



Matthew R. Bernier  
Senior Counsel

September 12, 2016

Carlotta Stauffer, Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: Revisions to Program Standards - Ten-Year DSM Plan 2015 – 2024

Dear Ms. Stauffer:

On August 30, 2016, Duke Energy Florida, LLC (DEF), submitted a letter with attachments requesting administrative approval of modifications to DEF's Better Business (BB) and Florida Custom Incentive (FCI) Demand Side Management (DSM) Program Standards.

A scrivener's error has been brought to our attention. The error involves Table 12.4 illustrated on Attachments B-1, page 18 and C-1, page 18. This table contains the wrong year in the column head. Specifically, the year "2010" should correctly read "2014". To correct this inadvertent error, DEF has revised Attachment B-1 and C-1. The Revised Attachments B-1 and C-1 will replace Attachments B-1 and C-1 submitted on August 30, 2016.

Please let us know if you have any questions.

Sincerely,

*/s/ Matthew R. Bernier*

Matthew R. Bernier

MRB/at  
cc: Tom Ballinger  
Attachments

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

**1. PROGRAM OVERVIEW**

The Better Business Program is the “umbrella” efficiency program designed to improve the energy efficiency of commercial 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 commercially metered DEF account.
2. Commercial multi-family is defined as commercially metered accounts of multi-family residential apartments or condominiums, or commercially metered accounts of assisted living residential apartment units (with a minimum of 500 square feet of conditioned space). Any multi-family residential dwellings that are master metered (referred to as “Domestic/Commercial”) 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 payments.

### 3. CONTRACTOR REQUIREMENTS

#### 3.1. PARTICIPATING DEF CONTRACTOR REQUIREMENTS

1. All participating contractors, those under contract with DEF, must comply with DEF contractor procedures specific to the program component in 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 DEF of compliance within thirty (30) days.
4. The contractor shall indemnify and hold DEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.
5. The contractor must comply with all federal, state, and local codes and regulations and have the appropriate license(s) for the work to be performed.
6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all DEF programs.
7. The contractor shall notify DEF of any incident occurring during installation of a conservation measure or any follow-up procedure within five (5) working days of incident.
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: (*Exception: Section 10 dealing with HVAC contractors is exempt from this provision.*)

- Workers' 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.

9. DEF reserves the right to request background checks of contractors participating in the Better Business Program.

**3.2. CUSTOMER CHOSEN CONTRACTOR REQUIREMENTS**

1. The contractor must comply with all federal, state and local codes and regulations and have the appropriate license(s) for the work to be performed.
2. The contractor is responsible for the work to be performed, the supervision of their employees, and the use of contractors' own equipment to meet the work specifications and completion date.
3. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all DEF programs.

**4. INCENTIVE**

The incentive payment structure is as follows:

<b>Program Component</b>	<b>Incentive</b>
<b>Building Envelope Improvements</b>	
Cool Roof	Energy Star Roof Product with 0.76 or greater initial solar reflectance per ASTM E 903 or ASTM C 1549; 15¢ per square-foot installed with a maximum of \$50,000 per building.

Ceiling Insulation Upgrade	10¢ per square foot to bring insulation level up to a minimum of R-19
	An additional \$0.075 per square foot will be paid to bring the insulation level from R19 to a minimum of R-38 for existing structures
Roof Insulation Upgrade	7¢ per sq. ft. to bring insulation level up to a minimum of R19 with a maximum of \$50,000 per building.
<b>HVAC Equipment Replacement</b>	
Air-Cooled and Water-Cooled Electric Chillers	\$50 per ton for qualifying equipment as referenced in the Table in Section 9.4
Heat Pumps < 65,000 Btu/h replacing resistance heat	\$375 for minimum cooling efficiency of <b>15 SEER</b> and minimum heating efficiency of <b>8.2 HSPF</b>
Heat Pumps < 65,000 Btu/h replacing heat pump	\$200 for minimum cooling efficiency of <b>15 SEER</b> and minimum heating efficiency of <b>8.2 HSPF</b>
Package Terminal Heat Pumps and Air Conditioners (PTHPs/PTACs)	\$100 per ton as referenced in the Table in Section 11.4
Single Package Vertical Units (SPVHP/SPVAC)	\$75 per ton as referenced in the Table in Section 11.4
Unitary A/C and Heat Pumps > 65,000 Btu/h	\$75 per ton as referenced in the Table in Section 12.4 *(Includes Variable Refrigerant Multi-Split A/C and HP units of all sizes as referenced in the Table in Section 12.5)
<b>HVAC System Related Improvements</b>	
Demand Control Ventilation	\$50 per ton 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 \$30 for first unit tested
	50% of test cost up to \$20 for each additional unit tested at same address

Duct Repair	25% of the repair cost up to a maximum of \$50 per unit for facilities with non-ducted electric heat
	50% of the repair cost up to a maximum of \$150 per unit for facilities with ducted electric heat. Commercial multi-family units count on a per unit basis, receive \$100 and no duct test is required - applies to top floors only on multi-story buildings.
Energy Recovery Ventilation	\$1.40 per CFM, minimum 450 CFM unit >65% total heating effectiveness per AHRI 1060-2000
HVAC Coil Cleaning	\$20 per unit (PTHP/PTAC) -- one-time incentive not to exceed 50% of the total project or service cost. \$20 per ton for all other type of air conditioning units – one time incentive not to exceed 50% of the total project or service cost.
Roof Top Unit Re-commissioning	\$25 per ton – one time incentive not to exceed 50% of the total project or service cost.
HVAC/Chiller Tune-up	\$25 per ton for HVAC units \$5 per ton for Chiller units The expected average incentive paid out will be \$10 per ton based on expected participation – one-time incentive not to exceed 50% of the total project or service cost.

#### 4.1 INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.
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 has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. The DEF Assessor will need to obtain the customer's Tax ID#. Any customer receiving over \$600 total during a year will receive an IRS 1099 form from DEF reporting to the customer and the IRS the total amount rebated by DEF for that year.

## **5. REPORTING REQUIREMENTS**

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

## **6. COOL ROOF**

### **6.1 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 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. The cooling system for the facility must be all electric.

### **6.2 MATERIAL AND INSTALLATION SPECIFICATIONS**

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

2. 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.

## 7. CEILING INSULATION

### 7.1 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 home 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. Commercial 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 will be eligible for incentives.



## **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. Flat roofs must have sufficient 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 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.

## **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 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
3. All participating Trade Allies in the Ceiling Insulation Program must follow DEF Code of Ethics.

## **8. ROOF INSULATION**

### **8.1 PARTICIPATION REQUIREMENTS**

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The weighted average R-value of the existing insulation over the total roof square footage (above conditioned space) must be less than R-12 for existing structures. For new construction, incentives will only be provided for insulation over R38.
3. Eligible facilities must have both electric (non-portable) air conditioning and electric (non-portable) heating.

### **8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

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 insulation must be installed in accordance with the manufacturers' recommendations and specifications and state, county, and local codes.
3. The insulation must be installed in the roof deck assembly. (*Note: Spray on foam insulation (i.e. Icynene) can be applied to the underside of the roof deck.*)
4. The insulation must be installed uniformly.

## ***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. Cooling and heating load calculations must be performed if the capacity of the new high efficiency unit differs from that of the original unit or if the new high efficiency unit is adding cooling or heating to previously unconditioned space.

## **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.
2. All equipment for which an incentive is paid shall be new and not refurbished, previously installed, or used.
3. All equipment installations shall meet or exceed the minimum efficiencies listed in Section 11.4 and meet manufacturers' instructions and specifications.
4. HVAC equipment must be all electric.
5. Chillers are not eligible for this incentive program if a thermal energy storage system has previously been installed and rebated.

## **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.

-

**9.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>AIR-COOLED AND WATER-COOLED ELECTRIC CHILLERS* (AHRI 550/590 Test Standards)</b>		
<b>Chiller Type and Size Range</b>	<b>2014 State Energy Code Standard</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<b>Water Cooled Centrifugal</b>		
under 150 tons	FL: 0.634 kW/ton IPLV: 0.596 kW/ton	FL: 0.571 kW/ton IPLV: 0.405 kW/ton
150-300 tons	FL: 0.634 kW/ton IPLV: 0.596 kW/ton	FL: 0.571 kW/ton IPLV: 0.405 kW/ton
300-600 tons	FL: 0.576 kW/ton IPLV: 0.549 kW/ton	FL: 0.513 kW/ton IPLV: 0.360 kW/ton
Over 600 tons	FL: 0.570 kW/ton IPLV: 0.539 kW/ton	FL: 0.513 kW/ton IPLV: 0.360 kW/ton
<b>Water Cooled Positive Displacement</b>		
under 75 tons	FL: 0.780 kW/ton IPLV: 0.630 kW/ton	FL: 0.760 kW/ton IPLV: 0.540 kW/ton
75-150 tons	FL: 0.775 kW/ton IPLV: 0.615 kW/ton	FL: 0.750 kW/ton IPLV: 0.527 kW/ton
150-300 tons	FL: 0.680 kW/ton IPLV: 0.580 kW/ton	FL: 0.660 kW/ton IPLV: 0.486 kW/ton
over 300 tons	FL: 0.620 kW/ton IPLV: 0.540 kW/ton	FL: 0.610 kW/ton IPLV: 0.441 kW/ton
<b>Air cooled</b>		
Any size	FL: 9.562 EER IPLV: 12.50 EER	FL: 10.16 EER IPLV: 13.75 EER

**10. SMALL HEAT PUMPS ( $\leq 65,000$  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.
4. Cooling and heating load calculations must be performed if the capacity of the new high efficiency unit differs from that of the original unit or if the new high efficiency unit is adding cooling or heating to previously unconditioned space.

**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.
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 Custom Program 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 described in Section 12.4.
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 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. 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.

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. 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.

4. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

## **11.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. Packaged terminal heat pump heating and cooling efficiencies (AHRI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 14.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air-conditioners that use only electric resistance elements for heating replacing packaged terminal heat pumps.
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 must be all electric.

## **11.3 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.

**11.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>PACKAGED TERMINAL HEAT PUMPS (PTHPs) (AHRI 310/380 Test Standards)*</b>		
<b>Cooling Capacity (Btu/h)</b>	<b>Heating Efficiency (COP)</b>	<b>Cooling Efficiency (EER)</b>
	<b>Minimum Efficiency Eligible for Incentive</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<6,900	3.9	13
6,901-9,400	3.4	12.2
9,401-12,000	3.8	12.7
12,001-14,700	3.3	11.2
>14,700	3.2	10.2

*No rebates are available for replacing PTHP's.*

<b>PACKAGED TERMINAL AIR CONDITONERS (PTACs) (AHRI 310/380 Test Standards)*</b>	
<b>Cooling Capacity (Btu/h)</b>	<b>Cooling Efficiency (EER)</b>
	<b>Minimum Efficiency Eligible for Incentive</b>
<6,900	12.8
6,901-9,400	12
9,401-12,000	11.2
12,001-14,700	11.2
>14,700	10.2



<b>SINGLE-PACKAGE VERTICAL HEAT PUMP(ASHRAE Standard 90.1-2004)</b>		
<b>RETROFIT (BETTER BUSINESS)</b>		
	<b>Heating Efficiency (COP)</b>	<b>Cooling Efficiency (EER)</b>
<b>Cooling Capacity (Btu/h)</b>	<b>Minimum Efficiency Eligible for Incentive</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<65,000	3.3	9.8
>65,000 <135,000	3.2	9.7
>135,000 <240,0000	3.1	9.4

\*For straight cooled equipment just EER only as COP is not required.

**Above tables are based on current Florida Energy Code Standards.**

**12. UNITARY A/C HEAT PUMPS (> 65,000 Btu/h)**

**\*also includes variable refrigerant flow multi split AC and heat pumps of all sizes**

**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.
4. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

## **12.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. 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).
3. All equipment installations shall meet or exceed the minimum efficiencies listed in Section 15.4 and 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. 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.

**12.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>Unitary AC and Heat Pumps (&gt; 65,000 Btu/h)*</b>			
<b>Equipment Type and Size Range</b>	<b>2014 State Energy Code Standard</b>		<b>Minimum Efficiency Eligible for Incentive</b>
<b>Air-Cooled</b>	<b>Air Conditioner</b>	<b>Heat Pump</b>	
65,000-135,000 Btu/h	11.2 EER	11.0 EER 3.3 COP	11.9 EER 3.48 COP
135,001 Btu/h – 240,000	11.0 EER	10.6 EER 3.2 COP	11.69 EER 3.42 COP
240,001 – 760,000 Btu/h	10.0 EER	9.5 EER 3.2 COP	10.63 EER 3.27 COP
Over 760,000 Btu/h	9.7 EER	9.5 EER 3.2 COP	10.31 EER 3.27 COP
<b>Water-Cooled</b>	<b>Air Conditioner</b>	<b>Heat Pump</b>	
65,000-135,000 Btu/h	12.1 EER	N/A	13.1EER
over 135,000 Btu/h	12.5 EER	N/A	13.6 EER

**12.5 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>Variable Refrigerant Flow Multi-Split Air Conditioners and Heat Pumps</b>			
<b>Equipment Type</b>	<b>Cooling Capacity (Btu/h)</b>	<b>Heating Type</b>	<b>Efficiency Level</b>
VFR Multi-Split AC's (Air Cooled)	<65,000	All	14.3 SEER
	>65,000 <135,000	No Heating – or has Electric resistance heating	12.3 EER

	>135,000<240,000	No Heating – or has Electric resistance heating	12.1 EER
	>240,000<760,000	No Heating – or has Electric resistance heating	11.0 EER
VFR Multi-Split Heat Pumps (Air Cooled)	<65,000	All	14.3 SEER 8.4 HSPF
	>65,000 <135,000	No Heating – or has Electric resistance heating	12 EER 3.6 COP
	>135,000<240,000	No Heating – or has Electric resistance heating	11.6 EER 3.6 COP
	>240,000<760,000	No Heating – or has Electric resistance heating	10.4 EER 3.5 COP

***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 what HVAC load reduction is projected.

### **13.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. DCV must include sensors that measure CO<sub>2</sub> 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. Commercial multi-family units will be qualified as individual units for incentive purposes. Multi-family unit's 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 Pascal'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.
9. Facilities with drop or suspended (lay-in) ceilings are not eligible.

## **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 Commercial multi-family units, the contractor shall seal all joints and connections of the duct work, and no duct test is required. Multi-family unit's 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 REQUIREMENTS**

1. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed a DEF-approved Duct Diagnostic course.

## **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, 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. The equipment must have a minimum of a Fifteen (15) year life with one membrane change out.

## **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 Air Conditioning, Heating and Refrigeration Institute (AHRI) rating procedure standard 1060-2000.
3. To be eligible for an incentive, the energy recovery ventilation unit AHRI 1060 rating must be greater than 65% total heating effectiveness.
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. HVAC COIL CLEANING**

### **16.1 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. This qualification is typically met by submitting copies of invoices.
3. Facility heating and cooling system must be all electric.
4. DEF must be informed of cleaning date to conduct random inspections during cleaning process.
5. The HVAC equipment will only be eligible for one cleaning over its lifetime.
6. To ensure quality and compliance any cleaning process used, by a customer or customer's vendor, must be observed and preapproved by a qualified DEF inspector to be eligible for an incentive. Additional supporting documentation may be required, such as proof that chemicals used are for use in HVAC systems.

### **16.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. Steam cleaning should use 305° F steam at 42 psi.
2. For PTAC/PTHP the cleaning process should start by removing the packaged HVAC units from the guest rooms.
3. 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.
4. A Business Energy Check or other pre-qualification method (as determined by DEF) is required prior to cleaning.
5. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.

## **17. ROOF TOP UNIT RECOMMISSIONING**

### **17.1 PARTICIPATION REQUIREMENTS**

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The equipment will only be eligible for participation once over its lifetime.

### **17.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. All equipment tune-up and repairs must meet manufacturers' instructions and specifications and meet all state, county and local codes.
2. 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.

### **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.

### **17.4 DOCUMENT HVAC PERFORMANCE AND CONDITION BEFORE AND AFTER RECOMMISSIONING**

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

**18. CHILLER/AIR CONDITIONER / HEAT PUMP TUNE-UP (*Does not include PTAC/PTHP*)**

**18.1 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.
3. The equipment will only be eligible for an incentive once over its lifetime.

**18.2 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.

**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. Contractor must be a licensed Mechanical Contractor, Class A, B, or C, in the jurisdiction having authority.
3. Contractor must perform, at a minimum, all work as outlined below for the customer to be eligible for the DEF AC/HP tune-up incentive.

**18.4 DOCUMENTATION REQUIREMENTS**

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

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

**1. PROGRAM OVERVIEW**

The Better Business Program is the “umbrella” efficiency program designed to improve the energy efficiency of commercial 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 commercially metered DEF account.
2. Commercial multi-family is defined as commercially metered accounts of multi-family residential apartments or condominiums, or commercially metered accounts of assisted living residential apartment units (with a minimum of 500 square feet of conditioned space). Any multi-family residential dwellings that are master metered (referred to as “Domestic/Commercial”) 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 payments.

### 3. CONTRACTOR REQUIREMENTS

#### 3.1. PARTICIPATING DEF CONTRACTOR REQUIREMENTS

1. All participating contractors, those under contract with DEF, must comply with DEF contractor procedures specific to the program component in 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 DEF of compliance within thirty (30) days.
4. The contractor shall indemnify and hold DEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.
5. The contractor must comply with all federal, state, and local codes and regulations and have the appropriate license(s) for the work to be performed.
6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all DEF programs.
7. The contractor shall notify DEF of any incident occurring during installation of a conservation measure or any follow-up procedure within five (5) working days of incident.
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: (*Exception: Section 10 dealing with HVAC contractors is exempt from this provision.*)

- Workers’ 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.

9. DEF reserves the right to request background checks of contractors participating in the Better Business Program.

**3.2. CUSTOMER CHOSEN CONTRACTOR REQUIREMENTS**

1. The contractor must comply with all federal, state and local codes and regulations and have the appropriate license(s) for the work to be performed.
2. The contractor is responsible for the work to be performed, the supervision of their employees, and the use of contractors’ own equipment to meet the work specifications and completion date.
3. The contractor must follow manufacturers’ specifications and procedures; failure to do so may result in termination of participation in any or all DEF programs.

**4. INCENTIVE**

The incentive payment structure is as follows:

Program Component	Incentive
<b>Building Envelope Improvements</b>	
Cool Roof	Energy Star Roof Product with <u>0.700.76</u> or greater <u>initial</u> solar reflectance per ASTM E 903 or ASTM C 1549; 15¢ per square-foot installed with a maximum of \$50,000 per building.

Ceiling Insulation Upgrade	10¢ per square foot to bring insulation level up to a minimum of R-19
	An additional \$0.075 per square foot will be paid to bring the insulation level from R19 to a minimum of R-38 for existing structures
Roof Insulation Upgrade	7¢ per sq. ft. to bring insulation level up to a minimum of R19 with a maximum of \$50,000 per building.
<b>HVAC Equipment Replacement</b>	
Air-Cooled and Water-Cooled Electric Chillers	\$50 per ton for qualifying equipment as referenced in the Table in Section 9.4
Heat Pumps < 65,000 Btu/h replacing resistance heat	\$375 for minimum cooling efficiency of <b>15 SEER</b> and minimum heating efficiency of <b>8.2 HSPF</b>
Heat Pumps < 65,000 Btu/h replacing heat pump	\$200 for minimum cooling efficiency of <b>15 SEER</b> and minimum heating efficiency of <b>8.2 HSPF</b>
Package Terminal Heat Pumps and Air Conditioners (PTHPs/PTACs)	\$100 per ton as referenced in the Table in Section 11.4
Single Package Vertical <u>Heat Pump Units</u> (SPVHP/SPVAC)	\$75 per ton as referenced in the Table in Section 11.4
Unitary A/C and Heat Pumps > 65,000 Btu/h	\$75 per ton as referenced in the Table in Section 12.4 *(Includes Variable Refrigerant Multi-Split A/C and HP units of all sizes as referenced in the Table in Section 12.5)
<b>HVAC System Related Improvements</b>	
Demand Control Ventilation	\$50 per ton 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 \$30 for first unit tested
	50% of test cost up to \$20 for each additional unit tested at same address

Duct Repair	25% of the repair cost up to a maximum of \$50 per unit for facilities with non-ducted electric heat
	50% of the repair cost up to a maximum of \$150 per unit for facilities with ducted electric heat. Commercial multi-family units count on a per unit basis, receive \$100 and no duct test is required - applies to top floors only on multi-story buildings.
Energy Recovery Ventilation	\$1.40 per CFM, minimum 450 CFM unit >65% total heating effectiveness per AHRI 1060-2000
HVAC Coil Cleaning	\$20 per unit (PTHP/PTAC) -- one-time incentive <u>not to exceed 50% of the total project or service cost.</u> \$20 per ton for all other type of air conditioning units – one time incentive not to exceed 50% of the total project or service cost.
Roof Top Unit Re-commissioning	\$25 per ton – one time incentive not to exceed 50% of the total project or service cost.
HVAC/Chiller Tune-up	\$25 per ton for HVAC units \$5 per ton for Chiller units The expected average incentive paid out will be \$10 per ton based on expected participation – <u>one-time incentive not to exceed 50% of the total project or service cost.-</u>

#### 4.1 INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.
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 has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. The DEF Assessor will need to obtain the customer's Tax ID#. Any customer receiving over \$600 total during a year will receive an IRS 1099 form from DEF reporting to the customer and the IRS the total amount rebated by DEF for that year.

## **5. REPORTING REQUIREMENTS**

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

## **6. COOL ROOF**

### **6.1 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 standards and must be certified as having an Initial Solar Reflectance Rating greater than or equal to ~~0.700~~0.76. Proof of certification by either Energy Star or the Cool Roof Rating Council must be attached to the incentive form.
4. The cooling system for the facility must be all electric.

### **6.2 MATERIAL AND INSTALLATION SPECIFICATIONS**

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

2. 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.

## 7. CEILING INSULATION

### 7.1 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 home 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. Commercial 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 **eligible** will be eligible for incentives.

## 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. Flat roofs must have sufficient 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 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.

## 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 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
3. All participating Trade Allies in the Ceiling Insulation Program must follow DEF Code of Ethics.

## **8. ROOF INSULATION**

### **8.1 PARTICIPATION REQUIREMENTS**

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The weighted average R-value of the existing insulation over the total roof square footage (above conditioned space) must be less than R-12 for existing structures. For new construction, incentives will only be provided for insulation over R38.
3. Eligible facilities must have both electric (non-portable) air conditioning and electric (non-portable) heating.

### **8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

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 insulation must be installed in accordance with the manufacturers' recommendations and specifications and state, county, and local codes.
3. The insulation must be installed in the roof deck assembly. (*Note: Spray on foam insulation (i.e. Icynene) can be applied to the underside of the roof deck.*)
4. The insulation must be installed uniformly.

## ***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. Cooling and heating load calculations must be performed if the capacity of the new high efficiency unit differs from that of the original unit or if the new high efficiency unit is adding cooling or heating to previously unconditioned space.

## 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.
2. All equipment for which an incentive is paid shall be new and not refurbished, previously installed, or used.
3. All equipment installations shall meet or exceed the minimum efficiencies listed in Section 11.4 and meet manufacturers' instructions and specifications.

4. HVAC equipment must be all electric.

4.5. Chillers are not eligible for this incentive program if a thermal energy storage system has previously been installed and rebated.

## 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.

**9.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>AIR-COOLED AND WATER-COOLED ELECTRIC CHILLERS*</b> (AHRI 550/590 Test Standards)		
<b>Chiller Type and Size Range</b>	<b>2014 State Energy Code Standard</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<b>Water Cooled Centrifugal</b>		
under 150 tons	FL: 0.634 kW/ton IPLV: 0.596 kW/ton	FL: 0.571 kW/ton IPLV: 0.405 kW/ton
150-300 tons	FL: 0.634 kW/ton IPLV: 0.596 kW/ton	FL: 0.571 kW/ton IPLV: 0.405 kW/ton
300-600 tons	FL: 0.576 kW/ton IPLV: 0.549 kW/ton	FL: 0.513 kW/ton IPLV: 0.360 kW/ton
Over 600 tons	FL: 0.570 kW/ton IPLV: 0.539 kW/ton	FL: 0.513 kW/ton IPLV: 0.360 kW/ton
<b>Water Cooled Positive Displacement</b>		
under 75 tons	FL: 0.780 kW/ton IPLV: 0.630 kW/ton	FL: 0.760 kW/ton IPLV: 0.540 kW/ton
75-150 tons	FL: 0.775 kW/ton IPLV: 0.615 kW/ton	FL: 0.750 kW/ton IPLV: 0.527 kW/ton
150-300 tons	FL: 0.680 kW/ton IPLV: 0.580 kW/ton	FL: 0.680 kW/ton IPLV: 0.486 kW/ton
over 300 tons	FL: 0.620 kW/ton IPLV: 0.540 kW/ton	FL: 0.610 kW/ton IPLV: 0.441 kW/ton
<b>Air cooled</b>		
Any size	FL: 9.562 EER IPLV: 12.50 EER	FL: 10.16 EER IPLV: 13.75 EER

**10. SMALL HEAT PUMPS ( $\leq 65,000$  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.
4. Cooling and heating load calculations must be performed if the capacity of the new high efficiency unit differs from that of the original unit or if the new high efficiency unit is adding cooling or heating to previously unconditioned space.

**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.
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 Custom Program 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 described in Section 12.4.
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 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. 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.

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. 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.



4. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

## 11.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Packaged terminal heat pump heating and cooling efficiencies (AHRI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 14.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air-conditioners that use only electric resistance elements for heating replacing packaged terminal heat pumps.
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 must be all electric.

## 11.3 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.

#### 11.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

<b>PACKAGED TERMINAL HEAT PUMPS (PTHPs) (AHRI 310/380 Test Standards)*</b>		
<b>Cooling Capacity (Btu/h)</b>	<b>Heating Efficiency (COP)</b>	<b>Cooling Efficiency (EER)</b>
	<b>Minimum Efficiency Eligible for Incentive</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<6,900	3.9	13
6,901-9,400	3.4	12.2
9,401-12,000	3.8	12.7
12,001-14,700	<del>3.1</del> <u>3.3</u>	<del>10.7</del> <u>11.2</u>
>14,700	<del>3.0</del> <u>3.2</u>	<del>9.6</del> <u>10.2</u>

\*No rebates are available for replacing PTHP's.

<b>PACKAGED TERMINAL AIR CONDITONERS (PTACs) (AHRI 310/380 Test Standards)*</b>	
<b>Cooling Capacity (Btu/h)</b>	<b>Cooling Efficiency (EER)</b>
	<b>Minimum Efficiency Eligible for Incentive</b>
<6,900	12.8
6,901-9,400	12
9,401-12,000	11.2
12,001-14,700	<del>10.4</del> <u>11.2</u>
>14,700	<del>9.6</del> <u>10.2</u>

<b>SINGLE-PACKAGE VERTICAL HEAT PUMP(ASHRAE Standard 90.1-2004)</b>		
<b>RETROFIT (BETTER BUSINESS)</b>		
	<b>Heating Efficiency (COP)</b>	<b>Cooling Efficiency (EER)</b>
<b>Cooling Capacity (Btu/h)</b>	<b>Minimum Efficiency Eligible for Incentive</b>	<b>Minimum Efficiency Eligible for Incentive</b>
<65,000	3.3	9.8
>65,000 <135,000	3.2	9.7
>135,000 <240,0000	3.1	9.4

\*For straight cooled equipment just EER only as COP is not required.

**Above tables are based on current Florida Energy Code Standards.**

## **12. UNITARY A/C HEAT PUMPS (> 65,000 Btu/h)**

**\*also includes variable refrigerant flow multi split AC and heat pumps of all sizes**

### **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.
4. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

## **12.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. 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).
3. All equipment installations shall meet or exceed the minimum efficiencies listed in Section 15.4 and 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. 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.

**12.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>Unitary AC and Heat Pumps (&gt; 65,000 Btu/h)*</b>			
<b>Equipment Type and Size Range</b>	<b>2010-2014 State Energy Code Standard</b>		<b>Minimum Efficiency Eligible for Incentive</b>
<b>Air-Cooled</b>	<b>Air Conditioner</b>	<b>Heat Pump</b>	
65,000-135,000 Btu/h	11.2 EER	11.0 EER 3.3 COP	11.9 EER 3.48 COP
135,001 Btu/h – 240,000	11.0 EER	10.6 EER 3.2 COP	11.69 EER 3.42 COP
240,001 – 760,000 Btu/h	10.0 EER	9.5 EER 3.2 COP	10.63 EER 3.27 COP
Over 760,000 Btu/h	9.7 EER	9.5 EER 3.2 COP	10.31 EER <del>3.13</del> <u>3.27</u> COP
<b>Water-Cooled</b>	<b>Air Conditioner</b>	<b>Heat Pump</b>	
65,000-135,000 Btu/h	<del>11.5</del> <u>12.1</u> EER	<del>12 EER</del> <u>4.2 COP</u> N/A	<del>12.5</del> <u>13.1</u> EER <del>4.56</del> <u>COP</u>
over 135,000 Btu/h	<del>11.0</del> <u>12.5</u> EER	N/A	<del>12.0</del> <u>13.6</u> EER <del>4.38</del> <u>OP</u>

**12.5 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY**

<b>Variable Refrigerant Flow Multi-Split Air Conditioners and Heat Pumps</b>			
<b>Equipment Type</b>	<b>Cooling Capacity (Btu/h)</b>	<b>Heating Type</b>	<b>Efficiency Level</b>
VFR Multi-Split AC's (Air Cooled)	<65,000	All	14.3 SEER
	>65,000 <135,000	No Heating – or has Electric resistance heating	12.3 EER

	>135,000<240,000	No Heating – or has Electric resistance heating	12.1 EER
	>240,000<760,000	No Heating – or has Electric resistance heating	11.0 EER
VFR Multi-Split Heat Pumps (Air Cooled)	<65,000	All	14.3 SEER 8.4 HSPF
	>65,000 <135,000	No Heating – or has Electric resistance heating	12 EER 3.6 COP
	>135,000<240,000	No Heating – or has Electric resistance heating	11.6 EER 3.6 COP
	>240,000<760,000	No Heating – or has Electric resistance heating	10.4 EER 3.5 COP

***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 what HVAC load reduction is projected.

## 13.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. DCV must include sensors that measure CO<sub>2</sub> 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. Commercial multi-family units will be qualified as individual units for incentive purposes. Multi-family unit's 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 Pascal'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.
9. Facilities with drop or suspended (lay-in) ceilings are not eligible.

#### **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 Commercial multi-family units, the contractor shall seal all joints and connections of the duct work, and no duct test is required. Multi-family unit's 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 REQUIREMENTS**

1. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed a DEF-approved Duct Diagnostic course.

## **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, 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. The equipment must have a minimum of a Fifteen (15) year life with one membrane change out.

## **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 Air Conditioning, Heating and Refrigeration Institute (AHRI) rating procedure standard 1060-2000.
3. To be eligible for an incentive, the energy recovery ventilation unit AHRI 1060 rating must be greater than 65% total heating effectiveness.
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. HVAC COIL CLEANING

### 16.1 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. This qualification is typically met by submitting copies of invoices.
3. Facility hHeating and cooling system must be all electric.
4. DEF must be informed of cleaning date to conduct random inspections during cleaning process.
5. The HVAC equipment will only be eligible for one cleaning over its lifetime.
6. To ensure quality and compliance any cleaning process used, by a customer or customer's vendor, must be observed and preapproved by a qualified DEF inspector to be eligible for an incentive. Additional supporting documentation may be required, such as proof that chemicals used are for use in HVAC systems.

### 16.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Steam cleaning should use 305° F steam at 42 psi.
2. For PTAC/PTHP the cleaning process should start by removing the packaged HVAC units from the guest rooms.
3. 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.
4. A Business Energy Check or other pre-qualification method (as determined by DEF) is required prior to cleaning.
5. All equipment installations must meet manufacturers' instructions and specifications and meet all state, county, and local codes.

## **17. ROOF TOP UNIT RECOMMISSIONING**

### **17.1 PARTICIPATION REQUIREMENTS**

1. Must meet the Eligibility Requirements as outlined in Section 2.
2. The equipment will only be eligible for participation once over its lifetime.

### **17.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS**

1. All equipment tune-up and repairs must meet manufacturers' instructions and specifications and meet all state, county and local codes.
2. 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.

### **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.

### **17.4 DOCUMENT HVAC PERFORMANCE AND CONDITION BEFORE AND AFTER RECOMMISSIONING**

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

**18. CHILLER/AIR CONDITIONER / HEAT PUMP TUNE-UP (*Does not include PTAC/PTHP*)**

**18.1 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.
- ~~2.3.~~ The equipment will only be eligible for participationan incentive once over its lifetime.

**18.2 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.

**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. Contractor must be a licensed Mechanical Contractor, Class A, B, or C, in the jurisdiction having authority.
3. Contractor must perform, at a minimum, all work as outlined below for the customer to be eligible for the DEF AC/HP tune-up incentive.

**18.4 DOCUMENTATION REQUIREMENTS**

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