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December 19, 2024

VIA ELECTRONIC FILING

Adam J. Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Duke Energy Florida, LLC's Petition for Approval of Proposed Demand-Side Management Plan*; Docket No. _____

Dear Mr. Teitzman:

Enclosed for filing is Duke Energy Florida, LLC's (DEF) Petition for Approval of Proposed Demand-Side Management Plan with the following attachments:

1. Attachment A: DEF's DSM Program Plan; and
2. Attachment B: DEF's DSM Program Participation Standards.

This filing is in compliance with Commission Order No. PSC-2024-0429-FOF-EG issued September 20, 2024.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1425 should you have any questions concerning this filing.

Sincerely,

/s/ Stephanie A. Cuello

Stephanie A. Cuello

SAC/clg
Attachments

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Duke Energy Florida, LLC
Petition for Approval of Proposed
Demand-Side Management Plan and
Demand-Side Management Standards

Docket No.:

Dated: December 19, 2024

**DUKE ENERGY FLORIDA, LLC'S PETITION FOR APPROVAL OF
PROPOSED DEMAND-SIDE MANAGEMENT PLAN AND DEMAND SIDE
MANAGEMENT PROGRAM STANDARDS**

Duke Energy Florida, LLC ("DEF"), pursuant to Sections 366.82(7), Florida Statutes (2024), Rule 25-17.0021, Florida Administrative Code ("F.A.C."), and Order No. PSC-2024-0429-FOF-EG, petitions the Florida Public Service Commission ("Commission") to approve DEF's Demand-Side Management ("DSM") Plan ("Plan") and DEF's Demand-Side Management Standards ("Standards"), which is being filed with this petition, and to authorize DEF to recover through the Energy Conservation Cost Recovery ("ECCR") clause reasonable and prudent expenditures associated with implementation of DEF's DSM Plan.

In support of this petition, DEF states:

1. DEF is a public utility subject to the jurisdiction of the Commission pursuant to Chapter 366 of the Florida Statutes. DEF's general offices are located at:

Duke Energy Florida, LLC
299 First Avenue North
St. Petersburg, Florida 33701

2. Notices, orders, pleadings and correspondence to be served upon DEF in this proceeding should be directed to:

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3. DEF is an investor-owned electric utility regulated by the Commission pursuant to Chapter 366, Florida Statutes. DEF is subject to FEECA, Sections 366.80-366.83 and 403.519, Florida Statutes ("F.S."). Pursuant to FEECA and Commission rules implementing FEECA, DEF is required to file a DSM Plan for Commission approval and is entitled to seek recovery of associated expenditures. DEF currently has a Commission-approved DSM Plan and Standards, but the Commission recently approved new conservation goals for DEF¹. Under Commission rules implementing FEECA and Order No. PSC-2024-0429-FOF-EG, DEF must file a Plan designed to achieve these new goals. DEF has a substantial interest in whether the Commission approves the proposed DSM Plan and Standards and authorizes cost recovery for Plan implementation expenditures.

¹ See Order No. PSC-2024-0429-FOF-EG.

DEF's Existing DSM Plan

4. DEF's most recent DSM Plan was approved by the Commission on August 30, 2020 and a Modification of the DSM Plan was approved by the Commission on December 20, 2021. DEF's DSM Plan currently contains 13 programs incorporating over 100 measures. Through its conservation programs, DEF offers a wide array of conservation measures and audit services to its customers.

DEF's Proposed DSM Plan

5. DEF's proposed DSM Plan, which is described in detail in the Plan document included as Attachment A to this Petition, includes 14 separate programs. Of these 14 conservation offerings, DEF is proposing to continue 6 of the programs or projects with no modifications. DEF is requesting modifications to 7 of the existing programs and the addition of one (1) program. DEF has dropped measures that no longer meet efficiency standards or have not been successful in the market and added measures that were needed. Additionally, the new Multi-Family New Builder Construction program was added to allow builders to bundle multi-family measures through this program and provide them with an opportunity to participate in incentives. The overview of DEF's DSM Plan may be found in Section I of the Plan document. DEF proposes to initiate program modifications and the new program after the Commission has approved the modifications and related changes to Program Standards and there has been an opportunity to properly implement the program changes.

6. DEF's DSM Plan is designed to meet the conservation goals approved for DEF by the Commission in Order No. PSC-2024-0429-FOF-EG to the best of DEF's ability.

7. In Section X of the Plan document, DEF has provided the cost-effectiveness test results for each of the proposed programs for which cost-effectiveness can be calculated.

8. DEF's monitoring efforts for each of its DSM programs and research projects are set forth in the program and project summaries in DEF's Plan document.

Disputed Issues and Conclusion

10. DEF is not aware of any disputed issues of material fact. DEF's proposed DSM Plan, which is contemporaneously filed with this Petition, should be approved and the Commission should authorize recovery of the reasonable and prudent expenditures associated with DEF's DSM Plan through DEF's ECCR clause. DEF's proposed programs, as reflected in the Plan document attached, should be approved. The statutes and rule which entitle DEF to relief are Sections 366.82(11), 366.06(1), F.S., and Rule 25-17.0021, F.A.C.

WHEREFORE, DEF respectfully requests that the Commission: (1) approve DEF's proposed DSM Plan, a copy of which is filed with this petition as Attachment A, (2) approve DEF's proposed DSM Standards, a copy of which is filed with this petition as Attachment B, (3) authorize DEF to recover through the ECCR clause reasonable and prudent expenditures associated with the implementation of the modifications to DEF's DSM Plan; and (4) grant such other relief as may be appropriate.

Respectfully submitted,

/s/ Stephanie A. Cuello
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Attorneys for Duke Energy Florida, LLC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 19th day of December, 2024, to all parties of record as indicated below.

/s/ Stephanie A. Cuello

Attorney

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2025 - 2034

DEMAND SIDE MANAGEMENT

PLAN

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I. PLAN OVERVIEW

In accordance with Rule 25-17.0021(4), Florida Administrative Code, Duke Energy Florida (DEF) is submitting this Demand Side Management (“DSM”) Plan (“Plan”) to the Florida Public Service Commission (“FPSC” or “Commission”) for approval. DEF’s proposed Plan is designed to meet the demand side management goals for 2025-2034 established by the Commission in Order No. PSC-2024-0429-FOF-EG. Through this collection of programs and measures, DEF will continue to offer meaningful energy saving opportunities to customers. The cost-effective programs presented in this Plan are responsive to the Commission’s directive to promote education and awareness of energy saving measures to all customer groups.

This Plan provides DEF customers with a comprehensive portfolio of cost-effective DSM programs. It includes programs targeted to both the residential and commercial customer segments. This portfolio of programs is the result of thorough analysis of available energy efficiency measures that customers can implement to reduce demand and energy consumption and analysis of the most effective ways to deliver those measures to customers. DEF will continue to promote awareness of energy efficiency opportunities through its Home Energy Check and Business Energy Check programs. DEF’s residential and commercial demand response programs will continue to contribute significant savings toward achievement of the annual peak demand goals over this time-period.

Over the first five-year period, DEF expects to educate and empower approximately 100,000 residential customers to become more efficient through its Home Energy Check program. This program will inform customers about low-cost and short-payback measures as well as behavioral modifications that can provide energy savings. DEF also plans to provide energy saving information to approximately 4,000 commercial customers over the next ten-year period through

its Business Energy Check program.

DEF will continue to provide information about energy efficiency techniques and energy efficiency measures to low-income customers through the Neighborhood Energy Saver (NES) and the Low-Income Weatherization Assistance Program (LIWAP). Along with direct installation of a number of energy conservation measures in customer homes, these programs will also provide one-on-one education about behavioral changes that can assist customers and control their energy usage. The Plan includes increased savings opportunities for low-income customers in the number of targeted homes in the NES program, of 5,775 annually, and the addition of incentives for high efficiency heat pumps coupled with load management for low-income new construction projects through the LIWAP.

The measures included in each of these programs reflect the impacts of changes to codes and standards and the projected energy and demand savings for the measures are based on the results of the technical potential study that supported DEF's proposed goals in Docket 20240013-EG.

II. PROGRAM SUMMARY

DEF has developed a comprehensive portfolio of DSM programs designed to achieve the goals established in Order No. PSC-2024-0429-FOF-EG. DEF's proposed Plan includes a combination of demand response and energy efficiency programs designed to meet both the residential and commercial goals.

A. Residential Programs

The following table shows the annual and cumulative MW and GWH savings DEF expects to achieve through the proposed portfolio of Residential Programs included in this Plan compared to the Commission approved residential goals.

TABLE 1

Residential Market Sector Demand and Energy Data (at the Generator)									
Year	Projected Summer Demand Savings (MW)		Commission Approved Summer MW Goal (Cumulative)	Projected Winter Demand Savings (MW)		Commission Approved Winter MW Goal (Cumulative)	Projected Annual Energy Savings (GWH)		Commission Approved Annual GMH Goal (Cumulative)
	Incremental	Cumulative		Incremental	Cumulative		Incremental	Cumulative	
2025	20.9	20.9	20.9	31.9	31.9	31.9	50.4	50.4	50.4
2026	21.0	41.9	41.9	32.3	64.2	64.2	50.7	101.1	101.1
2027	21.5	63.4	63.4	33.3	97.5	97.5	52.2	153.3	153.3
2028	21.7	85.1	85.1	33.8	131.3	131.3	52.7	205.9	205.9
2029	21.9	107.1	107.1	34.5	165.8	165.8	53.6	259.5	259.5
2030	21.6	128.7	128.7	33.0	198.8	198.8	52.9	312.4	312.4
2031	21.7	150.3	150.3	33.0	231.8	231.8	53.2	365.7	365.7
2032	21.7	172.0	172.0	33.0	264.8	264.8	53.6	419.2	419.2
2033	21.7	193.7	193.7	32.9	297.7	297.7	53.8	473.1	473.1
2034	21.7	215.5	215.5	32.9	330.6	330.6	54.2	527.3	527.3

The following provides an overview of each Residential Program:

Home Energy Check – This residential energy audit program provides customers with an analysis of their energy consumption as well as educational information on how to save money by reducing energy usage. The program offers a variety of options to customers for home energy audits including walk-through, phone assisted, and online audits. At the completion of the audit, DEF provides kits that contain energy saving measures that can be easily installed by the customer.

Residential Incentive Program – This program will provide incentives on a variety of

cost-effective measures designed to provide energy savings. This program will primarily be comprised of measures that target heating and cooling load such as high efficiency heat pumps, duct repair, insulation, energy efficient windows, and home energy management systems.

Multi-Family New Builder Construction - DEF is proposing a new builder construction bundle offering that would allow bundling of multi-family measures through this program. This additional offering will allow builders to install energy efficiency measures and provide them an opportunity to participate in incentives.

Neighborhood Energy Saver – This program is designed to provide energy saving education and assistance to low-income customers. DEF will utilize U.S. census block data to identify target neighborhoods with average incomes below 200% of the federal poverty guidelines. DEF plans to increase the number of targeted homes from 4,500 to 5,775 annually and increase its emphasis on installing smart thermostats for participants from 10% to 40%. In addition to direct installation of energy saving measures, a primary focus of this program will be to provide information and education about energy efficiency including information about savings that can be achieved through behavioral changes and low cost/no cost measures. DEF also plans to continue to provide high impact measures such as ceiling insulation and duct repair through this program. This program is cost-effective under the Rate Impact Measure (RIM) test and is expected to contribute significant savings toward achieving the established goals.

Low Income Weatherization Assistance Program – DEF plans to continue to partner with local weatherization agencies and other types of organizations that provide assistance to low-income communities through this program. This program will provide information

and education about energy efficiency, as well as funding for installation of weatherization measures and high efficiency appliances. This program is also projected to be cost effective under the Rate Impact Measure (RIM) test.

Residential Load Management – DEF will continue to support this residential demand response program. Currently, approximately 433,000 of DEFs residential customers already participate in this program in 2023, providing 638 MWs of winter peak-shaving capacity for use during high load periods. DEF’s Plan assumes 3,091 new participants annually from 2025 through 2029, which is expected to provide winter and summer MWs of load control.

B. Commercial Programs

Table 2 shows the annual and cumulative MW and GWH savings DEF plans to achieve through the proposed portfolio of Commercial Programs included in this Plan compared to the Commission approved commercial goals:

TABLE 2

Commercial/Industrial Market Sector Demand and Energy Data (at the Generator)									
Year	Projected Summer Demand Savings (MW)		Commission Approved Summer MW Goal (Cumulative)	Projected Winter Demand Savings (MW)		Commission Approved Winter MW Goal (Cumulative)	Projected Annual Energy Savings (GWH)		Commission Approved Annual GMH Goal (Cumulative)
	Incremental	Cumulative		Incremental	Cumulative		Incremental	Cumulative	
2020	7.4	7.4	7.4	3.5	3.5	3.5	5.0	5.0	5.0
2021	7.2	14.6	14.6	3.0	6.6	6.6	5.4	10.4	10.4
2022	9.1	23.7	23.7	4.4	11.0	11.0	5.9	16.3	16.3
2023	8.9	32.6	32.6	3.9	14.9	14.9	6.4	22.7	22.7
2024	9.8	42.5	42.5	4.5	19.4	19.4	6.9	29.6	29.6
2025	9.2	51.6	51.6	4.3	23.8	23.8	6.4	36.0	36.0
2026	8.5	60.1	60.1	4.3	28.1	28.1	5.6	41.6	41.6
2027	8.5	68.6	68.6	4.7	32.8	32.8	4.9	46.6	46.6
2028	8.0	76.7	76.7	4.7	37.5	37.5	4.4	51.0	51.0
2029	7.7	84.4	84.4	4.7	42.2	42.2	3.9	54.9	54.9

The following provides a list of the Commercial programs along with a brief overview of each program:

Business Energy Check – This program is available to all commercial customers and will provide education and information about energy savings opportunities specific to their business and operation. This program will also inform customers about rebates and incentives available through DEF’s commercial energy efficiency and load management programs. DEF currently provides walk-through audits and phone assisted audits for commercial businesses through this program and is planning to add online audits in the future.

Smart Saver– This program provides incentives to commercial customers on a variety of

high efficiency cost-effective measures that provide energy savings beyond the requirements of codes and standards. The measures included in this program primarily target commercial cooling load through high efficiency chillers and direct expansion air conditioning systems.

Smart Saver Custom Incentive – This program provides customized incentives for specific innovative projects that provide energy savings not otherwise addressed through DEF’s other commercial programs. This program is intended to encourage commercial customers to make capital investments for the installation of energy efficiency measures that reduce energy and peak demand.

C. **Demand Response Programs**

Interruptible Service – This program will continue to be available to non-residential customers who are willing to have their power interrupted at times of capacity shortage during peak or emergency conditions. This program provides peak demand savings through direct load control of the customer’s electric service. Customers will be eligible for bill credits through this program based on the specific eligibility requirements and terms of the applicable interruptible tariff.

Curtable Service - This is a manual load control program that will continue to be available to commercial customers who agree to reduce demand at times of capacity shortage during emergency conditions. Program participants will receive monthly demand credits per the terms of the specific curtable tariff under which they take

service.

Standby Generation - This program is a load control program that provides demand savings through control of customers' back-up generators. The program is a voluntary program available to all commercial and industrial customers who have on-site generation capability and are willing to allow remote activation of their on-site generation during capacity emergencies. The customers receive monthly bill credits per the terms of the specific stand-by tariff under which they take service.

- D. Technology Development** – This program is used to fund the research and testing of new energy efficiency and demand response equipment and technologies. The results of these studies are used to inform and support the development of new energy efficiency and demand response programs.

- E. Qualifying Facilities** – This program is used to manage the purchase of as-available energy and firm energy and capacity from qualifying facilities pursuant to standard offer and negotiated contracts. Under this program DEF develops standard offer contracts, negotiates, enters into, amends, and restructures firm energy and capacity contracts with qualifying cogeneration and small power production facilities, and administers all such contracts.

III. SUMMARY OF PORTFOLIO COSTS AND PROJECTED CUSTOMER BILL IMPACTS

The total costs of the portfolio over the ten-year period are projected to be approximately \$1.5 billion. All programs are designed to be cost effective based on the Rate Impact Measure (RIM) test. Approximately 70% of the total costs over the five-year period represent incentives to customers. Table 3 depicts the total projected cost of the commercial and residential portfolio and the projected residential rate impact/1,000 kWh's annually for the ten-year period.

TABLE 3

UPDATED RECOMMENDED PORTFOLIO PROJECTED ANNUAL RESIDENTIAL BILL - MONTHLY USAGE OF 1000 KWH											
	Total	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
\$	22,383	\$ 2,128	\$ 2,152	\$ 2,153	\$ 2,201	\$ 2,219	\$ 2,237	\$ 2,264	\$ 2,304	\$ 2,348	\$ 2,376
ECCR Charge 1000kWh	\$	\$ 3.93	\$ 4.23	\$ 4.46	\$ 4.49	\$ 3.90	\$ 3.85	\$ 3.81	\$ 3.77	\$ 3.74	\$ 3.70

IV. COST-EFFECTIVENESS TESTS

Programs have been analyzed for cost-effectiveness using the Commission-approved tests described in Rule 25-17.008, Florida Administrative Code. A summary of the cost-effectiveness results for each of the programs included in this Plan are provided below in Section VIII. These detailed results consist of one page each for the Rate Impact Measure (RIM), Total Resource Cost (TRC), and Participant Cost Test (PCT).

V. COST-RECOVERY

DEF submits the programs herein described for approval and for inclusion as cost recoverable Conservation and Energy Efficiency programs under current Commission-approved procedures pursuant to Rule 25-17.015, Florida Administrative Code.

Additionally, DEF seeks cost recovery for previously closed programs and closed tariffs that are part of existing programs that have ongoing costs associated with grandfathered participants. These include the Commercial Energy Management Program and the Interruptible Service (IS-1) and (IST-1), and Curtailable Service (CS-1) and (CST-1) tariffs.

VI. RESIDENTIAL CONSERVATION PROGRAMS

A. HOME ENERGY CHECK PROGRAM**Program Start Date:** 1995**Program Description**

The Home Energy Check is a residential energy audit program that provides residential customers with an analysis of their energy consumption as well as educational information on how to reduce energy usage and save money. The audit provides the opportunity to promote and directly install cost-effective measures in customers' homes while also educating and encouraging customers to implement energy-saving practices. The Home Energy Check serves as the foundation to offer other available residential demand side management programs. The Home Energy Check program offers the following types of energy audits:

- Type 1: Free Walk-Through (computer assisted).
- Type 2: Customer Online (Internet Option).
- Type 3: Customer Phone Assisted.
- Type 4: Home Energy Rating (or BERS/HERS) In-Home Audit.

Customers will be provided with energy efficiency tips and examples of easily installed energy efficiency measures. The program promotes continued customer involvement by demonstrating sustainable and measurable reductions in energy usage through the implementation of cost-effective energy efficiency measures and energy saving recommendations. Customers participating in the Home Energy Check program may receive a residential energy efficiency kit. The kit will contain energy saving measures that can easily be installed and utilized by the customer. The contents of this kit will be evaluated periodically and may change over time.

Policies and Procedures

All eligible residential customers of DEF can receive any of the above energy audits conducted on residentially metered buildings, located in DEF's service territory. There is no charge for Type 1 through Type 3 home energy checks. The Type 4 - Home Energy Rating audit, as outlined in DEF's "Florida BERS/HERS Audit" tariff, is available to all eligible DEF customers upon request.

Program Participation

Annual participation estimates for the Home Energy Check program are shown in the following table:

Program Participation					
Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	1,811,476	20,000	1.10%	1.10%
2026	1,844,137	1,824,137	19,800	2.18%	1.09%
2027	1,876,494	1,856,694	19,602	3.20%	1.06%
2028	1,909,201	1,889,599	19,406	4.17%	1.03%
2029	1,942,396	1,922,990	19,212	5.10%	1.00%
2030	1,975,868	1,956,656	19,020	5.98%	0.97%
2031	2,009,137	1,990,117	18,830	6.83%	0.95%
2032	2,042,017	2,023,187	18,641	7.64%	0.92%
2033	2,074,180	2,055,539	18,455	8.41%	0.90%
2034	2,106,850	2,088,395	18,270	9.16%	0.87%

1. The total number of customers is the forecast of residential customers in DEF's 2023 Ten Year Site Plan.
2. The entire residential class is eligible for participation.
3. Number of participants represents the customers that DEF expects to participate through this program annually.
4. Cumulative penetration is the ratio of cumulative measure participating customers to the eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the total savings for each individual measure included in the energy efficiency kit based on each measure's per customer savings and

annual projected participation. The total program savings were then computed as the sum of the individual measure savings, and are shown in the following tables:

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	784	0.34	0.18	15,672,955	6,745	3,654
2026	770	0.34	0.18	15,249,062	6,635	3,592
2027	770	0.34	0.18	15,096,571	6,568	3,556
2028	770	0.34	0.18	14,945,605	6,503	3,521
2029	770	0.34	0.18	14,796,149	6,438	3,485
2030	770	0.34	0.18	14,648,188	6,373	3,450
2031	770	0.34	0.18	14,501,706	6,310	3,416
2032	770	0.34	0.18	14,356,689	6,246	3,382
2033	770	0.34	0.18	14,213,122	6,184	3,348
2034	770	0.34	0.18	14,070,991	6,122	3,315
TOTAL				147,551,038	64,124	34,719

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	824	0.35	0.19	16,478,403	7,092	3,841
2026	810	0.35	0.19	16,032,725	6,976	3,777
2027	810	0.35	0.19	15,872,398	6,906	3,739
2028	810	0.35	0.19	15,713,674	6,837	3,701
2029	810	0.35	0.19	15,556,537	6,768	3,664
2030	810	0.35	0.19	15,400,972	6,701	3,628
2031	810	0.35	0.19	15,246,962	6,634	3,592
2032	810	0.35	0.19	15,094,493	6,567	3,556
2033	810	0.35	0.19	14,943,548	6,502	3,520
2034	810	0.35	0.19	14,794,112	6,437	3,485
TOTAL				155,133,825	67,419	36,503

Impact Evaluation Plan

The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations, statistical billing analysis, and end use studies, and include the consideration of the interactive effects of multiple measures. DEF will monitor how future changes to building codes and appliance

standards impact the cost effectiveness of measures included in this program.

B. RESIDENTIAL INCENTIVE PROGRAM

Program Start Date: 1995
Program modified in 2000, 2006, 2007, 2012, and 2015

Program Description

The Residential Incentive program is designed to provide incentives to residential customers for energy efficiency improvements for existing homes. The Residential Incentive program builds on customer awareness through the Home Energy Check program, trade-ally support, and communication and marketing efforts designed to educate customers on cost-effective measures for their residences.

The program seeks to meet the following overall goals:

- Provide a cost-effective portfolio of measures.
- Provide customer energy savings and demand reduction through the installation of energy efficient equipment and building envelope upgrades.
- Educate the residential market regarding best practices, innovative technologies, and opportunities for rebates for energy efficiency measures that provide savings above the requirements of codes and standards.

Policies and Procedures

Program participation is influenced through the home energy audits and other educational efforts. The program provides incentives for high efficiency heating and cooling equipment, duct repair, attic insulation upgrades, high performance windows, and home energy management systems for

residentially metered customers in DEF's service territory.

DEF inspects the installation of measures and equipment as required by Rule 25-17.003(10) (b), Florida Administrative Code, prior to issuing any incentive payments.

The Residential Incentive program will include the following measures:

High Efficiency HVAC Systems

The High Efficiency HVAC System measures will provide an incentive to customers who install a high efficiency HVAC system when replacing their existing system. The incentive will be awarded on a per unit basis according to the efficiency rating.

Duct Repair

The Duct Repair measure promotes energy efficiency through incentives to customers for a portion of the costs of duct repairs and duct sealing.

Attic Insulation Upgrade

The Attic Insulation Upgrade measure provides an incentive to encourage customers to upgrade their attic insulation over conditioned space.

Replacement Windows

The Window Replacement measure provides an incentive for installing high performance windows.

Home Energy Management System

DEF will offer an incentive for the installation and configuration of home energy management technologies.

Program Participation

Annual participation estimates for the Residential Incentive program are shown in the following table:

Program Participation					
Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	1,811,476	10,704	0.59%	0.59%
2026	1,844,137	1,844,137	10,910	1.17%	0.59%
2027	1,876,494	1,876,494	11,146	1.75%	0.59%
2028	1,909,201	1,909,201	11,416	2.31%	0.60%
2029	1,942,396	1,942,396	11,709	2.88%	0.60%
2030	1,975,868	1,975,868	9,605	3.31%	0.49%
2031	2,009,137	2,009,137	9,125	3.71%	0.45%
2032	2,042,017	2,042,017	8,668	4.08%	0.42%
2033	2,074,180	2,074,180	8,235	4.41%	0.40%
2034	2,106,850	2,106,850	7,823	4.72%	0.37%

1. The total number of customers is the forecast of residential customers in DEF's 2023 Ten Year Site Plan.
2. The entire residential class is eligible for participation in this program.
3. Number of program participants represents the number of individual measure participants.
4. Cumulative penetration is the ratio of cumulative measure participants to the eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the savings for each individual measure. The kW and kWh savings for each individual measure were based on the results of the market potential study that supported the 2024 goals filing. The kW and kWh savings were multiplied by the estimated participation for each measure to calculate the annual savings by measure. The

annual program savings are based on the sum of the annual savings for each individual measure.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	711	0.63	0.29	7,614,675	6,775	3,135
2026	711	0.65	0.29	7,758,704	7,065	3,174
2027	711	0.66	0.29	7,928,587	7,375	3,223
2028	713	0.68	0.29	8,137,268	7,710	3,290
2029	712	0.69	0.29	8,340,016	8,057	3,351
2025	730	0.66	0.30	7,016,152	6,383	2,873
2026	730	0.66	0.30	6,665,345	6,064	2,729
2027	730	0.66	0.30	6,332,077	5,761	2,593
2028	730	0.66	0.30	6,015,474	5,473	2,463
2029	730	0.66	0.30	5,714,700	5,199	2,340
TOTAL				71,522,997	65,864	29,172

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	748	0.67	0.31	8,006,000	7,123	3,297
2026	748	0.68	0.31	8,157,431	7,428	3,337
2027	748	0.70	0.30	8,336,044	7,754	3,389
2028	749	0.71	0.30	8,555,450	8,106	3,459
2029	749	0.72	0.30	8,768,617	8,471	3,524
2025	768	0.70	0.31	7,376,719	6,712	3,021
2026	768	0.70	0.31	7,007,883	6,376	2,870
2027	768	0.70	0.31	6,657,489	6,057	2,726
2028	768	0.70	0.31	6,324,614	5,754	2,590
2029	768	0.70	0.31	6,008,384	5,467	2,460
TOTAL				75,198,631	69,249	30,671

Impact Evaluation Plan

The Residential Incentive program provides incentives for the installation of various types of measures. The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations, statistical billing analysis, and end use studies, and include the consideration of the interactive effects of multiple measures. DEF will monitor how future changes to building codes and appliance standards impact the cost effectiveness of measures included in this program.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$310,645,933	\$177,017,751	\$133,628,182	1.75
Participant	\$167,682,722	\$69,946,560	\$97,736,162	2.40
Total Resource Cost	\$310,645,933	\$79,281,589	\$231,364,344	3.92

C. MULTI-FAMILY NEW BUILDER CONSTRUCTION

Program Start Date: 2025

Program Description

The Multi-Family New Builder Construction program is designed to provide incentives to builders and allows bundling of multi-family measures through this program. This program builds on customer awareness through the Home Energy Check program, trade-ally support, and communication and marketing efforts designed to educate builders and landlords on cost-effective measures for multi-family homes.

The program seeks to meet the following overall goals:

- Provide a cost-effective portfolio of measures.
- Provide customer energy savings and demand reduction through the installation of energy efficient equipment and building envelope upgrades.
- Educate the multi-family market regarding best practices, innovative technologies, and opportunities for rebates for energy efficiency measures that provide savings above the requirements of codes and standards.

Policies and Procedures

Program participation is influenced through home energy audits and other educational efforts. The program provides incentives for high efficiency heating and cooling equipment, duct repair, attic insulation upgrades, high performance windows, and home energy management systems for residentially metered customers in DEF's service territory.

DEF inspects the installation of measures and equipment as required by Rule 25-17.003(10) (b), Florida Administrative Code, prior to issuing any incentive payments.

The Multi-Family New Builder Construction program will include the following measures:

High Efficiency HVAC Systems

The High Efficiency HVAC System measures will provide an incentive to customers who install a high efficiency HVAC system when replacing their existing system. The incentive will be awarded on a per unit basis according to the efficiency rating.

Attic Insulation Upgrade

The Attic Insulation Upgrade measure provides an incentive to encourage customers to upgrade their attic insulation over conditioned space.

Whole Home Improvements-Tier 1

DEF will offer an incentive for the installation and configuration of home energy management technologies.

Program Participation

Annual participation estimates for the Multi-Family New Builder Construction program are shown in the following table:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	507,213	999	0.20%	0.20%
2026	1,844,137	516,358	1,160	0.42%	0.22%
2027	1,876,494	525,418	1,300	0.66%	0.25%
2028	1,909,201	534,576	1,400	0.91%	0.26%
2029	1,942,396	543,871	1,600	1.19%	0.29%
2030	1,975,868	553,243	1,780	1.49%	0.32%
2031	2,009,137	562,558	1,961	1.81%	0.35%
2032	2,042,017	571,765	2,143	2.16%	0.37%
2033	2,074,180	580,770	2,326	2.53%	0.40%
2034	2,106,850	589,776	2,510	2.91%	0.43%

1. The total number of customers is the forecast of residential customers in DEF's 2023 Ten Year Site Plan.
2. The entire residential class is eligible for participation in this program.
3. Number of program participants represents the number of individual measure participants.
4. Cumulative penetration is the ratio of cumulative measure participants to the eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the savings for each individual measure. The kW and kWh savings for each individual measure were based on the results of the market potential study that supported the 2024 goals filing. The kW and kWh savings were multiplied by the estimated participation for each measure to calculate the annual savings by measure. The annual program savings are based on the sum of the annual savings for each individual measure.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	3200	1.68	0.85	3,197,680	1,681	854
2026	3207	1.66	0.87	3,719,967	1,930	1,010
2027	3240	1.66	0.89	4,211,798	2,156	1,153
2028	3304	1.67	0.90	4,625,287	2,344	1,260
2029	3408	1.70	0.92	5,452,266	2,719	1,474
2030	3514	1.73	0.94	6,254,725	3,071	1,678
2031	3599	1.75	0.96	7,058,410	3,425	1,883
2032	3669	1.76	0.97	7,863,260	3,779	2,088
2033	3727	1.78	0.99	8,669,216	4,135	2,293
2034	3776	1.79	1.00	9,476,224	4,491	2,499
TOTAL				60,528,833	29,730	16,192

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	3364	1.77	0.90	3,362,011	1,768	898
2026	3372	1.75	0.92	3,911,139	2,029	1,062
2027	3406	1.74	0.93	4,428,246	2,267	1,213
2028	3474	1.76	0.95	4,862,985	2,464	1,325
2029	3583	1.79	0.97	5,732,463	2,859	1,550
2030	3694	1.81	0.99	6,576,161	3,229	1,764
2031	3784	1.84	1.01	7,421,149	3,601	1,979
2032	3858	1.85	1.02	8,267,360	3,973	2,195
2033	3919	1.87	1.04	9,114,736	4,347	2,411
2034	3970	1.88	1.05	9,963,216	4,722	2,627
TOTAL				63,639,466	31,258	17,024

Impact Evaluation Plan

This program provides incentives for the installation of various types of measures. The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations, statistical billing analysis, and end use studies, and include the consideration of the interactive effects of multiple measures. DEF will monitor how future changes to building codes and appliance standards impact the cost effectiveness of measures included in this program.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$136,655,754	\$108,256,378	\$28,399,375	1.26
Participant	\$103,838,750	\$16,441,200	\$87,397,550	6.32
Total Resource Cost	\$136,655,754	\$20,858,829	\$115,796,925	6.55

D. NEIGHBORHOOD ENERGY SAVER PROGRAM**Program Start Date:** 2007

Program Modified in 2015

Program Description

DEF's Neighborhood Energy Saver program is a custom energy conservation program designed to assist selected neighborhoods where approximately 50% of the households have incomes equal to or less than 200% of the federal poverty level as established by the U.S. Government. Duke Energy or a third-party contractor will directly install energy conservation measures identified through an energy assessment of the customer's home to increase their energy efficiency. Additionally, customers will receive a comprehensive package of energy education materials which will educate them on ways to better manage their energy usage. The energy conservation measures installed, and energy efficiency education materials will be provided at no cost to the participants.

The Neighborhood Energy Saver program seeks to achieve the following goals:

- Conduct a home energy assessment to identify energy efficiency opportunities within the customer's home.
- Implement a comprehensive package of electric conservation measures to increase the efficiency in the resident's home.
- Provide one-on-one customer education on energy efficiency techniques and energy conservation measures.
- Encourage customers to make behavioral changes that will allow them to

become more efficient and take control of their energy usage.

Policies and Procedures:

This program targets neighborhoods where approximately 50% of the households have incomes equal to or less than 200% of the federal poverty level established by the U.S. Government.

Incentive levels and specific eligibility requirements for each measure promoted in this program will be presented in the Program Participation Standards.

DEF is proposing to the below measures in this program, including but not limited to:

- Energy Efficient Lighting
- Water Heater Insulation Wrap and Hot Water Pipe Insulation
- Water Conservation Shower Heads and Faucet Aerators
- HVAC filters
- Smart Thermometer
- Ceiling Insulation Upgrade
- HVAC Maintenance/Tune up
- Duct Repair
- Smart Power Strips
- Filter Whistle
- Window Caulking
- Weather Stripping

Program Participation

Annual program measure participation estimates for the Neighborhood Energy Saver program are shown in the following table:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	487,287	80,727	16.57%	16.57%
2026	1,844,137	496,073	80,727	32.55%	16.27%
2027	1,876,494	504,777	84,353	48.70%	16.71%
2028	1,909,201	513,575	84,353	64.29%	16.42%
2029	1,942,396	522,505	84,353	79.33%	16.14%
2030	1,975,868	531,508	84,354	93.86%	15.87%
2031	2,009,137	540,458	84,356	107.91%	15.61%
2032	2,042,017	549,303	84,357	121.53%	15.36%
2033	2,074,180	557,954	84,358	134.77%	15.12%
2034	2,106,850	566,743	84,359	147.56%	14.88%

1. The total number of customers is the forecast of residential customers in DEF's 2023 Ten Year Site Plan.
2. Eligible customers represent the estimated homes in DEF's service territory that are at or below program qualifying income levels based on the 2010 US Census block data with a 2% growth rate per year.
3. Number of participants represents the customers that DEF expects to reach through direct offerings in each year.
4. Cumulative penetration is the ratio of cumulative participants to the remaining eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the total savings for each individual measure based on the estimated kW and kWh savings and annual projected participation for each measure. The kW and kWh impacts for each measure are based on the results of the most recent market potential study that supported the 2024 goals filing. The total projected program savings were then computed as the sum of the individual measure savings and are shown in the following tables.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	247	0.12	0.10	19,906,765	9,581	7,982
2026	247	0.12	0.10	19,906,765	9,581	7,982
2027	247	0.12	0.10	20,814,316	10,054	8,345
2028	247	0.12	0.10	20,814,316	10,054	8,345
2029	247	0.12	0.10	20,814,316	10,054	8,345
2030	247	0.12	0.10	20,814,656	10,054	8,345
2031	247	0.12	0.10	20,814,996	10,054	8,345
2032	247	0.12	0.10	20,815,336	10,054	8,345
2033	247	0.12	0.10	20,815,676	10,054	8,345
2034	247	0.12	0.10	20,816,016	10,054	8,345
TOTAL				206,333,158	99,592	82,724

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	259	0.12	0.10	20,929,792	10,074	8,393
2026	259	0.12	0.10	20,929,792	10,074	8,393
2027	259	0.13	0.10	21,883,984	10,570	8,773
2028	259	0.13	0.10	21,883,984	10,570	8,773
2029	259	0.13	0.10	21,883,984	10,570	8,773
2030	259	0.13	0.10	21,884,341	10,570	8,774
2031	259	0.13	0.10	21,884,698	10,570	8,774
2032	259	0.13	0.10	21,885,056	10,570	8,774
2033	259	0.13	0.10	21,885,413	10,570	8,774
2034	259	0.13	0.10	21,885,770	10,570	8,774
TOTAL				216,936,812	104,710	86,975

Impact Evaluation Plan

The program provides incentives for the installation of various types of measures. The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations, statistical billing analysis, and end use studies, and include the consideration of the interactive effects of multiple measures. DEF will monitor how future changes to building codes and appliance standards impact the cost effectiveness of measures included in this program.

Cost Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$570,349,922	\$376,920,867	\$193,429,055	1.51
Participant	\$369,701,734	\$86,165,461	\$283,536,273	4.29
Total Resource Cost	\$570,349,922	\$93,384,594	\$476,965,328	6.11

E. LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

Program Start Date: 2000
Program modified in 2006, 2015, 2017 and 2018

Program Description

The Low-Income Weatherization Assistance Program is designed to leverage working relationships with weatherization providers and local agencies to provide demand-side management and energy efficiency measures to low-income customers. The Low-Income Weatherization Assistance Program combines weatherization provider partnerships with energy education and energy efficiency improvements to benefit low-income families.

The program seeks to meet the following goals:

- Partner with the Department of Economic Opportunity and local home improvement providers to deliver energy-efficiency measures to low-income families.
- Identify and educate contractors and low-income customers regarding energy saving opportunities.
- Promote low-income participation in DEF's Demand Side Management programs.
- Educate low-income families on achievable, sustainable strategies to reduce individual energy bills.

Policies and Procedures

Incentive levels and specific eligibility requirements for each measure promoted in this program will be presented in the Program Participation Standards.

The following measures will be included in this program:

- Energy Efficient Lighting
- Air Sealing-Infiltration Control
- Water Heater Insulation Wrap and Hot Water Pipe Insulation
- Water Conservation Shower Heads and Faucet Aerators
- HVAC filters
- Indoor Wall Thermometer
- Ceiling Insulation Upgrade
- HVAC Maintenance/ Tune up
- Duct Repair
- Smart Power Strips
- High Efficiency Heat Pumps
- High Efficiency Room Air Conditioners
- High Efficiency Central Air Conditioning
- High Efficiency Refrigerators

Program Participation

Annual participation estimates for the Low-Income Weatherization Assistance Program are shown in the following table:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	487,287	2,934	0.60%	0.60%
2026	1,844,137	496,073	2,934	1.18%	0.59%
2027	1,876,494	504,777	3,047	1.77%	0.60%
2028	1,909,201	513,575	3,047	2.33%	0.59%
2029	1,942,396	522,505	3,047	2.87%	0.58%
2030	1,975,868	531,508	3,306	3.45%	0.62%
2031	2,009,137	540,458	3,306	4.00%	0.61%
2032	2,042,017	549,303	3,306	4.54%	0.60%
2033	2,074,180	557,954	3,216	5.04%	0.58%
2034	2,106,850	566,743		4.97%	0.00%

1. The total number of customers is the forecast of residential customers in DEF's 2023 Ten Year Site Plan.
2. Eligible customers represent the count of homes in DEF service territory that are at or below program qualifying income levels based on the 2010 US Census block data with a 2% growth rate per year.
3. Number of participants represents the eligible customers that DEF expects to reach via partnership local agencies
4. Cumulative penetration is the ratio of cumulative participants to the accumulated eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the total savings for each individual measure based on the estimated kW and kWh savings measure and annual projected participation for each measure. The kW and kWh impacts for each measure are based on the results of the most recent market potential study that supported the 2024 goals filing. The total projected program savings were then computed as the sum of the individual measure savings and are shown in the following tables.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	533	0.16	0.24	1,562,851	460	712
2026	533	0.16	0.24	1,562,851	460	712
2027	517	0.15	0.23	1,573,881	465	715
2028	517	0.15	0.23	1,573,881	465	715
2029	517	0.15	0.23	1,573,881	465	715
2030	479	0.14	0.22	1,582,707	466	716
2031	479	0.14	0.22	1,582,722	466	716
2032	479	0.14	0.22	1,582,737	466	716
2033	466	0.12	0.21	1,497,776	385	681
2034	0	0.00	0.00	1,497,791	385	681
TOTAL				15,591,079	4,482	7,078

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
025	560	0.16	0.26	1,643,167	483	749
026	560	0.16	0.26	1,643,167	483	749
027	543	0.16	0.25	1,654,764	489	751
028	543	0.16	0.25	1,654,764	489	751
029	543	0.16	0.25	1,654,764	489	751
030	503	0.15	0.23	1,664,044	490	752
031	503	0.15	0.23	1,664,060	490	752
032	503	0.15	0.23	1,664,076	490	752
033	490	0.13	0.22	1,574,749	405	716
034	0	0.00	0.00	1,574,764	405	716
TOTAL				16,392,319	4,712	7,442

Impact Evaluation Plan

This program provides incentives for the installation of various types of measures. The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations and statistical billing analysis and include the consideration of the interactive effects of multiple measures. The program measures and measure impacts will be modified consistent with future changes to codes and standards.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$43,645,778	\$32,841,083	\$10,804,695	1.33
Participant	\$31,614,864	\$4,346,461	\$27,268,403	7.27
Total Resource Cost	\$43,645,778	\$5,572,680	\$38,073,098	7.83

E. RESIDENTIAL LOAD MANAGEMENT PROGRAM

Program Start Date: 1981
Program Modified in 1995, 2000, 2007 and 2015

Program Description

The Residential Load Management program is a voluntary customer program that allows DEF to reduce demand and defer generation construction. Demand is reduced by controlling service to selected electrical equipment through various devices and communication options installed on the customers' premises.

Policies and Procedures: DEF will continue to offer this program to residential customers. Customers will have the opportunity to participate in this program through the (Load Management Rider) LMR-1 rate. Existing customers who are on either the Residential Year-Round Energy Management (RSL-1) or the Winter Only (RSL-2) rate schedules, will continue to stay on the program until they are switched to the LMR-1 rate schedule. The addition of new customers to this program will increase the summer and winter load control capabilities.

This program has grown to be one of the largest direct load control programs in the nation today. DEF will continue to incorporate improvements in technologies and the associated communication networks designed to decrease program costs, increase load shed capabilities, manage sustainability, and improve resource operability.

Program Participation

Annual program new participation estimates for 2025 through 2034 are shown in the table below:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	1,811,476	1,372,574	3,091	0.23%	0.23%
2026	1,844,137	1,402,144	3,091	0.44%	0.22%
2027	1,876,494	1,431,410	3,091	0.65%	0.22%
2028	1,909,201	1,461,026	3,091	0.85%	0.21%
2029	1,942,396	1,491,130	3,091	1.04%	0.21%
2030	1,975,868	1,521,511	3,091	1.22%	0.20%
2031	2,009,137	1,551,689	3,091	1.39%	0.20%
2032	2,042,017	1,581,478	3,091	1.56%	0.20%
2033	2,074,180	1,610,550	3,091	1.73%	0.19%
2034	2,106,343	1,639,622	3,091	1.89%	0.19%

1. The total number of customers is based on DEF's 2023 Ten Year Site Plan projections.
2. Estimate of the eligible customers are based on customers that are not presently on Energy Management and have electric heat.
3. New participants of winter only or year-round Energy Management Schedule.
4. Cumulative penetration is the ratio of cumulative participants to the eligible customer pool.

Savings Estimates

The total program savings shown in the following tables reflect the expected average demand savings associated with new program participants. The per participant savings are based on the data and analysis that supported the 2024 goals filing.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	1.64	1.13	0	5,063	3,505
2026	0	1.64	1.13	0	5,063	3,505
2027	0	1.64	1.13	0	5,063	3,505
2028	0	1.64	1.13	0	5,063	3,505
2029	0	1.64	1.13	0	5,063	3,505
2030	0	1.64	1.13	0	5,063	3,505
2031	0	1.64	1.13	0	5,063	3,505
2032	0	1.64	1.13	0	5,063	3,505
2033	0	1.64	1.13	0	5,063	3,505
2034	0	1.64	1.13	0	5,063	3,505
TOTAL				0	50,629	35,050

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	1.72	1.19	0	5,323	3,685
2026	0	1.72	1.19	0	5,323	3,685
2027	0	1.72	1.19	0	5,323	3,685
2028	0	1.72	1.19	0	5,323	3,685
2029	0	1.72	1.19	0	5,323	3,685
2030	0	1.72	1.19	0	5323	3685
2031	0	1.72	1.19	0	5323	3685
2032	0	1.72	1.19	0	5323	3685
2033	0	1.72	1.19	0	5323	3685
2034	0	1.72	1.19	0	5323	3685
TOTAL				0	53,230	36,851

Impact Evaluation Plan

Appliance level and duty-cycle impacts of the residential load control program may be evaluated in a number of ways including analysis of metering data, engineering analysis, analysis of the impacts of load control events, and end use studies.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$101,654,332	\$55,884,408	\$45,769,925	1.82
Participant	\$17,428,322	\$0	\$17,428,322	9999
Total Resource Cost	\$101,654,332	\$38,456,086	\$63,198,246	2.64

**VII. COMMERCIAL/INDUSTRIAL AND DEMAND RESPONSE
CONSERVATION PROGRAMS**

A. BUSINESS ENERGY CHECK PROGRAM

Program Start Date: 1995

Program Description

The Business Energy Check program is an energy audit/education program offered to commercial customers to assist customers in understanding their energy use and provide information and recommendations on how they can better manage their energy usage and make their operations more energy efficient. The audit focuses on educating and encouraging customers to implement energy-saving practices and measures. The audit also provides the opportunity to promote cost-effective measures in customers' facilities and serves as the foundation for other commercial energy efficiency and demand side management programs.

The Business Energy Check program provides education brochures to commercial customers while also providing free walk-through, phone-assisted and online audits.

Policies and Procedures

All commercial, industrial, and governmental customers are eligible to receive any of the above-mentioned audits on commercially metered buildings located in DEF's service territory. DEF may engage external agencies and/or companies as an extension of internal resources. The specific details and procedures for each type of audit or educational information provided through this program will be presented in the Program Participation Standards.

Customers participating in these audits will be provided with examples of energy saving measures

that can be easily installed and behavioral changes that may reduce energy consumption. The program promotes continued customer involvement by demonstrating sustainable and measurable reduction in energy consumption through the implementation of low-cost energy conservation measures.

The customer may receive a Commercial Energy Efficiency Kit after the completion of the Business Energy Check. The Commercial Energy Efficiency Kit will contain energy saving measures that can be easily installed and utilized by the customer. The contents of the kit will be evaluated periodically and may change over time.

Program Participation

Annual participation estimates for the Business Energy Check program are shown in the following table:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	192,439	192,439	400	0.21%	0.21%
2026	195,108	194,708	400	0.41%	0.21%
2027	197,753	197,753	400	0.61%	0.20%
2028	200,426	200,426	400	0.80%	0.20%
2029	203,140	203,140	400	0.98%	0.20%
2030	205,875	205,875	400	1.17%	0.19%
2031	208,595	208,595	400	1.34%	0.19%
2032	211,282	211,282	400	1.51%	0.19%
2033	213,911	213,911	400	1.68%	0.19%
2034	216,540	216,540	400	1.85%	0.18%

1. The total number of customers is the forecast of commercial/industrial (C/I) customers in DEF's 2023 Ten Year Site Plan.
2. The measure eligible customers are the total C/I customers less customers who have participated in the two prior years.
3. Number of program participants represents the participants projected.
4. Cumulative penetration is the ratio of cumulative participants to the eligible customer pool.

Savings Estimates

Program savings are based on measures included in the energy efficiency kits provided to program participants. Program savings were computed as the sum of the individual measure savings, and are shown in the following tables:

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	505	0.06	0.07	202,130	22	27
2026	505	0.06	0.07	202,130	22	27
2027	505	0.06	0.07	202,130	22	27
2028	505	0.06	0.07	202,130	22	27
2029	505	0.06	0.07	202,130	22	27
2025	505	0.06	0.07	202,130	22	27
2026	505	0.06	0.07	202,130	22	27
2027	505	0.06	0.07	202,130	22	27
2028	505	0.06	0.07	202,130	22	27
2029	505	0.06	0.07	202,130	22	27
TOTAL				2,021,298	223	271

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
	531	0.06	0.07	212,517	23	28
				2,125,174	234	284

Impact Evaluation Plan

The demand and energy savings for the measures included in the commercial energy kits were based on the results of the most recent market potential study utilized in the 2024 goals docket. The impacts included in this study were estimated based on engineering analysis, analysis of billing data, and considered the interactive effects of measures. Savings will also result from the implementation of both technological and behavioral recommendations provided as part of the commercial audit and educational information provided to program participants.

B. SMART SAVER (f/k/a Better Business)

Program Start Date: 1995
 Program modified 2000, 2005, 2006, 2007, 2015, 2016 and
 2018

Program Description

The Smart Saver program is designed to promote high efficiency measures and equipment to Commercial, Industrial, and Governmental customers. All business customers are eligible for this program. The Smart Saver program builds on customer awareness generated through the commercial audit program, educational materials provided to customers, and trade allies.

The program seeks to meet the following overall goals:

- Provide commercial, industrial and governmental customers with a cost-effective portfolio of measures across various building types.
- Improve customer energy savings and demand reduction through the installation of energy efficient equipment and thermal envelope upgrades.
- Educate customers regarding best practices, innovative technologies, and opportunities to manage energy consumption.

Policies and Procedures

The general eligibility requirements are as follows:

- The facility must be a commercially metered customer in DEF's service territory, including commercially metered multi-family residential facilities.
- DEF inspects the installation of measures and equipment as required by Rule

25-17.003(10) (b), Florida Administrative Code.

- Incentive levels and specific eligibility requirements for each measure promoted in this program will be provided in the Program Participation Standards.

The Smart Saver program is proposing to include the following measures:

HVAC Equipment

This program will promote HVAC load reduction measures. DEF will provide information to customers about high efficiency HVAC measures and will provide incentives for the purchase of cost-effective high efficiency equipment including unitary heat pumps and air conditioners, package terminal heat pumps, package terminal air conditioners, water-cooled chillers and air-cooled chillers, and energy recovery ventilation units.

Duct Leakage Test and Repair/Duct Seal

This portion of the program is designed to promote energy efficiency through improved duct system sealing.

Ceiling Insulation Upgrade

This portion of the program encourages customers to add insulation to the conditioned ceiling area by paying for a portion of the installed cost.

Wall Insulation

This portion of the program encourages customers to add insulation to wall structures of the

conditioned area by paying for a portion of the installed cost.

Program Participation

Annual participation estimates for the Smart Saver program are shown in the following table:

Year	Total Number of Customers ⁽¹⁾	Total Number of Measure Eligible Customers ⁽²⁾	Annual Number of Program Measure Participants ⁽³⁾	Cumulative Penetration Level (%) ⁽⁴⁾	Annual Participation Level (%)
2025	192,439	192,439	75,830	39.40%	39.40%
2026	195,108	195,108	72,159	75.85%	36.98%
2027	197,753	197,753	68,684	109.57%	34.73%
2028	200,426	200,426	65,399	140.74%	32.63%
2029	203,140	203,140	62,304	169.53%	30.67%
2030	205,875	205,875	59,176	196.02%	28.74%
2031	208,595	208,595	56,194	220.40%	26.94%
2032	211,282	211,282	53,367	242.86%	25.26%
2033	213,911	213,911	50,684	263.57%	23.69%
2034	216,540	219,222	48,149	279.14%	21.96%

- 1) The total of customers in the forecast of Commercial/Industrial customers in DEF's 2023 Ten Year Site Plan.
- 2) All Commercial, Industrial and Governmental rate classes are eligible to participate.
- 3) Number of Program Measure Participants represents the participants projected.
- 4) Cumulative penetration is the ratio of cumulative measure participants to the eligible customer pool.

Savings Estimates

Total program savings were developed by first estimating the total savings for each individual measure based on each measure's savings and annual projected participation. The total program savings were then computed as the sum of the individual measure savings and are shown in the following tables.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	61	0.00	0.04	4,639,073	273	3,054
2026	70	0.00	0.05	5,031,076	291	3,337
2027	80	0.00	0.05	5,470,375	311	3,649
2028	91	0.01	0.06	5,960,882	336	3,995
2029	104	0.01	0.07	6,502,265	363	4,476
2025	102	0.01	0.06	6,030,005	343	3,740
2026	93	0.01	0.05	5,237,219	323	3,081
2027	86	0.01	0.05	4,588,085	305	2,565
2028	80	0.01	0.04	4,051,694	289	2,158
2029	75	0.01	0.04	3,603,835	273	1,934
TOTAL				51,114,509	3,108	31,990

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	64	0.00	0.04	4,877,479	287	3,211
2026	73	0.00	0.05	5,289,628	306	3,509
2027	84	0.00	0.06	5,751,502	327	3,837
2028	96	0.01	0.06	6,267,217	353	4,200
2029	110	0.01	0.08	6,836,423	382	4,706
2025	107	0.01	0.07	6,339,892	360	3,933
2026	98	0.01	0.06	5,506,365	340	3,239
2027	90	0.01	0.05	4,823,870	321	2,696
2028	84	0.01	0.04	4,259,915	304	2,268
2029	79	0.01	0.04	3,789,039	287	2,034
TOTAL				53,741,331	3,267	33,634

Impact Evaluation Plan

The Smart Saver program provides incentives for the installation of various types of measures. The individual measure impacts are based on the most recent market potential study that supported the 2024 goals filing. These estimates are based on analysis of engineering simulations, statistical billing analysis, and end use studies, and include the consideration of the interactive effects of multiple measures. DEF will monitor how future changes to building codes and appliance

standards impact the cost effectiveness of measures included in this program.

Cost-effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$105,451,158	\$62,227,985	\$43,223,173	1.69
Participant	\$51,816,905	\$37,383,930	\$14,432,976	1.39
Total Resource Cost	\$105,451,158	\$47,795,009	\$57,656,148	2.21

C. SMART SAVER CUSTOM INCENTIVE PROGRAM

Program Start Date: 1992
Program modified in 1995 and 2016

Program Description

The objective of the Smart Saver Custom Incentive Program is to encourage commercial, industrial and governmental customers to make capital investments for installation of high efficiency technologies not covered by DEF's other commercial programs. Projects may include, but are not limited to, high efficiency equipment and machinery, whole-building construction or renovation projects, and other technologies specific to a particular industry or business process.

Policies and Procedures

The timeline for a project in this program varies depending on the project. The program process steps include application, data collection, analysis of data, monitoring, inspection, and incentives to the customer.

Program eligibility requirements to qualify for participation are as follows:

- Participants must be in the DEF service territory and be a commercially metered account.
- Participants must be willing to allow DEF to inspect the installations of all measures and equipment.

Specific eligibility requirements for this program will be presented in the Program Participation Standards.

DEF will perform a cost-effectiveness analysis for each project being considered under the

program, using the Commission-approved cost-effectiveness tests described in Rule 25-17.008, Florida Administrative Code. Only projects that pass both the Participant Cost Test (PCT) and the Rate Impact Measure (RIM) test will be considered for incentives. Incentives will not exceed 50% of the total project cost or reduce the payback to less than two years. The maximum incentive for a single project is \$500,000. Incentives may be paid in stages based on comparative performance metrics when there is uncertainty around the demand and energy reductions that will be achieved. Fifty percent (50%) of the approved incentive will be paid upon initial installation. The remaining incentive will be paid post-installation upon confirmation of the achieved impacts.

Program Participation

Annual participation estimates for the Smart Saver Custom Incentive program are shown in the following table.

Year	Total Number of Customers (1)	Total Number of Measure Eligible Customers (2)	Annual Number of Program Measure Participants (3)	Cumulative Penetration Level (%) (4)	Annual Participation Level (%)
2025	192,439	192,439	200	0.10%	0.10%
2026	195,108	195,108	190	0.20%	0.10%
2027	197,753	197,753	181	0.29%	0.09%
2028	200,426	200,426	172	0.37%	0.09%
2029	203,140	203,140	163	0.45%	0.08%
2030	205,875	205,875	0	0.44%	0.00%
2031	208,595	208,595	0	0.43%	0.00%
2032	211,282	211,282	0	0.43%	0.00%
2033	213,911	213,911	0	0.42%	0.00%
2034	216,540	216,540	0	0.42%	0.00%

1. The total number of customers is the forecast of Commercial/Industrial customers in DEF's 2023 Ten Year Site Plan.
2. All commercial, industrial, and governmental rate classes are eligible to participate.
3. The number of program participants represents the participants projected.
4. Cumulative penetration is the ratio of cumulative measure participating customers to the eligible customer pool.

Savings Estimates

Program savings will be calculated based on evaluation of the demand and energy savings for each individual project. DEF will inspect installations to verify operability of the technology and/or to obtain information needed to calculate the approved custom incentive amount. Annual saving estimates for the Smart Saver Custom Incentive program are shown in the following tables:

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	0.00	2.50	0	0	500
2026	0	0.00	2.63	0	0	500
2027	0	0.00	2.76	0	0	500
2028	0	0.00	2.91	0	0	500
2029	0	0.00	3.07	0	0	500
2025	0	0.00	0.00	0	0	500
2026	0	0.00	0.00	0	0	500
2027	0	0.00	0.00	0	0	500
2028	0	0.00	0.00	0	0	500
2029	0	0.00	0.00	0	0	500
TOTAL				0	0	5,000

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
5	0	0.00	2.63	0	0	526
6	0	0.00	2.77	0	0	526
7	0	0.00	2.90	0	0	526
8	0	0.00	3.06	0	0	526
9	0	0.00	3.23	0	0	526
5	0	0.00	0.00	0	0	526
6	0	0.00	0.00	0	0	526
7	0	0.00	0.00	0	0	526
8	0	0.00	0.00	0	0	526
9	0	0.00	0.00	0	0	526
AL				0	0	5,257

Impact Evaluation Plan

DEF will inspect installations to verify operability of the technology and to obtain information

needed to determine the achieved project savings. Project savings will be verified through engineering and billing analysis based on customer-specific site performance and usage data.

Cost-effectiveness

Each individual project will be analyzed for cost-effectiveness at the time of project submittal to DEF, using the Commission-approved tests. Total program cost-effectiveness will be determined based on the combined demand and energy savings of the individual projects.

D. STANDBY GENERATION PROGRAM

Program Start Date: 1993
Program modified in 1995 and 2007

Program Description

The Stand-by Generation program is a demand control program that utilizes commercial, industrial, governmental, customers sited equipment to reduce DEF's system demand. The program is a voluntary program available to all commercial and industrial customers who have on-site generation capability and are willing to utilize their equipment to reduce DEF system demand when deemed necessary. The program is offered through DEF's Stand-By Generation tariffs.

DEF may have direct control of the customer equipment or may rely upon the customer to initiate the on-site generation upon being notified by DEF. The customer is expected to continue running the generation until DEF notifies the customer that the generation is no longer needed. DEF does not restrict other use of the equipment by the customer.

The Stand-by Generation program participants receive a monthly bill credit based on the terms of the applicable tariff and the demonstrated capacity and kwh's produced by the customer's equipment. Bill credits are determined based on the provisions of the applicable Stand-By Generation tariffs.

Policies and Procedures

The general program eligibility requirements to qualify for participation are as follows:

- Customer must be eligible for service under DEF's commercial rate schedules.
- Customer must have standby generation that will reduce utility system demand at the request of DEF.
- Customer's Standby Generation Capacity calculation must be at least 50 kW.
- Customer must be within the range of DEF's load management system.

Program Participation

Annual participation estimates for the Standby Generation program are shown in the following table.

Year	Total Number of Customers (1)	Total Number of Measure Eligible Customers (2)	Annual Number of Program Measure Participants (3)	Cumulative Penetration Level (%) (4)	Annual Participation Level (%)
2025	192,439	192,439	10	0.01%	0.01%
2026	195,108	195,098	10	0.01%	0.01%
2027	197,753	197,733	15	0.02%	0.01%
2028	200,426	200,391	15	0.02%	0.01%
2029	203,140	203,090	15	0.03%	0.01%
2030	205,875	205,810	18	0.04%	0.01%
2031	208,595	208,513	18	0.05%	0.01%
2032	211,282	211,182	20	0.06%	0.01%
2033	213,911	213,791	20	0.07%	0.01%
2034	216,540	216,400	20	0.07%	0.01%

1. Total Number of Customers is based on DEF's 2023 Ten Year Site Plan projections.
2. Eligible Customers is based upon tariff GSLM-2 Rate Schedule.
3. Annual number of program participants represents the projected number of customers.
4. Cumulative penetration is the ratio of cumulative measure participants to the eligible customer pool.

Savings Estimates

The kW reduction estimates for this program were determined from historical data and are

presented below.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	160.00	200.00	0	1,600	2,000
2026	0	160.00	200.00	0	1,600	2,000
2027	0	160.00	200.00	0	2,400	3,000
2028	0	160.00	200.00	0	2,400	3,000
2029	0	160.00	200.00	0	2,400	3,000
2030	0	160.00	200.00	0	2,800	3,500
2031	0	160.00	200.00	0	2,800	3,500
2032	0	160.00	200.00	0	3,200	4,000
2033	0	160.00	200.00	0	3,200	4,000
2034	0	160.00	200.00	0	3,200	4,000
TOTAL				0	25,600	32,000

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	168.22	210.28	0	1,682	2,103
2026	0	168.22	210.28	0	1,682	2,103
2027	0	168.22	210.28	0	2,523	3,154
2028	0	168.22	210.28	0	2,523	3,154
2029	0	168.22	210.28	0	2,523	3,154
2030	0	168.22	210.28	0	2,944	3,680
2031	0	168.22	210.28	0	2,944	3,680
2032	0	168.22	210.28	0	3,364	4,206
2033	0	168.22	210.28	0	3,364	4,206
2034	0	168.22	210.28	0	3,364	4,206
TOTAL				0	11,009	13,761

Impact Evaluation Plan

DEF uses on-site metering to measure the generation capability of each Standby Generation program participant to reduce load at the time they join the program. The customer and a DEF representative will observe the metering tests to determine the load that the standby generator carries. This system testing will also determine the initial readings that will be recorded to determine the incentive that the customer will receive on their bill each month.

Cost-effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$67,201,940	\$22,378,727	\$44,823,212	3.00
Participant	\$19,240,156	\$0	\$19,240,156	9999.00
Total Resource Cost	\$67,201,940	\$3,138,571	\$64,063,369	21.41

E. INTERRUPTIBLE SERVICE PROGRAM

Program Start Date: 1996 for the IS-2 and IST-2 rate schedules.

Program Description

The Interruptible Service program is a direct load control program designed to reduce DEF's demand at times of capacity shortage during peak or emergency conditions.

Policies and Procedures

The program is available to non-residential customers throughout the DEF's entire service territory who are willing to have their service interrupted. The program is currently provided to customers through various tariffs. The specific eligibility requirements, bill credit amounts, and operational provisions are as defined in the specific tariffs. These tariffs are designed to support system operations and reliability. The provisions of these tariffs may be modified as appropriate to ensure that the program remains cost effective and provides system benefits.

Under this program, DEF will have the ability to interrupt service to the customer. Customers participating in the Interruptible Service program will receive a monthly interruptible demand credit per the provisions of the applicable tariff.

Program Participation

Annual participation estimates for the Interruptible Service program are shown in the following table:

Year	Total Number of Customers (1)	Total Number of Measure Eligible Customers (2)	Annual Number of Program Measure Participants (3)	Cumulative Penetration Level (%) (4)	Annual Participation Level (%)
2025	192,439	697	1	0.14%	0.14%
2026	195,108	696	1	0.29%	0.14%
2027	197,753	695	1	0.43%	0.14%
2028	200,426	694	1	0.58%	0.14%
2029	203,140	693	1	0.72%	0.14%
2030	205,875	692	1	0.87%	0.14%
2031	208,595	691	1	1.01%	0.14%
2032	211,282	690	1	1.16%	0.14%
2033	213,911	689	1	1.31%	0.15%
2034	216,540	688	1	1.45%	0.15%

1. Total Number of Customers is based on DEF's 2023 ten Year Site Plan projections.
2. Eligible Customers is based upon tariff IS-2 and IST-2 Rate Schedule.
3. Annual number of program participants represents the projected number of customers.
4. Cumulative penetration is the ratio of cumulative participants to the eligible customer pool.

Savings Estimates

Savings estimates for the Interruptible Service program are shown in the following tables.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	1000.00	1000.00	0	1,000	1,000
2026	0	1000.00	1000.00	0	1,000	1,000
2027	0	1000.00	1000.00	0	1,000	1,000
2028	0	1000.00	1000.00	0	1,000	1,000
2029	0	1000.00	1000.00	0	1,000	1,000
2030	0	1000.00	1000.00	0	1,000	1,000
2031	0	1000.00	1000.00	0	1,000	1,000
2032	0	1000.00	1000.00	0	1,000	1,000
2033	0	1000.00	1000.00	0	1,000	1,000
2034	0	1000.00	1000.00	0	1,000	1,000
TOTAL				0	10,000	10,000

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	1051.39	1051.39	0	1,051	1,051
2026	0	1051.39	1051.39	0	1,051	1,051
2027	0	1051.39	1051.39	0	1,051	1,051
2028	0	1051.39	1051.39	0	1,051	1,051
2029	0	1051.39	1051.39	0	1,051	1,051
2025	0	1051.39	1051.39	0	1,051	1,051
2026	0	1051.39	1051.39	0	1,051	1,051
2027	0	1051.39	1051.39	0	1,051	1,051
2028	0	1051.39	1051.39	0	1,051	1,051
2029	0	1051.39	1051.39	0	1,051	1,051
TOTAL				0	10,514	10,514

Impact Evaluation Plan

Program impacts are evaluated through on-site interval metering data of all Interruptible Service customers.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$21,235,988	\$15,676,287	\$5,559,701	1.35
Participant	\$14,375,999	\$0	\$14,375,999	9999
Total Resource Cost	\$21,235,988	\$1,300,288	\$19,935,700	16.33

F. CURTAILABLE SERVICE PROGRAM

Program Start Date: 1996 for the CS-2 and CST-2 rate schedules
2004 for the CS-3 and CST-3 rate schedules.

Program Description

The Curtailable Service program is an indirect load control program designed to reduce DEF's demand at times of capacity shortage during peak or emergency conditions.

Policies and Procedures

The program is available throughout DEF's entire service territory to non-residential customers who agree to curtail demand. The program is currently provided to customers through various tariffs. The specific customer eligibility and curtailment requirements, bill credit amounts, and operational provisions are as defined in the applicable tariffs. These tariffs are designed to support system operations and reliability. The provisions of these tariffs may be modified as appropriate to ensure that the program remains cost effective and provides system benefits. The CS-1 and CST-1 rate schedules were closed to new customers in 1996 but remain active for those customers that were grand-fathered onto those rates.

Program Participation

Annual participation estimates for the Curtailable Service program are shown in the following table:

Year	Total Number of Customers (1)	Total Number of Measure Eligible Customers (2)	Annual Number of Program Measure Participants (3)	Cumulative Penetration Level (%) (4)	Annual Participation Level (%)
2025	192,439	697	1	0.14%	0.14%
2026	195,108	696	0	0.14%	0.00%
2027	197,753	696	1	0.29%	0.14%
2028	200,426	695	0	0.29%	0.00%
2029	203,140	695	1	0.43%	0.14%
2030	205,875	694	0	0.43%	0.00%
2031	208,595	694	0	0.43%	0.00%
2032	211,282	694	0	0.43%	0.00%
2033	213,911	694	0	0.43%	0.00%
2034	216,540	694	0	0.43%	0.00%

1. Total Number of Customers is based on DEF's 2023 Ten Year Site Plan projections.
2. Eligible Customers is based upon tariff CS-2, CST-2, CS-3, and CST-3 Rate Schedules.
3. Annual number of program participants represents the projected number of customers.
4. Cumulative penetration is the ratio of cumulative participants to the eligible customer pool.

Savings Estimates

Savings estimate for the Curtailable Service program are shown in the following tables.

At the Meter:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	500	500	0	500	500
2026	0	-	-	0	0	0
2027	0	500	500	0	500	500
2028	0	-	-	0	0	0
2029	0	500	500	0	500	500
2030	0	-	-	0	0	0
2031	0	-	-	0	0	0
2032	0	-	-	0	0	0
2033	0	-	-	0	0	0
2034	0	-	-	0	0	0
TOTAL				0	1,500	1,500

At the Generator:

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2025	0	525.70	525.70	0	526	526
2026	0	0.00	0.00	0	0	0
2027	0	525.70	525.70	0	526	526
2028	0	0.00	0.00	0	0	0
2029	0	525.70	525.70	0	526	526
2030	0	0.00	0.00	0	0	0
2031	0	0.00	0.00	0	0	0
2032	0	0.00	0.00	0	0	0
2033	0	0.00	0.00	0	0	0
2034	0	0.00	0.00	0	0	0
TOTAL				0	1,577	1,577

Impact Evaluation Plan

Program impacts are evaluated through on-site interval metering data of all Curtailable Service customers.

Cost-Effectiveness

All cost-effectiveness tests are net of free ridership. The economic results of the program are as follows:

Cost-Effectiveness Test	NPV Benefits \$(000)	NPV Costs \$ (000)	NPV Net Benefits \$(000)	B/C Ratio
Rate Impact Measure	\$3,370,558	\$2,213,883	\$1,156,675	1.52
Participant	\$2,117,912	\$0	\$2,117,912	9999
Total Resource Cost	\$3,370,558	\$95,972	\$3,274,587	35.12

VIII. TECHNOLOGY DEVELOPMENT PROGRAM

Program Start Date: 1995

Program Description

Technical and operational knowledge for the advances in the energy field may come from field demonstration projects, research partnerships, webinars, general education, etc. The Technology Development program is designed to allow DEF to investigate technologies that may support the development of new demand response and energy efficiency programs. Projects undertaken in this program may include, but are not limited to, technological research, field demonstration projects, research on load behavior and demand-side management measures, and other market related research.

DEF will undertake certain development and demonstration projects which have the potential to become cost-effective demand and energy efficiency programs. In general, each research and development project that is proposed and investigated will proceed as follows:

1. Concept or idea development.
2. Research and design, including estimated costs and benefits.
3. Conduct field test or pilot program.
4. Evaluate field test or pilot program results, including cost-effectiveness.
5. Acceptance or rejection of project for continuation as a program.
6. If accepted in Item #5 above, application to the FPSC for approval to implement as a separate program or as measure within an existing program.

Eligible customers will be determined during the project research and design phase and will be dependent on the type of project proposed. Each project that is proposed and investigated is

expected to meet one or more of the goals identified in Section 366.82(2), Florida Statutes, and Chapter 25-17, Florida Administrative Code.

Program Participation

In most cases, each demand reduction and energy efficiency project that is proposed and investigated under this program will require field testing with actual customers. These projects will offer services or products to eligible customers, after being defined in the project research and design phase, on a voluntary basis.

Examples of potential projects that may be funded under this program include demand response and energy efficiency technologies, market transformation initiatives and other innovative technologies that will influence customer energy usage. All costs, including incentives and rebates, will be included as part of the pre-approved project expenditures under this program.

At the discretion of the Company, expenditures up to \$800,000 annually may be made and recovered through the conservation cost recovery clause for all energy efficiency and conservation projects that are proposed and investigated. If any single project's annual expenditures exceed \$100,000, a status report will be filed as a component of the Conservation Cost Recovery True-Up filing. The status report will identify each project under this program with annual costs more than \$100,000, the scope and purpose of the project, the project development schedule identifying both achieved and projected accomplishments, and the project's actual and proposed expenditures for Commission staff review. If any project (or combination of projects) expenditures are projected to exceed the \$800,000 annual limit available under this program and are sufficiently worthy of

special consideration, the Company will apply to the Commission staff for approval to proceed.

Finally, the Company will account for and maintain records of all expenses for each project in accordance with Chapter 25-17.015, Florida Administrative Code.

Savings Estimates

The savings impacts will be derived from actual data obtained from field tests which will calibrate engineering analysis, model results and estimates. This data will provide estimates of the benefits and costs associated with these projects. The actual experience and knowledge gained on a small scale may be leveraged to facilitate the development of new measures.

Consequently, program savings have not been estimated and have not been included in this DSM Plan. Any impacts obtained by this program will be calculated for each individual project and will be reported to the FPSC to be counted toward achieving DEF's conservation goals.

Impact Evaluation Plan

This program will normally include a field test or pilot where the impacts will be based on actual results. In the event a project does not involve a field test or pilot, the estimated or modeled savings will be fully documented with the methodology used.

Cost-Effectiveness

The cost-effectiveness of each project submitted to the FPSC for approval to be implemented as a program shall be analyzed and reported using the Commission-approved cost-effectiveness tests.

IX. QUALIFYING FACILITIES PROGRAM

Program Description

The purpose of this program is to meet the objectives and obligations established by the Public Utility Regulatory Policies Act, Section 366.051 of Florida Statutes, and the Commission's rules contained within Chapter 25-17, Florida Administrative Code. These policies pertain to the purchase of as-available energy and firm energy and capacity from Qualifying Facilities (QFs), including those that utilize renewable sources under Section 366.91, Florida Statutes, pursuant to DEF's agreement for purchase per the as-available energy tariff, standard offer contract tariff, or a negotiated QF purchased power contract on behalf of DEF customers.

Under the QF program, DEF analyzes, forecasts, facilitates, and administers the potential and actual power purchases from QF and the state jurisdictional QF or distributed generator interconnections. This Program develops standard offer QF contracts, negotiates, enters into, amends, and restructures non-firm energy, and firm energy and capacity contracts entered into with qualifying cogeneration, small power producers, which include renewable facilities.

X. BENEFITS & COST ANALYSIS – ALL PROGRAMS

A. RESIDENTIAL CONSERVATION PROGRAMS

PROGRAM:	Residential Incentive Program			RIP						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	401	1,236	0	1,637	1,290	5,337	1,211	7,837	-6,200	
2026	804	2,579	0	3,382	1,314	5,423	2,461	9,199	-5,817	
2027	1,204	4,037	0	5,241	1,343	5,525	3,715	10,583	-5,342	
2028	1,706	5,624	0	7,330	1,378	5,645	5,135	12,158	-4,828	
2029	2,107	7,346	8,733	18,185	1,413	5,774	6,581	13,768	4,417	
2030	2,391	8,838	10,238	21,466	1,188	4,776	7,813	13,777	7,689	
2031	2,641	10,333	11,665	24,638	1,129	4,537	9,049	14,715	9,923	
2032	2,877	11,832	11,742	26,451	1,072	4,310	10,325	15,708	10,743	
2033	3,302	13,335	13,016	29,653	1,019	4,095	11,606	16,719	12,934	
2034	3,767	14,845	16,618	35,230	968	3,890	12,782	17,639	17,590	
2035	3,992	15,216	16,772	35,980	0	0	12,949	12,949	23,031	
2036	4,280	15,597	16,929	36,805	0	0	13,309	13,309	23,496	
2037	4,464	15,986	17,089	37,539	0	0	13,766	13,766	23,773	
2038	4,682	16,386	17,252	38,320	0	0	13,980	13,980	24,340	
2039	4,946	16,796	17,418	39,160	0	0	14,319	14,319	24,840	
2040	4,996	17,209	17,580	39,785	0	0	14,555	14,555	25,230	
2041	4,867	16,718	16,825	38,411	0	0	14,496	14,496	23,914	
2042	5,008	16,155	16,018	37,181	0	0	14,505	14,505	22,676	
2043	5,020	15,504	15,146	35,670	0	0	14,387	14,387	21,283	
2044	5,023	14,765	14,213	34,001	0	0	14,249	14,249	19,752	
2045	4,840	13,384	12,696	30,921	0	0	13,591	13,591	17,329	
2046	4,657	12,152	11,361	28,170	0	0	12,944	12,944	15,225	
2047	4,451	10,868	10,013	25,331	0	0	12,248	12,248	13,083	
2048	4,222	9,527	8,652	22,401	0	0	11,503	11,503	10,898	
2049	3,966	8,124	7,271	19,361	0	0	10,699	10,699	8,662	
2050	3,762	6,868	6,059	16,689	0	0	10,048	10,048	6,641	
2051	3,692	6,459	5,617	15,769	0	0	9,765	9,765	6,003	
2052	3,623	6,056	5,190	14,869	0	0	9,489	9,489	5,380	
2053	3,560	5,664	4,785	14,009	0	0	9,231	9,231	4,778	
2054	3,498	5,276	4,394	13,168	0	0	8,979	8,979	4,188	
2055	3,235	4,826	3,962	12,023	0	0	8,221	8,221	3,802	
2056	2,946	4,349	3,519	10,815	0	0	7,414	7,414	3,401	
2057	2,630	3,841	3,064	9,534	0	0	6,552	6,552	2,982	
2058	2,280	3,294	2,591	8,165	0	0	5,624	5,624	2,541	
2059	1,896	2,712	2,102	6,710	0	0	4,632	4,632	2,079	
2060	1,531	2,165	1,655	5,351	0	0	3,701	3,701	1,649	
2061	1,158	1,621	1,221	4,001	0	0	2,774	2,774	1,227	
2062	780	1,079	801	2,660	0	0	1,848	1,848	812	
2063	394	539	395	1,327	0	0	924	924	403	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	125,597	349,141	332,600	807,337	12,114	49,311	361,380	422,805	384,532	
NPV	43,044	137,766	129,836	310,646	9,335	38,076	130,024	177,435	133,211	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 1.751										

PROGRAM:	Residential Incentive Program			RIP					
Total Resource Cost (TRC) Test									
	BENEFITS				COSTS				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL	AVOIDED	AVOIDED		UTILITY				
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	401	1,236	0	1,637	1,290	9,886	11,176	-9,538	
2026	804	2,579	0	3,382	1,314	10,001	11,315	-7,933	
2027	1,204	4,037	0	5,241	1,343	10,144	11,487	-6,246	
2028	1,706	5,624	0	7,330	1,378	10,321	11,699	-4,369	
2029	2,107	7,346	8,733	18,185	1,413	10,514	11,927	6,258	
2030	2,391	8,838	10,238	21,466	1,188	8,773	9,961	11,506	
2031	2,641	10,333	11,665	24,638	1,129	8,334	9,463	15,175	
2032	2,877	11,832	11,742	26,451	1,072	7,917	8,990	17,461	
2033	3,302	13,335	13,016	29,653	1,019	7,521	8,540	21,113	
2034	3,767	14,845	16,618	35,230	968	7,145	8,113	27,116	
2035	3,992	15,216	16,772	35,980	0	0	0	35,980	
2036	4,280	15,597	16,929	36,805	0	0	0	36,805	
2037	4,464	15,986	17,089	37,539	0	0	0	37,539	
2038	4,682	16,386	17,252	38,320	0	0	0	38,320	
2039	4,946	16,796	17,418	39,160	0	0	0	39,160	
2040	4,996	17,209	17,580	39,785	0	0	0	39,785	
2041	4,867	16,718	16,825	38,411	0	0	0	38,411	
2042	5,008	16,155	16,018	37,181	0	0	0	37,181	
2043	5,020	15,504	15,146	35,670	0	0	0	35,670	
2044	5,023	14,765	14,213	34,001	0	0	0	34,001	
2045	4,840	13,384	12,696	30,921	0	0	0	30,921	
2046	4,657	12,152	11,361	28,170	0	0	0	28,170	
2047	4,451	10,868	10,013	25,331	0	0	0	25,331	
2048	4,222	9,527	8,652	22,401	0	0	0	22,401	
2049	3,966	8,124	7,271	19,361	0	0	0	19,361	
2050	3,762	6,868	6,059	16,689	0	0	0	16,689	
2051	3,692	6,459	5,617	15,769	0	0	0	15,769	
2052	3,623	6,056	5,190	14,869	0	0	0	14,869	
2053	3,560	5,664	4,785	14,009	0	0	0	14,009	
2054	3,498	5,276	4,394	13,168	0	0	0	13,168	
2055	3,235	4,826	3,962	12,023	0	0	0	12,023	
2056	2,946	4,349	3,519	10,815	0	0	0	10,815	
2057	2,630	3,841	3,064	9,534	0	0	0	9,534	
2058	2,280	3,294	2,591	8,165	0	0	0	8,165	
2059	1,896	2,712	2,102	6,710	0	0	0	6,710	
2060	1,531	2,165	1,655	5,351	0	0	0	5,351	
2061	1,158	1,621	1,221	4,001	0	0	0	4,001	
2062	780	1,079	801	2,660	0	0	0	2,660	
2063	394	539	395	1,327	0	0	0	1,327	
2064	0	0	0	0	0	0	0	0	
NOMINAL	125,597	349,141	332,600	807,337	12,114	90,557	102,671	704,666	
NPV	43,044	137,766	129,836	310,646	9,335	69,947	79,282	231,364	
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 3.918									

PROGRAM:	Residential Incentive Program			RIP				
Participant Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	SAVINGS IN		OTHER					
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET	
	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	1,211	5,337	0	6,548	9,886	9,886	-3,338	
2026	2,461	5,423	0	7,885	10,001	10,001	-2,116	
2027	3,715	5,525	0	9,240	10,144	10,144	-904	
2028	5,135	5,645	0	10,780	10,321	10,321	459	
2029	6,581	5,774	0	12,355	10,514	10,514	1,841	
2030	7,813	4,776	0	12,589	8,773	8,773	3,816	
2031	9,049	4,537	0	13,586	8,334	8,334	5,252	
2032	10,325	4,310	0	14,635	7,917	7,917	6,718	
2033	11,606	4,095	0	15,700	7,521	7,521	8,179	
2034	12,782	3,890	0	16,671	7,145	7,145	9,526	
2035	12,949	0	0	12,949	0	0	12,949	
2036	13,309	0	0	13,309	0	0	13,309	
2037	13,766	0	0	13,766	0	0	13,766	
2038	13,980	0	0	13,980	0	0	13,980	
2039	14,319	0	0	14,319	0	0	14,319	
2040	14,555	0	0	14,555	0	0	14,555	
2041	14,496	0	0	14,496	0	0	14,496	
2042	14,505	0	0	14,505	0	0	14,505	
2043	14,387	0	0	14,387	0	0	14,387	
2044	14,249	0	0	14,249	0	0	14,249	
2045	13,591	0	0	13,591	0	0	13,591	
2046	12,944	0	0	12,944	0	0	12,944	
2047	12,248	0	0	12,248	0	0	12,248	
2048	11,503	0	0	11,503	0	0	11,503	
2049	10,699	0	0	10,699	0	0	10,699	
2050	10,048	0	0	10,048	0	0	10,048	
2051	9,765	0	0	9,765	0	0	9,765	
2052	9,489	0	0	9,489	0	0	9,489	
2053	9,231	0	0	9,231	0	0	9,231	
2054	8,979	0	0	8,979	0	0	8,979	
2055	8,221	0	0	8,221	0	0	8,221	
2056	7,414	0	0	7,414	0	0	7,414	
2057	6,552	0	0	6,552	0	0	6,552	
2058	5,624	0	0	5,624	0	0	5,624	
2059	4,632	0	0	4,632	0	0	4,632	
2060	3,701	0	0	3,701	0	0	3,701	
2061	2,774	0	0	2,774	0	0	2,774	
2062	1,848	0	0	1,848	0	0	1,848	
2063	924	0	0	924	0	0	924	
2064	0	0	0	0	0	0	0	
NOMINAL	361,380	49,311	0	410,691	90,557	90,557	320,134	
NPV	130,024	38,076	0	168,100	69,947	69,947	98,154	
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 2.403								

PROGRAM: New Builder Construction-MF MFNBC									
Rate Impact Measure (RIM) Test									
YEAR	BENEFITS				COSTS				NET BENEFITS \$(000)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL FUEL & O&M SAVINGS	AVOIDED T&D CAP. COSTS	AVOIDED GEN. CAP. COSTS	TOTAL BENEFITS	UTILITY PROGRAM COSTS	INCENTIVE PAYMENTS	REVENUE LOSSES	TOTAL COSTS	
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	168	268	0	436	542	481	508	1,531	-1,094
2026	361	593	0	955	552	555	1,108	2,214	-1,259
2027	575	974	0	1,549	562	620	1,774	2,957	-1,407
2028	855	1,406	0	2,260	573	670	2,573	3,816	-1,556
2029	1,123	1,922	2,286	5,331	584	770	3,508	4,862	469
2030	1,403	2,525	2,926	6,854	595	862	4,585	6,041	812
2031	1,704	3,220	3,636	8,561	606	953	5,843	7,403	1,158
2032	2,039	4,013	3,984	10,035	618	1,046	7,319	8,982	1,053
2033	2,560	4,910	4,794	12,264	629	1,138	9,003	10,771	1,493
2034	3,186	5,918	6,627	15,732	641	1,232	10,817	12,690	3,042
2035	3,376	6,066	6,689	16,131	0	0	10,958	10,958	5,173
2036	3,620	6,218	6,751	16,589	0	0	11,263	11,263	5,326
2037	3,776	6,373	6,815	16,964	0	0	11,650	11,650	5,314
2038	3,960	6,532	6,880	17,373	0	0	11,831	11,831	5,542
2039	4,184	6,696	6,946	17,826	0	0	12,118	12,118	5,708
2040	4,233	6,863	7,014	18,110	0	0	12,337	12,337	5,773
2041	4,241	6,963	7,011	18,215	0	0	12,638	12,638	5,577
2042	4,493	7,056	6,999	18,549	0	0	13,018	13,018	5,530
2043	4,646	7,145	6,984	18,775	0	0	13,321	13,321	5,453
2044	4,804	7,234	6,967	19,005	0	0	13,633	13,633	5,372
2045	4,727	6,989	6,633	18,348	0	0	13,279	13,279	5,069
2046	4,604	6,681	6,250	17,535	0	0	12,801	12,801	4,733
2047	4,429	6,309	5,816	16,554	0	0	12,192	12,192	4,362
2048	4,198	5,866	5,331	15,396	0	0	11,441	11,441	3,955
2049	3,866	5,297	4,745	13,908	0	0	10,432	10,432	3,476
2050	3,423	4,591	4,054	12,068	0	0	9,145	9,145	2,923
2051	2,869	3,818	3,323	10,009	0	0	7,587	7,587	2,422
2052	2,181	2,889	2,479	7,549	0	0	5,712	5,712	1,837
2053	1,350	1,795	1,518	4,663	0	0	3,499	3,499	1,164
2054	360	525	437	1,323	0	0	925	925	398
2055	350	506	415	1,271	0	0	890	890	381
2056	327	467	378	1,172	0	0	823	823	350
2057	292	413	330	1,035	0	0	728	728	307
2058	255	356	280	891	0	0	629	629	263
2059	214	296	230	740	0	0	523	523	217
2060	173	237	181	590	0	0	418	418	172
2061	131	177	133	441	0	0	313	313	128
2062	88	118	88	294	0	0	209	209	85
2063	44	59	43	146	0	0	104	104	42
2064	0	0	0	0	0	0	0	0	0
NOMINAL	89,188	140,286	135,975	365,449	5,901	8,326	261,459	275,686	89,763
NPV	32,285	53,011	51,360	136,656	4,418	5,953	97,886	108,256	28,399
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 1.262									

PROGRAM:	New Builder Construction-MF			MFNBC				
Total Resource Cost (TRC) Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	TOTAL	AVOIDED	AVOIDED		UTILITY			
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANTS	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	168	268	0	436	542	1,281	1,823	-1,386
2026	361	593	0	955	552	1,483	2,035	-1,080
2027	575	974	0	1,549	562	1,667	2,229	-680
2028	855	1,406	0	2,260	573	1,814	2,387	-127
2029	1,123	1,922	2,286	5,331	584	2,110	2,693	2,637
2030	1,403	2,525	2,926	6,854	595	2,388	2,982	3,871
2031	1,704	3,220	3,636	8,561	606	2,667	3,273	5,288
2032	2,039	4,013	3,984	10,035	618	2,946	3,564	6,471
2033	2,560	4,910	4,794	12,264	629	3,227	3,856	8,408
2034	3,186	5,918	6,627	15,732	641	3,508	4,149	11,582
2035	3,376	6,066	6,689	16,131	0	0	0	16,131
2036	3,620	6,218	6,751	16,589	0	0	0	16,589
2037	3,776	6,373	6,815	16,964	0	0	0	16,964
2038	3,960	6,532	6,880	17,373	0	0	0	17,373
2039	4,184	6,696	6,946	17,826	0	0	0	17,826
2040	4,233	6,863	7,014	18,110	0	0	0	18,110
2041	4,241	6,963	7,011	18,215	0	0	0	18,215
2042	4,493	7,056	6,999	18,549	0	0	0	18,549
2043	4,646	7,145	6,984	18,775	0	0	0	18,775
2044	4,804	7,234	6,967	19,005	0	0	0	19,005
2045	4,727	6,989	6,633	18,348	0	0	0	18,348
2046	4,604	6,681	6,250	17,535	0	0	0	17,535
2047	4,429	6,309	5,816	16,554	0	0	0	16,554
2048	4,198	5,866	5,331	15,396	0	0	0	15,396
2049	3,866	5,297	4,745	13,908	0	0	0	13,908
2050	3,423	4,591	4,054	12,068	0	0	0	12,068
2051	2,869	3,818	3,323	10,009	0	0	0	10,009
2052	2,181	2,889	2,479	7,549	0	0	0	7,549
2053	1,350	1,795	1,518	4,663	0	0	0	4,663
2054	360	525	437	1,323	0	0	0	1,323
2055	350	506	415	1,271	0	0	0	1,271
2056	327	467	378	1,172	0	0	0	1,172
2057	292	413	330	1,035	0	0	0	1,035
2058	255	356	280	891	0	0	0	891
2059	214	296	230	740	0	0	0	740
2060	173	237	181	590	0	0	0	590
2061	131	177	133	441	0	0	0	441
2062	88	118	88	294	0	0	0	294
2063	44	59	43	146	0	0	0	146
2064	0	0	0	0	0	0	0	0
NOMINAL	89,188	140,286	135,975	365,449	5,901	23,091	28,992	336,457
NPV	32,285	53,011	51,360	136,656	4,418	16,441	20,859	115,797
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 6.551								

PROGRAM:	New Builder Construction-MF			MFNBC				
Participant Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	SAVINGS IN		OTHER					
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET	
	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	508	481	0	989	1,281	1,281	-292	
2026	1,108	555	0	1,662	1,483	1,483	179	
2027	1,774	620	0	2,394	1,667	1,667	727	
2028	2,573	670	0	3,243	1,814	1,814	1,429	
2029	3,508	770	0	4,278	2,110	2,110	2,169	
2030	4,585	862	0	5,447	2,388	2,388	3,059	
2031	5,843	953	0	6,796	2,667	2,667	4,130	
2032	7,319	1,046	0	8,365	2,946	2,946	5,418	
2033	9,003	1,138	0	10,142	3,227	3,227	6,915	
2034	10,817	1,232	0	12,048	3,508	3,508	8,540	
2035	10,958	0	0	10,958	0	0	10,958	
2036	11,263	0	0	11,263	0	0	11,263	
2037	11,650	0	0	11,650	0	0	11,650	
2038	11,831	0	0	11,831	0	0	11,831	
2039	12,118	0	0	12,118	0	0	12,118	
2040	12,337	0	0	12,337	0	0	12,337	
2041	12,638	0	0	12,638	0	0	12,638	
2042	13,018	0	0	13,018	0	0	13,018	
2043	13,321	0	0	13,321	0	0	13,321	
2044	13,633	0	0	13,633	0	0	13,633	
2045	13,279	0	0	13,279	0	0	13,279	
2046	12,801	0	0	12,801	0	0	12,801	
2047	12,192	0	0	12,192	0	0	12,192	
2048	11,441	0	0	11,441	0	0	11,441	
2049	10,432	0	0	10,432	0	0	10,432	
2050	9,145	0	0	9,145	0	0	9,145	
2051	7,587	0	0	7,587	0	0	7,587	
2052	5,712	0	0	5,712	0	0	5,712	
2053	3,499	0	0	3,499	0	0	3,499	
2054	925	0	0	925	0	0	925	
2055	890	0	0	890	0	0	890	
2056	823	0	0	823	0	0	823	
2057	728	0	0	728	0	0	728	
2058	629	0	0	629	0	0	629	
2059	523	0	0	523	0	0	523	
2060	418	0	0	418	0	0	418	
2061	313	0	0	313	0	0	313	
2062	209	0	0	209	0	0	209	
2063	104	0	0	104	0	0	104	
2064	0	0	0	0	0	0	0	
NOMINAL	261,459	8,326	0	269,785	23,091	23,091	246,693	
NPV	97,886	5,953	0	103,839	16,441	16,441	87,398	
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 6.316								

PROGRAM: Neighborhood Energy Saver				NES						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS				(9)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	1,055	1,983	0	3,038	923	4,108	3,186	8,218	-5,179	
2026	2,094	4,065	0	6,159	923	4,108	6,417	11,448	-5,290	
2027	3,152	6,347	0	9,499	965	4,287	9,730	14,983	-5,483	
2028	4,362	8,586	0	12,948	965	4,287	13,137	18,390	-5,441	
2029	5,284	10,933	12,993	29,209	965	4,287	16,516	21,768	7,441	
2030	6,072	13,374	15,488	34,933	965	4,287	19,850	25,103	9,830	
2031	6,811	15,930	17,978	40,720	965	4,288	23,349	28,602	12,117	
2032	7,533	18,597	18,450	44,579	965	4,288	27,043	32,297	12,283	
2033	8,789	21,386	20,868	51,044	965	4,288	30,909	36,163	14,881	
2034	10,209	24,304	27,198	61,711	965	4,288	34,657	39,910	21,801	
2035	10,540	24,483	26,978	62,001	0	0	34,207	34,207	27,794	
2036	10,978	24,573	26,665	62,216	0	0	34,155	34,155	28,062	
2037	11,104	24,640	26,332	62,076	0	0	34,259	34,259	27,817	
2038	11,384	24,892	26,199	62,475	0	0	34,007	34,007	28,468	
2039	11,750	25,141	26,063	62,954	0	0	34,031	34,031	28,922	
2040	11,616	25,394	25,933	62,942	0	0	33,854	33,854	29,088	
2041	11,386	25,644	25,799	62,828	0	0	33,928	33,928	28,900	
2042	11,824	25,900	25,672	63,396	0	0	34,259	34,259	29,137	
2043	11,980	26,154	25,543	63,676	0	0	34,352	34,352	29,325	
2044	12,131	26,404	25,410	63,946	0	0	34,430	34,430	29,516	
2045	12,057	25,607	24,284	61,949	0	0	33,870	33,870	28,079	
2046	12,000	24,864	23,238	60,101	0	0	33,367	33,367	26,734	
2047	11,899	23,999	22,106	58,004	0	0	32,754	32,754	25,250	
2048	11,775	23,076	20,951	55,802	0	0	32,091	32,091	23,711	
2049	11,627	22,091	19,771	53,489	0	0	31,373	31,373	22,116	
2050	11,477	21,062	18,580	51,119	0	0	30,659	30,659	20,459	
2051	11,300	19,967	17,363	48,630	0	0	29,888	29,888	18,742	
2052	11,095	18,805	16,118	46,018	0	0	29,056	29,056	16,962	
2053	10,861	17,572	14,845	43,278	0	0	28,161	28,161	15,117	
2054	10,596	16,265	13,544	40,405	0	0	27,201	27,201	13,205	
2055	9,923	15,069	12,370	37,362	0	0	25,221	25,221	12,141	
2056	9,188	13,802	11,169	34,160	0	0	23,122	23,122	11,038	
2057	8,330	12,379	9,875	30,585	0	0	20,755	20,755	9,830	
2058	7,399	10,876	8,553	26,827	0	0	18,251	18,251	8,577	
2059	6,388	9,290	7,202	22,880	0	0	15,602	15,602	7,278	
2060	5,295	7,618	5,822	18,735	0	0	12,805	12,805	5,930	
2061	4,115	5,856	4,412	14,383	0	0	9,852	9,852	4,531	
2062	2,843	4,002	2,972	9,816	0	0	6,738	6,738	3,078	
2063	1,473	2,051	1,502	5,025	0	0	3,456	3,456	1,569	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	339,695	672,979	628,246	1,640,921	9,569	42,516	970,502	1,022,587	618,333	
NPV	112,046	236,815	221,489	570,350	7,219	32,077	337,625	376,921	193,429	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 1.513										

PROGRAM: Neighborhood Energy Saver				NES					
Total Resource Cost (TRC) Test									
	BENEFITS					COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL	AVOIDED	AVOIDED		UTILITY				
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	1,055	1,983	0	3,038	923	11,008	11,931	-8,893	
2026	2,094	4,065	0	6,159	923	11,008	11,931	-5,773	
2027	3,152	6,347	0	9,499	965	11,526	12,491	-2,992	
2028	4,362	8,586	0	12,948	965	11,526	12,491	457	
2029	5,284	10,933	12,993	29,209	965	11,526	12,491	16,718	
2030	6,072	13,374	15,488	34,933	965	11,526	12,491	22,442	
2031	6,811	15,930	17,978	40,720	965	11,526	12,492	28,228	
2032	7,533	18,597	18,450	44,579	965	11,527	12,492	32,087	
2033	8,789	21,386	20,868	51,044	965	11,527	12,492	38,551	
2034	10,209	24,304	27,198	61,711	965	11,527	12,493	49,219	
2035	10,540	24,483	26,978	62,001	0	0	0	62,001	
2036	10,978	24,573	26,665	62,216	0	0	0	62,216	
2037	11,104	24,640	26,332	62,076	0	0	0	62,076	
2038	11,384	24,892	26,199	62,475	0	0	0	62,475	
2039	11,750	25,141	26,063	62,954	0	0	0	62,954	
2040	11,616	25,394	25,933	62,942	0	0	0	62,942	
2041	11,386	25,644	25,799	62,828	0	0	0	62,828	
2042	11,824	25,900	25,672	63,396	0	0	0	63,396	
2043	11,980	26,154	25,543	63,676	0	0	0	63,676	
2044	12,131	26,404	25,410	63,946	0	0	0	63,946	
2045	12,057	25,607	24,284	61,949	0	0	0	61,949	
2046	12,000	24,864	23,238	60,101	0	0	0	60,101	
2047	11,899	23,999	22,106	58,004	0	0	0	58,004	
2048	11,775	23,076	20,951	55,802	0	0	0	55,802	
2049	11,627	22,091	19,771	53,489	0	0	0	53,489	
2050	11,477	21,062	18,580	51,119	0	0	0	51,119	
2051	11,300	19,967	17,363	48,630	0	0	0	48,630	
2052	11,095	18,805	16,118	46,018	0	0	0	46,018	
2053	10,861	17,572	14,845	43,278	0	0	0	43,278	
2054	10,596	16,265	13,544	40,405	0	0	0	40,405	
2055	9,923	15,069	12,370	37,362	0	0	0	37,362	
2056	9,188	13,802	11,169	34,160	0	0	0	34,160	
2057	8,330	12,379	9,875	30,585	0	0	0	30,585	
2058	7,399	10,876	8,553	26,827	0	0	0	26,827	
2059	6,388	9,290	7,202	22,880	0	0	0	22,880	
2060	5,295	7,618	5,822	18,735	0	0	0	18,735	
2061	4,115	5,856	4,412	14,383	0	0	0	14,383	
2062	2,843	4,002	2,972	9,816	0	0	0	9,816	
2063	1,473	2,051	1,502	5,025	0	0	0	5,025	
2064	0	0	0	0	0	0	0	0	
NOMINAL	339,695	672,979	628,246	1,640,921	9,569	114,227	123,796	1,517,124	
NPV	112,046	236,815	221,489	570,350	7,219	86,165	93,385	476,965	
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 6.108									

PROGRAM: Neighborhood Energy Saver				NES			
Participant Test							
	BENEFITS				COSTS		
	(1)	(2)	(3)	(4)	(5)	(6)	
	SAVINGS IN	INCENTIVE	OTHER	TOTAL	PARTICIPANT'S	TOTAL	NET
	PARTICIPANT'S	PAYMENTS	PARTICIPANT'S	TOTAL	COST	COSTS	BENEFITS
	BILL		BENEFITS	BENEFITS			
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	3,186	4,108	0	7,294	11,008	11,008	-3,714
2026	6,417	4,108	0	10,525	11,008	11,008	-483
2027	9,730	4,287	0	14,017	11,526	11,526	2,491
2028	13,137	4,287	0	17,424	11,526	11,526	5,898
2029	16,516	4,287	0	20,803	11,526	11,526	9,277
2030	19,850	4,287	0	24,138	11,526	11,526	12,612
2031	23,349	4,288	0	27,637	11,526	11,526	16,111
2032	27,043	4,288	0	31,331	11,527	11,527	19,805
2033	30,909	4,288	0	35,197	11,527	11,527	23,671
2034	34,657	4,288	0	38,945	11,527	11,527	27,418
2035	34,207	0	0	34,207	0	0	34,207
2036	34,155	0	0	34,155	0	0	34,155
2037	34,259	0	0	34,259	0	0	34,259
2038	34,007	0	0	34,007	0	0	34,007
2039	34,031	0	0	34,031	0	0	34,031
2040	33,854	0	0	33,854	0	0	33,854
2041	33,928	0	0	33,928	0	0	33,928
2042	34,259	0	0	34,259	0	0	34,259
2043	34,352	0	0	34,352	0	0	34,352
2044	34,430	0	0	34,430	0	0	34,430
2045	33,870	0	0	33,870	0	0	33,870
2046	33,367	0	0	33,367	0	0	33,367
2047	32,754	0	0	32,754	0	0	32,754
2048	32,091	0	0	32,091	0	0	32,091
2049	31,373	0	0	31,373	0	0	31,373
2050	30,659	0	0	30,659	0	0	30,659
2051	29,888	0	0	29,888	0	0	29,888
2052	29,056	0	0	29,056	0	0	29,056
2053	28,161	0	0	28,161	0	0	28,161
2054	27,201	0	0	27,201	0	0	27,201
2055	25,221	0	0	25,221	0	0	25,221
2056	23,122	0	0	23,122	0	0	23,122
2057	20,755	0	0	20,755	0	0	20,755
2058	18,251	0	0	18,251	0	0	18,251
2059	15,602	0	0	15,602	0	0	15,602
2060	12,805	0	0	12,805	0	0	12,805
2061	9,852	0	0	9,852	0	0	9,852
2062	6,738	0	0	6,738	0	0	6,738
2063	3,456	0	0	3,456	0	0	3,456
2064	0	0	0	0	0	0	0
NOMINAL	970,502	42,516	0	1,013,018	114,227	114,227	898,791
NPV	337,625	32,077	0	369,702	86,165	86,165	283,536
Utility Discount Rate = 6.83%							
Benefit Cost Ratio = 4.291							

PROGRAM: Low Income Weatherization Assistance					LIWAP				
Rate Impact Measure (RIM) Test									
	BENEFITS				COSTS				(9)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL	AVOIDED	AVOIDED		UTILITY				
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	82	130	0	213	162	267	248	677	-464
2026	163	267	0	431	162	267	500	929	-498
2027	243	412	0	655	163	268	749	1,181	-526
2028	337	558	0	895	163	268	1,015	1,446	-551
2029	409	711	845	1,966	163	268	1,278	1,710	256
2030	472	871	1,008	2,352	164	279	1,542	1,985	367
2031	531	1,039	1,172	2,741	164	279	1,818	2,261	480
2032	589	1,214	1,203	3,006	164	279	2,112	2,555	451
2033	684	1,382	1,347	3,413	155	263	2,405	2,823	590
2034	792	1,557	1,741	4,090	155	263	2,688	3,107	984
2035	828	1,583	1,743	4,154	0	0	2,686	2,686	1,468
2036	876	1,610	1,745	4,231	0	0	2,723	2,723	1,507
2037	900	1,636	1,747	4,282	0	0	2,776	2,776	1,506
2038	934	1,669	1,755	4,358	0	0	2,789	2,789	1,569
2039	976	1,703	1,764	4,443	0	0	2,826	2,826	1,617
2040	976	1,737	1,773	4,486	0	0	2,844	2,844	1,642
2041	968	1,772	1,781	4,522	0	0	2,884	2,884	1,637
2042	1,017	1,808	1,791	4,615	0	0	2,946	2,946	1,670
2043	1,042	1,845	1,800	4,687	0	0	2,988	2,988	1,699
2044	1,068	1,882	1,810	4,760	0	0	3,031	3,031	1,728
2045	1,098	1,907	1,807	4,811	0	0	3,083	3,083	1,728
2046	1,128	1,932	1,804	4,863	0	0	3,136	3,136	1,728
2047	1,158	1,956	1,801	4,915	0	0	3,187	3,187	1,727
2048	1,189	1,981	1,797	4,967	0	0	3,240	3,240	1,727
2049	1,220	2,005	1,794	5,019	0	0	3,293	3,293	1,726
2050	1,255	2,032	1,791	5,078	0	0	3,353	3,353	1,725
2051	1,291	2,058	1,789	5,138	0	0	3,414	3,414	1,723
2052	1,329	2,085	1,786	5,200	0	0	3,479	3,479	1,721
2053	1,377	2,137	1,805	5,319	0	0	3,569	3,569	1,749
2054	1,426	2,190	1,824	5,440	0	0	3,661	3,661	1,779
2055	1,330	2,021	1,659	5,009	0	0	3,381	3,381	1,629
2056	1,225	1,841	1,490	4,556	0	0	3,083	3,083	1,473
2057	1,111	1,651	1,317	4,079	0	0	2,767	2,767	1,312
2058	986	1,451	1,141	3,578	0	0	2,433	2,433	1,145
2059	852	1,239	961	3,051	0	0	2,080	2,080	971
2060	706	1,016	777	2,499	0	0	1,707	1,707	791
2061	549	781	588	1,918	0	0	1,314	1,314	605
2062	379	534	396	1,309	0	0	898	898	411
2063	196	274	200	670	0	0	461	461	209
2064	0	0	0	0	0	0	0	0	0
NOMINAL	33,690	56,476	51,552	141,719	1,618	2,701	94,390	98,709	43,010
NPV	9,961	17,486	16,199	43,646	1,226	2,041	29,574	32,841	10,805
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 1.329									

PROGRAM: Low Income Weatherization Assistance					LIWAP			
Total Resource Cost (TRC) Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	TOTAL	AVOIDED	AVOIDED		UTILITY			
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANTS	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	82	130	0	213	162	577	739	-526
2026	163	267	0	431	162	577	739	-308
2027	243	412	0	655	163	581	744	-89
2028	337	558	0	895	163	581	744	151
2029	409	711	845	1,966	163	581	744	1,221
2030	472	871	1,008	2,352	164	591	756	1,596
2031	531	1,039	1,172	2,741	164	591	756	1,986
2032	589	1,214	1,203	3,006	164	591	756	2,250
2033	684	1,382	1,347	3,413	155	529	685	2,728
2034	792	1,557	1,741	4,090	155	529	685	3,405
2035	828	1,583	1,743	4,154	0	0	0	4,154
2036	876	1,610	1,745	4,231	0	0	0	4,231
2037	900	1,636	1,747	4,282	0	0	0	4,282
2038	934	1,669	1,755	4,358	0	0	0	4,358
2039	976	1,703	1,764	4,443	0	0	0	4,443
2040	976	1,737	1,773	4,486	0	0	0	4,486
2041	968	1,772	1,781	4,522	0	0	0	4,522
2042	1,017	1,808	1,791	4,615	0	0	0	4,615
2043	1,042	1,845	1,800	4,687	0	0	0	4,687
2044	1,068	1,882	1,810	4,760	0	0	0	4,760
2045	1,098	1,907	1,807	4,811	0	0	0	4,811
2046	1,128	1,932	1,804	4,863	0	0	0	4,863
2047	1,158	1,956	1,801	4,915	0	0	0	4,915
2048	1,189	1,981	1,797	4,967	0	0	0	4,967
2049	1,220	2,005	1,794	5,019	0	0	0	5,019
2050	1,255	2,032	1,791	5,078	0	0	0	5,078
2051	1,291	2,058	1,789	5,138	0	0	0	5,138
2052	1,329	2,085	1,786	5,200	0	0	0	5,200
2053	1,377	2,137	1,805	5,319	0	0	0	5,319
2054	1,426	2,190	1,824	5,440	0	0	0	5,440
2055	1,330	2,021	1,659	5,009	0	0	0	5,009
2056	1,225	1,841	1,490	4,556	0	0	0	4,556
2057	1,111	1,651	1,317	4,079	0	0	0	4,079
2058	986	1,451	1,141	3,578	0	0	0	3,578
2059	852	1,239	961	3,051	0	0	0	3,051
2060	706	1,016	777	2,499	0	0	0	2,499
2061	549	781	588	1,918	0	0	0	1,918
2062	379	534	396	1,309	0	0	0	1,309
2063	196	274	200	670	0	0	0	670
2064	0	0	0	0	0	0	0	0
NOMINAL	33,690	56,476	51,552	141,719	1,618	5,728	7,346	134,372
NPV	9,961	17,486	16,199	43,646	1,226	4,346	5,573	38,073
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 7.832								

PROGRAM: Low Income Weatherization Assistance					LIWAP		
Participant Test							
	BENEFITS				COSTS		(7)
	(1)	(2)	(3)	(4)	(5)	(6)	
	SAVINGS IN		OTHER				
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET
	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	248	267	0	515	577	577	-61
2026	500	267	0	767	577	577	190
2027	749	268	0	1,017	581	581	437
2028	1,015	268	0	1,283	581	581	702
2029	1,278	268	0	1,546	581	581	966
2030	1,542	279	0	1,821	591	591	1,229
2031	1,818	279	0	2,097	591	591	1,506
2032	2,112	279	0	2,391	591	591	1,800
2033	2,405	263	0	2,668	529	529	2,139
2034	2,688	263	0	2,951	529	529	2,422
2035	2,686	0	0	2,686	0	0	2,686
2036	2,723	0	0	2,723	0	0	2,723
2037	2,776	0	0	2,776	0	0	2,776
2038	2,789	0	0	2,789	0	0	2,789
2039	2,826	0	0	2,826	0	0	2,826
2040	2,844	0	0	2,844	0	0	2,844
2041	2,884	0	0	2,884	0	0	2,884
2042	2,946	0	0	2,946	0	0	2,946
2043	2,988	0	0	2,988	0	0	2,988
2044	3,031	0	0	3,031	0	0	3,031
2045	3,083	0	0	3,083	0	0	3,083
2046	3,136	0	0	3,136	0	0	3,136
2047	3,187	0	0	3,187	0	0	3,187
2048	3,240	0	0	3,240	0	0	3,240
2049	3,293	0	0	3,293	0	0	3,293
2050	3,353	0	0	3,353	0	0	3,353
2051	3,414	0	0	3,414	0	0	3,414
2052	3,479	0	0	3,479	0	0	3,479
2053	3,569	0	0	3,569	0	0	3,569
2054	3,661	0	0	3,661	0	0	3,661
2055	3,381	0	0	3,381	0	0	3,381
2056	3,083	0	0	3,083	0	0	3,083
2057	2,767	0	0	2,767	0	0	2,767
2058	2,433	0	0	2,433	0	0	2,433
2059	2,080	0	0	2,080	0	0	2,080
2060	1,707	0	0	1,707	0	0	1,707
2061	1,314	0	0	1,314	0	0	1,314
2062	898	0	0	898	0	0	898
2063	461	0	0	461	0	0	461
2064	0	0	0	0	0	0	0
NOMINAL	94,390	2,701	0	97,091	5,728	5,728	91,363
NPV	29,574	2,041	0	31,615	4,346	4,346	27,268
Utility Discount Rate = 6.83%							
Benefit Cost Ratio = 7.274							

PROGRAM: Residential Load Management					EWH				
Rate Impact Measure (RIM) Test									
YEAR	BENEFITS				COSTS				NET BENEFITS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL FUEL & O&M SAVINGS	AVOIDED T&D CAP. COSTS	AVOIDED GEN. CAP. COSTS	TOTAL BENEFITS	UTILITY PROGRAM COSTS	INCENTIVE PAYMENTS	REVENUE LOSSES	TOTAL COSTS	
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	0	0	0	0	739	182	0	922	-922
2026	0	0	0	0	1,023	365	0	1,388	-1,388
2027	0	0	0	0	1,321	547	0	1,868	-1,868
2028	0	0	0	0	1,633	729	0	2,362	-2,362
2029	0	0	5,338	5,338	1,960	911	0	2,871	2,467
2030	0	0	6,398	6,398	2,302	1,094	0	3,396	3,003
2031	0	0	7,456	7,456	2,660	1,276	0	3,936	3,520
2032	0	0	7,678	7,678	3,034	1,458	0	4,493	3,186
2033	0	0	8,708	8,708	3,426	1,641	0	5,066	3,642
2034	0	0	11,375	11,375	3,835	1,823	0	5,658	5,717
2035	0	0	11,480	11,480	3,316	1,823	0	5,139	6,341
2036	0	0	11,588	11,588	3,399	1,823	0	5,222	6,366
2037	0	0	11,697	11,697	3,484	1,823	0	5,307	6,390
2038	0	0	11,809	11,809	3,571	1,823	0	5,394	6,415
2039	0	0	11,922	11,922	3,661	1,823	0	5,483	6,439
2040	0	0	12,038	12,038	3,752	1,823	0	5,575	6,463
2041	0	0	12,156	12,156	3,846	1,823	0	5,669	6,487
2042	0	0	12,276	12,276	3,942	1,823	0	5,765	6,511
2043	0	0	12,398	12,398	4,041	1,823	0	5,863	6,534
2044	0	0	12,522	12,522	4,142	1,823	0	5,964	6,558
2045	0	0	12,649	12,649	4,245	1,823	0	6,068	6,581
2046	0	0	12,778	12,778	4,351	1,823	0	6,174	6,604
2047	0	0	12,909	12,909	4,460	1,823	0	6,283	6,626
2048	0	0	13,043	13,043	4,572	1,823	0	6,394	6,649
2049	0	0	13,179	13,179	4,686	1,823	0	6,509	6,671
2050	0	0	11,985	11,985	4,323	1,641	0	5,963	6,022
2051	0	0	10,765	10,765	3,938	1,458	0	5,397	5,368
2052	0	0	9,518	9,518	3,532	1,276	0	4,808	4,709
2053	0	0	8,243	8,243	3,103	1,094	0	4,197	4,046
2054	0	0	6,941	6,941	2,651	911	0	3,562	3,379
2055	0	0	5,611	5,611	2,174	729	0	2,903	2,708
2056	0	0	4,252	4,252	1,671	547	0	2,218	2,034
2057	0	0	2,864	2,864	1,142	365	0	1,506	1,358
2058	0	0	1,447	1,447	585	182	0	767	680
2059	0	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0	0
NOMINAL	0	0	293,024	293,024	104,521	45,571	0	150,093	142,931
NPV	0	0	101,654	101,654	38,456	17,428	0	55,884	45,770
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 1.819									

PROGRAM: Residential Load Management					EWH			
Total Resource Cost (TRC) Test								
BENEFITS					COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	TOTAL	AVOIDED	AVOIDED		UTILITY			
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	0	0	0	739	0	739	-739
2026	0	0	0	0	1,023	0	1,023	-1,023
2027	0	0	0	0	1,321	0	1,321	-1,321
2028	0	0	0	0	1,633	0	1,633	-1,633
2029	0	0	5,338	5,338	1,960	0	1,960	3,378
2030	0	0	6,398	6,398	2,302	0	2,302	4,096
2031	0	0	7,456	7,456	2,660	0	2,660	4,796
2032	0	0	7,678	7,678	3,034	0	3,034	4,644
2033	0	0	8,708	8,708	3,426	0	3,426	5,282
2034	0	0	11,375	11,375	3,835	0	3,835	7,539
2035	0	0	11,480	11,480	3,316	0	3,316	8,164
2036	0	0	11,588	11,588	3,399	0	3,399	8,188
2037	0	0	11,697	11,697	3,484	0	3,484	8,213
2038	0	0	11,809	11,809	3,571	0	3,571	8,237
2039	0	0	11,922	11,922	3,661	0	3,661	8,262
2040	0	0	12,038	12,038	3,752	0	3,752	8,286
2041	0	0	12,156	12,156	3,846	0	3,846	8,310
2042	0	0	12,276	12,276	3,942	0	3,942	8,334
2043	0	0	12,398	12,398	4,041	0	4,041	8,357
2044	0	0	12,522	12,522	4,142	0	4,142	8,380
2045	0	0	12,649	12,649	4,245	0	4,245	8,404
2046	0	0	12,778	12,778	4,351	0	4,351	8,427
2047	0	0	12,909	12,909	4,460	0	4,460	8,449
2048	0	0	13,043	13,043	4,572	0	4,572	8,471
2049	0	0	13,179	13,179	4,686	0	4,686	8,493
2050	0	0	11,985	11,985	4,323	0	4,323	7,663
2051	0	0	10,765	10,765	3,938	0	3,938	6,826
2052	0	0	9,518	9,518	3,532	0	3,532	5,985
2053	0	0	8,243	8,243	3,103	0	3,103	5,140
2054	0	0	6,941	6,941	2,651	0	2,651	4,290
2055	0	0	5,611	5,611	2,174	0	2,174	3,437
2056	0	0	4,252	4,252	1,671	0	1,671	2,581
2057	0	0	2,864	2,864	1,142	0	1,142	1,723
2058	0	0	1,447	1,447	585	0	585	862
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0
NOMINAL	0	0	293,024	293,024	104,521	0	104,521	188,503
NPV	0	0	101,654	101,654	38,456	0	38,456	63,198
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 2.643								

PROGRAM: Residential Load Management					EWH		
Participant Test							
	BENEFITS				COSTS		(7)
	(1)	(2)	(3)	(4)	(5)	(6)	
	SAVINGS IN PARTICIPANT'S BILL	INCENTIVE PAYMENTS	OTHER PARTICIPANT'S BENEFITS	TOTAL BENEFITS	PARTICIPANT'S COST	TOTAL COSTS	NET BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	182	0	182	0	0	182
2026	0	365	0	365	0	0	365
2027	0	547	0	547	0	0	547
2028	0	729	0	729	0	0	729
2029	0	911	0	911	0	0	911
2030	0	1,094	0	1,094	0	0	1,094
2031	0	1,276	0	1,276	0	0	1,276
2032	0	1,458	0	1,458	0	0	1,458
2033	0	1,641	0	1,641	0	0	1,641
2034	0	1,823	0	1,823	0	0	1,823
2035	0	1,823	0	1,823	0	0	1,823
2036	0	1,823	0	1,823	0	0	1,823
2037	0	1,823	0	1,823	0	0	1,823
2038	0	1,823	0	1,823	0	0	1,823
2039	0	1,823	0	1,823	0	0	1,823
2040	0	1,823	0	1,823	0	0	1,823
2041	0	1,823	0	1,823	0	0	1,823
2042	0	1,823	0	1,823	0	0	1,823
2043	0	1,823	0	1,823	0	0	1,823
2044	0	1,823	0	1,823	0	0	1,823
2045	0	1,823	0	1,823	0	0	1,823
2046	0	1,823	0	1,823	0	0	1,823
2047	0	1,823	0	1,823	0	0	1,823
2048	0	1,823	0	1,823	0	0	1,823
2049	0	1,823	0	1,823	0	0	1,823
2050	0	1,641	0	1,641	0	0	1,641
2051	0	1,458	0	1,458	0	0	1,458
2052	0	1,276	0	1,276	0	0	1,276
2053	0	1,094	0	1,094	0	0	1,094
2054	0	911	0	911	0	0	911
2055	0	729	0	729	0	0	729
2056	0	547	0	547	0	0	547
2057	0	365	0	365	0	0	365
2058	0	182	0	182	0	0	182
2059	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0
NOMINAL	0	45,571	0	45,571	0	0	45,571
NPV	0	17,428	0	17,428	0	0	17,428
Utility Discount Rate = 6.83%							
Benefit Cost Ratio = 9999							

B. NON-RESIDENTIAL CONSERVATION PROGRAMS

PROGRAM: Smart \$aver Business				BB						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	212	522	0	734	1,234	696	569	2,500	-1,766	
2026	438	1,120	0	1,558	1,338	724	1,188	3,250	-1,692	
2027	678	1,803	0	2,481	1,455	754	1,847	4,056	-1,575	
2028	993	2,583	0	3,576	1,585	793	2,619	4,998	-1,422	
2029	1,268	3,491	4,145	8,904	1,729	875	3,433	6,037	2,867	
2030	1,492	4,302	4,977	10,770	1,604	821	4,169	6,594	4,176	
2031	1,668	5,020	5,660	12,348	1,393	768	4,830	6,991	5,357	
2032	1,818	5,667	5,617	13,102	1,220	720	5,459	7,399	5,703	
2033	2,073	6,259	6,101	14,432	1,078	675	6,040	7,792	6,640	
2034	2,341	6,828	7,634	16,803	958	669	6,503	8,130	8,673	
2035	2,390	6,563	7,225	16,179	0	0	6,259	6,259	9,920	
2036	2,457	6,239	6,763	15,459	0	0	6,117	6,117	9,341	
2037	2,442	5,846	6,241	14,530	0	0	5,998	5,998	8,532	
2038	2,425	5,375	5,652	13,453	0	0	5,685	5,685	7,768	
2039	2,405	4,817	4,989	12,211	0	0	5,407	5,407	6,803	
2040	2,153	4,150	4,234	10,537	0	0	4,806	4,806	5,732	
2041	1,893	3,559	3,577	9,029	0	0	4,280	4,280	4,749	
2042	1,731	3,013	2,983	7,727	0	0	3,781	3,781	3,947	
2043	1,504	2,487	2,427	6,418	0	0	3,218	3,218	3,200	
2044	1,251	1,963	1,888	5,102	0	0	2,622	2,622	2,480	
2045	1,017	1,591	1,508	4,116	0	0	2,091	2,091	2,024	
2046	790	1,237	1,155	3,182	0	0	1,593	1,593	1,589	
2047	567	899	827	2,293	0	0	1,122	1,122	1,171	
2048	339	559	507	1,405	0	0	656	656	749	
2049	113	230	205	547	0	0	211	211	336	
2050	103	215	189	507	0	0	189	189	318	
2051	90	197	172	459	0	0	163	163	296	
2052	76	177	152	404	0	0	134	134	270	
2053	62	157	133	352	0	0	107	107	244	
2054	47	138	115	300	0	0	81	81	219	
2055	32	118	97	247	0	0	54	54	192	
2056	17	98	79	194	0	0	29	29	166	
2057	2	78	62	142	0	0	3	3	139	
2058	2	80	63	144	0	0	3	3	141	
2059	1	42	32	75	0	0	2	2	73	
2060	1	42	32	75	0	0	2	2	74	
2061	1	43	32	76	0	0	1	1	74	
2062	1	43	32	76	0	0	1	1	75	
2063	0	44	32	76	0	0	0	0	76	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	36,891	87,592	85,539	210,022	13,594	7,494	91,270	112,359	97,663	
NPV	17,970	45,087	42,394	105,451	10,411	5,683	46,134	62,228	43,223	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 1.695										

PROGRAM: Smart Saver Business				BB					
Total Resource Cost (TRC) Test									
	BENEFITS				COSTS			(8)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	TOTAL	AVOIDED	AVOIDED		UTILITY				
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	212	522	0	734	1,234	4,243	5,477	-4,743	
2026	438	1,120	0	1,558	1,338	4,536	5,874	-4,316	
2027	678	1,803	0	2,481	1,455	4,862	6,317	-3,836	
2028	993	2,583	0	3,576	1,585	5,237	6,823	-3,247	
2029	1,268	3,491	4,145	8,904	1,729	5,713	7,442	1,462	
2030	1,492	4,302	4,977	10,770	1,604	5,869	7,473	3,298	
2031	1,668	5,020	5,660	12,348	1,393	5,381	6,774	5,574	
2032	1,818	5,667	5,617	13,102	1,220	4,939	6,159	6,943	
2033	2,073	6,259	6,101	14,432	1,078	4,538	5,615	8,817	
2034	2,341	6,828	7,634	16,803	958	4,225	5,183	11,620	
2035	2,390	6,563	7,225	16,179	0	0	0	16,179	
2036	2,457	6,239	6,763	15,459	0	0	0	15,459	
2037	2,442	5,846	6,241	14,530	0	0	0	14,530	
2038	2,425	5,375	5,652	13,453	0	0	0	13,453	
2039	2,405	4,817	4,989	12,211	0	0	0	12,211	
2040	2,153	4,150	4,234	10,537	0	0	0	10,537	
2041	1,893	3,559	3,577	9,029	0	0	0	9,029	
2042	1,731	3,013	2,983	7,727	0	0	0	7,727	
2043	1,504	2,487	2,427	6,418	0	0	0	6,418	
2044	1,251	1,963	1,888	5,102	0	0	0	5,102	
2045	1,017	1,591	1,508	4,116	0	0	0	4,116	
2046	790	1,237	1,155	3,182	0	0	0	3,182	
2047	567	899	827	2,293	0	0	0	2,293	
2048	339	559	507	1,405	0	0	0	1,405	
2049	113	230	205	547	0	0	0	547	
2050	103	215	189	507	0	0	0	507	
2051	90	197	172	459	0	0	0	459	
2052	76	177	152	404	0	0	0	404	
2053	62	157	133	352	0	0	0	352	
2054	47	138	115	300	0	0	0	300	
2055	32	118	97	247	0	0	0	247	
2056	17	98	79	194	0	0	0	194	
2057	2	78	62	142	0	0	0	142	
2058	2	80	63	144	0	0	0	144	
2059	1	42	32	75	0	0	0	75	
2060	1	42	32	75	0	0	0	75	
2061	1	43	32	76	0	0	0	76	
2062	1	43	32	76	0	0	0	76	
2063	0	44	32	76	0	0	0	76	
2064	0	0	0	0	0	0	0	0	
NOMINAL	36,891	87,592	85,539	210,022	13,594	49,541	63,136	146,886	
NPV	17,970	45,087	42,394	105,451	10,411	37,384	47,795	57,656	
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 2.206									

PROGRAM: Smart \$aver Business				BB			
Participant Test							
YEAR	BENEFITS				COSTS		NET BENEFITS
	(1)	(2)	(3)	(4)	(5)	(6)	
	SAVINGS IN PARTICIPANT'S BILL	INCENTIVE PAYMENTS	OTHER PARTICIPANT'S BENEFITS	TOTAL BENEFITS	PARTICIPANT'S COST	TOTAL COSTS	
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	569	696	0	1,266	4,243	4,243	-2,977
2026	1,188	724	0	1,912	4,536	4,536	-2,624
2027	1,847	754	0	2,601	4,862	4,862	-2,261
2028	2,619	793	0	3,412	5,237	5,237	-1,825
2029	3,433	875	0	4,307	5,713	5,713	-1,405
2030	4,169	821	0	4,990	5,869	5,869	-879
2031	4,830	768	0	5,599	5,381	5,381	217
2032	5,459	720	0	6,178	4,939	4,939	1,240
2033	6,040	675	0	6,714	4,538	4,538	2,177
2034	6,503	669	0	7,171	4,225	4,225	2,947
2035	6,259	0	0	6,259	0	0	6,259
2036	6,117	0	0	6,117	0	0	6,117
2037	5,998	0	0	5,998	0	0	5,998
2038	5,685	0	0	5,685	0	0	5,685
2039	5,407	0	0	5,407	0	0	5,407
2040	4,806	0	0	4,806	0	0	4,806
2041	4,280	0	0	4,280	0	0	4,280
2042	3,781	0	0	3,781	0	0	3,781
2043	3,218	0	0	3,218	0	0	3,218
2044	2,622	0	0	2,622	0	0	2,622
2045	2,091	0	0	2,091	0	0	2,091
2046	1,593	0	0	1,593	0	0	1,593
2047	1,122	0	0	1,122	0	0	1,122
2048	656	0	0	656	0	0	656
2049	211	0	0	211	0	0	211
2050	189	0	0	189	0	0	189
2051	163	0	0	163	0	0	163
2052	134	0	0	134	0	0	134
2053	107	0	0	107	0	0	107
2054	81	0	0	81	0	0	81
2055	54	0	0	54	0	0	54
2056	29	0	0	29	0	0	29
2057	3	0	0	3	0	0	3
2058	3	0	0	3	0	0	3
2059	2	0	0	2	0	0	2
2060	2	0	0	2	0	0	2
2061	1	0	0	1	0	0	1
2062	1	0	0	1	0	0	1
2063	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0
NOMINAL	91,270	7,494	0	98,765	49,541	49,541	49,223
NPV	46,134	5,683	0	51,817	37,384	37,384	14,433
Utility Discount Rate = 6.83%							
Benefit Cost Ratio = 1.386							

PROGRAM:	Interruptible Service DR			IS						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	0	0	0	0	37	150	0	187	-187	
2026	0	0	0	0	46	301	0	346	-346	
2027	0	0	0	0	55	451	0	506	-506	
2028	0	0	0	0	65	601	0	667	-667	
2029	0	0	1,115	1,115	76	752	0	827	288	
2030	0	0	1,337	1,337	87	902	0	989	348	
2031	0	0	1,558	1,558	98	1,053	0	1,151	407	
2032	0	0	1,604	1,604	110	1,203	0	1,313	291	
2033	0	0	1,819	1,819	122	1,353	0	1,476	344	
2034	0	0	2,376	2,376	135	1,504	0	1,639	737	
2035	0	0	2,398	2,398	102	1,504	0	1,606	793	
2036	0	0	2,421	2,421	105	1,504	0	1,608	812	
2037	0	0	2,444	2,444	107	1,504	0	1,611	833	
2038	0	0	2,467	2,467	110	1,504	0	1,614	853	
2039	0	0	2,491	2,491	113	1,504	0	1,616	874	
2040	0	0	2,515	2,515	116	1,504	0	1,619	896	
2041	0	0	2,539	2,539	118	1,504	0	1,622	917	
2042	0	0	2,564	2,564	121	1,504	0	1,625	939	
2043	0	0	2,590	2,590	124	1,504	0	1,628	962	
2044	0	0	2,616	2,616	128	1,504	0	1,631	985	
2045	0	0	2,642	2,642	131	1,504	0	1,634	1,008	
2046	0	0	2,669	2,669	134	1,504	0	1,638	1,032	
2047	0	0	2,697	2,697	137	1,504	0	1,641	1,056	
2048	0	0	2,725	2,725	141	1,504	0	1,644	1,080	
2049	0	0	2,753	2,753	144	1,504	0	1,648	1,105	
2050	0	0	2,504	2,504	133	1,353	0	1,486	1,017	
2051	0	0	2,249	2,249	121	1,203	0	1,324	925	
2052	0	0	1,988	1,988	109	1,053	0	1,161	827	
2053	0	0	1,722	1,722	96	902	0	998	724	
2054	0	0	1,450	1,450	82	752	0	833	617	
2055	0	0	1,172	1,172	67	601	0	668	504	
2056	0	0	888	888	51	451	0	503	386	
2057	0	0	598	598	35	301	0	336	263	
2058	0	0	302	302	18	150	0	168	134	
2059	0	0	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	0	0	61,214	61,214	3,374	37,590	0	40,964	20,250	
NPV	0	0	21,236	21,236	1,300	14,376	0	15,676	5,560	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 1.355										

PROGRAM:	Interruptible Service DR			IS					
Total Resource Cost (TRC) Test									
	BENEFITS				COSTS				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	TOTAL	AVOIDED	AVOIDED		UTILITY				
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	0	0	0	0	37	0	37	-37	
2026	0	0	0	0	46	0	46	-46	
2027	0	0	0	0	55	0	55	-55	
2028	0	0	0	0	65	0	65	-65	
2029	0	0	1,115	1,115	76	0	76	1,039	
2030	0	0	1,337	1,337	87	0	87	1,250	
2031	0	0	1,558	1,558	98	0	98	1,460	
2032	0	0	1,604	1,604	110	0	110	1,494	
2033	0	0	1,819	1,819	122	0	122	1,697	
2034	0	0	2,376	2,376	135	0	135	2,241	
2035	0	0	2,398	2,398	102	0	102	2,296	
2036	0	0	2,421	2,421	105	0	105	2,316	
2037	0	0	2,444	2,444	107	0	107	2,336	
2038	0	0	2,467	2,467	110	0	110	2,357	
2039	0	0	2,491	2,491	113	0	113	2,378	
2040	0	0	2,515	2,515	116	0	116	2,399	
2041	0	0	2,539	2,539	118	0	118	2,421	
2042	0	0	2,564	2,564	121	0	121	2,443	
2043	0	0	2,590	2,590	124	0	124	2,466	
2044	0	0	2,616	2,616	128	0	128	2,488	
2045	0	0	2,642	2,642	131	0	131	2,512	
2046	0	0	2,669	2,669	134	0	134	2,535	
2047	0	0	2,697	2,697	137	0	137	2,559	
2048	0	0	2,725	2,725	141	0	141	2,584	
2049	0	0	2,753	2,753	144	0	144	2,609	
2050	0	0	2,504	2,504	133	0	133	2,371	
2051	0	0	2,249	2,249	121	0	121	2,128	
2052	0	0	1,988	1,988	109	0	109	1,880	
2053	0	0	1,722	1,722	96	0	96	1,627	
2054	0	0	1,450	1,450	82	0	82	1,368	
2055	0	0	1,172	1,172	67	0	67	1,105	
2056	0	0	888	888	51	0	51	837	
2057	0	0	598	598	35	0	35	563	
2058	0	0	302	302	18	0	18	284	
2059	0	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	0	
NOMINAL	0	0	61,214	61,214	3,374	0	3,374	57,840	
NPV	0	0	21,236	21,236	1,300	0	1,300	19,936	
Utility Discount Rate = 6.83%									
Benefit Cost Ratio = 16.332									

PROGRAM:	Interruptible Service DR			IS				
Participant Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	SAVINGS IN		OTHER					
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET	
	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	150	0	150	0	0	150	
2026	0	301	0	301	0	0	301	
2027	0	451	0	451	0	0	451	
2028	0	601	0	601	0	0	601	
2029	0	752	0	752	0	0	752	
2030	0	902	0	902	0	0	902	
2031	0	1,053	0	1,053	0	0	1,053	
2032	0	1,203	0	1,203	0	0	1,203	
2033	0	1,353	0	1,353	0	0	1,353	
2034	0	1,504	0	1,504	0	0	1,504	
2035	0	1,504	0	1,504	0	0	1,504	
2036	0	1,504	0	1,504	0	0	1,504	
2037	0	1,504	0	1,504	0	0	1,504	
2038	0	1,504	0	1,504	0	0	1,504	
2039	0	1,504	0	1,504	0	0	1,504	
2040	0	1,504	0	1,504	0	0	1,504	
2041	0	1,504	0	1,504	0	0	1,504	
2042	0	1,504	0	1,504	0	0	1,504	
2043	0	1,504	0	1,504	0	0	1,504	
2044	0	1,504	0	1,504	0	0	1,504	
2045	0	1,504	0	1,504	0	0	1,504	
2046	0	1,504	0	1,504	0	0	1,504	
2047	0	1,504	0	1,504	0	0	1,504	
2048	0	1,504	0	1,504	0	0	1,504	
2049	0	1,504	0	1,504	0	0	1,504	
2050	0	1,353	0	1,353	0	0	1,353	
2051	0	1,203	0	1,203	0	0	1,203	
2052	0	1,053	0	1,053	0	0	1,053	
2053	0	902	0	902	0	0	902	
2054	0	752	0	752	0	0	752	
2055	0	601	0	601	0	0	601	
2056	0	451	0	451	0	0	451	
2057	0	301	0	301	0	0	301	
2058	0	150	0	150	0	0	150	
2059	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	
NOMINAL	0	37,590	0	37,590	0	0	37,590	
NPV	0	14,376	0	14,376	0	0	14,376	
Utility Discount Rate = 6.83%								
Benefit Cost Ratio: 9999								

PROGRAM:	Curtable Service DR			CS						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	0	0	0	3	63	0	67	-67	
2026	0	0	0	0	2	63	0	66	-66	
2027	0	0	0	0	6	127	0	132	-132	
2028	0	0	0	0	5	127	0	131	-131	
2029	0	0	335	335	8	190	0	198	136	
2030	0	0	334	334	7	190	0	197	137	
2031	0	0	334	334	7	190	0	197	136	
2032	0	0	301	301	8	190	0	198	103	
2033	0	0	303	303	8	190	0	198	105	
2034	0	0	356	356	8	190	0	198	158	
2035	0	0	360	360	8	190	0	198	162	
2036	0	0	363	363	8	190	0	198	165	
2037	0	0	367	367	9	190	0	199	168	
2038	0	0	370	370	9	190	0	199	171	
2039	0	0	374	374	9	190	0	199	175	
2040	0	0	377	377	9	190	0	199	178	
2041	0	0	381	381	9	190	0	200	181	
2042	0	0	385	385	10	190	0	200	185	
2043	0	0	388	388	10	190	0	200	189	
2044	0	0	392	392	10	190	0	200	192	
2045	0	0	396	396	10	190	0	200	196	
2046	0	0	400	400	11	190	0	201	200	
2047	0	0	405	405	11	190	0	201	204	
2048	0	0	409	409	11	190	0	201	207	
2049	0	0	413	413	11	190	0	202	211	
2050	0	0	278	278	8	127	0	135	144	
2051	0	0	281	281	8	127	0	135	146	
2052	0	0	142	142	4	63	0	67	75	
2053	0	0	144	144	4	63	0	68	76	
2054	0	0	0	0	0	0	0	0	0	
2055	0	0	0	0	0	0	0	0	0	
2056	0	0	0	0	0	0	0	0	0	
2057	0	0	0	0	0	0	0	0	0	
2058	0	0	0	0	0	0	0	0	0	
2059	0	0	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	0	0	8,587	8,587	231	4,752	0	4,983	3,604	
NPV	0	0	3,371	3,371	96	2,118	0	2,214	1,157	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 1.522										

PROGRAM:	Curtailed Service DR			CS				
Total Resource Cost (TRC) Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	TOTAL	AVOIDED	AVOIDED		UTILITY			
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	0	0	0	3	0	3	-3
2026	0	0	0	0	2	0	2	-2
2027	0	0	0	0	6	0	6	-6
2028	0	0	0	0	5	0	5	-5
2029	0	0	335	335	8	0	8	326
2030	0	0	334	334	7	0	7	327
2031	0	0	334	334	7	0	7	326
2032	0	0	301	301	8	0	8	293
2033	0	0	303	303	8	0	8	295
2034	0	0	356	356	8	0	8	349
2035	0	0	360	360	8	0	8	352
2036	0	0	363	363	8	0	8	355
2037	0	0	367	367	9	0	9	358
2038	0	0	370	370	9	0	9	361
2039	0	0	374	374	9	0	9	365
2040	0	0	377	377	9	0	9	368
2041	0	0	381	381	9	0	9	371
2042	0	0	385	385	10	0	10	375
2043	0	0	388	388	10	0	10	379
2044	0	0	392	392	10	0	10	382
2045	0	0	396	396	10	0	10	386
2046	0	0	400	400	11	0	11	390
2047	0	0	405	405	11	0	11	394
2048	0	0	409	409	11	0	11	398
2049	0	0	413	413	11	0	11	402
2050	0	0	278	278	8	0	8	270
2051	0	0	281	281	8	0	8	273
2052	0	0	142	142	4	0	4	138
2053	0	0	144	144	4	0	4	139
2054	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0
NOMINAL	0	0	8,587	8,587	231	0	231	8,356
NPV	0	0	3,371	3,371	96	0	96	3,275
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 35.120								

PROGRAM:	Curtable Service DR			CS				
Participant Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	SAVINGS IN		OTHER					
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET	
	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	0	63	0	63	0	0	63	
2026	0	63	0	63	0	0	63	
2027	0	127	0	127	0	0	127	
2028	0	127	0	127	0	0	127	
2029	0	190	0	190	0	0	190	
2030	0	190	0	190	0	0	190	
2031	0	190	0	190	0	0	190	
2032	0	190	0	190	0	0	190	
2033	0	190	0	190	0	0	190	
2034	0	190	0	190	0	0	190	
2035	0	190	0	190	0	0	190	
2036	0	190	0	190	0	0	190	
2037	0	190	0	190	0	0	190	
2038	0	190	0	190	0	0	190	
2039	0	190	0	190	0	0	190	
2040	0	190	0	190	0	0	190	
2041	0	190	0	190	0	0	190	
2042	0	190	0	190	0	0	190	
2043	0	190	0	190	0	0	190	
2044	0	190	0	190	0	0	190	
2045	0	190	0	190	0	0	190	
2046	0	190	0	190	0	0	190	
2047	0	190	0	190	0	0	190	
2048	0	190	0	190	0	0	190	
2049	0	190	0	190	0	0	190	
2050	0	127	0	127	0	0	127	
2051	0	127	0	127	0	0	127	
2052	0	63	0	63	0	0	63	
2053	0	63	0	63	0	0	63	
2054	0	0	0	0	0	0	0	
2055	0	0	0	0	0	0	0	
2056	0	0	0	0	0	0	0	
2057	0	0	0	0	0	0	0	
2058	0	0	0	0	0	0	0	
2059	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	
NOMINAL	0	4,752	0	4,752	0	0	4,752	
NPV	0	2,118	0	2,118	0	0	2,118	
Utility Discount Rate = 6.83%								
Benefit Cost Ratio: 9999								

PROGRAM:	Standby Generation DR			SBG						
Rate Impact Measure (RIM) Test										
	BENEFITS				COSTS					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	TOTAL	AVOIDED	AVOIDED		UTILITY					
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	INCENTIVE	REVENUE	TOTAL	NET	
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	PAYMENTS	LOSSES	COSTS	BENEFITS	
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
2025	0	0	0	0	39	169	0	208	-208	
2026	0	0	0	0	54	338	0	392	-392	
2027	0	0	0	0	90	592	0	682	-682	
2028	0	0	0	0	114	846	0	960	-960	
2029	0	0	2,899	2,899	139	1,099	0	1,239	1,661	
2030	0	0	3,676	3,676	177	1,395	0	1,572	2,104	
2031	0	0	4,450	4,450	209	1,691	0	1,900	2,551	
2032	0	0	4,812	4,812	254	2,029	0	2,283	2,529	
2033	0	0	5,660	5,660	293	2,367	0	2,661	2,999	
2034	0	0	7,604	7,604	334	2,706	0	3,040	4,564	
2035	0	0	7,674	7,674	277	2,706	0	2,983	4,692	
2036	0	0	7,746	7,746	284	2,706	0	2,990	4,757	
2037	0	0	7,819	7,819	291	2,706	0	2,997	4,823	
2038	0	0	7,894	7,894	298	2,706	0	3,004	4,890	
2039	0	0	7,970	7,970	306	2,706	0	3,011	4,958	
2040	0	0	8,047	8,047	313	2,706	0	3,019	5,028	
2041	0	0	8,126	8,126	321	2,706	0	3,027	5,099	
2042	0	0	8,206	8,206	329	2,706	0	3,035	5,171	
2043	0	0	8,288	8,288	338	2,706	0	3,043	5,245	
2044	0	0	8,371	8,371	346	2,706	0	3,052	5,319	
2045	0	0	8,456	8,456	355	2,706	0	3,060	5,395	
2046	0	0	8,542	8,542	364	2,706	0	3,069	5,473	
2047	0	0	8,630	8,630	373	2,706	0	3,078	5,551	
2048	0	0	8,719	8,719	382	2,706	0	3,088	5,632	
2049	0	0	8,810	8,810	391	2,706	0	3,097	5,713	
2050	0	0	8,346	8,346	376	2,537	0	2,913	5,433	
2051	0	0	7,871	7,871	360	2,367	0	2,727	5,144	
2052	0	0	7,101	7,101	329	2,114	0	2,443	4,658	
2053	0	0	6,314	6,314	297	1,860	0	2,157	4,157	
2054	0	0	5,510	5,510	263	1,606	0	1,869	3,641	
2055	0	0	4,542	4,542	220	1,311	0	1,530	3,012	
2056	0	0	3,553	3,553	175	1,015	0	1,189	2,364	
2057	0	0	2,394	2,394	119	676	0	796	1,598	
2058	0	0	1,209	1,209	61	338	0	399	810	
2059	0	0	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	0	0	
2061	0	0	0	0	0	0	0	0	0	
2062	0	0	0	0	0	0	0	0	0	
2063	0	0	0	0	0	0	0	0	0	
2064	0	0	0	0	0	0	0	0	0	
NOMINAL	0	0	199,240	199,240	8,873	67,642	0	76,515	122,725	
NPV	0	0	67,202	67,202	3,139	24,819	0	27,958	39,244	
Utility Discount Rate = 6.83%										
Benefit Cost Ratio = 2.404										

PROGRAM:	Standby Generation DR			SBG				
Total Resource Cost (TRC) Test								
	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	TOTAL	AVOIDED	AVOIDED		UTILITY			
	FUEL & O&M	T&D CAP.	GEN. CAP.	TOTAL	PROGRAM	PARTICIPANT'S	TOTAL	NET
	SAVINGS	COSTS	COSTS	BENEFITS	COSTS	COST	COSTS	BENEFITS
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2025	0	0	0	0	39	0	39	-39
2026	0	0	0	0	54	0	54	-54
2027	0	0	0	0	90	0	90	-90
2028	0	0	0	0	114	0	114	-114
2029	0	0	2,899	2,899	139	0	139	2,760
2030	0	0	3,676	3,676	177	0	177	3,499
2031	0	0	4,450	4,450	209	0	209	4,242
2032	0	0	4,812	4,812	254	0	254	4,558
2033	0	0	5,660	5,660	293	0	293	5,366
2034	0	0	7,604	7,604	334	0	334	7,269
2035	0	0	7,674	7,674	277	0	277	7,397
2036	0	0	7,746	7,746	284	0	284	7,462
2037	0	0	7,819	7,819	291	0	291	7,528
2038	0	0	7,894	7,894	298	0	298	7,596
2039	0	0	7,970	7,970	306	0	306	7,664
2040	0	0	8,047	8,047	313	0	313	7,734
2041	0	0	8,126	8,126	321	0	321	7,805
2042	0	0	8,206	8,206	329	0	329	7,877
2043	0	0	8,288	8,288	338	0	338	7,950
2044	0	0	8,371	8,371	346	0	346	8,025
2045	0	0	8,456	8,456	355	0	355	8,101
2046	0	0	8,542	8,542	364	0	364	8,178
2047	0	0	8,630	8,630	373	0	373	8,257
2048	0	0	8,719	8,719	382	0	382	8,337
2049	0	0	8,810	8,810	391	0	391	8,419
2050	0	0	8,346	8,346	376	0	376	7,970
2051	0	0	7,871	7,871	360	0	360	7,511
2052	0	0	7,101	7,101	329	0	329	6,772
2053	0	0	6,314	6,314	297	0	297	6,017
2054	0	0	5,510	5,510	263	0	263	5,247
2055	0	0	4,542	4,542	220	0	220	4,322
2056	0	0	3,553	3,553	175	0	175	3,379
2057	0	0	2,394	2,394	119	0	119	2,274
2058	0	0	1,209	1,209	61	0	61	1,148
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0
NOMINAL	0	0	199,240	199,240	8,873	0	8,873	190,367
NPV	0	0	67,202	67,202	3,139	0	3,139	64,063
Utility Discount Rate = 6.83%								
Benefit Cost Ratio = 21.412								

PROGRAM:	Standby Generation DR			SBG					
Participant Test									
BENEFITS					COSTS				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	SAVINGS IN		OTHER						
	PARTICIPANT'S	INCENTIVE	PARTICIPANT'S	TOTAL	PARTICIPANT'S	TOTAL	NET		
YEAR	BILL	PAYMENTS	BENEFITS	BENEFITS	COST	COSTS	BENEFITS		
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		
2025	0	169	0	169	0	0	169		
2026	0	338	0	338	0	0	338		
2027	0	592	0	592	0	0	592		
2028	0	846	0	846	0	0	846		
2029	0	1,099	0	1,099	0	0	1,099		
2030	0	1,395	0	1,395	0	0	1,395		
2031	0	1,691	0	1,691	0	0	1,691		
2032	0	2,029	0	2,029	0	0	2,029		
2033	0	2,367	0	2,367	0	0	2,367		
2034	0	2,706	0	2,706	0	0	2,706		
2035	0	2,706	0	2,706	0	0	2,706		
2036	0	2,706	0	2,706	0	0	2,706		
2037	0	2,706	0	2,706	0	0	2,706		
2038	0	2,706	0	2,706	0	0	2,706		
2039	0	2,706	0	2,706	0	0	2,706		
2040	0	2,706	0	2,706	0	0	2,706		
2041	0	2,706	0	2,706	0	0	2,706		
2042	0	2,706	0	2,706	0	0	2,706		
2043	0	2,706	0	2,706	0	0	2,706		
2044	0	2,706	0	2,706	0	0	2,706		
2045	0	2,706	0	2,706	0	0	2,706		
2046	0	2,706	0	2,706	0	0	2,706		
2047	0	2,706	0	2,706	0	0	2,706		
2048	0	2,706	0	2,706	0	0	2,706		
2049	0	2,706	0	2,706	0	0	2,706		
2050	0	2,537	0	2,537	0	0	2,537		
2051	0	2,367	0	2,367	0	0	2,367		
2052	0	2,114	0	2,114	0	0	2,114		
2053	0	1,860	0	1,860	0	0	1,860		
2054	0	1,606	0	1,606	0	0	1,606		
2055	0	1,311	0	1,311	0	0	1,311		
2056	0	1,015	0	1,015	0	0	1,015		
2057	0	676	0	676	0	0	676		
2058	0	338	0	338	0	0	338		
2059	0	0	0	0	0	0	0		
2060	0	0	0	0	0	0	0		
2061	0	0	0	0	0	0	0		
2062	0	0	0	0	0	0	0		
2063	0	0	0	0	0	0	0		
2064	0	0	0	0	0	0	0		
NOMINAL	0	67,642	0	67,642	0	0	67,642		
NPV	0	24,819	0	24,819	0	0	24,819		
Utility Discount Rate = 6.83%									
Benefit Cost Ratio: 9999									



2025 – 2034

DUKE ENERGY FLORIDA, LLC

DEMAND SIDE MANAGEMENT

PROGRAM PARTICIPATION STANDARDS

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I. RESIDENTIAL CONSERVATION PROGRAMS

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
HOME ENERGY CHECK

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
HOME ENERGY CHECK PROGRAM**

1. PROGRAM OVERVIEW

The Home Energy Check (HEC) program of Duke Energy Florida, LLC (DEF) is a residential energy audit program that provides customers with an analysis of their energy consumption as well as educational information on how to save money by reducing their energy usage. The audit provides the opportunity to promote and directly install cost-effective measures in customers' homes while also educating and encouraging customers to implement energy-saving practices. The Home Energy Check program serves as the foundation for other residential energy efficiency and demand side management programs. The Home Energy Check program offers the following types of energy audits:

1. Type 1: Free Walk-Through (computer assisted)
2. Type 2: Customer Online (Internet Option)
3. Type 3: Customer Phone Assisted
4. Type 4: Home Energy Rating (or BERS/HERS) Audit

All audit types, except Type 4 - Home Energy Rating, are provided to the customer at no charge. The charge for the Home Energy Rating can be found in DEF's tariffs Section II, Fifth Revised Sheet No. 2.6 - Florida BERS/HERS Audit.

Customers will be provided with energy-efficiency tips and examples of easily installed, energy-efficiency measures. The program promotes continued customer involvement by demonstrating sustainable and measurable reductions in energy usage through the implementation of low-cost energy-efficiency measures and energy-saving recommendations. Customers participating in the Home Energy Check program may receive a residential Energy Efficiency Kit. The kit will contain energy saving measures that can easily be installed and utilized by the customer. The contents of this kit will be evaluated periodically and may change over time.

Additionally, beginning in 2021, a participant classified as low-income, with income equal to or less than 200% of federal poverty level guideline, will be eligible to receive measures included in an "Assistance Kit". These measures will be provided in addition to the measures included in the normal HEC Kits to customers who complete either an online or

walk-through audit. The “Assistance Kit” will include measures that can provide meaningful energy efficiency savings to customers in need. The “Assistance Kits” will be available for up to 20,000 qualifying low-income customers each year through 2025, but will no longer be provided beginning in 2026.

2. ELIGIBILITY REQUIREMENTS

The residence must be in DEF’s service area and must be a residential, metered customer of DEF.

3. PARTICIPATION REQUIREMENTS

No more than one audit may be conducted for the same customer at the same premise within a two-year period. DEF reserves the right to update audits and schedule field visits on a per need basis.

4. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
RESIDENTIAL INCENTIVE PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
RESIDENTIAL INCENTIVE PROGRAM**

1. PROGRAM OVERVIEW

The Residential Incentive Program (RI) program of Duke Energy Florida, LLC (DEF) is an "umbrella" program designed to improve the energy efficiency of existing and new residential homes. The program seeks to meet the following overall goals:

- Provide a cost-effective portfolio of measures across different housing types.
- Provide customer energy savings and demand reduction through the installation of energy-efficient equipment and thermal envelope upgrades.
- Educate the residential market regarding best practices, innovative technologies, and opportunities to participate in all applicable incentives for managing energy consumption.

2. ELIGIBILITY REQUIREMENTS

1. All measures must have been recommended during a DEF energy audit completed within the past two (2) years. (**Exception:** *in emergency cases, the customer may have HVAC or Heat Pump Water Heaters equipment installed prior to the audit*).
2. The residence must be in DEF's service area and be a residential, metered customer of DEF.
3. All HVAC, Heat Pump Water Heaters and window installations must be permitted by the appropriate local agency.
4. A DEF-approved Trade Ally must be used for Duct Test, Duct Leakage Repair and Ceiling Insulation measures.

5. All installations must be accessible for verification by a DEF representative to ensure compliance with the RI program standards.

3. TRADE ALLY REQUIREMENTS

1. All Trade Allies must comply with DEF Trade Ally training, procedures, and manufacturers' specifications specific to the portion of the RI program for which they are participating. Failure to do so may result in termination of participation in any or all DEF programs.
2. The Trade Ally is responsible for the work to be performed, the supervision of their employees and the use of Trade Ally's own equipment to meet the work specifications and completion date.
3. The Trade Ally must correct any deficiency found in the installation or product when advised by a DEF representative and notify the DEF representative of compliance within thirty (30) days.
4. The Trade Ally shall notify DEF of any incident occurring during installation of an RI program measure or any follow-up procedure within twenty-four (24) hours of the incident.
5. The Trade Ally shall indemnify and hold DEF harmless against any and all injuries, damages, claims, or costs caused by items furnished or services rendered by the Trade Ally and/or its employees.
6. The Trade Ally must comply with all Federal, State, and local codes and regulations and have the appropriate permits and license(s) for the work to be performed.
7. The Trade Ally must provide documentation of and maintain in force the following types of insurance coverage. The Trade Ally must maintain coverage that meets the greater of the minimum coverage required by the State for license retention or the minimum coverage requirements specified in the Trade Ally agreement. This applies to all Program measures:
 - Workman's Compensation
 - General Contractual and Automobile Bodily Injury Liability

- General and Automobile Property Damage Liability
- General and Vehicle Liability

4. INCENTIVES

The incentive payment structure is as follows:

Program Component	Dwelling Segment	Incentive
Duct Test	Single-Family and Manufactured Homes	DEF will pay 50% of test cost up to \$50 for the first unit tested for homes with ducted electric air and heat
		DEF will pay 50% of test cost up to \$40 for each additional unit at same address for homes with ducted electric air and heat
Duct Leakage Repair	Single-Family and Manufactured Homes	DEF will pay the cost of duct repairs up to \$400 per system for homes with ducted electric air and heat.
Attic Insulation (Ceiling Insulation Upgrade)	Single-Family Homes	<p>DEF will pay for insulation upgrades for single-family homes.</p> <ul style="list-style-type: none"> • Will pay \$0.25 per square foot up to \$600 to bring insulation from R-19 or less to a minimum of R-38 • Will pay \$0.27 per square foot up to \$700 to bring insulation from R-12 or less to a minimum of R-38 • Will pay \$0.31 per square foot and up to \$800 to bring insulation from R-2 or less to a minimum of R38.

Attic Insulation (Ceiling Insulation Upgrade)	Multi- Family Homes	<p>DEF will pay for insulation upgrades for multi-family homes.</p> <ul style="list-style-type: none"> • Will pay \$0.27 per square foot up to \$300 to bring insulation from R-12 or less to a minimum of R-38 • Will pay \$0.31 per square foot up to \$350 to bring insulation from R-2 or less to a minimum of R38.
High Efficiency Central Air Conditioner	Single-Family	<p>DEF will pay \$300 for a High Efficiency Central Air Conditioning system with a minimum cooling efficiency of 16.0 SEER/15.2 SEER2 replacing less efficient Central Air Conditioning system for Single-Family Homes.</p>
High Efficiency Heat Pump	Single-Family	<p>DEF will pay \$500 for High Efficiency Heat Pump system with a minimum cooling efficiency of 16.0 SEER/15.2 SEER2 and minimum heating efficiency of 9.0 HSPF/7.5 HSPF2 replacing less efficient Heat Pump HVAC systems</p>
High Efficiency Heat Pump Replacing Resistance Heat	Single-Family, Manufactured and Multi- Family Homes	<p>DEF will pay \$600 for High Efficiency Heat Pump system with a minimum cooling efficiency of 16.0 SEER/15.2SEER2 and minimum heating efficiency of 9.0 HSPF/7.5 HSPF2 replacing less efficient resistance heat/strip heat HVAC systems.</p>

Higher Efficiency Heat Pump Replacing Resistance Heat	Single-Family	DEF will pay \$1,000 for High Efficiency Heat Pump system with a minimum cooling efficiency of 16.8 SEER/16.SEER2 and minimum heating efficiency of 9.0 HSPF/7.5HSPF2 replacing less efficient resistance heat/strip heat HVAC systems.
High Efficiency Replacement Windows	Single-Family	DEF will pay \$4.00 per square foot of east, west and south-facing window area up to a maximum incentive of \$800 for high performance windows that have a minimum Solar Heat Gain Coefficient (SHGC) of less than or equal to 0.21 and a U-Value of equal to or less than 0.27
High Efficiency Water Heating	Single-Family	DEF will pay \$500 for a 50 Gallon heat pump (hybrid) water heater. To qualify for the rebate, it must be ENERGY STAR certified and have a uniform energy factor (UEF) of at least 3.3.
		DEF will pay \$800 for an 80 Gallon heat pump (hybrid) water heater. To qualify for the rebate, it must be ENERGY STAR certified and have a uniform energy factor (UEF) of at least 3.3.

Notes: 1. If SEER is not available, an EER conversion using industry standard practices may be used to determine qualification.

4.1 INCENTIVE PROCESSING

1. A copy of the incentive form and all supporting documentation must accompany the application for all measures completed.
2. The customer or Trade Ally shall have twelve (12) months from date of installation to submit all required forms for the measure after which they will become ineligible for incentive.

3. Inspections will be performed on at least 10% of all program measures.
4. A copy of the certificate of completion and pre and post duct leakage data will be required for single-family, aerosol, duct-sealing measures.
5. If the measure is assigned for inspection, a DEF representative will complete an inspection form.
6. Incentives will be processed for payment after inspection requirements are met.
7. Duct test repair and insulation upgrade, incentive payments are made to the Trade Allies.
8. HVAC, Heat Pump Water Heaters, and window incentive payments are paid to the customer or designated recipient.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), F.A.C.

6. DUCT TEST AND LEAKAGE REPAIR FOR SINGLE-FAMILY AND MANUFACTURED HOMES

6.1 PARTICIPATION REQUIREMENTS

1. Multi-family homes are not eligible to participate.
2. Repair recommendations must have been the result of a DEF-approved duct test or DEF audit. (**Exception:** If during an energy audit or prior to duct test, the DEF representative validates the need for duct repair or complete duct system replacement, a duct test is not required).
3. The customer's duct system must be in adequate condition to accommodate the duct test and must be accessible and in adequate condition for duct repair. (**Exception:** aerosol sealing method).

4. Homes must have centrally ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e., water heater, stove, etc.), then the house must pass an industry-approved safety test prior to any duct sealing.
5. A minimum of 60 CFM at 25 Pascals of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications and must meet all state, county, and local codes.
2. For conventional duct repair, only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Tape may be used to hold the duct in place while the mastic is drying. If tape is used, the mastic must cover the tape completely and extend a minimum of 2" past the width of the tape. Mastic must meet Underwriters Laboratories (UL) 181 specifications for the material that the mastic is being applied to.
3. Duct test procedures must be followed as specified in manufacturers' instructions, unless otherwise directed by DEF when performing the duct test.
4. All participating Trade Allies in the Duct Test and Leakage Repair program must follow DEF Code of Ethics. DEF reserves the right to request background check results on all participating employees.
5. Aerosol procedures must be followed as specified in training or manufacturers' instructions and will include:
 - Complete pre-seal and post-seal leakage test using approved aerosol software.
 - Aerosol sealants shall meet the requirements of Underwriters Laboratories (UL) 723.
 - Seal all boot-to-ceiling and/or floor connections.
 - All areas of the duct system will be evaluated, and cost-effective

leaks will be sealed by conventional or aerosol method.

6.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air Conditioning Contractor.
3. All participating Trade Allies must attend and successfully complete DEF-approved duct repair training.

6.4 INSPECTION REQUIREMENTS

All on-site inspectors must attend and successfully complete a DEF-approved Duct Diagnostics training.

At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom, field, and laboratory)
- Codes and standards as they relate to duct sealing.
- Successfully demonstrate the use of blower door equipment

7. CEILING INSULATION UPGRADE FOR SINGLE-FAMILY AND MULTI-FAMILY HOMES

7.1 PARTICIPATION REQUIREMENTS

1. Manufactured homes are not eligible to participate.
2. Insulation recommendations must have been the result of a DEF audit.
3. Eligible residences must have whole-house cooling and/or electric heating.
4. The weighted average R-value of the existing insulation over the total attic square

footage (above conditioned space) must be less than or equal to R-19.
(**Exception:** May exclude conditioned area for a recent addition.)

5. Any structure that has participated in DEF's attic insulation upgrade program is not eligible to participate again. However, if the structure, through an act of God loses the insulation **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide DEF with a letter from his/her insurance company stating that the insulation was not covered.
6. Any home with "Knob and Tube Wiring" must be documented or certified as not energized by a state-licensed electrician.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturers' recommendations, specifications and must meet all state, county, and local codes.
2. All installations must result in an insulation value equal to or greater than R-38.
3. Flat roofs must have enough space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.
4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.
5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by state, county, and local codes.
6. The insulation must be installed uniformly, resulting in the same R-value throughout the entire area including knee walls.
7. All attic access panels that are located in conditioned space must be insulated in the same minimum R-value as throughout the entire area and permanently attached.

7.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. The Trade Ally will attach an R-value Certification Card signed by the insulation Trade Ally or his/her representative to the attic joist visible from the attic access and provide a copy of the R-value Certification Card to the customer. The card shall contain, at a minimum, the following information:
 - Manufacturer's name
 - Insulation type
 - R-Value of insulation installed.
 - Thickness of insulation installed.
 - Location of insulation installed.
 - Name and address of the Trade Ally installing the insulation.
 - Date of installation
3. All participating Trade Allies in the Ceiling Insulation program must follow DEF Code of Ethics. DEF reserves the right to request background check results on all participating employees.

8. HIGH-EFFICIENCY CENTRAL AIR CONDITIONER FOR SINGLE-FAMILY HOMES

8.1 PARTICIPATION REQUIREMENTS

1. Multi-family and manufactured homes are not eligible to participate.
2. The customer must have had an audit within the past two (2) years. (An exception would be made for emergency heat pump equipment installations and change-outs as a result of a non-operating system).
3. The customer must not be replacing an existing heat pump.

8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications and must meet all state, county, and local codes.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards, as appropriate.
3. Both air handler and condensing unit must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the heating and cooling minimum-efficiency requirements.
5. All equipment shall be new and not refurbished, previously installed, or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2008).
7. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
8. System must be all electric.

8.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air Conditioning Contractor.
3. The Trade Ally must be able to demonstrate their ability to properly calculate heating and cooling loads by using industry-approved sizing software in the jurisdiction

having authority.

4. The Trade Ally shall have twelve (12) months from date of installation to submit all “High Efficiency Equipment Forms” after which they will become ineligible for incentive.

9. HIGH EFFICIENCY HEAT PUMP FOR SINGLE-FAMILY HOMES

9.1 PARTICIPATION REQUIREMENTS

1. Multi-family and manufactured homes are not eligible to participate.
2. The customer must have had an audit within the past two (2) years. (An exception would be made for emergency heat pump equipment installations and change-outs as a result of a non-operating system).
3. Replacing less efficient heat pump.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers’ instructions and specifications and must meet all state, county, and local codes.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards, as appropriate.
3. Both air handler and condensing unit must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the heating and cooling minimum-efficiency requirements.
5. All equipment shall be new and not refurbished, previously installed, or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer’s rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning

Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2008).

7. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
8. System must be all electric.

9.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air Conditioning Contractor.
3. The Trade Ally must be able to demonstrate their ability to properly calculate heating and cooling loads by using industry-approved sizing software in the jurisdiction having authority.
4. The Trade Ally shall have twelve (12) months from date of installation to submit all “High Efficiency Equipment Forms” after which they will become ineligible for incentive.

10. HIGH-EFFICIENCY, ELECTRIC HEAT PUMPS - SINGLE FAMILY, MULTI-FAMILY, AND MANUFACTURED HOMES

10.1 PARTICIPATION REQUIREMENTS

1. The customer must have had an audit within the past 2 years. (An exception would be made for emergency heat pump equipment installations and change-outs as a result of non-operating systems).
2. Replacing electric resistance/strip heat.

10.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications and must meet all state, county, and local codes.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.
3. Both air handler and condensing unit must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.
5. All equipment shall be new and not refurbished, previously installed, or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2008).
7. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
8. Heat pump must be all electric.

10.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air Conditioning Contractor.
3. Trade Allies must be able to demonstrate their ability to properly calculate heating and cooling loads by using industry-approved sizing software in the jurisdiction

having authority.

4. The Trade Ally shall have twelve (12) months from date of installation to submit all “High Efficiency Equipment Forms” after which they will become ineligible for incentive.

11. HIGHER-EFFICIENCY, ELECTRIC HEAT PUMPS - SINGLE-FAMILY HOMES

11.1 PARTICIPATION REQUIREMENTS

1. Multi-family and manufactured homes are not eligible to participate.
2. The customer must have had an audit within the past two (2) years. (An exception would be made for emergency heat pump equipment installations and change-outs as a result of a non-operating system).
3. Replacing electric resistance/strip heat.

11.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers’ instructions and specifications and must meet all state, county, and local codes.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.
3. Both air handler and condensing unit must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the heating and cooling minimum-efficiency requirements.
5. All equipment shall be new and not refurbished, previously installed, or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer’s rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning

Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2008).

7. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
8. Heat pump must be all electric.

11.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air Conditioning Contractor.
3. The Trade Ally must be able to demonstrate their ability to properly calculate heating and cooling loads by using industry-approved sizing software in the jurisdiction having authority.
4. The Trade Ally shall have twelve (12) months from date of installation to submit all “High Efficiency Equipment Forms” after which they will become ineligible for incentive.

12. REPLACEMENT WINDOWS

12.1 PARTICIPATION REQUIREMENTS

1. Multi-family and manufactured homes are not eligible to participate.
2. Eligible residences must have whole-house electric air conditioning and whole-house electric heating.
3. The customer must have had an audit within the past two (2) years. (An exception would be made for emergency window equipment installations and change-outs as a result of a non-operating system).

4. Any structure that has maximized DEF's window incentive program is not eligible to participate again. However, if the structure, through an act of God, loses windows **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide DEF with a letter from his/her insurance company stating that the windows were not covered.

12.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The replacement window and installation must meet manufacturers' instructions and specifications and must meet all state, county, and local codes.
2. Incentive will be provided for south, east and west facing windows.
3. All materials shall be new and not refurbished, previously installed, or used.
4. The windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) of less than or equal to 0.21 and a U- value of less than or equal to 0.27.
5. Windows with overhangs extending three (3) feet or greater are exempt from the SHGC requirement but not the U-value requirement.

12.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. The Trade Ally will leave a copy of the manufacturers' product specification sheet with the customer.

13. HIGH-EFFICIENCY WATER HEATING FOR SINGLE-FAMILY HOMES

13.1 PARTICIPATION REQUIREMENTS

1. Multi-family and manufactured homes are not eligible to participate.
2. The customer must have had an audit within the past two (2) years. (An exception

would be made for emergency water heating equipment installations and change-outs as a result of a non-operating system).

3. The customer must not be replacing an existing heat pump water Heater.

13.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications and must meet all state, county, and local codes.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards, as appropriate.
3. All equipment shall be new and not refurbished, previously installed, or used.
4. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2008).
5. System must be all electric.

13.3 TRADE ALLY REQUIREMENTS

1. Must meet the Trade Ally requirements as outlined in Section 3.
2. Must be a Florida plumber licensed by the city, county, or state.
3. The Trade Ally shall have twelve (12) months from date of installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

MULTI-FAMILY NEW BUILDER CONSTRUCTION PROGRAM

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
MULTI-FAMILY NEW BUILDER CONSTRUCTION PROGRAM

1. PROGRAM OVERVIEW

The Multi-Family New Builder Construction (MFNBC) program is designed to provide incentives to multi-family builders and developers for energy efficiency improvements. This program builds on customer awareness the DEF energy efficiency and marketing efforts designed to educate customers on cost-effective measures for residential dwellings.

The program seeks to meet the following overall goals:

- The purpose of this program is to provide incentives to encourage multi-family residential construction to exceed applicable residential building codes and or construction that meets Energy Star requirements.
- Provide customer energy savings and demand reduction through the installation of energy-efficient equipment and thermal envelope upgrades.
- Educate the multi-family residential market regarding best practices, innovative technologies, and opportunities to participate in all applicable incentives for managing energy consumption.

2. ELIGIBILITY REQUIREMENTS

1. The MFNBC program is available to builders and developers of multi-family residential dwellings that are served on a residential retail schedule. Details of the program are available on the company website, www.duke-energy.com. The multi-family unit must be new. Additions do not qualify for this multi-family residential new construction measure. The multi-family unit will be eligible if the project is permitted new construction by the local governing body and Florida Building Code.
2. The MFNBC builder, developer or builder/owner must comply with all federal, state, and local codes.
3. The multi-family unit must be accessible for verification of the MFNBC program standards by a DEF employee or representative.

4. The multi-family unit must be individually metered by DEF on a residential rate.
5. All installations must be accessible for verification by a DEF representative to ensure compliance with this program participation standards.

3. BUILDER/DEVELOPER REQUIREMENTS

1. All Builders/Developers must comply with DEF Builders/Developers training, procedures, and manufacturers' specifications specific to the portion of the MFNBC program for which they are participating. Failure to do so may result in termination of participation in any or all DEF programs.
2. All Builders/Developers are responsible for the work to be performed, the supervision of their employees and the use of Trade Ally's own equipment to meet the work specifications and completion date.
3. All Builders/Developers must correct any deficiency found in the installation or product when advised by a DEF representative and notify the DEF representative of compliance within thirty (30) days.
4. All Builders/Developers shall notify DEF of any incident occurring during installation of a program measure or any follow-up procedure within twenty-four (24) hours of the incident.
5. All Builders/Developers shall indemnify and hold DEF harmless against any and all injuries, damages, claims, or costs caused by items furnished or services rendered by the Builders/Developers and/or its employees.
6. All Builders/Developers must comply with all Federal, State, and local codes and regulations and have the appropriate permits and license(s) for the work to be performed.

7. All Builders/Developers must provide documentation of and maintain in force the following types of insurance coverage. The Builders/Developers must maintain coverage that meets the greater of the minimum coverage required by the State for license retention or the minimum coverage requirements specified in the Builders/Developers agreement. This applies to all program measures:

- Workman’s Compensation
- General Contractual and Automobile Bodily Injury Liability
- General and Automobile Property Damage Liability
- General and Vehicle Liability

4. INCENTIVES

The incentive payment structure is as follows:

<p>ENERGY STAR Qualified New MFNBC -Whole Home Improvement Tier 1</p>	<p>Will pay an incentive in the amount of \$500 per new single metered apartment.</p>
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5. INCENTIVE PROCESSING

1. A copy of the incentive form and all supporting documentation must accompany the application for all measures completed.
2. All Builders/Developers shall have twelve (12) months from date of completion to submit all required forms for the measure after which they will become ineligible for incentive.
3. Inspections will be performed on at least 10% of all program measures.
4. A copy of the Energy Star certificate.

5. If the measure is assigned for inspection, a DEF representative will complete an inspection form.
6. Incentives will be processed for payment after inspection requirements are met.
7. Incentive payments are made to the Builders/Developers.

6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), F.A.C.

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

NEIGHBORHOOD ENERGY SAVER PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
NEIGHBORHOOD ENERGY SAVER PROGRAM**

1.0 PROGRAM OVERVIEW

Duke Energy Florida, LLC's (DEF) Neighborhood Energy Saver (NES) program is a custom energy conservation program for low-income customers. The program is designed to assist selected neighborhoods where 50% of the households have incomes equal to or less than 200% of the poverty level as established by the U.S. Government. This program allows DEF to individually reach a larger audience of income-eligible customers than through traditional government agency flow-through methods. DEF or a third-party contractor will directly install energy conservation measures (ECM) identified through an energy assessment of the customer's home to increase their energy efficiency. Additionally, customers will receive a comprehensive package of energy education materials which will educate them on ways to better manage their energy usage. The energy conservation measures installed, and energy efficiency education provided, will be at no cost to the participants.

This program seeks to achieve the following goals:

1. Complete a home energy assessment to identify energy-efficiency opportunities within the customer's home.
2. Implement a comprehensive package of electric conservation measures to increase the home's energy efficiency.
3. Provide one-on-one customer education on energy-efficiency techniques and energy conservation measures.
4. Promote behavioral changes that will help customers control their energy usage.

2.0 ELIGIBILITY REQUIREMENTS

This DEF program is a direct install program based upon identifying income-eligible neighborhoods where at least 50% of the households have incomes equal to or less than 200% of the poverty level established by the U.S. Government. Additional requirements

are as follows:

- The resident must be a residential, metered customer in DEF's service area.
- Customer must reside in a selected DEF qualifying Census Block that meets the definition of an income-eligible neighborhood as stated above.
- Multi-family dwellings that meet the above definition, which are located within the same city, but may not be within the same Census Block, may also be eligible to participate in the program if they meet guidelines as presented in the program participation standards.
- All installations must be accessible for verification by a DEF representative.

3.0 EQUIPMENT/MATERIALS AND INSTALLATION SPECIFICATIONS

All materials and installation specifications shall meet or exceed the following guidelines:

- All equipment and the associated installations must meet manufacturers' instructions and specifications and DEF procedures. Any contractor who fails to meet these requirements may be terminated from participation in any or all DEF programs.
- All work shall be performed to constitute a finished product.
- Materials shall be free of defects and covered under warranty for at least one year.
- Installation procedures must comply with all federal, state, and local codes.

4.0 CONTRACTOR REQUIREMENTS

The contractor may work with subcontractors to install certain measures as mutually agreed upon with DEF. Contractors and subcontractors must have an active Florida General Contractor's license, meet all associated requirements of the Florida Department of Business and Professional Regulation and must comply with all local, state, and federal rules and codes. The selected contractor(s) is/are responsible for all work performed and must meet and/or comply with the following requirements:

1. Contractors must have appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
2. DEF reserves the right to request background checks of contractors participating in this program. The contractor shall be responsible for all associated costs.
3. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors and the use of contractor's own equipment (or rental equipment) to meet the work specifications.
4. All contractors must comply with DEF contractor procedures and manufacturers' specifications specific to this program. Failure to do so may result in termination of participation in any or all DEF programs.
5. The contractor shall notify DEF of any incident occurring as a result of this program or any follow-up procedure within one (1) working day of the incident.
6. The contractor must correct any deficiency found in the installation or product(s) associated with this program's comprehensive package of electric conservation measures, when advised by a DEF representative, and notify the DEF representative of compliance within thirty (30) days.
7. Contractors shall indemnify and hold DEF harmless from any and all losses, liabilities, injuries, damages, claims or costs, whatsoever caused, by items furnished or services rendered, as a result of this program.
8. The contractor must notify their insurance companies to provide DEF with documentation, and maintain in force, the state required minimum insurance policies for license retention or the following minimum insurance policies, whichever is greater:
 - Workman's Compensation as required by law.
 - General Contractual and Automobile Bodily Injury Liability: \$100,000 per person and \$300,000 per occurrence
 - General and Automobile Property Damage Liability: \$100,000 per occurrence
 - General and Vehicle Liability policies endorsed: \$100,000 per occurrence to provide blanket coverage.
 - All sub-contract labor must comply with insurance requirements.

9. All participating duct sealing contractors must attend and successfully complete a DEF-approved duct repair course. At a minimum, the training will consist of:
 - Training session on building science
 - Duct test applications (classroom, field, and laboratory)
 - Codes and standards as they relate to duct sealing.

10. Sub-contractors participating in the measures must follow DEF's Code of Ethics. DEF reserves the right to request background check results on all participating contractors and employees.

5.0 ELIGIBLE MEASURES

5.1 ENERGY-EFFICIENT LIGHTING

This measure will provide for the installation of a maximum of eight (8) energy-efficient light bulbs, for lights which are in use for an average of at least four (4) hours per day:

The contractor shall replace up to eight (8) less efficient bulbs with LED bulbs with similar lumen output. LED bulbs will be installed in accordance with the manufacturer's specifications.

5.2 WATER HEATER MEASURES

5.2.1 WATER HEATER INSULATION WRAP

Contractor will furnish and install water heater insulation on electric water heaters as needed in accordance with the following requirements:

- Insulation shall have an insulating value of R-6 or greater.
- Insulation shall be Underwriters Laboratories (UL) approved.
- Insulation shall be installed in accordance with manufacturer guidelines.
- Tape is allowed to be placed on top of the wrap to secure the insulation. (Tape used to secure the insulation must be vinyl and have good adhesive qualities.)
- Water heating units, which have manufacturers' warnings against insulating, shall not be wrapped.
- Gas water heaters do not qualify.
- Any violation of the National Electrical Code will make a unit ineligible for the

water heater wrap.

Recommended Materials

- Blanket Materials conformance to ASTM C592-80
- High Temperature conformance to ASTM 892-78
- Facing Material must have foil or vinyl facing.
- R-Value must be a minimum of R-6.

5.2.2 WATER HEATER PIPE INSULATION

Contractor will furnish and install pipe insulation, as needed, in accordance with the following requirements:

- Insulation shall have an insulating value of R-3 or greater.
- Insulation shall be installed on at least the first five (5) feet of the hot-and-cold water pipes, when accessible.
- Gas water heater systems do not qualify.
- Any violation of the National Electrical Code will make a unit ineligible for the water heater pipe insulation.

Recommended Materials

- Must be flexible.
- Wall thickness of 1 inch.
- Temperature range must be 160 degrees to 200 degrees Fahrenheit.
- Must comply with requirements of ASTM E 84-05 and Underwriters Laboratories (UL) 181 sections 11.0 a 16.0, and retards heat loss.

5.2.3 WATER HEATER TEMPERATURE CHECK AND ADJUSTMENT

- The contractor will check the temperature of the hot water and inform the customer of the possibility for turndown adjustment.
- Contractor will discuss the appropriateness of this conservation measure.
- If customer agrees and the water heater equipment is in proper working condition, contractor should reduce temperature setting to 120° F.

5.2.4 WATER-SAVING FAUCET AERATORS

Contractor will furnish and install a maximum of three (3) water-saving faucet aerators on the customer's faucets.

- Install a maximum of one kitchen aerator per home that shall provide a maximum-flow rate of 2.2 gallons per minute (GPM) over normal line pressures and have shut-off capability.
- Install a maximum of two (2) bathroom aerators per home that shall provide a maximum flow rate of 1.5 GM over normal line pressures.
- Homes using gas water heaters will not qualify for water saving faucet aerators measures.

Recommended Materials

- Must be dual thread to fit male and female threaded faucets.
- Must meet the performance requirements of ANSI specification A112.18.
- Screen must be stainless steel.

5.2.5 WATER SAVING SHOWERHEADS

Contractor will furnish and install a maximum of two (2) showerheads per home, including adapters. The showerhead:

- Shall have fittings constructed of chrome plated solid brass with 1/2-inch thread.
- Shall have a flow rate not to exceed 2.5 GPM at normal line pressures.
- Hand-held type fixtures may be provided. If the existing fixture is not handheld, the contractor must obtain the customer's approval to install the handheld showerhead.

Recommended Materials

- Must meet ANSI/ASME specification A112.18.1M 2.5 GPM max.
- Adjustable spray selections offer regular, massage and combo setting.
- Must meet Federal, State, and Local plumbing standards.
- Must have pause feature for user to slow the flow for additional savings.
- Anti-sediment screen to prevent line debris from clogging the screen.

5.3 REFRIGERATION THERMOMETERS

Contractor will furnish, install, and demonstrate the proper temperature setting for the refrigeration equipment:

- Locate all refrigerators/freezers in the home.
- Place one thermometer in refrigeration compartment area that will have uniform

temperature and place one thermometer in the freezer compartment.

- Educate resident on proper refrigeration settings and how to adjust their refrigerator/freezer thermostat.
- Install a maximum of six (6) refrigeration thermometers per home.

5.4 HVAC MEASURES

5.4.1 WALL PLATE THERMOMETER

Contractor will furnish, install, and recommend the winter/summer temperature settings for the HVAC equipment:

- For central HVAC equipment, the wall plate thermometer should be mounted in the main conditioned space as close to any central HVAC air returns and away from any supply vents.
- For window units, locate the wall plate thermometer on the opposite wall in the largest room that is cooled by the unit.
- The wall plate thermometer should not be installed on exterior walls.
- Replace the existing wall switch plate with the wall plate thermometer.
- Educate resident on recommended winter/summer settings and how to adjust the HVAC system thermostat.
- Install a maximum of one (1) wall plate thermometer per home.

Recommended Materials

- Must be Underwriters Laboratories (UL) listed.
- Must be fire resistant and precut to fit.
- Must be minimum 1/8" thick.
- Must be wireless and battery included.

5.4.2 SMART THERMOSTAT

Contractor will furnish, install, and recommend the winter/summer temperature settings for the HVAC equipment:

- For central HVAC equipment, the smart thermostat should be mounted in the main conditioned space as close to any central HVAC air returns and away from any supply vents.
- For window units, locate the smart thermostat on the opposite wall in the largest

room that is cooled by the unit.

- The smart thermostat should not be installed on exterior walls.
- Replace the existing wall switch plate with the wall smart thermostat.
- Educate resident on recommended winter/summer settings and how to adjust the smart thermostat.
- Install a maximum of one (1) wall smart thermostat per home.

Recommended Materials

- Must be Underwriters Laboratories (UL) listed.
- Must be fire resistant and precut to fit.
- Must be minimum 1/8" thick.
- Must be wireless and battery included.

5.4.3 WINTERIZATION KIT FOR WALL/WINDOW AC UNITS

Contractor will furnish and demonstrate the proper installation and use of the winterization kit for wall/window AC units:

- Locate all wall/window AC units in the home.
- Install the winterization kit on all wall/window AC units, if seasonably applicable and the system is not in operation. If the wall/window AC units are in operational mode, continue with educational component and leave the AC winterization kit with the residents.
- Educate the resident on proper installation techniques for the AC winterization kit on all wall/window units.
- Install or leave behind a maximum of three (3) winterization kits per home.

Recommended Materials

- A quilted AC cover designed to insulate and stop draft penetration.
- Must include installation instructions, weather stripping and removable tape.

5.5 HVAC MAINTENANCE

During the assessment, the contractor will perform a visual assessment of the HVAC system and make a recommendation for a basic system check. Home must be electrically heated and/or cooled to qualify for this measure.

The following represents the minimum requirement that must be performed by an approved HVAC Technician:

System Controls and Operation:

- Check thermostatic operation.
- Cycle all controls.
- Inspect for dirt and loose connections; clean and tighten, as necessary.
- Visually check all connections for refrigerant leaks.
- Check refrigerant pressure and add as needed.
- Check and record supply and return temperature.

Evaporator:

- Inspect coil assembly and drip pan.
- Clean coil and pan and flush, as necessary.
- Check drain line and blow out if necessary.
- Apply algae treatment as required.

Blower and Blower Drive:

- Oil blower motor if applicable.
- Check motor bearings.
- Check belt condition and tension; replace if necessary.
- Check blower cleanliness; clean if necessary.
- Check and record amp draw.
- Check drive and pulley alignment.
- Check for vibrations.

Condenser:

- Lubricate condenser fan motor, if applicable.
- Check motor bearings.
- Check coil condition for dirt build-up and clean, as necessary.
- Clean condenser as needed.

Compressor:

- Check electrical wire connections; clean and tighten where possible.
- Check operation and condition.
- Check and record operating amperage.

Heating System:

- Check electric heat strips.

5.5.1 CONTRACTOR REQUIREMENTS

Contractor must meet specifications as outlined in section 4.0.

5.6 DUCT LEAKAGE REPAIR

5.6.1 PARTICIPATION REQUIREMENTS

Contractor will determine if the home qualifies for an HVAC Duct Leakage Repair. Home must have a centrally ducted system to qualify for this measure.

Contractor will perform a visual inspection of the duct work. If not currently insulated or sealed, the contractor will arrange for a qualified HVAC Technician to install this measure.

1. The customer's duct system must be in adequate condition to accommodate the duct leakage repair.
2. The duct must be accessible for repair.
3. Homes must have centrally ducted electric cooling and electric heat.
4. Home must not contain any combustion appliances (including wood burning or gas fireplaces).
5. The Contractor will seal every joint and connection.

5.6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. For conventional duct repair only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Tape may be used to hold the duct in place while the mastic is drying. If tape is used, the mastic must cover the tape completely and extend a minimum of 2" past the width of the tape. Mastic must meet Underwriters Laboratories (UL) 181 specifications for the material to which the mastic is being applied.

5.6.3 CONTRACTOR REQUIREMENTS

Contractor must meet specifications as outlined in section 4.0.

5.7 AIR-SEALING/INFILTRATION CONTROL MEASURES

5.7.1 WEATHER STRIPPING

Installed on exterior doors shall be aluminum and/or vinyl and/or metal with rubber gasket.

Recommended Materials

- Professional-grade weather stripping

5.7.2 DOOR SWEEPS

Installed on external doors must be triple flange.

Recommended Materials

- The height must be 2-3/8 inches.
- Extruded Aluminum with slotted holes for adjustment.
- Pliable vinyl triple seal with appropriate screws.

5.7.3 CAULKING

- Used on surfaces designated by the manufacturer.
- Must have a minimum life of twenty-five years.
- Must be acrylic latex or equivalent.

Recommended Materials

- Must be clear silicon acrylic caulk.
- Must stick to damp and dry surfaces with soap/water cleanup.
- Must dry clear, odor free and be paintable.
- Must not be oil or resin-based caulks.

5.7.4 FOAM INSULATION

Use on surfaces as designated by the manufacturer.

Recommended Materials

- One component, expanding, polyurethane, foam sealant.
- Must have strong adhesion quality-sticks to most surfaces.
- Must be Underwriters Laboratories (UL) classified.
- Must be environmentally safe and contain no CFCs or HCFCs.

5.7.5 HVAC FILTERS

Contractor will furnish and deliver twelve (12) filters for each central HVAC system.

- Locate all HVAC return grills with filters and note the size and location.
- Install a new filter in the main return grill.
- Leave customer with additional eleven (11) filters of the same size.
- If filter is of the permanent, washable type, clean filter.
- Educate the resident on the importance of replacing or cleaning these filters regularly.

Recommended Materials

- May be fiber glass or natural fiber.
- Must be Underwriters Laboratories (UL) classified.
- Must be a high-efficiency furnace/AC filter.
- Must have a minimum-efficiency rating value of four.

5.8 CEILING INSULATION**5.8.1 PARTICIPATION REQUIREMENTS**

1. Insulation recommendations must be the recommendation of the contractor.
2. Eligible residences must have whole-house electric air conditioning and/or whole-house electric heating.
3. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be R-2 or less. (**Exception:** May exclude conditioned area for a recent addition.)
4. Any home with “Knob and Tube Wiring” that is energized is not eligible.¹

¹ National Electrical Code, Article 394

5.8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturers' recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R-38.
3. Flat roofs must have enough space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.
4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.
5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by state, county, and local codes.
6. The insulation must be installed uniformly, resulting in the same R-value throughout the entire area including knee walls.²
7. All attic access panels that are located in conditioned space must be insulated to a minimum R-value of 38 or as practical, and the insulation must be permanently attached.
8. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose-fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts).³

5.8.3 CONTRACTOR REQUIREMENTS

1. The contractor must meet requirements as outlined in section 4.0.
2. The contractor will supply to the customer, in writing, the number of bags that will be installed and leave the customer an empty bag or manufacturers' literature in order to determine the required density of the insulation.

² Current Florida Building Code Section - Walls Considered Ceiling Area

³ Current Florida Building Code Section - Ceilings With Blown-In Insulation

3. The contractor will sign and attach an R-value Certification Card to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
 - Manufacturer's name
 - Insulation type
 - R-Value of insulation installed, thickness of insulation installed, and location of insulation installed.
 - Name and address of the Trade Ally installing the insulation.
 - Date of installation

6.0 INSTALLATION PROCESS

The energy assessment will begin with the Energy Specialist(s)' explanation of the process/program to the resident. Emphasis on educating the resident on each of the conservation measures is vital to making the improvements sustainable.

1. Identify the location and wattage of up to eight (8) high-use non-LED lights within the home to be replaced with energy-efficient bulbs of equivalent lumen output and note the locations installed. The energy savings potential of these bulbs will be communicated to the resident.
2. Measure the hot water temperature at the closest water faucet to the water heater and document the temperature. If the water temperature is above 120° F, they will recommend having the water heater thermostat set to a lower temperature and note the recommendation. Gas water heaters will not qualify for this measure. Additionally, any violation of the National Electrical Code will make a unit ineligible.
3. The water heater location and type will be identified as to its eligibility for the installation of a water heater wrap. Gas water heaters do not qualify for this measure. Additionally, any violation of the National Electrical Code will make a unit ineligible. If a water heater wrap is applicable, this wrap will be installed per the manufacturer's instructions. Verify that the water heater is electric, not leaking and meets code requirements.
4. Insulation will be installed on the hot and cold-water pipes to and from the electric water heater (5' on each side of the tank) as practicable. Gas water heaters do not qualify for this measure. Additionally, any violation of the National Electrical Code

- will make a unit ineligible.
5. The general location of each shower head (maximum 2 per home) will be noted and replaced with an upgraded water-saving showerhead. The Energy Specialist(s) will also list any adapters required for this replacement.
 6. The general location of each applicable faucet (maximum per home is 1 in the kitchen and 2 in the bathrooms) will be noted and a water-saving aerator will be installed.
 7. Locate all central HVAC filter locations and note the size and location. Replace (1) HVAC filter as required. Leave customer with additional (11) filters of the same size. Educate the resident on the importance of replacing or cleaning these filters regularly. Up to 3 window air-conditioner filters are also eligible for replacement.
 8. Inform the resident that a wall plate thermometer will be installed in the house. A location for the wall plate thermometer should be considered carefully. A location in the main conditioned space as close to any central HVAC air returns and away from any supply vents is best. For window units, locate the wall plate thermometer on the opposite wall in the largest room that is cooled by the unit. The wall plate thermometer should not be installed on exterior walls. Replace the existing wall switch plate with the wall plate thermometer. Explain to the resident that proper setting of the HVAC thermostat can result in significant savings on the power bill.
 9. Install refrigerator thermometers in up to three (3) refrigerators/freezers in the house. Discuss the savings from the use of a refrigerator thermometer to keep food at the proper temperature with the resident.
 10. Each penetration into the building envelope (HVAC chase, pipes, etc.) will be inspected for adequate seal. If needed, foam insulation will be added. Additionally, any broken windows will be noted and repaired with clear tape as practicable. The Energy Specialist(s) will discuss the impact of air infiltration on the customer's power bill.
 11. Weather stripping, caulking and door sweeps will be specified for all exterior doors and window AC units as needed. The Energy Specialist(s) will install measures and discuss the impact of air infiltration around doors and window AC units on the customer's power bill.
 12. Install the winter kit for wall/window AC units, if applicable. This kit will prevent operation of the HVAC unit until it is removed. Explain the proper operation of the kit

- to the resident. Leave the kit with the customer if it is not the proper season to install on the unit.
13. Review the condition of the insulation in the attic and make recommendation to install enough to meet R-38 requirements. The Energy Specialist(s) will note if insulation is required and will make arrangements for the Insulation Contractor to make an appointment to install the insulation.
 14. Review the condition of the whole house HVAC system and recommend an HVAC tune-up if required. This measure is available for central electric heat and/or central AC units. The Energy Specialist(s) will note the need for a tune up and will make arrangements with an HVAC Technician to get this service completed.
 15. Review the condition of the duct work. If applicable, will make arrangements with an HVAC Technician to have the ducts sealed.
 16. Document for the resident each of the measures that were installed in the home and reiterate the importance of each measure in saving energy and money. An explanation includes the benefits and instruction on the proper use and care of the NES measures.
 1. Educational materials outlining the installed measures, and their benefits will be provided.
 2. Other materials will also be provided by DEF that provide participants with specific energy saving tips.
 17. The Energy Specialist(s) will also inform the resident that their home may be selected for inspection after all energy efficiency measures are installed.

7.0 INCENTIVES

7.1 CUSTOMER INCENTIVES

The program provides an array of benefits that are distributed directly to those homes within the qualifying NES program. The customer will begin to benefit immediately from those measures which were specifically recommended from the Home Energy Assessment and installed as part of the comprehensive package of electric conservation measures during the NES program. The comprehensive package of electric conservation measures

consists of the following which are provided at no cost to the resident:

- Light bulbs
- Water heater insulation wrap and insulation for water pipes.
- Water conservation shower head and faucet aerators
- Water heater temperature check
- 12 HVAC filters
- Indoor wall thermometer
- Window AC unit cover
- HVAC maintenance
- Attic insulation
- Duct sealing
- Air Infiltration measures to include caulking, weather stripping, door sweeps.

Additionally, the customer receives education on energy efficiency techniques and the promotion of behavioral changes to help reduce their energy usage and make these measures sustainable.

7.2 CONTRACTOR INCENTIVES

The contractor will submit the following information with all invoices (not to exceed forty-five (45) days from the date of installation):

- A completed copy of the installed measures with date as well as customer and installer's information for each DEF account
- Itemized invoice listing each of the completed DEF accounts, measures and cost based upon the agreed cost per measure installed.

8.0 REPORTING REQUIREMENTS

DEF will follow the reporting requirements consistent with Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

1. PROGRAM OVERVIEW

Duke Energy Florida, LLC's (DEF) Low-Income Weatherization Assistance Program (LIWAP) is a custom energy conservation program. Through its partnerships with local weatherization providers, DEF provides education about energy saving opportunities and installs energy efficiency measures in homes of qualifying low-income customers. The program seeks to achieve the following goals:

1. Integrate DEF's program procedures with the Department of Economic Opportunity (DEO) and local weatherization providers (collectively referred to as "Agencies") to deliver energy efficiency measures to low-income families.
2. Identify and educate Agencies and low-income customers about energy saving opportunities to upgrade their home's energy efficiency.
3. Increase low-income families' participation in DEF's DSM programs.
4. Minimize "lost opportunities" in the existing marketplace.

2. ELIGIBILITY REQUIREMENTS

The eligibility requirements for DEF's program will align with the participating Agency's criteria or requirements for participation in their low-income services. Additional requirements are as follows:

1. The residence must be in DEF's service area and be a residential, metered customer with an active account.
2. All installations must be accessible for verification by a DEF representative.
3. Homes that have participated within the past ten years for the listed measures are not eligible for the same measure.

3. CONTRACTOR REQUIREMENTS

The Agencies are responsible for all work performed. Agencies may also use DEF participating contractors for attic insulation and duct testing/repair.

1. Agencies and their agents must have appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
2. All work performed must follow manufacturers' and DEF's specifications where applicable.
3. Agencies and their agents must correct any deficiencies found in the installation or materials identified by DEF.
4. Agencies shall indemnify and hold DEF harmless from any and all losses, liabilities, injuries, damage claims or costs whatsoever caused by items furnished or services rendered.
5. All DEF contractors shall indemnify and hold harmless DEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.
6. DEF requires a minimum of the following insurance policies be in force by all participating contractors:
 - Workman's Compensation as required by law.
 - General Contractual and Automobile Bodily Injury Liability: \$100,000 per person and \$300,000 per occurrence
 - General and Automobile Property Damage Liability: \$100,000 per occurrence
 - General and Vehicle Liability policies endorsed: \$100,000 per occurrence to provide blanket coverage.

4. EQUIPMENT/MATERIALS AND INSTALLATION SPECIFICATIONS

All materials and installation specifications shall meet or exceed the following guidelines:

- Equipment must meet manufacturers' specification and installation procedures.

- All work shall be performed to constitute a finished product.
- Materials shall be free of defects and covered under warranty for at least one year.
- Installation procedures must comply with all federal, state, and local codes.
- All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and DEF procedures may result in termination of participation in any or all DEF programs.

5. AGENCY RESPONSIBILITY

Agencies will be responsible for the following:

1. Qualify all participants using federal and state guidelines outlined in Section 2.
2. Follow the recommendations of the National Energy Audit Tool (NEAT), Agency assessment protocol or any DEF approved energy audit to determine eligible measures to be installed. Qualify and install measures by DEF's standards and procedures. All installations shall comply with DEF specifications (see Sections 4.2 through 10.2).
3. Provide DEF random access to the weatherized homes for program evaluation and inspection.
4. Deliver energy education to weatherization clients.
5. Invoice DEF for program approved installed measures on a monthly basis.

6. INCENTIVES AND ELIGIBLE MEASURES

Duke Energy will provide incentives for the following measures with the stipulation that all requirements and minimum levels are achieved where applicable:

Weatherization Measure	Minimum Measure Requirement	Maximum Incentive Amount	Additional Requirements
Attic Insulation	<p>Insulate single-family homes with R2 or less up to R38 on residences with whole-house electric air conditioning and/or electric heating.</p> <p>Insulate single-family homes with R19 or less up to R38 on residences with whole-house electric air conditioning and/or electric heating.</p>	<p>\$.50 per square foot up to a maximum of \$1000 per home</p> <p>\$.50 per square foot up to a maximum of \$725 per home.</p>	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol
Duct Leakage Test/ Repair	Repair Centrally Ducted Electric Heated and Cooled Systems in Single-family Homes	\$175	Completed Duct Test and Repair
Reduce Air Infiltration	Must demonstrate a minimum reduction of 25% at 50 Pas in electrically heated homes. Not to exceed a minimum of 0.35 ACH in Single-family Homes.	\$125	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol
Electric Hot Water Reduction	Wrap electric water heater, insulate water pipes, lower temperature setting if needed, repair water leaks	\$48	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol
HVAC Maintenance	Tune up on Centrally Ducted Electric Heated and Cooled Systems for Single-family Homes	\$175	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol

High Efficiency Heat Pump Replacing a Heat Pump	New HP for Single-family home must be a minimum 15 SEER and 8.8 HSPF	\$475	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol. Incentive applicable on each new HP installed
High Efficiency Heat Pump Replacing Electric Resistance Heat	New HP for Single-family home must be a minimum 15 SEER and 8.8 HSPF	\$475	
High Efficiency Central Air Conditioning	New High Efficiency Central Air Conditioner replacing less efficient Central Air Conditioner for Single-family home. New Air Conditioner must have a minimum cooling rating of 16 SEER.	\$725	Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol
Water Saving Showerheads	Maximum of 2.5 gallon per minute flow on homes with Electric Water Heaters	\$7 per showerhead	Maximum of 2 per home
Energy-efficient Light Bulbs	Replace less efficient bulbs with 9W LEDs with similar lumen output.	\$4.00 per bulb	Maximum of 6 light bulbs per household
	Replace less efficient specialty chandelier bulbs with 5W LED's	\$2.00 per bulb	
Faucet Aerators	Water Flow Reduction on homes with Electric Water Heaters	\$3 per Aerator	Maximum of 2 per household
Smart Power Strip	Smart Power Strip	\$10 per Power Strip	Maximum of 1 per household
Refrigerator	Must be Energy Star rated	\$125	1 per household

Notes:

1. Incentive amounts will be reviewed and compared to market prices annually and adjusted accordingly.

7. CEILING INSULATION

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol.
3. The home must be a single-family home and be at least two years old.
4. Eligible residences must have whole-house electric air conditioning and/or whole-house electric heating.
5. The total ceiling area to be insulated must be greater than 100 square feet.
6. Any home with “Knob and Tube Wiring” that is energized is not eligible. (Refer to: National Electrical Code, Article 324, Section 324-4).

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer’s recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R38.
3. Flat roofs must have enough space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.
4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.
5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County, and local codes.
6. The insulation must be installed uniformly, resulting in a minimum R-38 value throughout the entire area including knee walls. (Refer to: Florida Building Code Chapter 13, sub section 6 Section 604.1.A.1 Walls Considered Ceiling Area).

7. All attic access panels that are located in conditioned space must be insulated with a minimum R-38 batt permanently attached.
8. Radiant barriers will not be allowed as a substitute in the LIWAP.
9. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts). (Refer to: Florida Building Code Chapter 13, sub section 6 Section 604.1ABC.1.1 Ceilings with Blown-In Insulation).

7.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. The contractor will supply to the customer, in writing, the number of bags installed and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.
3. The contractor will attach an R-value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
 - Manufacturer's name
 - Insulation type
 - R-Value of insulation installed.
 - Thickness of insulation installed.
 - Location of insulation installed.
 - Name and address of the contractor installing the insulation.
 - Date of installation

8. DUCT LEAKAGE REPAIR

This program's duct repair is designed encourage weatherization providers to identify and repair duct leakage. Blower door or duct blaster equipment will be used as a diagnostic tool to locate duct leakage and provide quality control. This program component is available to

all residential customers with single-family homes having a centrally ducted system with electric heating and cooling, provided the duct system is easily accessible.

8.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.0.
2. Repair recommendations must have been the result of a DEF-approved duct test, or follow the Agency approved protocol.
3. The customer's duct system and HVAC systems must be in adequate condition to accommodate the duct test, and not have been previously tested for the present occupant within a 5-year period.
4. The duct must be accessible for repair.
5. Homes must have centrally ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e., water heater, stove, etc.), then the house must pass a safety test prior to any duct sealing.

8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Only mastic and fiber cloth or mastic with imbed fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.
3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by DEF when performing the duct test.

8.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor.

3. All participating contractors must have attended and successfully completed a DEF-approved duct repair course. At a minimum, the training will consist of:
 - Training session on Building Science
 - Duct test applications (classroom and laboratory)
 - Duct test field applications.
 - Codes and standards as they relate to duct sealing.
4. Before any duct repairs can be made on homes with non-space heating combustion appliances, the contractor shall follow the procedures as written in Chapter 4 of the “Duct Doctoring” instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer’s vent pipe. This is not required. Instead of this procedure, DEF has adopted the National Fuel Gas Code’s “Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation.”
5. A list of DEF contractors will be furnished to local weatherization providers for duct testing and repair. Providers will contract directly with DEF duct repair contractors for repair work.

8.4 INSPECTION REQUIREMENTS

All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom and laboratory)
- Duct test field applications.
- Codes and standards as they relate to duct sealing.

9. HIGH EFFICIENCY ELECTRIC HEAT PUMPS AND AIR CONDITIONERS

Promote the proper sizing and installation of high efficiency Heat Pump and Air Conditioning systems.

9.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.
3. Both air handler and condensing units must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.
5. All equipment shall be new and not refurbished or have been previously installed or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. (Note: If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF, except for water source units.)
7. If the unit is sized larger than one ton (12,000 BTU) per 500 square feet of conditioned space, a manual J or ASHRAE approved sizing calculation must be submitted. The contractor must certify that the unit was sized according to manufacturer specifications. Exception: Manufactured homes are exempted from this requirement.
8. The contractor will certify that the unit was sized according to manufacturer specifications.

9. Refrigerant charge and type shall be according to manufacturer's specifications and recommendations for the unit installed. The contractor will certify that the proper charge is installed, that the unit is tested and is leak free.
10. Contractors shall certify that the airflow meets the manufacturer's recommendations and specifications for the system installed.
11. Contractors shall certify that if the equipment installed has a scroll compressor (36,001 Btu or larger), that a hard start kit was installed either by the contractor or at the factory.
12. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible, and the location shown to the customer.
13. The contractor shall check that the controlling thermostat is properly leveled, that the anticipator is properly set, and the thermometer is correct to within two degrees Fahrenheit.
14. The contractor will be encouraged to use mastic on all new connections.
15. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
16. Heat pump must be all electric.

9.3 CONTRACTOR REQUIREMENTS

1. Must meet Contractor Requirements outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.
3. Contractors must demonstrate their capability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.
4. The contractor must notify DEF within thirty (30) days if there was an emergency replacement due to equipment failure.
5. The Agency shall have six (6) months from date of installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

10. HEATING AND AIR CONDITIONING MAINTENANCE (HVAC)

Heating and air conditioning maintenance is designed to increase energy efficiency through proper operation of mechanical equipment. Agencies are encouraged to identify HVAC systems that could benefit from service maintenance to avoid future breakdowns.

10.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.0.
2. Must have centrally ducted electric heating and cooling.
3. Must be a recommendation of a NEAT or DEF-approved audit, or Agency assessment protocol.

10.2 EQUIPMENT/SERVICE AND INSTALLATION SPECIFICATIONS

The following represents the minimum requirement that must be performed by an approved contractor:

Filter:

- Inspect and clean filters.
- Replace up to one throw-away filter.
- Replace specialty filters if provided by customer.

System Controls and Operation:

- Check thermostatic operation.
- Cycle all controls.
- Inspect for dirt and loose connections; clean and tighten, as necessary.
- Visually check all connections for refrigerant leaks
- Check refrigerant pressure and add as needed.
- Check and record supply and return temperature.

Evaporator:

- Inspect coil assembly and drip pan.
- Clean coil and pan and flush, as necessary.
- Check drain line and blow out if necessary.

- Apply algae treatment as required.

Blower and Blower Drive:

- Oil blower motor if applicable.
- Check motor bearings.
- Check belt condition and tension; replace if necessary.
- Check blower cleanliness; clean if necessary.
- Check and record amp draw.
- Check drive and pulley alignment.
- Check for vibrations.

Condenser:

- Lubricate condenser fan motor, if applicable
- Check motor bearings.
- Check coil condition for dirt build-up and clean, as necessary.
- Clean condenser as needed.

Compressor:

- Check electrical wire connections; clean and tighten where possible.
- Check operation and condition.
- Check and record operating amperage.

Heating System:

- Check electric heat strips.

10.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Sections 2.1 and 6.3.

11. WATER HEATER

It is the intent of this portion of the program to save energy through adding additional insulation to older water heaters, set back temperatures, insulate pipes, and replace older less efficient water heaters and help defray the cost of a new high-efficient water heater.

11.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation of a NEAT or DEF approved audit, or Agency assessment protocol.
3. Must have an electric water heater.

11.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Sides must be wrapped with a minimum Insulation level equal to R-6 or greater.
2. Top must be insulated to an R-8 or greater.
3. Pipes shall be insulated up to 3-foot minimum.

11.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements outlined in Section 2.1.

12. AIR INFILTRATION REDUCTION

It is the intent of this portion of the program to save energy through reduction of unintended air infiltration into conditioned spaces of older homes.

12.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation from a NEAT or DEF-approved audit, or Agency assessment protocol.
3. Must be able to achieve an infiltration reduction of at least 25% at 50 Pa's.
4. Home must meet ASHRA Standard 90.2 as a minimum air infiltration level once infiltration sealing is completed.

12.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

Contractor must use a blower door and a manometer for precise pressure measurements.

12.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements outlined in Section 2.1 and 6.3.

13. LED BULBS, WATER SAVING SHOWERHEADS AND FAUCET AERATORS**13.1 PARTICIPATION REQUIREMENTS**

1. Must meet the Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation from a NEAT or DEF-approved audit, or Agency assessment protocol.

Measure	Participation Requirements	Equipment and Installation Specifications
Water Saving Showerhead	<ul style="list-style-type: none"> • Electric Water Heater • Current showerhead flow of 3.5 gallon per minute or greater 	<ul style="list-style-type: none"> • Must meet manufacturer's specifications
Light Bulbs	<ul style="list-style-type: none"> • Operation of less efficient bulbs a minimum of 3 hours per day. 	<ul style="list-style-type: none"> • LED bulbs with similar lumen output installed in accordance with manufacturer's specifications.
Faucet aerators	<ul style="list-style-type: none"> • No aerators currently installed 	<ul style="list-style-type: none"> • Must meet manufacturer's specifications. • Threads must be compatible with existing faucet threads

13.2 CONTRACTOR REQUIREMENTS

Must meet the Contractor Requirements outlined in Section 2.1.

14. REFRIGERATOR REPLACEMENT

14.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.0.
2. Must be a recommendation from a NEAT or DEF-approved audit, or Agency assessment protocol.

14.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. New refrigerator must be Energy Star rated.
2. Old refrigerator must be decommissioned and recycled appropriately.
3. Old refrigerator must be metered for 2 hours w/o defrost cycle or metered for 24 hours to make sure that usage is over 900 kWh per year.
4. Replacement refrigerator must be top freezer, no through the door ice maker, no water dispenser, white or black, 18 to 21 cubic feet.

14.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements outlined in section 2.1.
2. Contractor is responsible for removing old refrigerator from home and will put a hole through old unit and/or cut the cord so it cannot be reused.

15. INCENTIVE PROCESSING

Incentives will be paid directly to the Agencies. Agencies are required to submit the following information along with all invoices by the tenth workday of each month (not to exceed forty-five (45) days from the date of installation):

- Customer information - including name, address, and DEF account number.
- A list of installed measures and, where appropriate, pre-existing conditions
- Itemized invoice with a brief description of installed measures (incentive measures only) and program incentive for each weatherized home, or the DEF/LIWAP data information form

If the home is not selected for inspection, or after it has passed inspection, invoices will be processed for payment. DEF will input installed measures and paid incentives to a data base system. Submitted reports and invoices will be maintained on file.

16. REPORTING REQUIREMENTS

DEF will follow the reporting requirements consistent with Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

RESIDENTIAL LOAD MANAGEMENT PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
RESIDENTIAL LOAD MANAGEMENT PROGRAM**

1. PROGRAM OVERVIEW

The Residential Load Management (RLM) program is a direct load control program of Duke Energy Florida, LLC (DEF). This program is designed to reduce DEF's demand during peak or emergency conditions by temporarily interrupting service to selected customer electrical equipment, for example, central heating and cooling systems, electric water heaters connected via internet-based communication, and swimming pool pumps.

2. ELIGIBILITY REQUIREMENTS

1. The program is available to residential customers in DEF's service area. DEF must have the ability to control the customer's load per the terms of the applicable RLM rate schedule.
2. The customer must be eligible for Residential Service under Rate Schedule RS-1, RSL-1, or LMR-1
3. Various types of devices may be used to control the customer's load, including both connected/communicating customer-owned devices and company-owned devices. The Company must be allowed reasonable access to the customer's premises to install, maintain, inspect, test and remove any company-owned devices.

3. PARTICIPATION REQUIREMENTS

The program participation requirements and participation options are as specified in the applicable RLM rate schedules.

4. EQUIPMENT AND INSTALLATION REQUIREMENTS

All installations must comply with all provisions of the National Electric Code (NEC) and any code or requirement of other authorities having jurisdiction.

When required, a DEF-approved, licensed contractor must complete all work. The contractor shall comply with all RLM program participation standards as specified by DEF in the most current copy of the Energy Management Operations Manual.

The company or assigned representative may require an inspection of the company-owned load management devices installed at the premise to ensure the equipment is connected, not tampered with, or disconnected without notice and operating properly prior to instating or reinstating bill credits on the account. If access cannot be obtained, service may be discontinued, and the customer billed for all prior load management credits received over a period not in excess of six months.

5. CONTRACTOR REQUIREMENTS

1. Contractors must meet the financial criteria set forth in the DEF Purchasing Standards for contractors doing business with DEF.
2. DEF reserves the right to request background checks of contractors participating in the RLM program.
3. Contractors must be insured per minimum specifications detailed within the Demand Side Management Contractor Participation Agreement.
4. Contractor is responsible for providing supervision of its employees and the necessary tools and equipment to meet program specifications by required completion date.

6. INCENTIVES

Customer incentives will be provided per the terms of the applicable RLM rate schedule.

7. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5) of the Florida Administrative Code.

II. NON-RESIDENTIAL CONSERVATION PROGRAMS

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
BUSINESS ENERGY CHECK PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
BUSINESS ENERGY CHECK PROGRAM**

1. PROGRAM OVERVIEW

The Business Energy Check (BEC) program of Duke Energy Florida, LLC (DEF) provides energy audits and assessments for non-residential customers. This program is designed to provide information to customers about their energy usage and identify opportunities for energy savings. The program can serve as a foundation for participation in other non-residential DSM programs.

The program provides energy evaluations to non-residential customers at no charge to the customer. These evaluations may include a billing analysis, information and educational material about energy saving practices and measures, recommendations for energy savings which may include operational changes or equipment modifications, and information about incentives and savings that may be available through other DEF programs.

The program offers multiple types of energy evaluations to non-residential customers including walk-through audits, phone-assisted audits along with educational information, and an online customer assessment tool.

2. ELIGIBILITY REQUIREMENTS

The customer must be a non-residential customer located in DEF's service territory and served by a metered DEF account.

3. INCENTIVES

DEF may periodically offer an incentive to customers who participate in the program, such as a non-residential Energy Efficiency Kit. Items in the kit could change over time as codes increase.

4. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
SMART \$AVER

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
SMART SAVER
(f/k/a BETTER BUSINESS PROGRAM)

1. PROGRAM OVERVIEW

The Smart Saver program is an “umbrella” program designed to improve the energy efficiency of non-residential facilities. The program seeks to meet the following overall goals:

- Provide customers with a cost-effective portfolio of measures across all building types.
- Improve customer-energy savings and demand reduction through the installation of energy-efficient equipment and thermal envelope upgrades.
- Educate customers regarding best practices, innovative technologies, and opportunities to manage energy consumption.

2. ELIGIBILITY REQUIREMENTS

1. Equipment and measures must be installed in facilities that are located in the DEF service territory and served by a non-residential metered DEF account.
2. Non-residential multi-family is defined as non-residential metered accounts of multi-family residential apartments or condominiums, or non-residential metered accounts of assisted living residential apartment units. Any multi-family residential dwellings that are master metered (referred to as “non-residential”) shall be eligible to participate in this program.
3. DEF must be permitted to inspect the installation of all measures and equipment prior to issuing any incentive payment over a certain amount or post installation for mandated inspections.

3. CONTRACTOR REQUIREMENTS

3.1. REQUIREMENTS FOR PARTICIPATING DEF CONTRACTORS (a/k/a Contractors under contract with DEF)

1. All Contractors must comply with DEF Contractor training, procedures, and manufacturers' specifications specific to the portion of the program for which they are participating. Failure to do so may result in termination of participation in any or all DEF programs.
2. The Contractor is responsible for the work to be performed, the supervision of their employees and the use of Contractor's own equipment to meet the work specifications and completion date.
3. The Contractor must correct any deficiency found in the installation or product when advised by a DEF representative and notify the DEF representative of compliance within thirty (30) days.
4. The Contractor shall notify DEF of any incident occurring during installation of a program measure or any follow-up procedure within twenty-four (24) hours of the incident.
5. The Contractor shall indemnify and hold DEF harmless against any and all injuries, damages, claims, or costs caused by items furnished or services rendered by the Contractor and/or its employees.
6. The Contractor must comply with all Federal, State, and local codes and regulations and have the appropriate permits and license(s) for the work.
7. The Contractor must provide documentation of and maintain in force the following types of insurance coverage. The Contractor must maintain coverage that meets the greater of the minimum coverage required by the State for license retention or the minimum coverage requirements specified in the Contractor agreement. This applies to all Program measures:
 - Workman's Compensation
 - General Contractual and Automobile Bodily Injury Liability
 - General and Automobile Property Damage Liability

- General and Vehicle Liability

3.1. CUSTOMER CHOSEN CONTRACTOR REQUIREMENTS

If the customer selects their own Contractor or certified facility management employee, it is their responsibility to make sure the installation complies with all federal, state, and local codes and regulations and have the appropriate license(s)/Certifications for the work to be performed if required.

The contractor/customer is responsible for the work to be performed, the supervision of their employees, and the use of contractors'/customer's own equipment to meet the work specifications and completion date.

The contractor/customer must follow manufacturers' specifications and procedures.

3.2 INSPECTIONS

Customer participation in Duke Energy programs is an agreement to allow Duke Energy access to sites for inspections as required by the Public Service Commission or in performance of measure qualifications.

4. INCENTIVE

Should the need arise, and utilizing available marketing dollars, DEF may periodically offer a monetary incentive to specified vendors and existing customers who are asked to participate in the marketing of the program.

Caps placed on measures could be increased/lessened or removed to encourage customer participation as needed year to year.

The incentive payments for below qualifying measures are as follows:

Program Component	Incentive
Building Envelope Improvements	
Wall Insulation	\$0.20 per square foot to bring the level to $\geq R20$. (Retrofit only) (other requirements apply)
Cool Roof	\$0.15 per square-foot Roof Product with \$0.76 or greater initial solar reflectance installed meeting specified requirements listed in the roofing section \$50,000 per building limit.
HVAC Equipment Replacement	
Air-Cooled and Water-Cooled Electric Chillers	\$25 per ton for qualifying equipment as referenced in Chiller section and meeting efficiency requirements
Heat Pumps $\leq 65,000$ Btu/h replacing resistance heat	\$100 per ton for minimum cooling efficiency of 16.0 SEER/15.2 SEER2 and minimum heating efficiency of 9.0 HSPF/7.5 HSPF2
Heat Pumps $< 65,000$ Btu/h replacing Heat Pumps	\$75 per ton for minimum cooling efficiency of 16.0 SEER/15.2 SEER2 and minimum heating efficiency of 9.0 HSPF/7.5 HSPF2
High Eff AC $< 65,000$ Btu/h replacing existing AC	\$50 per ton for minimum cooling efficiency of 16.0 SEER/15.2 SEER2
Package Terminal Heat Pumps and Air Conditioners (PTHPs/PTACs)	\$100 per ton per specifications referenced in Packaged Terminal equipment section meeting required efficiencies
Single Package Vertical Heat Pump (SPVHP)	\$50 per ton meeting required efficiencies
Ductless Mini-Split AC	\$100 per ton of HVAC meeting required efficiencies
Ductless Mini-Split Heat Pump	\$200 Per Ton of Heat Pump meeting required efficiencies

Unitary A/C and Heat Pumps > 65,000 Btu/h	\$50 per ton per meeting required efficiencies*(Includes Variable Refrigerant and Multi-Split A/C and HP)
Water Source Heat Pumps	\$40 per Ton meeting required efficiencies
VFD on Cooling Tower Fans	\$65 per HP not to exceed 50% of VFD costs
VFD on HVAC Pump Motors	\$65 per HP not to exceed 50% of VFD costs
Advanced Rooftop Controller	\$150 per ton of controlled HVAC Meeting requirements Incentive not to exceed 50% of project costs
HVAC System Related Improvements	
Demand Control Ventilation	\$0.10 per sq ft with properly designed and installed DCV controls and programming. Note: Incentives for DCV are not to exceed 50% of total project or service cost
Duct Test	50% of test cost up to \$50 for first unit tested (customer pays \$50 and Duke Energy pays \$50)
	50% of test cost up to \$40 for each additional unit tested at same address (customer pays \$40 and Duke Energy pays \$40)
Duct Repair	\$0.29 cents per sq ft. Up to \$725 per unit sealed
Energy Recovery Ventilation	\$0.97 per sq ft, minimum 500CFM unit >65% total heating effectiveness per AHRI Standards Caps may apply to incentive payout
HVAC PTHP/PTAC Coil Cleaning	\$20 per unit (PTHP/PTAC)
HVAC (DX Tune Up	One-time incentive \$25 per ton Incentive not to exceed 50% of project cost

HVAC Chiller Tune Up	\$15 per ton - Must meet specific requirements. Incentive not to exceed 50% of project cost
Smart Thermostat	\$100 per thermostat installed on HVAC systems. Some limitations may be applied
Lighting and Controls	
Occupancy Sensors	\$0.07 cents per watt controlled. Must meet requirements listed in Lighting section
LED Exterior Wall Packs	\$1.42 per Watt for LED Wall Pack Must meet requirements listed in Lighting section
Refrigerated Display Case LED Lighting	\$15 per 60" Refrigerated Case LED Strip Must meet requirements listed in Lighting section
LED Linear - 2x4 Fixture Replacement	\$30 per fixture - 2x4 LED Troffer Must meet requirements listed in Lighting section
LED Exit Sign	\$2.00 per Watt Single-Sided LED Exit Sign Must meet requirements listed in Lighting section

**** Note that if provided funds are available, DEF may choose to increase incentives on specific measures above in an effort to enhance acceptance in the marketplace. ****

*****Maximum incentive pay out could be adjusted *****

4.1 INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects in the program.
2. Project supporting documents will be collected and reviewed for program compliance.
3. Incentives will not be paid until the review (and inspection when required) is completed.
4. A copy of the customer's invoice, purchase order, or equivalent (determined by DEF) must accompany the incentive application for all measures and must be received within

six (6) months of the completion of that measure. For a new construction measure, the supporting documentation must be received within six (6) months of the Certificate of Occupancy or permanent meter set.

5. The customer will receive the incentive in the form of a rebate check or other deemed payment method. The DEF personnel will need to obtain the customer's Tax ID#. Any customer receiving over \$600 cumulative total during a year will receive an IRS 1099 form from DEF or its representative reporting to the customer and the IRS the total amount of the rebates received.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. CEILING INSULATION

6.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. Building must be at least two (2) years old in order to qualify for an incentive.
3. The weighted average R-value of the existing insulation over the total ceiling square footage (above conditioned space) must be less than or equal to R-12. (**Exception:** May exclude conditioned area for a recent addition.)
4. Eligible facilities must have both electric (non-portable) air conditioning and electric (non-portable) heating.
5. A Business Energy Check or other pre-qualification methods (as determined by DEF) is required prior to installation to establish existing insulation levels.
6. Any structure that has in the past utilized this portion of the program (attic insulation) is not eligible to participate again. However, if that structure, through an act of God, loses the insulation and this loss is not covered by insurance, then the structure would be eligible to participate a second time. It is the customer's responsibility to provide

DEF with a letter from their insurance company stating that the insulation loss was not covered by insurance.

7. Any building with “Knob and Tube Wiring” must be documented or certified as not energized by a state-licensed electrician. (*National Electrical Code 1990, Article 324, Section 324-4*).
8. Non-residential multi-family units will be qualified as individual units for incentive purposes. For multi-family units greater than one story in height, the top floor only will be eligible for incentives.

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturers’ recommendations and specifications and must meet all state, county, and local codes.
2. Flat roofs must have enough space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.
3. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.
4. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by state, county, and local codes.
5. The insulation must be installed uniformly, resulting in the same R-value average of at least an R 38 throughout the entire area.
6. All attic access panels that are located in conditioned space must be insulated in the same minimum R-value as throughout the entire area and permanently attached.

6.3 CONTRACTOR REQUIREMENTS

1. DEF participating contractors must meet the contractor requirements outlined in Section 3.1. Customer chosen contractors must meet the contractor requirements as outlined in Section 3.2.

2. The contractor will attach an R-Value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
 - Manufacturer's name
 - Insulation type
 - R-Value, the thickness, and the location of the insulation installed.
 - Name and address of the contractor installing the insulation.
 - Date of installation

7. WALL INSULATION

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. Buildings must be at least two (2) years old in order to qualify for an incentive.
3. The weighted average R-value of the existing insulation must be less than or equal to R-16. (**Exception:** May exclude conditioned area for a recent addition.)
4. Eligible facilities must have both electric (non-portable) air conditioning and electric (non-portable) heating. This is retrofit measure only; new construction projects are not eligible.
5. A Business Energy Check or other pre-qualification methods (as determined by DEF) is required prior to installation to establish existing insulation levels.
6. Any structure that has in the past utilized this portion of the program (Wall insulation) is not eligible to participate again. However, if that structure, through an act of God, loses the insulation and this loss is not covered by insurance, then the structure would be eligible to participate a second time. It is the customer's responsibility to provide DEF with a letter from their insurance company stating that the insulation loss was not covered by insurance.
7. Any building with "Knob and Tube Wiring" must be documented or certified as not energized by a state-licensed electrician. (*National Electrical Code 1990, Article 324, Section 324-4*).

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturers' recommendations and specifications and must meet all state, county, and local codes.
2. The insulation must be installed uniformly, resulting in the same R-value greater than or equal to 21 throughout each area.
3. All attic access panels that are located in conditioned space must be insulated in the same minimum R-value as throughout the entire area and permanently attached.
4. Improvements to wall insulation in existing non-residential buildings, after retrofit, needs to meet or exceed the ASHRAE Standard 90.1-2010 R-value.

7.3 CONTRACTOR REQUIREMENTS

1. DEF participating contractors must meet the contractor requirements outlined in Section 3.1. Customer chosen contractors must meet the contractor requirements as outlined in Section 3.2.
2. The contractor will provide all required documentation by the insulation contractor or his representative to the customer.
 - Manufacturer's name
 - Insulation type
 - R-Value, the thickness, and the location of the insulation installed.
 - Name and address of the contractor installing the insulation.
 - Date of installation
3. All participating Trade Allies in the Wall Insulation Program must follow DEF Code of Ethics.

8. COOL ROOF

8.1 PARTICIPATION REQUIREMENTS

1. The account must meet the Eligibility Requirements as outlined in Section 2
2. The customer must provide proof of the installation of the approved roof products including documentation of project cost and project completion date. This requirement is typically met by submitting copies of invoices. Documentation must also be provided indicating the total square footage over air-conditioned space.
3. The roof product must be tested using the ASTM E 903 or ASTM C 1549 test or ASTM E1918 or CRRC-1 standards and must be certified as having an Initial Solar Reflectance Rating greater than or equal to 0.76. Proof of certification by either Energy Star or the Cool Roof Rating Council must be attached to the incentive form.
4. Product must be installed by a licensed contractor or qualified/certified personnel.
5. The cooling system for the facility must be all electric.

HVAC EQUIPMENT

9. AIR-COOLED AND WATER-COOLED ELECTRIC CHILLERS

9.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of HVAC project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices or purchase orders.
3. Air Conditioning, Heating and Refrigeration Institute (AHRI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form. If AHRI sheet cannot be obtained, documentation must be provided indicating that the equipment was tested to the AHRI 550/590 Test Standard or AHRI required standards. DEF will default to AHRI ratings for tonnage of the equipment being approve.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturers' rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning, Heating and Refrigeration Institute (AHRI) rating procedure. Accepted Efficiency ratings are either Full Load (FL) or Integral Partial Load Value (IPLV).
2. All equipment for which an incentive is paid shall be new and not refurbished, previously installed, or used.
3. All equipment installations shall exceed the efficiency requirements set by federal, state, and local code by a DEF specified minimum.
4. HVAC equipment must be all electric.

9.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

10. SMALL HEAT PUMPS and Straight Cool HVAC ($\leq 65,000$ Btu/h)

10.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of HVAC project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices or purchase orders.
3. Air Conditioning, Heating and Refrigeration Institute (AHRI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form.

10.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems (i.e., both air handler and outdoor condensing units must be replaced in order to qualify for an incentive), including any supplemental devices, and shall be listed by Underwriters Laboratories (UL) or other nationally recognized testing laboratories in accordance with UL standards as appropriate. (Includes Geothermal units)
2. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
3. All equipment shall be new and not refurbished, previously installed, or used.
4. Data/Server Rooms will be evaluated under the appropriate code on a per case basis.
5. The installed air handler/outdoor condensing unit combination must satisfy both the cooling, and the heating minimum efficiency requirements as set by DEF.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning, Heating and Refrigeration Institute (AHRI) rating procedure (standard 210/240-2023). All cooling-mode efficiency ratings eligibility will be based on EER2 if available. If EER2 ratings are not available, then SEER2 will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF2.
7. The contractor will be encouraged to use mastic on all new connections.
8. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
9. Heat pumps must be all electric.

10.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

11. PACKAGE TERMINAL HEAT PUMPS (PTHPs) REPLACING PTAC's and PTAC's REPLACING LESS EFFICIENT PTAC's

11.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of HVAC project cost, project completion date and an itemized inventory of equipment installed and site location installation. This qualification is typically met by submitting copies of invoices or purchase orders.
3. Air Conditioning, Heating and Refrigeration Institute (AHRI) certified efficiency data at Standard Rating Conditions must accompany the incentive form.

11.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations shall exceed the minimum efficiency requirements set by federal, state, and local code by 6-10% to allow for equipment availability.
2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or AHRI rating procedure.
3. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
4. All equipment shall be new and not refurbished, previously installed, or used.
5. Package Terminal Heat pump and PTAC must be all electric.

11.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1 or 3.2.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

12. LARGE UNITARY A/C AND HEAT PUMPS (> 65,000 Btu/h)
***Also includes variable refrigerant flow multi split AC and Heat Pumps of all sizes**
Ductless Mini-Split Units, Single Packaged Vertical, Water Source Heat Pumps

12.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility requirements as outlined in Section 2.
2. The customer must provide proof of HVAC project cost, project completion date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices or purchase orders.
3. Air Conditioning, Heating and Refrigeration Institute (AHRI) certified efficiency data, or equivalent (determined by DEF representative), at Standard Rating Conditions must be attached to the incentive form.

12.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations shall exceed the minimum efficiency requirements set by federal, state, county, and local code by DEF specified minimum Installed equipment must be complete systems including any supplemental devices and shall be listed by Underwriters Laboratories (UL), or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards, as appropriate.
2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or AHRI rating procedure (AHRI 210/240-94 for less than 135,000 Btu/h and AHRI 340/360 for units greater than 135,000 Btu/h). If Minimum Efficiency Rating cannot be attained by a nationally recognized testing laboratory or be qualified by manufactures ratings, Duke reserves the right to not incentivize equipment.
3. All equipment installations shall meet manufacturers' instructions and specifications and meet all state, county, and local codes.

4. All equipment shall be new and not refurbished, previously installed, or used.
5. The contractor will be encouraged to use Mastic on all new connections.
6. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
7. HVAC equipment must be all electric.

12.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1 or 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

HVAC SYSTEM RELATED IMPROVEMENTS

13. DEMAND CONTROL VENTILATION (DCV)

13.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. Customer must provide documentation of the DCV system and provide square footage of the conditioned space.

13.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. DCV must include sensors that measure CO₂ levels (or other approved methods) and adjusts ventilation rate in spaces with varying occupancy through integrating sensor readings to control the outside air dampers.
2. Installation of DCV system and sensors shall be in accordance with the manufacturers' recommendations and specifications and meet all state, county, and local codes.
3. Commissioning the DCV system is recommended to ensure the ventilation system is working properly with the HVAC computer and sensors.

13.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

14. DUCT TEST AND LEAKAGE REPAIR

14.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. Repair recommendations must have been the result of a DEF-approved duct test. (**Exception:** If during an energy audit or prior to duct test, the DEF representative validates the need for complete duct system replacement, a duct test is not required).
3. The customer's duct system must be in adequate condition to accommodate the duct test to be performed and not have been previously tested for the present occupant within a 5-year period. (**Exception:** Duct systems altered as a result of remodeled or added conditioned area.)
4. The duct must be easily accessible for repair. (Exception: aerosol sealing method.)
5. Non-residential, multi-family units will be qualified as individual units for incentive purposes. Multi-family units greater than one story in height may only have the top floor duct system(s) repaired.
6. All facilities must have centrally ducted electric cooling and electric heat. If non-space heating combustion appliances exist, then the facility must pass a safety test prior to any duct sealing.
7. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

8. A minimum of 60 CFM @ 25 Pa's of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

14.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
2. For conventional duct repair only, mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Tape may be used to hold the duct in place while the mastic is drying. If tape is used, the mastic must cover the tape completely and extend a minimum of 2" past the width of the tape. Mastic must meet Underwriters Laboratories (UL) 181 specifications for the material that the mastic being applied to.
3. Blower door or duct blaster procedures must be followed as specified in training, or manufacturers' instructions, unless otherwise directed by DEF when performing the duct test.
4. Aerosol procedures must be followed as specified in training or manufacturers' instructions and will include:
 - Complete pre-seal and post-seal leakage test using approved aerosol software.
 - Aerosol sealants shall meet the requirements of Underwriters Laboratories (UL) 723.
 - Seal all boot-to-ceiling and/or floor connections.
 - All areas of the duct system will be evaluated, and cost-effective leaks will be sealed by conventional (6.2.2) or aerosol method.
 - Complete post-seal leakage test using approved aerosol software.

14.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.

2. Must be a licensed Mechanical Contractor, or a Class A, B, or C Air-Conditioning contractor in the jurisdiction having authority.
3. All participating contractors must have attended and successfully completed a DEF-approved duct repair course.
4. In non-residential, multi-family units, the contractor shall seal all joints and connections of the duct work, and no duct test is required. Multi-family units greater than one story in height may only have the top floor duct system(s) repaired. No combustion appliances (fireplaces, water heating, etc.) are allowed for multi-family due to safety concerns.

14.4 INSPECTION REQUIRMENTS

1. Customer must allow Duke Energy access to site to preform required inspections as needed.

15. ENERGY RECOVERY VENTILATION

15.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of energy recovery ventilation project cost, square footage of conditioned space of coverage, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices.
3. Air Conditioning, Heating and Refrigeration Institute (AHRI) 1060 certified efficiency data must be attached to the incentive form.
4. All ratings must be done with an approved model rating tool by AHRI with a current version number listed on the AHRI site.

15.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices and shall be listed by Underwriters Laboratories or other nationally recognized testing

- laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.
2. Equipment efficiency ratings shall be obtained from an approved modeling tool by Air Conditioning, Heating and Refrigeration Institute (AHRI) rating procedure standard and have an active version number on the AHRI site.
 3. To be eligible for an incentive, the energy recovery ventilation unit AHRI rating must be equal to or greater than 500 CFM with a rating equal to or greater than 65% total heating effectiveness per AHRI Standards.
 4. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
 5. All equipment shall be new and not refurbished, previously installed, or used.
 6. The contractor will be encouraged to use mastic on all new connections.

15.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

16. ADVANCED ROOFTOOP CONTROLLER

16.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices.
3. All ratings must be done with an approved model rating tool by AHRI if appropriate.

16.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.

16.3 CONTRACTOR REQUIREMENTS

1. Advanced Rooftop Controls (ARC) are retrofit kits that can help manage rooftop HVAC units more efficiently by adding variable frequency drives and controls to constant speed roof top unit supply fans must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

17. VFD ON COOLING TOWER FANS AND VFD ON HVAC PUMP MOTORS

17.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices.
3. All ratings must be done with an approved model rating tool by AHRI if appropriate.

17.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.

2. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
3. All equipment shall be new and not refurbished, previously installed, or used.
4. VFD on Redundant equipment is not eligible. Must be between 5 and 200 HP. Replace an existing VFD does not qualify.
5. Incentive cannot exceed 50% of the cost of the VFD installation.

17.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

18. SMART THERMOSTAT

18.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices.

18.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.
2. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.

3. Equipment shall be a WIFI connected Smart Thermostat
4. New Construction is excluded.
5. Thermostat shall have a program memory retention capability or battery backup (minimum two days) with a warning indicator for battery replacement and be connected to WIFI.

18.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. If installed by qualified facility personal they must follow manufactures requirements for installation and startup.
3. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

19. HVAC COIL CLEANING - PTHP/AC CLEANING

19.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of cleaning project cost, project completion date and an itemized inventory of equipment cleaned including room number if applicable. This qualification is typically met by submitting copies of invoices.
3. Heating and cooling system must be all electric.
4. DEF must be informed of cleaning date to conduct random inspections during cleaning process or photos of equipment and cleaning as determined by DEF Management.
5. The HVAC equipment will only be eligible for one cleaning over its lifetime.

19.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. For PTAC/PTHP the cleaning process should start by removing the packaged HVAC units from the guest rooms.
2. The cleaning process should consist of removing the covers to gain access to the condenser and evaporator coils, blower fan(s) and other items in the air flow path. The entire unit is then cleaned.
3. Pre-and post-documentation form (provided by DEF) must be completed for each unit.
4. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.

20. CHILLER/HVAC DX AIR CONDITIONER / HEAT PUMP TUNE-UP (Does not include PTAC/PTHP)

20.1 PARTICIPATION REQUIREMENTS

1. Customer must meet program eligibility requirements.
2. Customer must provide proof of project cost and project date. This is typically met by submitting copies of invoices.

20.2 MATERIAL AND INSTALLATION REQUIREMENTS

1. HVAC equipment must be all electric.
2. All equipment tune-up and repairs must meet manufacturer's instructions and inspections and meet all state, county, and local codes.

20.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. Contractor must be a licensed Mechanical Contractor, Class A, B, or C, in the jurisdiction having authority.

20.4 DOCUMENTATION REQUIREMENTS

1. Document equipment manufacturer, model, and serial numbers.
2. Pre-and post-documentation form (provided by DEF) must be completed for each unit.

21. LIGHTING FIXTURES AND CONTROLS

21.1 OCCUPANCY SENSORS, REFRIGERATED DISPLAY CASE LED LIGHTING 60" (5 FOOT), LED EXTERIOR WALL PACKS ONE 35 W LED WALL PACT, LED LINEAR FIXTURE REPLACEMENT 2 X 4 LED TROFFER, LED EXIT SIGN ONE 5 W SINGLE SIDED LED EXIT SIGN

21.2 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The customer must provide proof of project cost, project completion date and an itemized inventory of equipment installed. This requirement is typically met by submitting copies of invoices. Unless utilized in one of Duke Energy's delivery channels.

21.3 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with Underwriters Laboratories (UL) standards as appropriate.
2. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.
3. If required by Minimum Codes, the equipment is not eligible for an incentive.

21.4 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 3.1. If a customer-chosen contractor, the contractor must meet the contractor requirements as outlined in Section 3.2.
2. If installed by qualified facility personal they must follow manufactures requirements for installation and startup.

22. NEIGHBORHOOD Business ENERGY Saver Initiative (NBES – A pilot offering as a channel to customers)

22.1 NBES INITIATIVE OVERVIEW

Duke Energy Florida, LLC's (DEF) Neighborhood Business Energy Saver (NBES) initiative is a custom energy conservation offering for non-residential metered low-income customers and will initially be piloted as a part of the Smart Saver program. The NBES initiative is designed to assist businesses in selected neighborhoods where 50% of the households have incomes equal to or less than 200% of the poverty level as established by the U.S. Government. The NBES initiative allows DEF to individually reach a larger audience of income-eligible non-residential customers than through traditional government agency flow-through methods. DEF, through a third-party contractor, will directly install energy conservation measures (ECM), at a discounted cost identified through an energy assessment of the customer's facilities. Additionally, customers will receive a comprehensive package of energy education materials which will inform them on ways to better manage their facilities' energy usage.

The Neighborhood Business Energy Saver program seeks to achieve the following goals:

1. Complete a non-residential energy assessment to identify energy-efficiency opportunities within the customer's facilities.
2. Implement a comprehensive package of conservation measures to increase the business's energy efficiency.
3. Provide one-on-one customer education on energy-efficiency techniques and energy conservation measures.
4. Promote behavioral changes that will help the customers business control their

energy usage.

22.2 ELIGIBILITY REQUIREMENTS

1. The facility must be a non-residential metered customer in DEF's service area.
2. The Business must be located in a selected DEF qualifying Census Block that meets the definition of an income-eligible neighborhood as stated above.
3. Multi-family dwellings that meet the above definition, which are located within the same city, but may not be within the same Census Block, may also be eligible to participate in the program if they meet guidelines as presented in the program participation standards.
4. All installations must be accessible for verification by a DEF representative.

22.3 EQUIPMENT/MATERIALS AND INSTALLATION SPECIFICATIONS

All materials and installation specifications shall meet or exceed the following guidelines:

1. All equipment and the associated installations must meet manufacturers' instructions and specifications and DEF procedures. Any contractor who fails to meet these requirements may be terminated from participation in any or all DEF programs.
2. All work shall be performed to constitute a finished product.
3. Materials shall be free of defects and covered under warranty for at least one year.
4. Installation procedures must comply with all federal, state, and local codes.

22.4 CONTRACTOR REQUIREMENTS

The contractor may work with subcontractors to install certain measures as mutually agreed upon with DEF. Contractors and subcontractors must have an active Florida General Contractor's license, meet all associated requirements of the Florida Department of Business and Professional Regulation and must comply with all local, state and federal rules and codes. The selected contractor(s) is/are responsible for all work performed and

must meet and/or comply with the following requirements:

1. Contractors must have appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.
2. DEF reserves the right to request background checks of contractors participating in the BNES program. The contractor shall be responsible for all associated costs.
3. The contractor is responsible for the associated work to be performed, the supervision of their employees and/or subcontractors and the use of contractor's own equipment (or rental equipment) to meet the work specifications.
4. All contractors must comply with DEF contractor procedures and manufacturers' specifications specific to the BNES initiative. Failure to do so may result in termination of participation in any or all DEF programs.
5. The contractor shall notify DEF of any incident occurring as a result of the NBES initiative or any follow-up procedure within one (1) working day of the incident.
6. The contractor must correct any deficiency found in the installation or product(s) associated with the BNES comprehensive package of electric conservation measures, when advised by a DEF representative, and notify the DEF representative of compliance within thirty (30) days.
7. Contractors shall indemnify and hold DEF harmless from any and all losses, liabilities, injuries, damages, claims, or costs, whatsoever caused, by items furnished or services rendered, as a result of the BNES program.
8. The contractor must notify their insurance companies to provide DEF with documentation, and maintain in force, the state required minimum insurance policies for license retention or the following minimum insurance policies, whichever is greater:
 - Workman's Compensation as required by law.
 - General Contractual and Automobile Bodily Injury Liability: \$100,000 per person and \$300,000 per occurrence
 - General and Automobile Property Damage Liability: \$100,000 per occurrence
 - General and Vehicle Liability policies endorsed: \$100,000 per occurrence to provide blanket Coverage

- All sub-contract labor must comply with insurance requirements.
9. All participating duct sealing contractors must attend and successfully complete a DEF-approved duct repair course. At a minimum, the training will consist of:
- Training session on building science
 - Duct test applications (classroom, field, and laboratory)
 - Codes and standards as they relate to duct sealing.
10. Sub-contractors participating in the measures must follow DEF's Code of Ethics. DEF reserves the right to request background check results on all participating contractors and employees.

23 ELIGIBLE MEASURES

23.1 ENERGY-EFFICIENT Ceiling Mounted Occupancy Sensors

This measure will provide for the direct installation of energy-efficient ceiling mounted occupancy sensors.

23.2 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.0.
2. Only for applications not already required by the State Energy Code.
3. Plug load occupancy sensors do not qualify.

23.3 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Must be Underwriters Laboratories (UL) approved sensors.
2. Manual override must offer the ability to turn lights off when space is occupied but must not offer the ability to turn lights on when space is unoccupied.
3. The occupancy sensors shall be installed in accordance with the manufacturers' recommendations and specifications.
4. Only passive and/or ultrasonic detectors are eligible.

5. Sensors must be hard-wired and control interior lighting fixtures.

23.4 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 4.0.

24. EFFICIENT INDOOR AND EXTERIOR LIGHTING

24.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.0.
2. Eligible installations must use pre-approved lighting technology. Eligible lighting technologies include LED Exterior Wall Packs, 60” LED Refrigerator Display Case Strips, LED Linear 2 x 4 Troffer Replacement, and LED Single-Sided Exit Signs.
3. All lamps, ballasts, and fixtures must be Underwriters Laboratories (UL) listed.
4. Completed projects must meet all federal, state, and local codes and regulations and minimum Illuminating Engineering Society (IES) illumination standards.

24.2 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 4.0.

25. CEILING INSULATION

25.1 PARTICIPATION REQUIREMENTS

1. Insulation recommendations must be the recommendation of the contractor. Eligible non-residential facilities must have whole-facility electric air conditioning and/or whole facility electric heating.
2. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be R-12 or less. (Exception: May exclude conditioned area for a recent addition.)
3. Any facility with “Knob and Tube Wiring” that is energized is not eligible.

25.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturers' recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R-38.
3. Flat roofs must have enough space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.
4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space and have a minimum clearance around all recessed lighting and gas.

26. DUCT LEAKAGE REPAIR

26.1 PARTICIPATION REQUIREMENTS

Contractor will determine if the facility qualifies for an HVAC Duct Leakage Repair. Facilities must have a centrally ducted system to qualify for this measure. Contractor will perform a visual inspection of the duct work. If not currently insulated or sealed, the contractor will arrange for a qualified HVAC Technician to install this measure.

1. The non-residential customer's duct system must be in adequate condition to accommodate the duct leakage repair.
2. The duct must be accessible for repair.
3. Facilities must have centrally ducted electric cooling and electric heat.
4. Facilities must not contain any combustion appliances (including wood burning or gas fireplaces).
5. The Contractor will seal every joint and connection.

26.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.

2. For conventional duct repair only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Tape may be used to hold the duct in place while the mastic is drying. If tape is used, the mastic must cover the tape completely and extend a minimum of 2” past the width of the tape. Mastic must meet Underwriters Laboratories (UL) 181 specifications for the material to which the mastic is being applied.

26.3 CONTRACTOR REQUIREMENTS

1. Contractor must meet specifications as outlined in section 4.0.

27. HVAC MEASURE

27.1 HVAC MAINTENANCE

During the assessment, the contractor will perform a visual assessment of the HVAC system and make a recommendation for a basic system check. Facility must be centrally electrically heated and/or cooled to qualify for this measure.

The following represents the minimum requirement that must be performed by an approved HVAC Technician:

System Controls and Operation:

- Check thermostatic operation.
- Cycle all controls.
- Inspect for dirt and loose connections; clean and tighten, as necessary.
- Visually check all connections for refrigerant leaks.
- Check refrigerant pressure and add as needed.
- Check and record supply and return temperature.

Evaporator:

- Inspect coil assembly and drip pan.
- Clean coil and pan and flush, as necessary.
- Check drain line and blow out if necessary.
- Apply algae treatment as required.

Blower and Blower Drive:

- Oil blower motor if applicable.
- Check motor bearings.
- Check belt condition and tension; replace if necessary.
- Check blower cleanliness; clean if necessary.
- Check and record amp draw.
- Check drive and pulley alignment.
- Check for vibrations.

Condenser:

- Lubricate condenser fan motor, if applicable.
- Check motor bearings.
- Check coil condition for dirt build-up and clean, as necessary.
- Clean condenser as needed.

Compressor:

- Check electrical wire connections; clean and tighten where possible.
- Check operation and condition.
- Check and record operating amperage.

Heating System:

- Check electric heat strips.

27.2 CONTRACTOR REQUIREMENTS

Contractor must meet specifications as outlined in the Contractors Requirements Section

28. ADDITIONAL CUSTOMER ENGAGEMENT OPPORTUNITIES AND CHANNELS

Duke may explore additional opportunities and/or channels such as midstream, upstream, marketplace and others as needed.

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

SMART SAVER CUSTOM INCENTIVE PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
SMART SAVER CUSTOM INCENTIVE PROGRAM**

1. PROGRAM OVERVIEW

The objective of the Smart Saver Custom Incentive program of Duke Energy Florida, LLC (DEF) is to encourage customers to make capital investments for the installation of high-efficiency technologies not covered by DEF's other DSM programs. Projects may include, but are not limited to, thermal energy storage projects, high-efficiency machinery, whole-building construction projects and other technologies specific to a particular industry or business process. Incentives will be determined on a project-specific basis.

2. ELIGIBILITY REQUIREMENTS

1. The participant must be located in the DEF service territory and be a non-residential, metered account.
2. Owners who do not occupy the facilities or renters of these types of facilities are eligible to participate in this program. If renters of a facility wish to participate in this program, they must submit written approval from the owner to do so.
3. Projects must pass the Participants cost effectiveness test and the RIM cost effectiveness test to qualify for incentives.
4. Projects must have a payback period of no less than two (2) years.
5. Projects must not include fuel switching.
6. A Smart Saver Custom Incentive Program Pre-Application Questionnaire or specific DEF Calculator evaluation, must be completed, and submitted for approval. DEF will evaluate the information provided to determine if the project may be eligible for incentives through this Program. Approval must be granted prior to completion of any project.

3. PARTICIPATION REQUIREMENTS

1. The customer will be required to submit an application to apply for projects that are determined to be eligible. The application will include additional project specific details including efficiency ratings of equipment, details of project costs, demand, and energy savings, as well as the savings load shape and measure life.
2. The application must be approved and signed by an authorized representative of DEF.
3. DEF will evaluate projects to determine cost effectiveness and appropriate incentive levels.
4. DEF will be allowed access to all measure installations for inspection purposes if requested.

4. EQUIPMENT AND INSTALLATION REQUIREMENTS

1. Completed projects must meet all federal, state, and local codes and regulations.
2. Projects may be inspected to verify the demand and energy savings.
3. All equipment for which an incentive is paid shall be new and not refurbished or previously installed or used. Incentives will not apply to equipment installed to provide back-up or redundancy.
4. All equipment installations shall meet manufacturers' instructions and specifications.
5. All projects must exceed local, state, and federal minimum efficiency standards.
6. Equipment must be all electric.
7. Other material and equipment specification requirements may be identified on an individual project basis.
8. The installed energy-efficiency equipment may require instrumentation, such as a DEF load profiler online or a chiller EMS to provide data on energy consumption to ensure the peak load shift has occurred.

5. INCENTIVES

1. Incentives are limited to fifty percent (50%) of the customer's actual total project cost for the energy efficiency measure(s).
2. The maximum incentive for a single project is \$250,000.
3. Incentives may be paid in stages based on comparative performance metrics when there is uncertainty around the demand and energy reductions that will be achieved. Fifty percent (50%) of the approved incentive will be paid upon initial installation. The remaining incentive will be paid post-installation upon confirmation of the achieved impacts.

6. INCENTIVE PROCESSING

1. A Payment Request Form along with documentation of project costs and completion date must be submitted to DEF within ninety (90) days of completion of the project. This documentation must include an itemized inventory of the equipment installed along with equipment efficiency ratings from a nationally recognized certification program directory or a manufacturer's rating. For new construction projects, the supporting documentation must be received within ninety (90) days of the Certificate of Occupancy, permanent meter set or final payment authorization form.
2. DEF may inspect installations to verify operability of the technology and/or to obtain information needed to calculate the approved custom incentive amount.
3. Project-supporting documents will be reviewed to ensure program compliance.
4. Incentive payments will be based on the final, approved incentive amount for each project. Incentive amounts may be adjusted if the project cost or achieved impacts vary from the preliminary estimates.
5. Incentives will be paid after review and/or savings verification has occurred.
6. If the vendor is the payee, the vendor must issue credit in the amount of the Smart Saver Custom Incentive to the customer on the invoices provided with the payment request submission.

7. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
STANDBY GENERATION PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
STANDBY GENERATION PROGRAM**

1. PROGRAM OVERVIEW

The Standby Generation program of Duke Energy Florida, LLC (DEF) is a load-control program designed to reduce DEF's demand based upon control of customer equipment. The program is voluntary and is available to business customers who have on-site generation capability and are willing to reduce their facility demand at the request of the company.

2. ELIGIBILITY REQUIREMENTS

1. Customer must be a non-residential customer taking service under a General Service rate schedule.
2. The program meter must be accessible by DEF for the purposes of reading, inspecting, and maintaining the standby-generation metering equipment.

3. PARTICIPATION REQUIREMENTS

1. Customer must have standby generation that will reduce utility system demand at the request of DEF.
2. Customer standby-generation capacity must be at least 50 KW and must be compliant with all state and federal emissions requirements.
3. Customer must be within the range of the Company's switch communications capability.

4. EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All installations must comply with all provisions of the National Electric Code (NEC) and any code or requirement of other authorities having jurisdiction.
2. Where necessary, the engineering for the metering and monitoring module installation will be done by a registered Florida engineer. The physical installation will be done by

a licensed Florida electrical contractor selected by DEF. Appropriate permits will be secured for each installation by the contractor.

5. CONTRACTOR REQUIREMENTS

1. The contractor shall comply with all Load Management Standards as specified by the DEF energy management department and stated in the most current copy of the Energy Management Operations Manual.
2. Contractors participating in the installation of metering and communications modules on the customer's equipment must meet the financial criteria set forth in the DEF Materials and Contracts Department policies and procedures.
3. The contractor must comply with all Federal, State, and local codes and regulations.
4. Contractors are responsible for the work to be performed, the use of the contractor's own equipment and the supervision of employees in order to meet the work specifications and the required completion date.
5. Contractor shall indemnify and hold DEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.
6. Contractors will be insured as specified in the terms and conditions of their contract with DEF.
7. DEF reserves the right to request background checks of contractors working under this program.

6. INCENTIVES

Incentives will be provided in accordance with the provisions of the applicable Stand-by rate schedule.

7. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
INTERRUPTIBLE SERVICE PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
INTERRUPTIBLE SERVICE PROGRAM**

1. PROGRAM OVERVIEW

The Interruptible Service (IS) program of Duke Energy Florida, LLC (DEF) is a direct load-control program that is used to reduce system demand during peak or emergency conditions through interruption of service to program participants. The program allows DEF to interrupt service to program participants per the provisions of the applicable Interruptible Service rate schedule.

2. ELIGIBILITY REQUIREMENTS

1. Customer must be eligible for service under an approved Interruptible Service Rate Schedule.
2. The facility must be in the DEF service territory and served by a metered, DEF account.
3. The customer must be a DEF non-residential customer.

3. PARTICIPATION REQUIREMENTS

1. Participant must sign an agreement with DEF as to the terms and conditions of this service.
2. Participant must allow DEF to install the required load control equipment.
3. Participant will be billed in accordance with the applicable Interruptible Service rate schedule.

4. INCENTIVES

Incentives will be provided in accordance with the terms of the applicable Interruptible Service Rate Schedule.

5. REPORTING REQUIREMENTS

The reporting requirements for this program are as specified in FPSC Rule 25-17.0021(5), Florida Administrative Code.

DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
CURTAILABLE SERVICE PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
CURTAILABLE SERVICE PROGRAM**

1. PROGRAM OVERVIEW

The Curtailable Service (CS) program of Duke Energy Florida, LLC (DEF) is an indirect load-control program that is used to reduce DEF's demand during peak or emergency conditions. This program is made available to non-residential customers through the Curtailable Service rate schedules. Customers who choose to participate in this program are required to curtail their load when requested by the utility per terms of the applicable rate schedule or to a level at or below the contractual agreed upon non-curtailable demand. The eligibility criteria, participation requirements, curtailment requirements and customer incentives, along with potential penalties for failure to curtail, are as specified in the terms of the applicable curtailable service rate schedule.

2. ELIGIBILITY REQUIREMENTS

1. Customer must be eligible for service under an approved Curtailable Service Rate Schedule.
2. The facility must be in the DEF service territory and served by a metered, DEF account through one point of delivery.
3. The customer must be a DEF non-residential customer.

3. PARTICIPATION REQUIREMENTS

1. Participants must sign an agreement with DEF as to the terms and conditions of this service.
2. Participants will be billed in accordance with the terms of the applicable Curtailable Service rate schedule.
3. Participants must remain on a curtailable service rate for the minimum term and provide notice to terminate their participation as specified in the applicable Curtailable Service rate schedule.

4. Participants are required to curtail their load during periods of requested curtailable per the terms of the applicable rate schedule or to a level at or below the contractual agreed upon non-curtable load.
5. Participants who fail to comply with their curtailment responsibilities will be billed additional charges as specified in the applicable curtable service rate schedule.
6. Participants are required to provide notice to transfer to a firm, rate schedule as specified in the applicable curtable service rate schedule.

4. INCENTIVES

Incentives will be provided per the terms of the applicable Curtable Service rate schedule.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

III. TECHNOLOGY DEVELOPMENT

DUKE ENERGY FLORIDA, LLC

PROGRAM PARTICIPATION STANDARDS

TECHNOLOGY DEVELOPMENT PROGRAM

**DUKE ENERGY FLORIDA, LLC
PROGRAM PARTICIPATION STANDARDS
TECHNOLOGY DEVELOPMENT PROGRAM**

1. PROGRAM OVERVIEW

The purpose of the Technology Development program of Duke Energy Florida, LLC (DEF) is to enable DEF to investigate technologies and pursue research, development and demonstration projects that may lead to the development of new cost-effective demand side management programs. The program is designed to allow DEF to investigate technologies and develop new programs from initial concept through submittal to the Florida Public Service Commission (FPSC) for consideration and approval. In general, each proposed technology development project will proceed according to the following schedule. Each milestone will represent a decision point to continue or discontinue the project based upon knowledge available at the time.

1. Project concept or idea development
2. Project research and design, including estimated costs and benefits.
3. Field demonstration program
4. Evaluation of field demonstration program, including cost-effectiveness
5. If accepted for continuation as a program, application to the FPSC for approval to implement the program.

Expenditures of up to \$800,000 annually may be made and recovered through the energy conservation cost recovery clause for all energy efficiency and conservation projects that are proposed and investigated. All costs, including incentives and rebates that are offered, will be as part of the pre-approved project expenditures under this program. To ensure that all expenses are properly accounted for, a “job order” will be created for each project which will be the repository for all investigation expenses. A record of program expenses will be maintained in accordance with Rule 25-17.015, Florida Administrative Code.

2. ELIGIBILITY REQUIREMENTS

Customers eligible to participate in field demonstration projects will be determined during the project research and design phase. Eligibility will be dependent on the type of project being proposed and investigated. Field demonstrations will involve only a limited number of customers. Participants in field demonstration projects must allow DEF and its contractor's access to the facility for maintaining and monitoring the evaluation equipment. DEF will be solely responsible for determining the technologies to be evaluated under this program.

3. INCENTIVES

As part of this program, DEF may provide an incentive to participants in field demonstration projects for their willingness to work with DEF on the technology evaluation.

4. REPORTING REQUIREMENTS

If any single project's annual expenditures exceed \$100,000, a status report will be filed as a component of the Energy Conservation Cost Recovery Projection and True-Up filings. If any project (or combination of projects) expenditures are projected to exceed the \$800,000 annual limit, DEF will apply to the FPSC staff for approval to proceed with the particular project which would cause DEF to exceed the limit.