12 months to help prioritize those customers who will benefit most from the program. This will also help in any direct marketing activities to specifically target those customers. In addition to utilizing the EAP List, the program will utilize census data to target low-income areas within Vectren territory. Vectren uses door-to-door canvassing for obtaining most of the appointments. The program is marketed to the public as “Neighborhood Weatherization” at various community events also working closely with the Vectren Foundation.

### **Barriers/Theory**

Lower-income homeowners do not have the money to make even simple improvements to lower their bill and often live in homes with the most need for EE improvements. They may also lack the knowledge, experience, or capability to do the work. Health and safety can also be at risk for low-income homeowners, as their homes typically are not as “tight”, and indoor air quality can be compromised. In order to increase participation and eligibility, Vectren South has incorporated a H&S budget into the program. An average of \$250 per fuel type or \$500 per home has been budgeted, but H&S dollars can be spent up to \$5,000 per home, upon approval by Vectren. This program provides customers with basic improvements to help them start saving energy without needing to make the investment themselves.

### **Initial Measures, Products and Services**

As specified above under program changes, the measures available for installation will vary based on the home and include:

Traditional IQW - Income requirement of up to 300% FPL

- GSL and Specialty LED Bulbs/Lamps (Interior/Exterior/Candelabras)
- High Efficiency Kitchen and Bathroom Aerators
- High Efficiency Showerhead (Standard or Handheld)
- Pipe Wrap
- Filter Whistles
- Infiltration Reduction
- Attic Insulation
- Duct Repair, Seal and Insulation
- Air Sealing - Gas Furnace with CAC, Heat Pump, Electric Furnace with CAC

- Refrigerator replacement
- Smart thermostat
- Water Heater Temperature Setback
- Smart power strips
- CAC or Furnace Tune-Up

Whole Home IQW - Income requirement of up to 200% FPL. Includes all the “Traditional” measures plus:

- Water heater replacement
- Attic Insulation
- Wall Insulation
- Exterior caulking
- CAC or Furnace Replacement

### **Program Delivery**

Vectren South will oversee the program and will partner with CLEAResult to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

To assure quality installations, 5% of the installations will be field inspected. A third-party evaluator will evaluate the program using standard EM&V protocols.

**F. Community Based – LED Specialty Bulb Distribution (formerly Food Bank LED)**

**Program Description**

The Community Based Specialty LED Distribution program is designed to provide energy efficient specialty lighting products to low-income community members who receive assistance from local food banks and township trustees. The program is intended to educate low-income community members on the benefits of energy efficient lighting and provide them with products which would otherwise be unaffordable.

**Eligible Customers**

The Community Based Specialty LED Distribution program targets local food banks and township trustees who serve low-income homeowners and tenants within Vectren electric service territory.

**Marketing Plan**

Marketing materials will be created to educate product recipients on the benefits of energy efficiency lighting.

**Barriers/Theory**

Lower income customers often do not have the money to make even simple improvements to lower their bill and often live in homes with the most need for EE improvements. This program provides those customers with products to help them start saving energy without needing to make the investment themselves.

**Initial Measures, Products and Services**

LED specialty bulbs will be offered.

**Table 18. Community Based LED Distribution Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Community Based - LED Specialty Bulb Distribution				
	Number of Measures	33,976	33,976	33,976	101,928
	Energy Savings kWh	1,159,285	1,159,285	1,159,285	3,477,855
	Peak Demand kW	159.7	159.7	159.7	479.1
	Total Program Budget \$	168,110	171,693	177,923	517,727
	Per Participant Avg Energy Savings (kWh)*				34.1
	Per Participant Avg Demand Savings (kW)*				0.005
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

## Program Delivery

Vectren South will oversee the program and will partner with CLEARResult to deliver the program.

## Evaluation, Measurement and Verification

A third-party evaluator will evaluate the program using standard EM&V protocols.

## G. Energy Efficient Schools

### Program Description

The Energy Efficient Schools Program is designed to impact students by teaching them how to conserve energy and to produce cost effective electric savings by influencing students and their families to focus on the efficient use of electricity.

The program consists of a school education program for 5th grade students attending schools served by Vectren South. To help in this effort, each child that participates will receive a take-home energy kit with various energy saving measures for their parents to install in the home. The kits, along with the in-school teaching materials, are designed to make a lasting impression on the students and help them learn ways to conserve energy.

**Table 19: Energy Efficient Schools Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	<b>Energy Efficient Schools</b>				
	Number of Kits	2,600	2,600	2,600	7,800
	Energy Savings kWh	733,118	696,462	661,639	2,091,220
	Peak Demand kW	78.3	74.4	70.7	223.4
	Total Program Budget \$	118,451	122,451	102,451	343,352
	Per Participant Avg Energy Savings (kWh)*				268.1
	Per Participant Avg Demand Savings (kW)*				0.029
	Weighted Avg Measure Life*				10
	Net To Gross Ratio				100%

### Eligible Customers

The program will be available to selected 5th grade students/schools in the Vectren South electric service territory.

### Marketing Plan

The program will be marketed directly to elementary schools in Vectren South electric service territory as well as other channels identified by the implementation contractor. A list of the eligible schools will be provided by Vectren South to the implementation contractor for direct marketing to the schools via email, phone, and mail (if necessary) to obtain desired participation levels in the program.

### **Barriers/Theory**

This program addresses the barrier of education and awareness of EE opportunities. Working through schools, both students and families are educated about opportunities to save. As well, the families receive energy savings devices they can install to begin their savings.

### **Initial Measures, Products and Services**

The kits for students will include:

- High Efficiency Kitchen Aerator
- High Efficiency Bathroom Aerators (2)
- High Efficiency Showerhead
- GSL LED bulbs 11 Watt (2)
- GSL LED Bulb 15 Watt (1)
- LED Nightlight
- Filter Whistle

Please note that bulb type may be updated to include the BR30.

### **Program Delivery**

Vectren South will oversee the program and will partner with National Energy Foundation (NEF) to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

Classroom participation will be tracked. A third-party evaluator will evaluate the program using standard EM&V protocols.

## H. Residential Behavior Savings

### Program Description

The Residential Behavioral Savings Program motivates behavior change and provides relevant, targeted information to the consumer through regularly scheduled direct contact via mailed and emailed home energy reports. The report and web portal include a comparison against a group of similarly sized and equipped homes in the area, usage history comparisons, goal setting tools, and progress trackers. The Home Energy Report program anonymously compares customers' energy use with that of other customers with similar home size and demographics. Customers can view the past 12 months of their energy usage and compare and contrast their energy consumption and costs with others in the same neighborhood. Once a consumer understands better how they use energy, they can then start conserving energy. This program will be expanded to target more customers as identified in the MPS, including a low-income segment, which will motivate customers to act on energy savings tips. The main delivery channel will be targeted mail and email with the addition of specific tips provided to the low-income customer segment. Customers in this low-income wave will also be offered a direct-ship kit with energy saving measures.

Program data and design was provided by Opower, the implementation vendor for the program. Opower provides energy usage insight that drives customers to take action by selecting the most relevant information for each particular household, which ensures maximum relevancy and high response rate to recommendations.

**Table 20: Residential Behavior Savings Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
<b>Residential</b>	<b>Residential Behavioral Savings</b>				
	Number of Participants	41,543	42,016	40,182	123,741
	Energy Savings kWh	7,020,000	7,100,000	6,790,000	20,910,000
	Peak Demand kW	1,350	1,270	1,210	3,830
	Total Program Budget \$	254,105	261,391	268,896	784,392
	Per Participant Avg Energy Savings (kWh)*				169.0
	Per Participant Avg Demand Savings (kW)*				0.031
	Weighted Avg Measure Life*				1
	Net To Gross Ratio				100%

### Eligible Customers

Residential customers who receive electric service from Vectren South are eligible to participate in this integrated natural gas and electric EE program.

### Barriers/Theory

The Residential Behavioral Savings program provides residential customers with better energy information through personalized reports delivered by mail, email and an integrated web portal to help them put their energy usage in context and make better energy usage decisions. Behavioral science research has demonstrated that peer-based comparisons are highly motivating ways to present information. The program will leverage a dynamically created comparison group for each residence and compare it to other similarly sized and located households.

### **Implementation & Delivery Strategy**

The program will be delivered by Opower and include energy reports and a web portal. Customers typically receive between 4 to 6 reports annually and monthly emailed reports. These reports provide updates on energy consumption patterns compared to similar homes and provide energy savings strategies to reduce energy use. They also promote other Vectren South programs to interested customers. The web portal is an interactive system for customers to perform a self-audit, monitor energy usage over time, access energy savings tips and be connected to other Vectren South gas and electric programs. In efforts to enhance program savings to low income customers, Opower will provide specific tips to the low-income customer segment.

### **Program Delivery**

Vectren South will oversee the program and partner with Opower to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

A third-party evaluator will complete the evaluation of this program and work with Vectren South to select the participant and non-participant groups.

## I. Appliance Recycling

### Program Description

The Residential Appliance Recycling program encourages customers to recycle their old inefficient air conditioners, refrigerators, and freezers in an environmentally safe manner. The program recycles operable refrigerators and freezers, so the appliance no longer uses electricity, and keeps 95% of the appliance out of landfills. An older refrigerator can use up to three times the amount of energy as new efficient refrigerators. An incentive of \$50 will be provided to the customer for each operational unit picked up. Additionally, air conditioners were added to the mix offering a \$25 rebate. To qualify for the air conditioner pick up, customers must have a refrigerator or freezer to be picked up.

**Table 21: Appliance Recycling Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Appliance Recycling				
	Number of Measures	1,375	1,300	1,125	3,800
	Energy Savings kWh	1,322,563	1,250,423	1,082,097	3,655,083
	Peak Demand kW	174.6	165.1	142.9	482.6
	Total Program Budget \$	244,152	246,902	249,152	740,205
	Per Participant Avg Energy Savings (kWh)*				961.9
	Per Participant Avg Demand Savings (kW)*				0.127
	Weighted Avg Measure Life*				8
	Net To Gross Ratio				67%

### Eligible Customers

Any residential customer with an operable secondary air conditioner, refrigerator, or freezer receiving electric service from Vectren South.

### Marketing Plan

The program will be marketed through a variety of mediums, including the use of utility bill inserts and customer emails, press releases, retail campaigns coordinated with appliance sales outlets as well as the potential for direct mail, web and social and mass media promotional campaigns.

### Barriers/Theory

Many homes have second air conditioners, refrigerators, and freezers that are very inefficient. Customers are not aware of the high energy consumption of these units. Customers also often have no way to move and dispose of the units, so they are kept in homes past their usefulness. This program educates customers about the waste of these units and provides a simple way for customers to dispose of the units.

### Program Delivery

Vectren South will work directly with Appliance Recycling Centers of America Inc. (ARCA), to implement this program.



### **Evaluation, Measurement and Verification**

Recycled units will be logged and tracked to assure proper handling and disposal. The utility will monitor the activity for disposal. Customer satisfaction surveys will also be used to understand the customer experience with the program. A third-party evaluator will evaluate the program using standard EM&V protocols.

## J. Smart Cycle (DLC Change Out) Program

### Program Description

Vectren South has had a Direct Load Control (DLC) program since the early 1990's and currently has approximately 22,994 switches that remain in the program. However, with the advent of smart thermostats and the myriad of benefits they offer for both EE and DR, Vectren South began replacing DLC switches with smart thermostats in 2018. Smart thermostats provide an alternative to traditional residential load control switches as well as enhance the way customers manage and understand their home energy use.

Throughout the 2018-2020 plan period, Vectren South replaced approximately 1,000 DLC switches with smart thermostats each year. As an alternative to DLC switches, smart thermostats can optimize heating and cooling of a home to reduce energy usage and control load while utilities can learn from occupant behavior/preference, adjusting heating, ventilation, and air conditioning (HVAC) settings. Evaluation results show significantly more load reduction can be delivered by smart thermostats. The current DLC switch program is a well-established means for Vectren South to shed load during peak demand; however, over time, to optimize results while minimizing cost to the customer, designing a program incorporating a change out from switches to smart thermostats is a strategic option for cost effective load control solutions. Vectren South's 2021-2023 plan continues to replace 1,000 DLC switches with smart thermostats each year.

Vectren will be partnering with Energy Hub beginning in 2020 that will manage customer enrollments, energy savings, and provide a platform for management of Demand Response (DR) events. Our previous DR provider, Nest, will no longer offer these services and does not have the capability to manage other thermostats in the market such as Ecobee.

During the months of June through September, customers in this program will receive a monthly bill credit of \$5 for participating in the program. Customers are notified of all events and have the capability of opting out of events at any time during the actual event.

**Table 22: Smart Cycle (DLC Change Out) Program & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
<b>Residential</b>	<b>Smart Cycle (DLC Change Out)</b>				
	Number of Measures	1,000	1,000	1,000	3,000
	Energy Savings kWh	362,577	362,577	362,577	1,087,731
	Peak Demand kW	1,140	1,140	1,140	3,420
	Total Program Budget \$	984,328	1,063,328	1,142,328	3,189,985
	Per Participant Avg Energy Savings (kWh)*				362.6
	Per Participant Avg Demand Savings (kW)*				1.710
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

### **Eligible Customers**

Customers in the Vectren South territory who currently participate in the DLC Summer Cyclers program and have access to Wi-Fi.

### **Marketing Plan**

Proposed marketing efforts include utilizing direct mailers, email blasts, Vectren South online audit tools, bill inserts as well as other outreach and education efforts and promotional campaigns throughout the year to ensure participation levels are maintained.

### **Incentive Strategy**

Customers will receive a professionally installed Wi-Fi thermostat at no additional cost and a monthly bill credit of \$5 during the months of June to September. Additionally, the Smart Cycle program includes incentives for existing customers from the 2016 Pilot Program to participate in the Demand Response events for 2021-2023.

### **Program Delivery**

Vectren South will oversee the program.

### **Evaluation, Measurement and Verification**

A third-party evaluator will evaluate the program using standard EM&V protocols.

## K. Bring Your Own Thermostat (BYOT)

### Program Description

The Bring Your Own Thermostat (BYOT) program is a further expansion of the residential smart thermostat initiative. BYOT allows customers to purchase their own device from multiple vendors and participate in DR with Vectren South and other load curtailment programs managed through the utility. Taking advantage of two-way communicating smart thermostats, the BYOT program can help reduce acquisition costs for load curtailment programs and improve customer satisfaction.

**Table 23: BYOT Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	BYOT (Bring Your Own Thermostat)				
	Number of Participants	400	450	500	1,350
	Energy Savings kWh				
	Peak Demand kW	456.0	513.0	570.0	1,539.0
	Total Program Budget \$	126,646	156,496	189,246	472,388
	Per Participant Avg Energy Savings (kWh)*				0.0
	Per Participant Avg Demand Savings (kW)*				1.140
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

### Eligible Customers

Residential single or multi-family customers in the Vectren South territory with access to Wi-Fi and who own a qualifying compatible Wi-Fi thermostat that operates the central air-conditioning cooling system.

### Marketing Plan

Proposed marketing efforts include utilizing direct mailers, email blasts, Vectren South online audit tools, bill inserts as well as other outreach and education efforts and promotional campaigns throughout the year to ensure participation levels are maintained.

### Incentive Strategy

Customers will receive a one-time enrollment incentive of \$75 and a bill credit of \$5 during the months of June to September. The enrollment incentive will be provided in the first year to new enrollees only.

### Program Delivery

Vectren South will oversee the program.

### Evaluation, Measurement and Verification

A third-party evaluator will evaluate the program using standard EM&V protocols.

## M. Residential Midstream

### Program Description

Following the successful launch of a residential midstream pilot in Q2 2020, Vectren will continue to offer the Residential Midstream program. Midstream measures and savings will continue to shift from prescriptive to midstream based on program performance. The program targets a small number of distributors that serve the broader market, rather than individual customers. As the HVAC market in Vectren territory matures, midstream offerings can increase market penetration and enlist participants that have historically not taken part in incentive programs.

This approach moves a limited selection of current downstream HVAC measures to a midstream model to test the success of the delivery channel in Vectren territory. The measure selection will target measures that are currently experiencing limited uptake in the market so as not to disrupt the current downstream program. With success, the midstream offering will evaluate additional measures while incorporating feedback from Vectren and distributors.

**Table 25: Residential Midstream Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
<b>Residential</b>	<b>Residential Midstream</b>				
	Number of Participants	1,310	1,411	1,771	4,492
	Energy Savings kWh	922,215	1,061,351	1,271,737	3,255,303
	Peak Demand kW	695.3	744.6	938.4	2,378.4
	Total Program Budget \$	439,289	417,849	498,073	1,355,211
	Per Participant Avg Energy Savings (kWh)*				724.7
	Per Participant Avg Demand Savings (kW)*				0.529
	Weighted Avg Measure Life*				18
	Net To Gross Ratio				100%

### Eligible Customers

Any residential customer located in the Vectren South electric service territory.

### Marketing Plan

The marketing plan will target distributors through direct outreach to contractor trade networks. Co-branded materials will be available to participating distributors to draw attention to, and provide education on, the HVAC measures within the program. Fact Sheets will also be created to keep the program top of mind. CleaResult will provide program approved verbiage for email blast content for Distributors to promote the program to their Contractors.

### **Barriers/Theory**

The main barrier for this program is the administrative burden and costs of implementation for the distributor. To address this burden, incentives are paid directly to the distributor, with savings passed along to the customer. With program activity focused on engaging distributors, customers find energy efficiency programs simple and appealing, as their participation varies little from their typical purchasing practices.

### **Initial Measures, Products and Services**

Details of the measures, savings, and incentives can be found in Appendix B. Measures included in the program will change over time as baselines change, new technologies become available and customer needs are identified.

### **Program Delivery**

Vectren South will oversee the program and will partner with CLEAResult to deliver the program. CLEAResult will partner with Distributors (or Participating Partners) to implement the Midstream Program. Participating Partners will be given access and trained on the program-specific platform, Program Partner Center (PPC). Within PPC, distributors will be able to validate that customers are eligible, verify that products meet the requirements of the program, and upload their sales data. Once data is uploaded, PPC will validate that information provided is accurate and meets eligibility requirements set forth by the program. Once all data has been verified, the incentive reimbursement will be processed for the participating partner.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

As part of the Quality Assurance/Quality Control process, the vendor will provide 100% paper verification that the equipment/products purchased meet the program efficiency standards and a field verification of the measures installed. A third-party evaluator will review the program using appropriate EM&V protocols.

## **P. Conservation Voltage Reduction - Residential and Commercial and Industrial**

### **Program Description**

Conservation Voltage Reduction (CVR) achieves energy conservation through automated monitoring and control of voltage levels provided on distribution circuits. End use customers realize lower energy and demand consumption when CVR is applied to the distribution circuit from which they are served. The first CVR was put into service on July 2017, for the Buckwood substation and the second CVR is being put into service in 2021 at the Eastside substation. This filing has the third CVR being planned in 2023.

Energy and demand savings occur when CVR is applied to distribution circuits. Once applied, a step change in energy and demand consumption by customers is realized, dependent upon where customer loads are located within the voltage zones, the load characteristics of the circuit, and how end-use loads respond to the voltage reduction. The resultant energy and demand consumption reduction persists at the new levels if tighter voltage bandwidth operation is applied. As a result, ongoing energy and demand savings persists for the duration of the life of the CVR equipment and if the equipment is maintained and operated in the voltage bandwidth mode.

As approved in Cause 44927, Vectren South capitalized the costs to implement the CVR program and will recover the program budget, consisting of ongoing maintenance, carrying cost, and depreciation expense associated with the implementation along with annual ongoing O&M expense through the annual DSMA rider. The 2021-2023 Plan will contain these expenses for the Buckwood and Eastside substation as well as the substation for the 2023 year.

**Table 24: Conservation Voltage Reduction Energy Savings Targets<sup>2</sup>**

Market	Program	2021	2022	2023	Total Program
<b>Residential</b>	<b>CVR Residential</b>				
	Number of Participants			4,965	4,965
	Energy Savings kWh			1,067,954	1,067,954
	Peak Demand kW			430	430
	Total Program Budget \$	354,969	348,828	418,537	1,122,334
	Per Participant Avg Energy Savings (kWh)*				215.1
	Per Participant Avg Demand Savings (kW)*				0.087
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

Market	Program	2021	2022	2023	Total Program
<b>Commercial &amp; Industrial</b>	<b>CVR Commercial</b>				
	Number of Participants			662	662
	Energy Savings kWh			875,340	875,340
	Peak Demand kW			213.9	213.9
	Total Program Budget \$	225,130	219,516	172,184	616,829
	Per Participant Avg Energy Savings (kWh)*				1322.3
	Per Participant Avg Demand Savings (kW)*				0.323
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

### Program Delivery

Vectren South will oversee the program and will partner with an implementer to deliver the program.

### Eligible Customers

Vectren South has identified substations that will benefit from the CVR program. For this program, one substation will be installed in 2023.

### Barriers/Theory

CVR is both a DR and an EE program. First, it seeks to cost effectively deploy new technology to targeted distribution circuits, in part to reduce the peak demand experienced on Vectren South's electrical power supply system. The voltage reduction stemming from the CVR program operates to effectively reduce consumption during the times in which system peaks are set and as a result directly reduces peak demand. CVR also cost effectively reduces the level of ongoing energy consumption by end-use devices located on the customer side of the utility meter as many end-use devices consume less energy with lower voltages consistently applied. Like an equipment maintenance service program, the voltage optimization

<sup>2</sup> For purposes of this filing, the CVR savings include only the 2023 CVR substation because savings are recognized fully the first year of implementation, therefore Buckwood substation and Eastside substation savings were recognized fully in 2017 and 2021.



allows the customer's equipment to operate at optimum levels which saves energy without requiring direct customer intervention or change.

**Initial Measures, Products and Services**

Vectren South will install the required communication and control equipment on the appropriate circuits from the substation. No action is required of the customers.

## Q. Home Energy Management Systems (HEMS)

### Program Description

A HEMS program is a behavioral program that provides real time energy usage data to encourage customers to take action to reduce energy consumption. The HEMS program will be piloted using advanced metering infrastructure (AMI) data to communicate energy usage to customers. The platform will utilize a smart phone application to communicate with customers about their home energy usage and provide suggestions for ways customers can save energy. To enhance customer engagement, participants in the program will receive a smart thermostat at no cost, if they do not currently have one installed in their home. The objectives of this program include:

- Motivate customers to save energy by increasing customer awareness and engagement around energy consumption and their utility bill
- Increase customer knowledge of and participation in Company programs including, but not limited to, energy efficiency programs and advanced data analytics
- Deliver energy and demand savings

**Table 26: HEMS Program Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Residential	Home Energy Management Systems				
	Number of Participants	1,000	1,000	1,000	3,000
	Energy Savings kWh	515,000	515,000	515,000	1,545,000
	Peak Demand kW	80.0	80.0	80.0	240.0
	Total Program Budget \$	203,513	210,513	220,513	634,538
	Per Participant Avg Energy Savings (kWh)*				515.0
	Per Participant Avg Demand Savings (kW)*				0.080
	Weighted Avg Measure Life*				6
	Net To Gross Ratio				100%

### Eligible Customers

Any residential customer located in the Vectren South electric service territory, having an AMI meter.

### Program Delivery

Vectren South will oversee the program and will partner with a third-party to deliver the program.

### Integration with Vectren South Gas

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### Evaluation, Measurement and Verification

A third-party evaluator will review the program using appropriate EM&V protocols.

## R. Commercial and Industrial Prescriptive

### Program Description

The Commercial & Industrial (C&I) Prescriptive Program is designed to provide financial incentives on qualifying products to produce greater energy savings in the C&I market. The rebates are designed to promote lower electric energy consumption, assist customers in managing their energy costs, and build a sustainable market around EE.

Program participation is achieved by offering incentives structured to cover a portion of the customer's incremental cost of installing prescriptive efficiency measures.

**Table 27: Commercial & Industrial Prescriptive Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Commercial & Industrial	<b>Commercial Prescriptive</b>				
	Number of Measures	31,875	26,229	25,750	83,854
	Energy Savings kWh	15,650,556	13,813,073	12,520,261	41,983,890
	Peak Demand kW	2,960.7	2,592.7	2,694.7	8,248.0
	Total Program Budget \$	2,513,494	2,431,243	2,234,780	7,179,517
	Per Participant Avg Energy Savings (kWh)*				500.7
	Per Participant Avg Demand Savings (kW)*				0.098
	Weighted Avg Measure Life*				14
	Net To Gross Ratio				84%

### Eligible Customers

Any eligible participating commercial or industrial customer receiving Vectren South electric service.

### Marketing Plan

Proposed marketing efforts include trade ally outreach, trade ally meetings, direct mail, face-to-face meetings with customers, marketing campaigns and bonuses, web-based marketing, and coordination with key account executives.

### Barriers/Theory

Customers often have the barrier of higher first cost for EE measures, which precludes them from purchasing the more expensive EE alternative. They also lack information on high-efficiency alternatives. Trade allies often run into the barrier of not being able to promote more EE alternatives because of first cost or lack of knowledge. Trade allies also gain credibility with customers for their EE claims when a measure is included in a utility prescriptive program. Through the program the trade allies can promote EE measures directly to their customers encouraging them to purchase more efficient equipment while helping customers get over the initial cost barrier.

### **Initial Measures, Products and Services**

Measures will include high-efficient lighting and lighting controls, HVAC equipment including variable frequency drives, commercial kitchen equipment including electronically commutated motors (ECMs), and miscellaneous items including compressed air equipment.

Note that measures included in the program will change over time as baselines change, new technologies become available and customer needs are identified. Detailed measure listings, participation and incentives are in Appendix B.

### **Implementation & Delivery Strategy**

The program will be delivered primarily through the trade allies working with their customers. Vectren South and its implementation partners will work with the trade allies to make them aware of the offerings and help them promote the program to their customers. The implementation partner will provide training and technical support to the trade allies to become familiar with the EE technologies offered through the program. The program will be managed by the same implementation provider as the Commercial & Industrial Custom program so that customers can seamlessly receive assistance and all incentives can be efficiently processed through a single procedure.

### **Incentive Strategy**

Incentives are provided to customers to reduce the difference in first cost between the lower efficient technology and the high-efficient option. There is no fixed incentive percentage amount based on the difference in price because some technologies are newer and need higher amounts. Others have been available in the marketplace longer and do not need as much to motivate customers. Incentives will be adjusted to respond to market activity and bonuses may be available for limited time, if required, to meet goals.

### **Program Delivery**

Vectren South will oversee the program partner Nexant to deliver the program.

### **Evaluation, Measurement and Verification**

Site visits will be made on 5% of the installations, as well as all projects receiving incentive greater than \$20,000, to verify the correct equipment was installed. Standard EM&V protocols will be used for the third-party evaluation of the program.

## S. Commercial Midstream

### Program Description

The Commercial Midstream program will provide incentives to actors at the distributor level (firms positioned between the manufacturer and the end user). An example will be to provide incentives for HVAC equipment such as Ductless Heat Pumps, Air Source Heat Pumps and Heat Pump Water Heaters.

Through midstream incentives, the program aims to influence the equipment that distributors stock and fine-tune incentives to fit desired program outcomes. Because distributors have a large influence on the essential equipment that customers install, the program will be able to encourage distributors to stock and promote more energy-efficient equipment to their clientele. Midstream incentives can be more easily adjusted, as customers receive the discount at the time of equipment purchase, not after a lengthy application process.

**Table 28: Commercial & Industrial Midstream Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Commercial & Industrial	Commercial Midstream				
	Number of Projects	12	12	12	36
	Energy Savings kWh	31,570	31,570	31,570	94,710
	Peak Demand kW	5.5	5.5	5.5	16.4
	Total Program Budget \$	15,577	15,577	15,577	46,732
	Per Participant Avg Energy Savings (kWh)*				2630.8
	Per Participant Avg Demand Savings (kW)*				0.454
	Weighted Avg Measure Life*				18
	Net To Gross Ratio				100%

### Eligible Customers

In order to receive midstream incentives, equipment must be installed at an active electric or natural gas General Service customer of Vectren Energy Delivery of Indiana on Rate 120, 125 Vectren South or 220, 225 Vectren North at the location of installation.

### Marketing Plan

The marketing plan will target distributors and regional account representatives through direct outreach to contractor trade networks. Co-branded materials will be available to participating distributors to draw attention to, and provide education on, the measures within the program. Fact Sheets will also be created to keep the program top of mind. CleaResult will provide program approved verbiage for email blast content for Distributors to promote the program to their Contractors.

### **Barriers/Theory**

The main barrier for this program is the administrative burden and costs of implementation for the distributor. To address this burden, incentives are paid directly to the distributor, with savings passed along to the customer. With program activity focused on engaging distributors, customers find energy efficiency programs simple and appealing, as their participation varies little from their typical purchasing practices.

### **Initial Measures, Products and Services**

Details of the measures, savings, and incentives can be found in Appendix B. Measures included in the program will change over time as baselines change, new technologies become available and customer needs are identified.

### **Program Delivery**

Vectren South will oversee the program and will partner with a third-party implementer to deliver the program. Participating Partners will be given access and trained on the program-specific platform, Program Partner Center (PPC). Within PPC, distributors will be able to validate that customers are eligible, verify that products meet the requirements of the program, and upload their sales data. Once data is uploaded, PPC will validate that information provided is accurate and meets eligibility requirements set forth by the program. Once all data has been verified, the incentive reimbursement will be processed for the participating partner.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas/electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

### **Evaluation, Measurement and Verification**

As part of the Quality Assurance/Quality Control process, the vendor will provide 100% paper verification that the equipment/products purchased meet the program efficiency standards and a field verification of the measures installed. A third-party evaluator will review the program using appropriate EM&V protocols.

## **T. Commercial and Industrial Custom**

### **Program Description**

To maximize cost-effectiveness and streamline program delivery, the Commercial Custom Program encompasses several different options for commercial & industrial customers to participate. These include: Custom Program, Commercial New Construction, Building Tune Up, and Strategic Energy Management (SEM).

The **Custom Program** promotes the implementation of customized energy-saving projects at qualifying customer facilities. Incentives promoted through this program serve to reduce the cost of implementing energy-reducing projects and upgrading to high-efficiency equipment. Due to the nature of a custom EE program, a wide variety of projects are eligible. Under the Custom program, Vectren will offer a Compressed Air Leak Repair component as suggested in the MPS. The program would offer a compressed air leak study for no cost to the customer if they agree to a predefined customer commitment (e.g. fixing a certain % of the leaks). High usage compressed air industries include food manufacturers, plastics, metals and chemical plants.

Specific to **Commercial New Construction-Energy Design Assistance (EDA)**, this program provides value by promoting EE designs with the goal of developing projects that are more energy efficient than current Indiana building code. This program applies to new construction and major renovation projects. Major renovation is defined as the replacement of at least two systems within an existing space (e.g. lighting, HVAC, controls, building envelope). The program provides incentives as part of the facility design process to explore opportunities in modeling EE options to craft an optimal package of investments. The program also offers customers the opportunity to receive prescriptive or custom rebates toward eligible equipment in order to reduce the higher capital cost for the EE solutions.

The **Building Tune-Up** program provides a targeted, turnkey, and cost-effective retro-commissioning solution for small- to mid-sized customer facilities. It is designed as a comprehensive customer solution that will identify, validate, quantify, and encourage the installation of both operational and capital measures. Most of these measures will be no- or low-cost with low payback periods and will capture energy savings from building automation systems.

Vectren will offer a **Strategic Energy Management (SEM)** offering to select large energy users throughout 18-month training process. Upon enrollment, the customer is assigned an energy manager to provide personalized service, as well as technical support, and a facility audit. Because of the 18-month

training process, anticipated savings from this will be realized across program years. Savings will capture both prescriptive/custom capital investments and behavioral changes through on-site consultation.

**Table 29: Commercial & Industrial Custom Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Commercial & Industrial	<b>Commercial Custom</b>				
	Number of Measures	56	69	65	190
	Energy Savings kWh	5,509,079	6,677,683	6,221,324	18,408,086
	Peak Demand kW	702.0	892.0	831.0	2,425.0
	Total Program Budget \$	847,795	982,471	933,500	2,763,766
	Per Participant Avg Energy Savings (kWh)*				96884.7
	Per Participant Avg Demand Savings (kW)*				12.763
	Weighted Avg Measure Life*				16
	Net To Gross Ratio				85%

### Eligible Customers

Applicants must be an active electric or natural gas General Service customer of Vectren Energy Delivery of Indiana on Rate 120, 125 Vectren South or 220, 225 Vectren North at the location of installation.

Building Tune Up also requires applicants to be both an active Vectren South electric customer on a qualifying commercial rate and an active natural gas General Service customer on Rate 120 or 125.

### Marketing Plan

Proposed marketing efforts include individualized outreach to large C&I customers through a variety of channels and coordination with key account representatives to leverage the contacts and relationships they have with the customers. Direct mail, media outreach, trade shows, marketing campaigns and bonuses, trade ally meetings, and educational seminars could also be used to promote the program. The Building Tune-Up and Commercial New Construction programs will now be marketed through the Commercial Custom Program through outreach and direct personal communication from Vectren South staff and third-party contractors. The program implementer will provide service provider specific-marketing collateral to support these companies as they connect with customers. SEM marketing includes individualized outreach to large C&I customers through a variety of channels to solicit program participants. We anticipate these outreach efforts will include several on-site meetings at customer facilities.

### Barriers/Theory

Applications of some specific EE technologies are unique to that customer's application or process. The energy savings estimates for these measures are highly variable and cannot be assessed without an engineering estimation of that application; however, they offer a large opportunity for energy savings. To promote the installation of these high efficient technologies or measures, the Commercial & Industrial



Custom program will provide incentives based on the kWh saved as calculated by the engineering analysis. To assure savings, these projects will require program engineering reviews and pre approvals. The custom energy assessments offered will help remove customer barriers regarding opportunity identification and determining energy savings potential.

The Building Tune-Up program will typically target customers with buildings between 50,000 square feet and 150,000 square feet. Customers in this size range face unique barriers to energy efficiency. For example, although they are large enough to have a Building Automation System (BAS), they are usually too small to have a dedicated facility manager or staff with experience achieving operational efficiency. Also, most retro-commissioning service companies prefer larger projects and are too expensive for small-to-midsized customers. We have specifically tailored the incentive structure and program design to eliminate these barriers. The Building Tune-Up program is designed as a comprehensive customer solution that will identify, validate, quantify, and encourage the installation of both operational and capital measures eligible for incentive offerings.

#### **Initial Measures, Products and Services**

All technologies or measures that save kWh qualify for the program. There are different services offered in the Building Tune-Up, New Construction and SEM sub-programs. The BTU program will specifically target measures that provide no- and low-cost operational savings. Most measures involve optimizing the building automation system (BAS) settings but the program will also investigate related capital measures, like controls, operations, processes, and HVAC.

The New Construction service provides energy design assistance at the design phase to encourage new buildings to go beyond what Indiana code requires. Each recommendation is provided to the customer through a report that estimates the savings and cost impacts. Customers are then provided additional rebates for each recommendation they select and install from the report.

The service within the SEM program provides in-depth consulting and support to large energy users who are interested in becoming ISO 50001 Ready. The program assigns a certified trainer to help set up their Energy Management System and trains them on best practices of energy management over an 18-month period. The participating customer will also receive an energy audit that will identify areas of opportunity to optimize the energy use in their facility.

#### **Implementation & Delivery Strategy**

The implementation partner will work collaboratively with Vectren South staff to recruit and screen customers for receiving facility energy assessments, technical assistance and energy management

education. The implementation partner will also provide engineering field support to customers and trade allies to calculate the energy savings. Customers or trade allies with a proposed project will complete an application form with the energy savings calculations for the project. The implementation team will review all calculations and where appropriate complete site visits to assess and document pre installation conditions. Customers will be informed, and funds reserved for the project. Implementation engineering staff will review the final project information as installed and verify the energy savings. Incentives are then paid on the verified savings.

**C&I New Construction** - The new construction program is designed as a proactive, cost-effective way to achieve energy efficiency savings and foster economic growth. Typically, program participants face time and cost constraints throughout the project that make it difficult to invest in sustainable building practices. Participants need streamlined and informed solutions that are specific to their projects and locations. This scenario is particularly true for small- to medium-sized new construction projects, where design fees and schedules provide for a very limited window of opportunity.

To help overcome the financial challenge, a Standard Energy Design Assistance (EDA) is offered. This provides additional engineering expertise during the design phase to identify energy-saving opportunities. Commercial and industrial projects for buildings greater than 100,000 square feet still in the conceptual design phase qualify for Vectren South's Enhanced EDA incentives which include energy modeling. The Vectren South implementation partner staff expert will work with the design team through the conceptual design, schematic design and design development processes providing advice and counsel on measures that should be considered and EE modeling issues. Incentives will be paid after the design team submits completed construction documents for review to verify that the facility design reflects the minimum energy savings requirements. For those projects that are past the phase where EDA can be of benefit, the C&I New Construction program offers the opportunity to receive prescriptive or custom rebates towards eligible equipment.

The **Building Tune-Up** program is designed to encourage high levels of implementation by customers seeking to optimize the operation of their existing HVAC system.

**SEM** is a new, comprehensive approach to energy management, customers are provided with expert support during their participation in the program. As soon as a customer enrolls in the program, an energy manager is assigned to provide personalized service throughout the 18-month training process. That process starts with a series of trainings that will introduce SEM and ISO 50001 concepts to the customer

and gives them specific instructions on how they can implement lasting change within their organization.

Key strategies include:

- **Energy Managers.** Program-provided energy managers guide customers through the process, helping them complete program requirements, and supporting their implementation of SEM.
- **High-Quality Training.** Energy Managers prepare each customer's energy champion for the cohort training, which is conducted in which customers learn the basic elements of ISO 50001 and how to apply them to their facilities.
- **Free Facility Audit.** SEM is focused on long-term change, and the program provides each customer with a free facility audit to identify both operational and capital energy efficiency projects. The energy audit also serves as a teaching moment for the companies' energy team on how to systematically identify opportunities for improvement. The low- and no-cost operational projects can be completed almost immediately, while the capital projects help customers continue to take advantage of savings.

### **Incentive Strategy**

Incentives will be calculated on a per kWh basis. The initial kWh rate will be \$0.10/kWh and is paid based on the first-year annual savings reduction. Rates may change over time and vary with some of the special initiatives. Incentives will not pay more than 50% of the project cost nor provide incentives for projects with paybacks less than 12 months. Vectren South will offer a cost share on facility energy assessments that will cover up to 100% of the assessment cost.

The Commercial New Construction program will provide incentives to help offset some of the expenses for the design team's participation in the EDA process with the design team incentive. The design team incentive is a fixed amount based on the new/renovated conditioned square footage and is paid when the proposed EE projects associated with the construction documents exceed a minimum energy savings threshold. The program also offers customers the opportunity to receive prescriptive or custom rebates toward eligible equipment in order to reduce the higher capital cost for the EE solutions. Program specific savings and incentive include:

Facility Size – Square Feet	Design Team Incentives	Minimum Savings
Small <25,000	\$750	25,000 kWh
Medium 25,000 - 100,000	\$2,250	75,000 kWh
Large >100,000	\$3,750	150,000 kWh
Enhance Large >100,000	\$5,000	10% beyond code

**Program Delivery**

Vectren South will oversee the program partner Nexant to deliver the program. Additionally, Nexant will oversee the SEM Program’s implementation, training and modeling.

**Integration**

Vectren South will offer this integrated natural gas and electric EE program in its combined natural gas and electric service territory. Vectren South has allocated implementation costs based on the net benefits split between natural gas and electric.

**Evaluation, Measurement and Verification**

Given the variability and uniqueness of each project, all projects will be pre-approved. Pre and post visits to the site to verify installation and savings will be performed as defined by the program implementation partner. Monitoring and verification may occur on the largest projects. A third-party evaluator will be used for this project and use standard EM&V protocols.

**U. Small Business Energy Solutions (SBES)**

**Program Description**

The SBES Program provides value by directly installing EE products such as high efficiency lighting, pre-rinse sprayers, refrigeration controls, electrically commutated motors, smart thermostats and vending machine controls. The program helps small businesses, multi-family and not-for-profit customers identify and install cost effective energy saving measures by providing an on-site energy assessment customized for their business. The Multi-Family Retrofit program that began in 2017 will continue to be offered under the SBES program. This program is an integrated gas and electric and is targeting dual fuel customers. Vectren also permits the program to include eligible non-profit establishment of any size to participate within this program.

**Table 30: Small Business Energy Solutions Budget & Energy Savings Targets**

Market	Program	2021	2022	2023	Total Program
Commercial & Industrial	<b>Small Business Energy Solutions</b>				
	Number of Projects	78	78	78	234
	Energy Savings kWh	3,194,615	3,949,771	3,952,715	11,097,100
	Peak Demand kW	484.9	557.9	557.9	1,600.6
	Total Program Budget \$	807,181	884,304	878,048	2,569,533
	Per Participant Avg Energy Savings (kWh)*				47423.5
	Per Participant Avg Demand Savings (kW)*				6.840
	Weighted Avg Measure Life*				15
	Net To Gross Ratio				100%

**Eligible Customers**

Any participating Vectren South business customer with a maximum peak energy demand of less than 400 kW. Additionally, multifamily building owners with Vectren general electric service may qualify for the program, including apartment buildings, condominiums, cooperatives, duplexes, quadraplexes, townhomes, nursing homes and retirement communities.

**Marketing Plan**

The SBES Program will be marketed primarily through in-network trade ally outreach. The program implementer will provide trade ally-specific marketing collateral to support trade allies as they connect with customers.

The program will provide targeted marketing efforts as needed to individual customer segments (e.g., hospitality, grocery stores, and retail) to increase participation in under-performing segments, including direct customer outreach and enhanced incentive campaigns. Additional program marketing may occur through direct mail, trade associations, local business organizations, marketing campaigns and bonuses, educational seminars, and direct personal communication from Vectren South staff and third-party contractors.

**Barriers/Theory**

Small business customers generally do not have the knowledge, time or money to invest in EE upgrades. This program assists these small businesses with direct installation and turn-key services to get measures installed at no or low out-of-pocket cost.

There is an implementation contractor in place providing suggested additions and changes to the program based on results and local economics.

### **Implementation & Delivery Strategy**

Trade Ally Network: Trained trade ally energy advisors will provide energy assessments to business customers with less than 400 kW of annual peak demand. The program implementer will issue an annual Request for Qualification to select the trade allies with the best ability to provide high-quality and cost-effective service to small businesses and provide training to Small Business Energy Solutions trade allies on the program process, with an emphasis on improving energy efficiency sales.

Energy Assessment: Trade allies will walk through small businesses and record site characteristics and energy efficiency opportunities at no cost to the customer. They will provide an energy assessment report that will detail customer-specific opportunities, costs, energy savings, incentives, and simple payback periods. The trade ally will then review the report with the customer, presenting the program benefits and process, while addressing any questions.

### **Initial Measures, Products and Services**

The program will have two types of measures provided. The first are measures that will be installed at no cost to the customer. They will include but are not limited to the following:

- Smart thermostats
- Programmable thermostats
- Program the programmable thermostats
- Pre-rinse sprayers
- Faucet aerators

The second types of measures require the customer to pay a portion of the labor and materials. These measures include:

- Interior LED Lighting (replacing incandescent, high bays and linear fluorescents)
- Linear Fluorescent Delamping
- Exterior LED Lighting
- Interior Lighting Controls EC motors
- Anti-Sweat Heater Controls
- Refrigerated LED
- Refrigerated Case Cover
- Furnace Tune-Up
- Steam Trap Replacement
- Vending Machine Control

### **Incentive Strategy**

In addition to the no-cost measures identified during the audit, the program will also pay a cash incentive on every recommended improvement identified through the assessment. Incentive rates may change over time and vary with special initiatives.

### **Program Delivery**

Vectren South will oversee the program partner Nexant to deliver the program.

### **Integration with Vectren South Gas**

Vectren South will offer this integrated natural gas and electric EE program in its combined natural gas and electric service territory.

### **Evaluation, Measurement and Verification**

On-site verification will be provided for the first three projects completed by each trade ally, in addition to the program standard 5% of all completed projects and all projects receiving incentives greater than \$20,000. These verifications allow the program to validate energy savings, in addition to providing an opportunity to ensure the trade allies are providing high-quality customer services and the incentivized equipment satisfies program requirements. A third-party evaluator will evaluate the program using standard EM&V protocols.

## 8. Program Administration

As in previous years, Vectren South will continue to serve as the program administrator for the 2021-2023 Plan. Vectren South will utilize third-party program implementers to deliver specific programs or program components where specialty expertise is required. Contracting directly with specialty vendors avoids an unnecessary layer of management, oversight and expense that occurs when utilizing a third-party administration approach.

Program administration costs are allocated at the program level and include costs associated with program support and internal labor. Program support includes costs associated with outside consulting and annual license and maintenance fees for DSMore, Data Management, and Esource. Based upon the EE and DR programs proposed in the 2021 - 2023 Plan, Vectren South is proposing to maintain the staffing levels that were previously approved to support the portfolio. The major responsibilities associated with these FTEs are as follows:

- **Portfolio Management and Implementation** - Oversees the overall portfolio and staff necessary to support program administration. Serves as primary contact for regulatory and oversight of programs.
- **Reporting and Analysis** - Responsible for all aspects of program reporting including, budget analysis/reporting, scorecards and filings.
- **Outreach and Education** - Serves as contact to trade allies regarding program awareness. Also serves as point of contact for residential and commercial/industrial customers to assist with responding to program inquiries.
- **Research and Evaluation** - Works with the selected EM&V Administrator and facilitates measurement and verification efforts, assists with program reporting/tracking.



## 9. Support Services

Support services are considered indirect costs which support the entire portfolio and include: Contact Center, Online Audit, Outreach & Education, and Evaluation, Measurement and Verification (EM&V). These costs are budgeted at the portfolio level.

**Table 31: Portfolio Level Costs by Year**

<b>Indirect Portfolio Level Costs</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Contact Center	\$64,008	\$65,032	\$67,130
Online Audit	\$43,598	\$44,295	\$45,724
Outreach & Education	\$416,560	\$423,225	\$436,877
Evaluation	\$522,653	\$518,856	\$512,192
<b>Total Indirect Portfolio Level Costs</b>	<b>\$1,046,819</b>	<b>\$1,051,408</b>	<b>\$1,061,922</b>

### A. Contact Center

The Vectren Contact Center, called the Energy Efficiency Advisory Team, fields referrals from the company's general call center and serves as a resource for interested customers. A toll-free number is provided on all outreach and education materials. Direct calls are initial contacts from customers or market providers coming through the dedicated toll-free number printed on all Vectren South's energy efficiency materials. Transferred calls are customers that have spoken with a Vectren Contact Center representative and have either asked or been offered a transfer to an Energy Efficiency Advisor who is trained to respond to energy efficiency questions or conduct the on-line energy audit.

These customer communication channels provide support mechanisms for Vectren South customers to receive the following services:

- Provide general guidance on energy saving behaviors and investments using customer specific billing data via the on-line tool (bill analyzer and energy audit).
- Respond to questions about the residential and general service programs.
- Facilitate the completion of and provide a hard copy report from the online audit tool for customers without internet access or who have difficulty understanding how to use the tool.
- Respond to inquiries about rebate fulfillment status.

## **B. Online Audit**

The Online Energy Audit tool is a customer engagement and messaging tool that uses actual billing data from a customer's energy bills to pinpoint ways to save energy in their home. Data collected drives account messaging through providing tips and rebates relevant to that customer's situation. Additionally, data collected from the online energy audit is used to validate neighbor comparison data, which illustrates how the customer's monthly energy use compares to their neighbors and is designed to inspire customers to try and save more energy than their efficient neighbors. This tool provides the online ability and means to communicate, cross promote, and educate customers about energy efficiency and Vectren's energy efficiency programs. The Online Energy Audit tool provides tools and messaging to educate customers and provide suggestions, tips, and advice on energy usage. The budget for the Online Audit tool is shared across Vectren's Indiana Gas DSM, Electric DSM and Vectren Energy Delivery of Ohio, Inc. (VEDO) DSM portfolios.

## **C. Outreach & Education**

Vectren South's Customer Outreach and Education program serves to raise awareness and drive customer participation as well as educate customers on how to manage their energy bills. The program includes the following goals as objectives:

- Build awareness;
- Educate consumers on how to conserve energy and reduce demand;
- Educate customers on how to manage their energy costs and reduce their bill;
- Communicate support of customer EE needs; and
- Drive participation in the EE and DR programs.

The marketing approach includes paid media as well as web-based tools to help analyze bills, energy audit tools, EE and DSM program education and information. Informational guides and sales promotion materials for specific programs are included in this budget.

This effort is the key to achieving greater energy savings by convincing the families and businesses making housing/facility, appliance and equipment investments to opt for greater EE. The first step in convincing the public and businesses to invest in EE is to raise their awareness.

It is essential that a broad public education and outreach campaign not only raise awareness of what consumers can do to save energy and control their energy bills, but also prime them for participation in the various EE and DR programs.

Vectren South will oversee outreach and education for the programs and work closely with implementation partners to provide consistent messaging across different program outreach and education efforts. Vectren South will utilize the services of communication and EE experts to deliver the EE and DR message.

The Outreach budget also includes funds for program development and staff training. Examples of these costs include memberships to EE related organizations, outreach for home/trade shows and travel and training related to EE associated staff development.

Another outreach opportunity that Vectren South has employed is a jointly facilitated Industrial Energy Efficiency Workshop. Vectren South first offered this workshop in June 2019 to share resources available for commercial and industrial customers. There were 25 total attendees, with 10 customers represented (6 opt-out and 4 opt-in). The workshop featured speakers from the Midwest Energy Efficiency Alliance (MEEA), Department of Energy (DOE) ENERGY STAR® division, Nexant and Vectren, and included a bonus incentive for companies who attended in an effort to increase program participation. The workshop was well received and Vectren South plans to continue offering this resource during the 2021-2023 Plan period. Evaluation

Vectren South will work with an independent third-party evaluator, selected by the VOB, to conduct an evaluation of DSM programs approved as part of its 2021-2023 Plan. The evaluation will include standard EM&V analyses, such as a process, impact, and/or market effects evaluation of Vectren South's portfolio of DSM programs. Gas impacts will be calculated for all of Vectren South's integrated gas programs. EM&V costs are based on 5% of the budget and allocated at the portfolio level.

## 10. Other Costs

Other costs being requested in the 2021-2023 filed plan include a Market Potential Study and funding for Emerging Markets.

**Table 32: Other Costs by Year**

<b>Other Costs</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Emerging Markets	\$200,000	\$200,000	\$200,000
Market Potential Study	\$200,000	\$0	\$0
<b>Total</b>	<b>\$400,000</b>	<b>\$200,000</b>	<b>\$200,000</b>

### A. Emerging Markets

The Emerging Markets funding allows Vectren’s DSM portfolio to offer leading-edge program designs for next-generation technologies, services, and engagement strategies to growing markets in the Vectren territory. The budget will be \$200,000 each year for 2021-2023 and will not be used to support existing programs, but rather support new program development or new measures within an existing program.

Incentives promoted through this program may range from innovative rebate offerings to engineering and trade ally assistance to demand-control services that encourage early adoption of new, efficient technologies in high-impact market sectors. Depending on the development of certain technologies and growth areas in the service territory, a wide variety of projects and services are eligible.

To offset the risks of oversaturation of common prescriptive measures and redefined prescriptive baselines, this program will bring to market next generation technologies and energy-saving strategies that have significant savings and cost-effectiveness potential. As new technologies develop towards lower costs and higher efficiency, their market penetration and energy-savings potential will increase. This program will allow Vectren to be on the forefront of emerging technologies to understand the market disruption a new product may cause, test strategies for capturing their energy-saving opportunities, and plan for future program savings growth. This offering will supplement the other DSM programs that do not easily fit into other program offerings. Additionally, growing segments of Vectren South electric customers may require tailored offerings to accommodate their needs in order to participate.

Because this program will focus on innovative new approaches and leading the DSM market, the exact list of measures cannot be set at this time. However, potential measures and services include: new technologies, such as Advanced Lighting Controls; new strategies for achieving significant energy savings, such as midstream incentives, contractor bids to provide energy efficiency projects, and targeting

high-impact market sectors; and integrated DSM (iDSM) approaches, such as demand response, combined energy efficiency and demand response measures, and load shifting.

Emerging technologies and measures will be reviewed and may be offered using this funding as long as they do not fall into a current program offering. Innovative engagement and incentivizing approaches may also be used as a tool to provide reduced costs to new systems, equipment and/or services to help reduce peak demand and electric usage. This program also allows Vectren to take steps toward an integrated Demand Side Management approach to address both energy efficiency and demand response together.

## **B. Market Potential Study**

Vectren South is requesting \$200,000 to complete a refresh and Market Potential Study (MPS) in 2021 to include 2026. The current MPS is for program years 2021-2025, including 2026 is necessary to support future EE filings which will be based on 2022 IRP. Vectren will issue a Request for Quote to select a consultant to perform this work.

## **11. Conclusion**

Vectren South has developed a 2021-2023 Electric Energy Efficiency Plan that is aligned with the 2019 Integrated Resource Plan and is reasonably achievable and cost effective. The cost effectiveness analysis was performed for 2021-2023 using the DSMore model – a nationally recognized economic analysis tool that is specifically designed to evaluate the cost effectiveness of implementing energy efficiency and demand response programs.

Program costs were determined by referencing current program delivery costs, based on prior contracts and performance in the field and consultation with the program vendors that will deliver the DSM Plan. Energy and demand savings were primarily determined by using recent EM&V results and the IN TRM version 2.2. For measures that were not addressed in the IN TRM or EM&V, Vectren South used Technical Resource Manual resources from nearby states or vendor input. Vectren South utilized the avoided costs from 2019 IRP<sup>1</sup> adjusted down for fixed capacity.

Based on this information, Vectren South requests IURC approval of this 2021-2023 DSM Plan as well as the costs associated with Emerging Markets and the Market Potential study for 2021 and beyond.

<sup>1</sup> Avoided costs aligned with Vectren South's 2019 IRP, with an adjustment down to fixed capacity cost assumptions.

## 12. Appendix A: Cost Effectiveness Tests Benefits & Costs Summary

Test	Benefits	Costs
Participant Cost Test	<ul style="list-style-type: none"> <li>• Incentive payments</li> <li>• Annual bill savings</li> <li>• Applicable tax credits</li> </ul>	<ul style="list-style-type: none"> <li>• Incremental technology/equipment costs</li> <li>• Incremental installation costs</li> </ul>
Utility Cost Test (Program Administrator Cost Test)	<ul style="list-style-type: none"> <li>• Avoided energy costs</li> <li>• Avoided capacity costs</li> </ul>	<ul style="list-style-type: none"> <li>• All program costs (startup, marketing, labor, evaluation, promotion, etc.)</li> <li>• Utility/Administrator incentive costs</li> </ul>
Rate Impact Measure Test	<ul style="list-style-type: none"> <li>• Avoided energy costs</li> <li>• Avoided capacity costs</li> </ul>	<ul style="list-style-type: none"> <li>• All program costs (startup, marketing, labor, evaluation, promotion, etc.)</li> <li>• Utility/Administrator incentive costs</li> <li>• Lost revenue due to reduced energy bills</li> </ul>
Total Resource Cost Test	<ul style="list-style-type: none"> <li>• Avoided energy costs</li> <li>• Avoided capacity costs</li> <li>• Applicable participant tax credits</li> </ul>	<ul style="list-style-type: none"> <li>• All program costs (not including incentive costs)</li> <li>• Incremental technology/equipment costs (whether paid by the participant or the utility)</li> </ul>

## Appendix B: Program Measure Detail

Program Name	Measure	Measure Life	NTG	Average kWh/Unit	Average KW/Unit	2021 Participation	2022 Participation	2023 Participation	Avg Incentive/Unit	IMC/unit	2021 kWh	2022 kWh	2023 kWh	2021 kW	2022 kW	2023 kW	
Lighting	LED Specialty	15	50%	34.1	0.005	40,000	40,000	35,000	\$ 2.00	\$ 3.50	1,364,829	1,364,828	1,194,224	188	188	165	
Lighting	LED Reflector	15	50%	49.1	0.007	75,000	70,000	65,000	\$ 3.00	\$ 3.50	3,682,005	3,436,538	3,191,071	510	476	442	
<b>Lighting Total</b>			50%			115,000	110,000	100,000			5,046,834	4,801,366	4,385,295	698	664	607	
EE Products - Electric	AC Tune Up	2	63%	111.1	0.123	250	325	350	\$ 25.00	\$ 82.00	27,787	36,122	38,901	31	40	43	
EE Products - Electric	Air Purifier	9	69%	681.1	0.078	5	5	5	\$ 50.00	\$ 70.00	3,405	3,405	3,405	0	0	0	
EE Products - Electric	Air Source Heat Pump 16 SEER	18	65%	880.8	0.464	150	50	40	\$ 300.00	\$ 870.00	132,122	44,041	35,233	70	23	19	
EE Products - Electric	Air Source Heat Pump 18 SEER	18	65%	1,590.0	0.530	40	20	15	\$ 500.00	\$ 870.00	63,598	31,799	23,849	21	11	8	
EE Products - Electric	ASHP Tune Up	2	63%	285.0	-	15	20	25	\$ 50.00	\$ 64.00	4,275	5,700	7,125	-	-	-	
EE Products - Electric	Attic Insulation - South (Dual - Gas & Electric)	25	68%	303.6	0.464	100	100	100	\$ 360.00	\$ 750.00	30,359	30,359	30,359	46	46	46	
EE Products - Electric	Attic Insulation - South (Electric Only)	25	68%	3,018.7	0.103	20	10	10	\$ 450.00	\$ 1,500.00	60,373	30,187	30,187	2	1	1	
EE Products - Electric	Central Air Conditioner 16 SEER	18	65%	434.9	0.540	600	500	400	\$ 200.00	\$ 400.00	260,950	217,458	173,967	324	270	216	
EE Products - Electric	Central Air Conditioner 18 SEER	18	65%	666.0	0.577	40	35	30	\$ 400.00	\$ 800.00	26,640	23,310	19,980	23	20	17	
EE Products - Electric	Dual Fuel Air Source Heat Pump 16 SEER	18	65%	695.3	0.330	10	10	10	\$ 300.00	\$ 1,000.00	6,953	6,953	6,953	3	3	3	
EE Products - Electric	Dual Fuel Air Source Heat Pump 18 SEER	18	65%	991.7	0.325	5	5	5	\$ 500.00	\$ 1,666.67	4,958	4,958	4,958	2	2	2	
EE Products - Electric	Duct Sealing - South (Dual - Gas & Electric)	20	68%	217.5	0.382	21	21	21	\$ 240.00	\$ 175.00	4,568	4,568	4,568	8	8	8	
EE Products - Electric	Ductless Heat Pump 19 SEER 9.5 HSPF	18	65%	3,066.5	0.380	10	5	5	\$ 300.00	\$ 2,333.33	30,665	15,332	15,332	4	2	2	
EE Products - Electric	Ductless Heat Pump 21 SEER 10.0 HSPF	18	65%	2,932.2	0.368	15	10	10	\$ 500.00	\$ 2,833.33	43,984	29,322	29,322	6	4	4	
EE Products - Electric	Ductless Heat Pump 23 SEER 10.0 HSPF	18	65%	4,306.1	0.711	20	15	10	\$ 500.00	\$ 3,333.33	86,123	64,592	43,061	14	11	7	
EE Products - Electric	Heat Pump Water Heater	10	69%	2,556.8	0.349	7	10	12	\$ 500.00	\$ 1,000.00	17,897	25,568	30,681	2	3	4	
EE Products - Electric	Pool Heater	10	69%	1,266.5	-	2	4	5	\$ 1,000.00	\$ 3,333.33	2,533	5,066	6,332	-	-	-	
EE Products - Electric	Smart Programmable Thermostat - South (Dual - Gas & Electric)	15	78%	299.4	-	700	650	500	\$ 60.00	\$ 63.81	209,606	194,634	149,718	-	-	-	
EE Products - Electric	Smart Programmable Thermostat - South (Electric Only)	15	78%	740.3	-	120	100	80	\$ 75.00	\$ 127.61	88,830	74,025	59,220	-	-	-	
EE Products - Electric	Variable Speed Pool Pump	15	69%	1,172.6	1.716	160	-	-	\$ 300.00	\$ 750.00	187,612	-	-	-	275	-	-
EE Products - Electric	Wall Insulation - South (Dual - Gas & Electric)	25	68%	29.3	0.259	94	94	94	\$ 360.00	\$ 750.00	2,758	2,758	2,758	24	24	24	
EE Products - Electric	Wall Insulation - South (Electric Only)	25	68%	801.0	0.019	12	12	12	\$ 450.00	\$ 1,500.00	9,612	9,612	9,612	0	0	0	
EE Products - Electric	Wifi Thermostat - South (Dual - Gas & Electric)	15	78%	294.6	-	80	75	60	\$ 40.00	\$ 51.60	23,570	22,097	17,678	-	-	-	
EE Products - Electric	Wifi Thermostat - South (Electric Only)	15	78%	294.6	-	30	25	20	\$ 50.00	\$ 103.20	8,839	7,366	5,893	-	-	-	
<b>EE Products - Electric Total</b>						2,506	2,101	1,819			1,338,016	889,232	749,092	856	469	405	
Marketplace - Electric	Air Purifier	9	69%	681.1	0.078	10	10	15	\$ 50.00	\$ 70.00	6,811	6,811	10,216	1	1	1	
Marketplace - Electric	Smart Power Strips	4	100%	25.8	0.002	50	50	50	\$ 10.00	\$ 35.00	1,292	1,292	1,292	0	0	0	
Marketplace - Electric	Smart Programmable Thermostat - South (Dual - Gas & Electric)	15	78%	299.4	-	200	230	250	\$ 60.00	\$ 63.81	59,887	68,870	74,859	-	-	-	
Marketplace - Electric	Smart Programmable Thermostat - South (Electric Only)	15	78%	740.3	-	35	42	50	\$ 75.00	\$ 127.61	25,909	31,091	37,013	-	-	-	
Marketplace - Electric	LED Specialty	15	23%	34.1	0.005	250	250	250	\$ 2.00	\$ 3.50	8,530	8,530	8,530	1	1	1	
Marketplace - Electric	LED Reflector	15	39%	49.1	0.007	250	250	250	\$ 3.00	\$ 3.50	12,273	12,273	12,273	2	2	2	
<b>Marketplace - Electric Total</b>						795	832	865			114,702	128,867	144,183	4	4	4	
Instant Rebates - Electric	Smart Programmable Thermostat - South (Dual - Gas & Electric)	15	78%	299.4	-	385	663	995	\$ 60.00	\$ 63.81	115,283	198,527	297,940	-	-	-	
Instant Rebates - Electric	Smart Programmable Thermostat - South (Electric Only)	15	78%	740.3	-	55	47	71	\$ 75.00	\$ 127.61	40,714	34,792	52,558	-	-	-	
Instant Rebates - Electric	Heat Pump Water Heater	10	69%	2,556.8	0.349	15	22	25	\$ 500.00	\$ 1,000.00	38,352	56,249	63,919	5	8	9	
Instant Rebates - Electric	Air Purifier	9	69%	681.1	0.078	15	14	17	\$ 50.00	\$ 70.00	10,216	9,535	11,578	1	1	1	
<b>Instant Rebates - Electric Total</b>						470	746	1,108			204,565	299,102	425,995	6	9	10	
RNC-Electric	Gold Star: HERS Index Score ≤ 63 - Electric Heater	25	54%	0.5	-	-	-	700	\$ 2,059.00	\$ -	-	-	-	-	-	36	
RNC-Electric	Gold Star: HERS Index Score ≤ 63 - Gas Heated Space Heating	25	54%	0.4	75.000	90	90	175	\$ 846.80	\$ 77,490.58	92,989	92,989	30	36	36	0	
RNC-Electric	Habitat Kit Electric Only	14	100%	0.1	8.000	8	8	-	\$ 48.75	\$ 19,140.39	19,140	19,140	0	0	0	1	
RNC-Electric	Habitat Kit Gas and Electric	14	100%	0.0	20.000	20	20	-	\$ 48.75	\$ 14,368.44	14,368	14,368	1	1	1	6	
RNC-Electric	Platinum Star Plus: HERS Index Score ≤ 60 - Electric Heater	25	54%	2.1	-	-	-	1,200	\$ 3,793.19	\$ -	-	-	-	-	-	-	
RNC-Electric	Platinum Star Plus: HERS Index Score ≤ 60 - Gas Heating	25	54%	1.2	5.000	5	5	300	\$ 2,492.27	\$ 7,224.29	7,224	7,224	6	6	6		
RNC-Electric	Platinum Star: HERS Index Score ≤ 60 - Electric Heater	25	54%	0.6	-	-	-	1,000	\$ 3,079.19	\$ -	-	-	-	-	-	-	
RNC-Electric	Platinum Star: HERS Index Score ≤ 60 - Gas Heating	25	54%	0.5	-	48	48	250	\$ 1,778.27	\$ 45,762.41	54,915	54,915	19	23	23	23	
<b>RNC-Electric Total</b>						171	171	3,625			188,637	188,637	56	66	66	66	

Program Name	Measure	Measure Life	NTG	Average kWh/ Unit	Average KW/ Unit	2021 Participation	2022 Participation	2023 Participation	Avg Incentive/Unit	IMC/unit	2021 kWh	2022 kWh	2023 kWh	2021 kW	2022 kW	2023 kW
Home Energy Assessments	Bathroom Aerator 1.0 gpm - Elec DHW	10		23.7	0.003	60	63	76			1,423	1,494	1,793	0	0	0
Home Energy Assessments	Customer Education (Audit & Report)	1		63.1	0.007	332	349	418			20,959	22,007	26,408	2	3	3
Home Energy Assessments	Duct Sealing Electric Heat Pump	20		298.0	0.293	8	8	8			2,384	2,384	2,384	2	2	2
Home Energy Assessments	Duct Sealing Gas Heating w/ CAC	20		169.0	0.293	6	6	6			1,014	1,014	1,014	2	2	2
Home Energy Assessments	Attic Insulation - South (Electric Only)	25		3,018.7	0.103	8	8	8			24,149	24,149	24,149	1	1	1
Home Energy Assessments	Attic Insulation - South (Dual - Gas & Electric)	25		303.6	0.464	5	5	5			1,518	1,518	1,518	2	2	2
Home Energy Assessments	Wall Insulation - South (Electric Only)	25		801.0	0.019	8	8	8			6,408	6,408	6,408	0	0	0
Home Energy Assessments	Wall Insulation - South (Dual - Gas & Electric)	25		29.3	0.259	2	2	2			59	59	59	1	1	1
Home Energy Assessments	Exterior 9W LED (A19-9W Exterior)	15		84.2	0.008	113	118	142			9,492	9,967	11,960	1	1	1
Home Energy Assessments	Interior 9W LED (A19-9W Interior)	15		31.7	0.004	4,725	4,961	5,953			149,833	157,325	188,790	20	21	25
Home Energy Assessments	Exterior 6W LED	15		21.3	0.003	655	688	826			13,948	14,646	17,575	2	2	2
Home Energy Assessments	LED Lamp Candelabra	15		32.8	0.004	1,435	1,507	1,808			47,127	49,483	59,379	6	7	8
Home Energy Assessments	LED Lamp Downlight Retro	15		41.8	0.005	233	244	293			9,723	10,209	12,251	1	1	2
Home Energy Assessments	LED Night Light - 5W	8		13.1	-	838	880	1,056			11,017	11,567	13,881	-	-	-
Home Energy Assessments	LED 8W Dimmable R30 (BR30-8W)	15		52.6	0.007	1,172	1,231	1,477			61,642	64,724	77,669	8	9	10
Home Energy Assessments	Furnace Whistle (Elec)	15		238.7	0.050	12	13	15			2,864	3,008	3,609	1	1	1
Home Energy Assessments	Furnace Whistle (Gas)	15		62.9	0.002	64	67	81			4,023	4,224	5,069	0	0	0
Home Energy Assessments	Kitchen Flip Aerator 1.5 gpm - Elec DHW	5		162.9	0.007	40	42	50			6,515	6,840	8,208	0	0	0
Home Energy Assessments	Low Flow Showerhead 1.5 gpm - Elec DHW	10		259.4	0.015	40	42	50			10,374	10,893	13,071	1	1	1
Home Energy Assessments	Pipe Wrap - Elec DHW (per home)	15		74.8	0.009	8	8	10			599	628	754	0	0	0
Home Energy Assessments	PowerStrip (Tier 1 Advanced - 7 outlet plug)	4		25.6	0.002	120	126	151			3,071	3,225	3,870	0	0	0
Home Energy Assessments	Smart Thermostat - Elec Heated	15		1,224.2	-	60	63	76			73,452	77,125	92,550	-	-	-
Home Energy Assessments	Smart Thermostat - Gas Heated	15		277.2	-	320	336	403			88,689	93,123	111,748	-	-	-
Home Energy Assessments	Water Heater Setback - Elec DHW	15		66.0	0.008	8	8	10			528	554	665	0	0	0
<b>Home Energy Assessments Total</b>						<b>400</b>	<b>420</b>	<b>504</b>			<b>550,810</b>	<b>576,574</b>	<b>684,783</b>	<b>50</b>	<b>53</b>	<b>61</b>
IQW - Electric	5W Candelabra	15	100%	10.4	0.001	1,138	900	719		\$ 2.08	11,795	9,332	7,453	2	1	1
IQW - Electric	9W LED	15	100%	33.4	0.004	1,950	1,800	1,725		\$ 3.21	65,119	60,110	57,605	8	7	7
IQW - Electric	Air Sealing Gas Furnace w/ CAC	15	100%	124.9	0.162	25	35	30		\$ 50.00	3,122	4,370	3,746	4	6	5
IQW - Electric	Air Source Heat Pump 16 SEER	18	100%	694.0	0.407	1	1	1		\$ 5,400.00	694	694	694	0	0	0
IQW - Electric	Attic Insulation - Gas Heated (Electric)	25	100%	383.3	0.378	50	55	50		\$ 706.30	19,163	21,080	19,163	19	21	19
IQW - Electric	Audit Recommendations - dual (Electric)	1	100%	82.9	0.004	650	600	575		\$ 26.00	53,876	49,732	47,659	2	2	2
IQW - Electric	Audit Recommendations - Electric Only	1	100%	102.2	0.004	38	35	30		\$ 106.00	3,882	3,576	3,065	0	0	0
IQW - Electric	Bathroom Aerator 1.0 gpm - Elec DHW	10	100%	34.6	0.003	98	90	86		\$ 0.52	3,376	3,116	2,987	0	0	0
IQW - Electric	Central Air Conditioner 16 SEER	18	100%	587.2	1.047	20	20	20		\$ 3,500.00	11,744	11,744	11,744	21	21	21
IQW - Electric	Duct Sealing Gas Heating with A/C	20	100%	155.1	0.269	25	40	35		\$ 110.00	3,877	6,204	5,428	7	11	9
IQW - Electric	Exterior LED Lamps	15	100%	99.0	-	195	180	173		\$ 7.20	19,305	17,820	17,078	-	-	-
IQW - Electric	Filter Whistle	15	100%	46.0	0.076	7	6	6		\$ 1.64	299	276	264	0	0	0
IQW - Electric	HVAC/Furnace Tune Up (With filter replacement)	2	100%	155.1	0.197	145	165	150		\$ 75.00	22,496	25,599	23,272	29	33	30
IQW - Electric	IQW - Whole Home (Dual - Gas & Electric)	15	100%	1,316.4	-	-	-	5		\$ -	-	-	6,582	-	-	-
IQW - Electric	IQW - Whole Home (Electric Only)	10	100%	1,490.4	-	-	-	1		\$ -	-	-	1,490	-	-	-
IQW - Electric	IQW MFDI 9W LED	15	100%	33.3	0.004	400	200	200		\$ 3.21	13,324	6,662	6,662	2	1	1
IQW - Electric	IQW MFDI Bathroom Aerator 1.0 gpm - Elec DHW	10	100%	29.4	0.003	80	80	70		\$ -	2,350	2,350	2,056	0	0	0
IQW - Electric	IQW MFDI Kitchen Flip Aerator 1.5 gpm - Elec DH	16	100%	96.7	0.007	70	70	80		\$ -	6,772	6,772	7,739	0	0	1
IQW - Electric	IQW MFDI LED Nightlight	8	100%	13.6	-	-	100	100		\$ 2.75	-	1,364	1,364	-	-	-
IQW - Electric	IQW MFDI Low Flow Showerhead 1.5 gpm - Elec	1	100%	266.7	0.015	75	75	75		\$ -	20,005	20,005	20,005	1	1	1
IQW - Electric	IQW MFDI Site Visit and DI - Electric Only		100%	46.1	0.002	100	100	100		\$ 22.50	4,609	4,609	4,609	0	0	0



Program Name	Measure	Measure Life	NTG	Average kWh/ Unit	Average KW/ Unit	2021 Participation	2022 Participation	2023 Participation	Avg Incentive/Unit	IMC/unit	2021 kWh	2022 kWh	2023 kWh	2021 kW	2022 kW	2023 kW
IQW - Electric	IQW MFDI Smart Thermostat (Electric Only)		100%	740.5	-	100	100	100		\$ 39.00	74,048	74,048	74,048	-	-	-
IQW - Electric	Kitchen Flip Aerator 1.5 gpm - Elec DHW	10	100%	145.7	0.007	65	60	58		\$ 1.34	9,469	8,740	8,376	0	0	0
IQW - Electric	LED SW Globe	15	100%	19.6	0.002	650	600	575		\$ 8.75	12,729	11,750	11,260	2	1	1
IQW - Electric	LED Nightlight	8	100%	13.6	-	1,300	1,200	1,150		\$ 2.75	17,727	16,364	15,682	-	-	-
IQW - Electric	LED R30 Dimmable	15	100%	32.6	0.004	163	150	144		\$ 11.54	5,297	4,889	4,686	1	1	1
IQW - Electric	Low Flow Showerhead 1.5 gpm - Elec DHW	5	100%	342.6	0.015	52	48	46		\$ 3.32	17,815	16,445	15,759	1	1	1
IQW - Electric	Pipe Wrap - Elec DHW (per home)	15	100%	99.3	0.011	13	12	12		\$ 1.72	1,291	1,191	1,142	0	0	0
IQW - Electric	Refrigerator Replacement	8	100%	359.8	0.053	20	20	20		\$ 580.00	7,197	7,197	7,197	1	1	1
IQW - Electric	Smart Power Strips	4	100%	25.8	0.002	195	180	173		\$ 35.00	5,037	4,650	4,456	0	0	0
IQW - Electric	Smart Thermostat (Dual)	15	100%	429.0	-	130	108	86		\$ 39.00	55,770	46,332	37,001	-	-	-
IQW - Electric	Smart Thermostat (Electric)	15	100%	1,580.2	-	8	8	8		\$ 39.00	12,642	12,642	12,642	-	-	-
IQW - Electric	Wall Insulation - Dual (gas heated)	25	100%	58.3	0.042	15	15	22		\$ 877.00	874	874	1,282	1	1	1
IQW - Electric	Water Heater Temperature Setback - Elec DHW	4	100%	81.5	0.009	3	3	3		\$ 6.50	245	245	245	0	0	0
<b>IQW - Electric Total</b>						788	735	710			485,948	460,780	444,441	102	111	103
Foodbank	9W LED	15	100%	34.1	0.005	33,976	33,976	33,976			1,159,285	1,159,285	1,159,285	160	160	160
<b>Foodbank Total</b>						33,976	33,976	33,976			1,159,285	1,159,285	1,159,285	160	160	160
Energy Efficiency Schools	15W LED	15	100%	38.2	0.004	2,600	2,600	2,600			104,581	99,352	94,385	11	11	10
Energy Efficiency Schools	11W LED	15	100%	28.2	0.003	2,600	2,600	2,600			77,060	73,207	69,547	8	8	8
Energy Efficiency Schools	11W LED	15	100%	28.2	0.003	2,600	2,600	2,600			77,060	73,207	69,547	8	8	8
Energy Efficiency Schools	Low Flow Showerhead	5	100%	99.3	0.003	2,600	2,600	2,600			271,411	257,841	244,949	7	7	6
Energy Efficiency Schools	Kitchen Aerator	10	100%	41.0	0.001	2,600	2,600	2,600			112,018	106,417	101,096	3	3	3
Energy Efficiency Schools	Bathroom Aerator	10	100%	8.1	0.000	2,600	2,600	2,600			22,086	20,982	19,933	1	1	1
Energy Efficiency Schools	Bathroom Aerator	10	100%	8.1	0.000	2,600	2,600	2,600			22,086	20,982	19,933	1	1	1
Energy Efficiency Schools	LED Night Light	8	100%	6.0	-	2,600	2,600	2,600			16,345	15,527	14,751	-	-	-
Energy Efficiency Schools	Furnace Filter Whistle	5	100%	11.1	0.014	2,600	2,600	2,600			30,471	28,947	27,500	38	36	34
<b>Energy Efficiency Schools Total</b>						2,600	2,600	2,600			733,118	696,462	661,639	78	74	70
Residential Behavioral	Residential Behavioral	1	100%	169.0	0.031	41,543	42,016	40,182			7,020,000	7,100,000	6,790,000	1,350	1,270	1,210
<b>Residential Behavioral Total</b>						41,543	42,016	40,182			7,020,000	7,100,000	6,790,000	1,350	1,270	1,210
Appliance Recycling	Refrigerator	8	100%	1,065.0	0.137	1,040	1,000	880		\$ 50.00	1,120,313	1,064,203	925,206	142	137	121
Appliance Recycling	Freezer	8	100%	692.0	0.075	260	250	220		\$ 50.00	182,000	172,885	150,304	19	19	17
Appliance Recycling	AC Pickup/unit	8	100%	267.8	0.216	75	50	25		\$ 25.00	20,250	13,337	6,588	15	10	7
<b>Appliance Recycling Total</b>						1,375	1,300	1,125			1,322,563	1,250,424	1,082,098	176	166	145
CVR Residential	CVR Residential	15	100%	189.8	0.076	-	-	5,627			-	-	1,067,954	-	-	430
<b>CVR Residential Total</b>						-	-	5,627			-	-	1,067,954	-	-	430
Smart DLC Changeout	Smart DLC Changeout	15	100%	362.6	1.140	1,000	1,000	1,000			362,577	362,577	362,577	1,140	1,140	1,140
<b>Smart DLC Changeout Total</b>						1,000	1,000	1,000			362,577	362,577	362,577	1,140	1,140	1,140
Bring Your Own Thermostat (BYOT)	BYOT	15	100%	-	1.140	400	450	500			-	-	-	456	513	570
<b>Bring Your Own Thermostat (BYOT) Total</b>						400	450	500			-	-	-	456	513	570
Midstream HVAC - Electric	Ductless Heat Pump 19 SEER 9.5 HSPF	18	65%	3,066.5	0.380	38	51	55		\$ 250.00	116,527	156,391	168,657	14	19	21
Midstream HVAC - Electric	Ductless Heat Pump 21 SEER 10 HSPF	18	65%	2,932.2	0.368	14	19	26		\$ 400.00	41,051	55,713	76,238	5	7	10
Midstream HVAC - Electric	Ductless Heat Pump 23 SEER 10 HSPF	18	65%	4,306.1	0.711	27	30	35		\$ 400.00	116,266	129,184	150,715	19	21	25
Midstream HVAC - Electric	Air Source Heat Pump 16 SEER	18	65%	880.8	0.464	142	189	190		\$ 200.00	125,076	166,474	167,355	66	88	88
Midstream HVAC - Electric	Air Source Heat Pump 18 SEER	18	65%	1,590.0	0.530	28	37	40		\$ 400.00	44,519	58,828	63,598	15	20	21
Midstream HVAC - Electric	Central Air Conditioner 16 SEER	18	65%	434.9	0.540	986	986	1,315		\$ 200.00	428,827	428,827	571,915	533	533	710
Midstream HVAC - Electric	Central Air Conditioner 18 SEER	18	65%	666.0	0.577	75	99	110		\$ 400.00	49,949	65,933	73,259	43	57	63
<b>Midstream HVAC - Electric Total</b>						1,310	1,411	1,771			922,215	1,061,351	1,271,737	695	745	938

Program Name	Measure	Measure Life	NTG	Average kWh/ Unit	Average KW/ Unit	2021 Participation	2022 Participation	2023 Participation	Avg Incentive/Unit	IMC/unit	2021 kWh	2022 kWh	2023 kWh
Home Energy Management Systems	HEMS	6	100%	515.0	0.080	1,000	1,000	1,000			515,000	515,000	515,000
<b>Home Energy Management Systems Total</b>						1,000	1,000	1,000			515,000	515,000	515,000
C&I Custom	Building Tune-Up (Electric)	7	83%	50,000.0	0.050	5	6	6	\$ 2,500.00	\$ 3,000.00	250,000	300,000	300,000
C&I Custom	Custom Electric	17	83%	114,089.8	15.121	32	41	37	\$ 7,959.36	\$ 38,513.34	3,650,875	4,677,683	4,221,324
C&I Custom	EDA Lighting Power Density Reduction	15	83%	41,571.7	7.170	10	10	10	\$ 3,345.02	\$ 4,000.00	410,894	418,128	418,128
C&I Custom	EDA Non-Lighting (Electric)	13	83%	28,187.2	18.000	7	10	10	\$ 2,254.98	\$ 4,000.00	197,310	281,872	281,872
C&I Custom	SEM Electric	13	83%	500,000.0	10.000	2	2	2	\$ 60,000.00	\$ 35,000.00	1,000,000	1,000,000	1,000,000
<b>C&amp;I Custom Total</b>						56	69	65			5,509,079	6,677,683	6,221,324
C&I Prescriptive	Advanced Rooftop Controls	9	83%	3,034.0	2.620	150	150	188	\$ 827.15	\$ 1,000.00	455,100	455,100	570,392
C&I Prescriptive	Agriculture - Automatic Milker Take Off	15	83%	10,062.0	2.100	1	1	1	\$ 1.67	\$ -	10,062	10,062	10,062
C&I Prescriptive	Agriculture - Dairy Plate Cooler	15	83%	76.2	0.016	1	1	1	\$ 1.00	\$ -	76	76	76
C&I Prescriptive	Agriculture - HE Dairy Scroll Compressor	12	83%	279.5	0.069	1	1	1	\$ 16.67	\$ -	279	279	279
C&I Prescriptive	Agriculture - Heat Mat	5	83%	657.0	-	1	1	1	\$ 21.67	\$ 225.00	657	657	657
C&I Prescriptive	Agriculture - Heat Reclaimer	14	83%	152.7	-	1	1	1	\$ 1.67	\$ -	153	153	153
C&I Prescriptive	Agriculture - High Speed Fans	7	83%	625.0	0.198	1	1	1	\$ 25.00	\$ 150.00	625	625	625
C&I Prescriptive	Agriculture - High Volume Low Speed Fans	10	83%	8,543.0	3.100	1	1	1	\$ 250.00	\$ 4,180.00	8,543	8,543	8,543
C&I Prescriptive	Agriculture - Livestock Waterer	10	83%	1,592.0	0.525	1	1	1	\$ 66.67	\$ 787.50	1,592	1,592	1,592
C&I Prescriptive	Agriculture - Poultry Farm LED Lighting	7	83%	292.0	0.050	1	1	1	\$ 0.03	\$ 30.00	292	292	292
C&I Prescriptive	Agriculture - VSD Milk Pump	15	83%	32.0	0.007	1	1	1	\$ 1.67	\$ 4,000.00	32	32	32
C&I Prescriptive	Air Compressor	15	83%	36,724.0	6.552	2	2	2	\$ 1,875.00	\$ -	73,448	73,448	73,448
C&I Prescriptive	Air Conditioners	15	83%	1,520.0	4.731	75	75	100	\$ 309.00	\$ 100.00	114,000	114,000	152,000
C&I Prescriptive	Barrel Wrap Insulation	5	83%	360.1	0.068	1	1	1	\$ 30.00	\$ -	360	360	360
C&I Prescriptive	Chilled Water Reset Control	10	83%	16,536.0	3.059	3	3	3	\$ 238.50	\$ 681.34	49,608	49,608	49,608
C&I Prescriptive	Chiller	20	83%	191,462.0	8.245	3	3	4	\$ 5,830.43	\$ 79.46	574,386	574,386	765,848
C&I Prescriptive	Chiller Tune-Up	5	83%	34,339.9	7.204	6	6	6	\$ 1,100.63	\$ -	206,039	206,039	206,039
C&I Prescriptive	Clothes Washer	10	83%	541.5	-	3	3	3	\$ 60.00	\$ 475.33	1,625	1,625	1,625
C&I Prescriptive	Compressed Air Leak Study	2	83%	172,000.0	10.000	9	9	1	\$ 5,676.00	\$ 6,364.00	1,548,000	1,548,000	172,000
C&I Prescriptive	Compressed Air Nozzles	15	83%	888.2	0.337	2	2	2	\$ 6.50	\$ 14.00	1,776	1,776	1,776
C&I Prescriptive	EC Motors	15	83%	410.1	0.042	125	125	125	\$ 37.75	\$ 50.00	51,266	51,266	51,266
C&I Prescriptive	Exterior LED	15	83%	1,315.0	0.020	1,342	1,042	956	\$ 105.00	\$ 270.24	1,764,730	1,370,230	1,257,140
C&I Prescriptive	Food Service - Anti-Sweat Heater Control	12	83%	1,278.0	-	75	75	75	\$ 100.00	\$ 200.00	95,850	95,850	95,850
C&I Prescriptive	Food Service - Combination Oven	12	83%	18,431.7	3.535	1	1	1	\$ 1,000.00	\$ 2,125.00	18,432	18,432	18,432
C&I Prescriptive	Food Service - Commercial Dishwasher	16	83%	3,090.0	1.911	8	8	8	\$ 442.00	\$ 616.25	24,720	24,720	24,720
C&I Prescriptive	Food Service - Convection Oven	12	83%	3,234.8	0.620	1	1	1	\$ 350.00	\$ 1,113.00	3,235	3,235	3,235
C&I Prescriptive	Food Service - Freezer	12	83%	2,931.2	0.313	8	8	8	\$ 200.00	\$ 220.25	23,450	23,450	23,450
C&I Prescriptive	Food Service - Fryer	12	83%	1,526.2	0.220	1	1	1	\$ 80.00	\$ 500.00	1,526	1,526	1,526
C&I Prescriptive	Food Service - Griddle	12	83%	10,032.7	1.924	3	3	3	\$ 550.00	\$ 2,090.00	30,098	30,098	30,098
C&I Prescriptive	Food Service - Hot Food Holding Cabinet	12	83%	5,256.0	0.506	8	8	8	\$ 420.00	\$ 1,110.00	42,048	42,048	42,048
C&I Prescriptive	Food Service - Ice Machine	9	83%	924.3	0.143	3	3	3	\$ 170.00	\$ 1,333.60	2,773	2,773	2,773
C&I Prescriptive	Food Service - Low Flow Pre-Rinse Sprayer	5	83%	713.0	-	1	1	1	\$ 10.00	\$ -	713	713	713
C&I Prescriptive	Food Service - Refrigerated Case Cover	6	83%	157.5	-	1	1	1	\$ 10.00	\$ 42.00	158	158	158
C&I Prescriptive	Food Service - Refrigerator	12	83%	1,482.6	0.066	7	7	7	\$ 58.43	\$ 180.00	10,378	10,378	10,378
C&I Prescriptive	Food Service - Steam Cooker	12	83%	2,225.9	0.433	1	1	1	\$ 200.00	\$ 3,500.00	2,226	2,226	2,226
C&I Prescriptive	Heat Pump	15	83%	660.1	0.677	11	11	11	\$ 78.00	\$ 143.64	7,293	7,246	7,246
C&I Prescriptive	Heat Pump Water Heater	10	83%	1,534.0	0.032	1	1	1	\$ 500.00	\$ -	1,534	1,534	1,534
C&I Prescriptive	High Efficiency Hand Dryer	15	83%	769.0	-			10	\$ 180.00	\$ 200.00			7,690

Program Name	Measure	Measure Life	NTG	Average kWh/ Unit	Average KW/ Unit	2021 Participation	2022 Participation	2023 Participation	Avg Incentive/Unit	IMC/unit	2021 kWh	2022 kWh	2023 kWh	2021 kW	2022 kW	2023 kW
C&I Prescriptive	Interior LED - High-Bay	15	83%	1,005.9	0.371	1,183	1,062	1,002	\$ 81.00	\$ 113.54	1,189,977	1,068,264	1,007,910	439	394	372
C&I Prescriptive	Interior LED - Low-Bay	15	83%	241.2	0.052	28,314	23,367	22,967	\$ 21.74	\$ 78.04	6,840,582	5,631,299	5,535,124	1,474	1,217	1,196
C&I Prescriptive	Lighting Control	8	83%	401.9	0.216	582	305	306	\$ 35.00	\$ 98.75	233,900	122,610	123,012	126	66	66
C&I Prescriptive	Lighting Power Density Reduction	15	83%	156,097.2	7.166	11	11	11	\$ 14,778.31	\$ -	1,717,082	1,717,082	1,717,043	79	79	79
C&I Prescriptive	Pellet Dryer Duct Insulation	5	83%	198.5	0.030	1	1	1	\$ 30.00	\$ -	198	198	198	0	0	0
C&I Prescriptive	Plug Load Occupancy Sensor	8	83%	169.0	-	1	1	1	\$ 20.00	\$ 70.00	169	169	169	-	-	-
C&I Prescriptive	Programmable Thermostat	15	83%	648.9	-	215	214	214	\$ 50.00	\$ 35.00	139,518	138,870	138,870	-	-	-
C&I Prescriptive	Refrigerated LED	8	83%	237.0	0.048	820	820	820	\$ 16.00	\$ 35.89	194,340	194,340	194,340	39	39	39
C&I Prescriptive	Showerheads	5	83%	7,130.5	-	1	1	1	\$ 10.00	\$ -	7,130	7,130	7,130	-	-	-
C&I Prescriptive	Smart Strip Plug Outlet	8	83%	23.4	-	1	1	1	\$ 8.00	\$ 15.00	23	23	23	-	-	-
C&I Prescriptive	Vending Machine Control	5	83%	1,054.4	-	3	3	3	\$ 41.67	\$ 179.67	3,163	3,163	3,163	-	-	-
C&I Prescriptive	VFD-Fan	15	83%	107,827.9	2.975	5	5	5	\$ 7,500.00	\$ 3,638.33	539,140	539,140	539,140	15	15	15
C&I Prescriptive	VFD-Pump	15	83%	122,828.9	8.175	5	5	5	\$ 7,500.00	\$ -	614,145	614,145	614,145	41	41	41
C&I Prescriptive	Wifi-Enabled Thermostat	15	83%	649.0	-	115	115	115	\$ 100.00	\$ 250.00	74,635	74,635	74,635	-	-	-
C&I Prescriptive	Window Air Conditioner & PTAC	14	83%	207.3	0.143	5	5	5	\$ 46.85	\$ 196.00	1,036	1,036	1,036	1	1	1
C&I Prescriptive	Window Film	10	83%	3.1	0.001	1	1	1	\$ 1.00	\$ 2.67	3	3	3	0	0	0
<b>C&amp;I Prescriptive Total</b>						33,122	27,476	26,997			16,650,556	14,813,073	13,520,261	3,215	2,847	2,948
Commercial Midstream	Ductless Heat Pump 19 SEER 9.5 HSPF	18	100%	3,066.5	0.380	3	3	3	\$ 300.00	\$ 2,333.33	9,199	9,199	9,199	1	1	1
Commercial Midstream	Ductless Heat Pump 21 SEER 10 HSPF	18	100%	2,932.2	0.368	2	2	2	\$ 500.00	\$ 2,833.33	5,864	5,864	5,864	1	1	1
Commercial Midstream	Ductless Heat Pump 23 SEER 10 HSPF	18	100%	4,306.1	0.711	2	2	2	\$ 500.00	\$ 3,333.33	8,612	8,612	8,612	1	1	1
Commercial Midstream	Air Source Heat Pump 18 SEER	18	100%	1,590.0	0.530	4	4	4	\$ 500.00	\$ 870.00	6,360	6,360	6,360	2	2	2
Commercial Midstream	Heat Pump Water Heater	10	100%	1,534.0	0.032	1	1	1	\$ 238.50	\$ 1,362.68	1,534	1,534	1,534	0	0	0
<b>Commercial Midstream Total</b>						12	12	12			31,570	31,570	31,570	5	5	5
SBES	Anti-Sweat Heater Control	12	83%	909.3	-	1	1	1	\$ 170.00	\$ 200.00	909	909	909	-	-	-
SBES	EC Motors	15	83%	403.2	0.042	8	9	9	\$ 77.25	\$ 50.00	3,210	3,637	3,637	0	0	0
SBES	Exterior LED	15	83%	1,583.6	0.015	597	853	853	\$ 295.37	\$ 181.64	945,410	1,350,813	1,350,813	9	13	13
SBES	Faucet Aerator	10	83%	507.8	-	1	1	1	\$ 4.72	\$ 2.00	508	508	508	-	-	-
SBES	Interior LED	15	83%	183.8	0.036	5,935	7,836	7,836	\$ 35.20	\$ 131.43	1,090,612	1,439,939	1,439,939	214	283	283
SBES	Lighting Control	8	83%	136.2	0.026	188	188	188	\$ 26.00	\$ 107.33	25,568	25,568	25,691	5	5	5
SBES	Low Flow Pre-Rinse Sprayer	5	83%	7,130.5	-	1	1	1	\$ 60.00	\$ -	7,130	7,130	7,130	-	-	-
SBES	Program the Programmable Thermostat	5	83%	736.5	-	12	12	12	\$ 25.00	\$ 25.00	8,838	8,838	8,838	-	-	-
SBES	Programmable Thermostat	15	83%	1,737.0	-	9	9	9	\$ 100.00	\$ 35.00	15,633	15,633	15,633	-	-	-
SBES	Refrigerated Case Cover	6	83%	415.0	0.195	15	15	15	\$ 83.40	\$ 14.50	6,225	6,225	6,225	3	3	3
SBES	Refrigerated LED	8	83%	409.5	0.070	3	3	3	\$ 47.50	\$ 190.00	1,228	1,228	1,228	0	0	0
SBES	Vending Machine Control	5	83%	1,410.4	-	3	3	3	\$ 265.00	\$ 215.50	4,231	4,231	7,052	-	-	-
SBES	Wifi-Enabled Thermostat	15	83%	1,737.0	-	49	49	49	\$ 100.00	\$ 250.00	85,111	85,111	85,111	-	-	-
<b>SBES Total</b>						78	78	78			2,194,615	2,949,771	2,952,715	231	304	304
CVR Commercial	CVR Commercial	15	100%	155.6	0.038	-	-	5,627			-	-	875,340	-	-	214
<b>CVR Commercial Total</b>						-	-	5,627			-	-	875,340	-	-	214
<b>Portfolio Total</b>						236,579	226,393	225,737			44,325,438	43,961,753	43,533,925	10,061	9,571	10,303