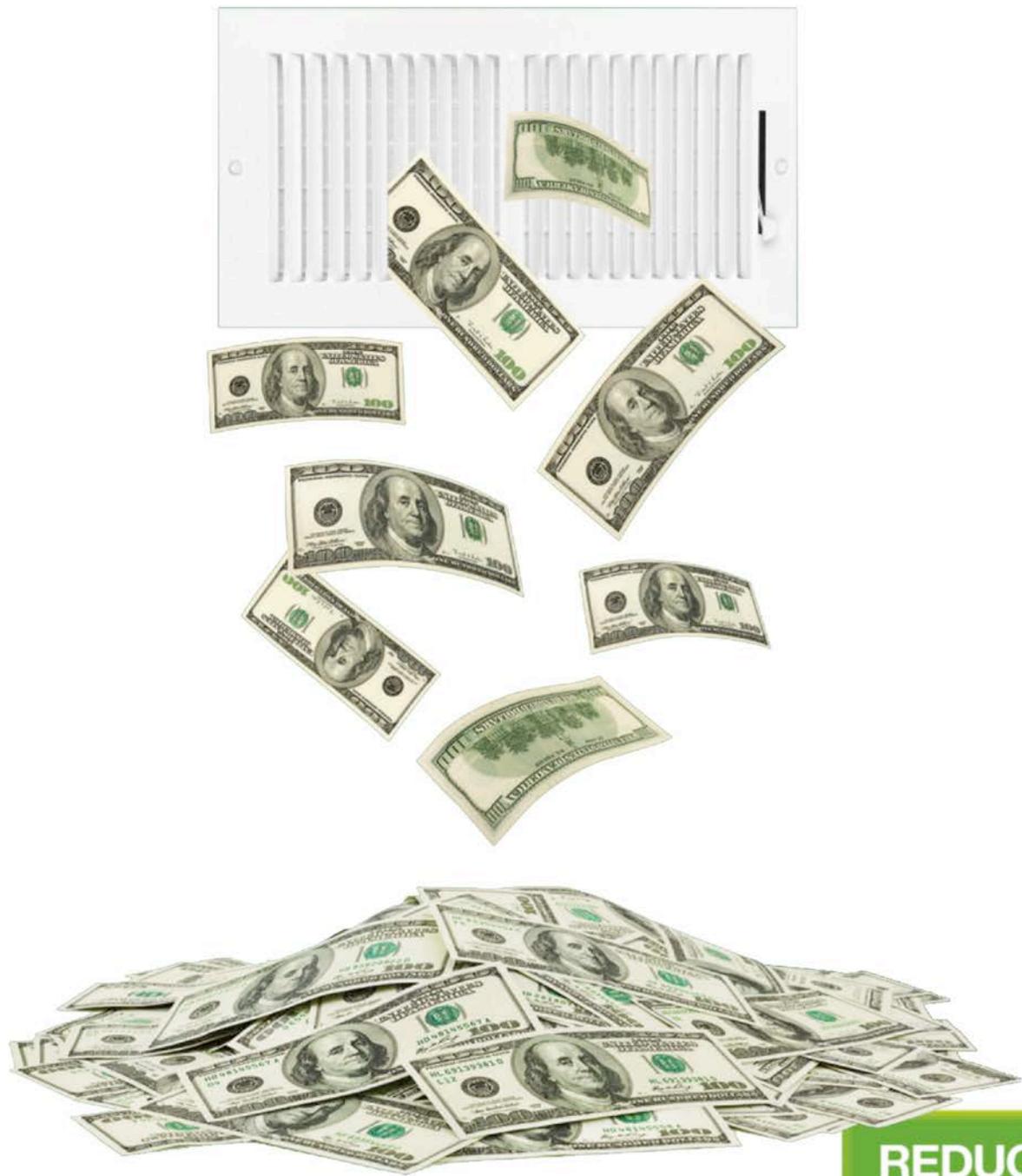


# 2016-2017

## Prescriptive Program Manual



Version 1

**REDUCE**<sup>™</sup>  
**THE USE**  
South Carolina



# RTU4BUSINESS

## Reduce the Use: Business

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## 1.1 PROGRAM OVERVIEW

Santee Cooper is pleased to offer its 2016-2017 Commercial Prescriptive Rebate Program (**Rebate Program or Program**). This manual outlines the requirements of the 2016-2017 Rebate Program.

The Program promotes the implementation of high-efficiency energy conservation measures. Rebates promoted through this Program aim to reduce Santee Cooper customers' incremental cost to upgrade to high-efficiency equipment over standard-efficiency options and to install other energy efficient products. The following is a list of measures to be included in this Rebate Program:

- Lighting and lighting controls
- HVAC equipment and variable frequency drives (VFDs) for HVAC equipment
- Building envelope and other facility improvements
- Commercial refrigeration equipment efficiency upgrades and ENERGY STAR qualified commercial appliances
- Variable speed pool filter pumps & variable frequency drives (set at constant speed)

Rebates for qualifying measures are available for new construction, major renovation, and retrofit applications, unless noted otherwise.

## 1.2 PROGRAM CHANGES FOR 2016-2017

### 2016-2017 Program Changes

- Program starts December 1, 2015 and ends November 30, 2017. Equipment must be installed and applications submitted by November 30 of the year the project is started to be eligible for Program rebates.
- Program Changes
  - HVAC – 3-phase heat pumps and A/C are now eligible for rebate at \$0.30/kWh saved.
  - VFD-Constant Flow units are limited to retrofit only
  - Fixture Mounted Occupancy Sensor -\$10 Rebate with minimum wattage of 30W
  - Wall Mounted Occupancy Sensor -\$10 Rebate with minimum wattage of 30W
  - Energy Efficient Windows – Require U-Factor and SHGC of 0.40 or less. No longer has to be Energy Star certified.
  - LED Display Case Lighting – Retrofit only from T-12 or T-8 to LED
  - High-Efficiency Open and Reach-In Display Cases – Measure rebates split out by usage (Refrigerated Foods and Frozen Foods) instead of by temperature.
  - New Construction may now use Interior Lighting Certificate to determine eligible and ineligible wattage for entry on Lighting Workbook.
  - The Lighting Workbook has been streamlined to improve the time to fill out.

### 1.3 CONTACT INFORMATION

Questions and additional information about the Program can be directed to Santee Cooper via:

- Web: [www.ReducetheUse.com](http://www.ReducetheUse.com)
- Telephone: (843) 347-3399 x3910
- Toll-Free Fax: (855) 505-5061
- Email: [commercial.energy@SanteeCooper.com](mailto:commercial.energy@SanteeCooper.com)
- Mail: Santee Cooper Commercial Prescriptive Rebate Program  
1229 38<sup>th</sup> Ave North, #112  
Myrtle Beach, SC 29577

### 1.4 MANUAL ORGANIZATION

This Program Manual is organized as follows:

- Section 2 – Information regarding customer eligibility, measure eligibility, and rebate levels
- Section 3 – Outline of Program participation process
- Section 4 – Equipment Catalogs with detailed measure and rebate information
- Appendix A – Rebate Program’s Frequently Asked Questions
- Appendix B – Forms for Rebate Application, as well as measure-specific forms that must be completed along with the Application
- Appendix C – Eligibility requirements for HVAC tune-up
- Appendix D – Eligibility requirements for heat pump duct sealing
- Appendix E – Sample Santee Cooper electric bill
- Appendix F – Glossary of acronyms, units, and definitions
- Appendix G – Listing of HVAC minimum efficiencies required by South Carolina’s current energy code - for reference only - These are NOT Rebate Program efficiencies.

## Section 2

## Eligibility Requirements and Rebate Information

### 2.1 CUSTOMER ELIGIBILITY

To be eligible to participate in this Rebate Program, a customer must be served by Santee Cooper under one or more of the Santee Cooper commercial electric rate schedules listed in Table 2-1.

Table 2-1: Eligible Rate Schedules for the Rebate Program<sup>1</sup>

Description	Schedules
General Service	GA
Medium General Service	GB
Seasonal General Service	GV
General Service – Time of Use Rate	GT
Large General Service	GL
Temporary Service <sup>2</sup>	TP
Transition Adjustment	TA

### 2.2 MEASURE ELIGIBILITY

This Rebate Program provides rebates for many types of energy-efficient technologies, as shown in Table 2-2 below.

Table 2-2: Rebate Program Eligible Measures and Equipment Summary

<b>Lighting</b>	<b>Building Envelope/Other</b>	<b>Refrigeration (continued)</b>
Lighting Equipment	VFD-Constant Flow	High-Efficiency Compressors
Occupancy & Daylight Sensors	Roof Insulation	High-Efficiency Display Cases
LED Channel Letter Signage	Cool Roof	High-Efficiency Doors
Screw-in CFL's	Window Film	Night Covers
LED Pool Lighting Retrofit	Energy Efficient Windows	Strip Curtains
<b>HVAC</b>	Weather Stripping	Retrofit Open Display Cases
Three Phase HVAC Units	Variable Speed Pool Filter Pumps	ENERGY STAR Ice Machines
Single Phase HP	<b>Refrigeration</b>	ENERGY STAR Refrigerators
PTAC/PTHP	Anti-Sweater Heater Controls	ENERGY STAR Vending Machines
Chillers	Auto-Closers	
VFDs for HVAC applications	Door Gaskets	
VRF/Mini-split systems	Electronically Commutated Motors	
HVAC Tune-Ups	High-Efficiency Case Lighting	
Duct Sealing and Insulation	Evaporator Fan Controllers	

<sup>1</sup> Santee Cooper approved rates

<sup>2</sup> Commercial service only

In order to be eligible for rebates through this Rebate Program, all energy conservation measures must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017.
- Equipment must be installed and applications submitted by November 30 of the year the project is started to be eligible for Program rebates.
- Qualifying equipment and materials employed must be new
- Qualifying measures cannot have been previously rebated through any other Santee Cooper rebate program
- Qualifying measures must be completed in a manner that meets or exceeds all applicable code and regulatory requirements
- The equipment that is removed and replaced with more energy-efficient equipment cannot be re-installed elsewhere and must be disposed of in accordance with all applicable local, state, and federal codes and regulations

Detailed information on specific eligibility for qualifying energy-efficiency measures and equipment is included in the Equipment Catalogs provided in Section 4. Instructions on how to complete the Rebate Application and the additional documentation required for each measure are also included.

### 2.3 REBATE INFORMATION

Customers will be issued rebates upon the verified completion of all the requirements for the associated measures and will receive rebate amounts in accordance with the payment structure detailed in the Equipment Catalogs listed in Section 4, not to exceed 50% of the eligible project cost. Eligible project costs are based upon the actual costs incurred by the customer in connection with the evaluation, construction, installation, implementation, and commissioning of an eligible energy-efficiency measure. Material and external labor costs must be thoroughly documented by the customer. Examples of acceptable documentation of eligible costs include invoices, work orders, cancelled checks, and accounting system reports.

For this Rebate Program, customers will be subject to a maximum rebate cap of \$200,000 per facility, and an overall maximum rebate cap of \$300,000 per facility for all energy-efficiency programs offered by Santee Cooper through November 30 of each year. Additionally, a 1099 tax form will be sent with each rebate check processed over \$600.

Rebate requests (Customer Rebate Applications and/or Lighting Workbooks) will be reviewed on a first-come, first-served basis until available rebate funding has been committed. Customers requesting rebates after reservation of all available Rebate Program funding will be given the option to be placed on a waiting list which will be in the order that requests are received by Santee Cooper.

### 3.1 PROGRAM TIMELINE

This Rebate Program is available for qualifying measures initiated between December 1, 2015 and November 30, 2017. All qualifying equipment must be purchased and installed, qualifying work completed<sup>1</sup> and associated Rebate Applications (including Lighting Workbooks, if applicable) received by Santee Cooper on or before November 30 of the year the project is started. In no case will the 2016-2017 Rebate Program Application deadline be later than November 30, 2017.

Santee Cooper will honor Applications (Customer Rebate Applications and/or Lighting Workbooks) on a first-come first-served basis, based on the date received. All complete and qualifying Rebate Applications received prior to the yearly application deadlines will be honored subject to available funding.

### 3.2 CUSTOMER PARTICIPATION PROCESS

There are three general participation procedures for the Rebate Program – one for retrofit lighting measures, one for new construction lighting measures, and one for all non-lighting measures. Table 3-1 provides a summary of these three participation processes. Detailed information about each participation process is provided in this section, and participation information, including instructions on completing the Rebate Application for each eligible measure, is included in the Equipment Catalogs provided in Section 4.

Table 3-1: Rebate Program Customer Participation Overview

Participation Steps	Retrofit Lighting	New Construction Lighting	HVAC and all Other Measures
Step 1	Submit "as planned" Retrofit Lighting Workbook	Purchase and install eligible lighting equipment	Purchase and install eligible measure(s)
Step 2	Purchase and install eligible measure(s) after approval by the Program Administrator	Submit New Construction Lighting Workbook and Application Documents	Submit Rebate Application Documents
Step 3	Submit "as installed" Retrofit Lighting Workbook and Application Documents		

#### 3.2.1 Retrofit Lighting Measures

Customers with eligible lighting retrofit measures can participate in the Rebate Program by following these basic steps:

- **Step 1: Prepare and submit "as-planned" Retrofit Lighting Workbook **prior to purchasing and installing equipment**** (Note: customers purchasing , or agreeing

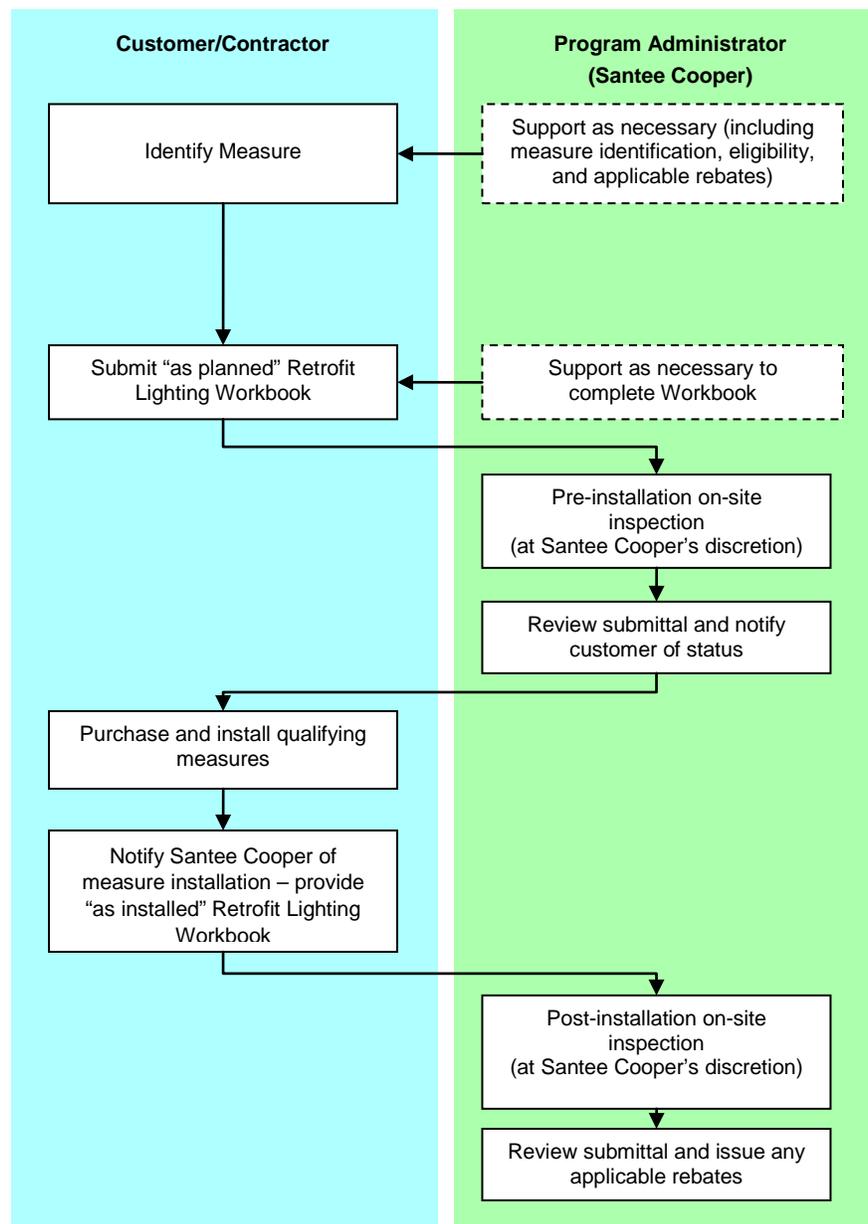
<sup>1</sup> For new construction projects that extend past program deadline, please contact Santee Cooper prior to November 30, 2017 to discuss project eligibility.

to purchase by signing a purchase order or contract, or installing lighting equipment prior to receiving approval of the Retrofit Lighting Workbook from the Program Administrator will not be eligible for participation or rebates)

- Step 2: Purchase and install the qualifying measures after approval from the Program Administrator
- Step 3: Submit “as installed” Retrofit Lighting Workbook along with other required documentation including W9 form with valid Tax ID

Figure 3-1 shows a graphical representation of the participation process for retrofit lighting measures.

Figure 3-1 Participation Process for Retrofit Lighting Measures



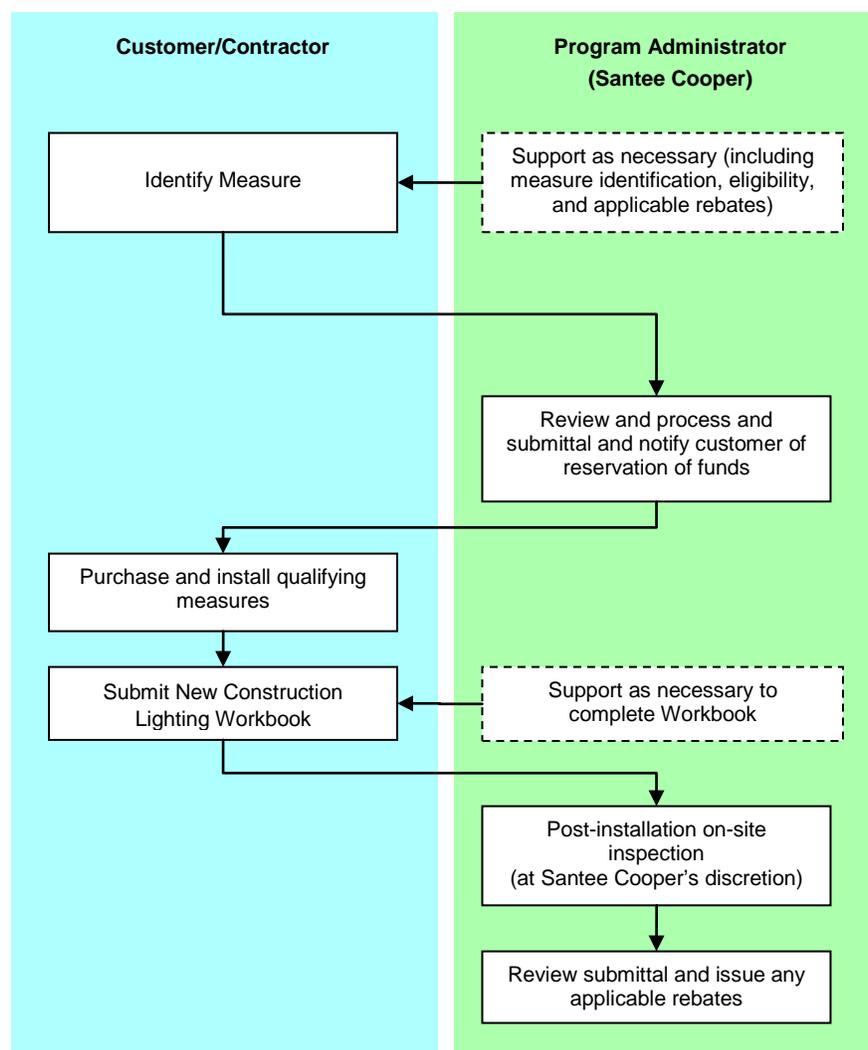
### 3.2.2 New Construction Lighting Measures

Customers with eligible new construction lighting measures can participate in this Rebate Program following these basic steps:

- Step 1: Complete the new construction project, including purchasing and installing the qualifying measures
- Step 2: Submit New Construction Lighting Workbook along with all other required documentation including W9 form with valid Tax ID

Figure 3-3 below shows a graphical representation of the participation process.

Figure 3-2: Participation Process for New Construction Lighting



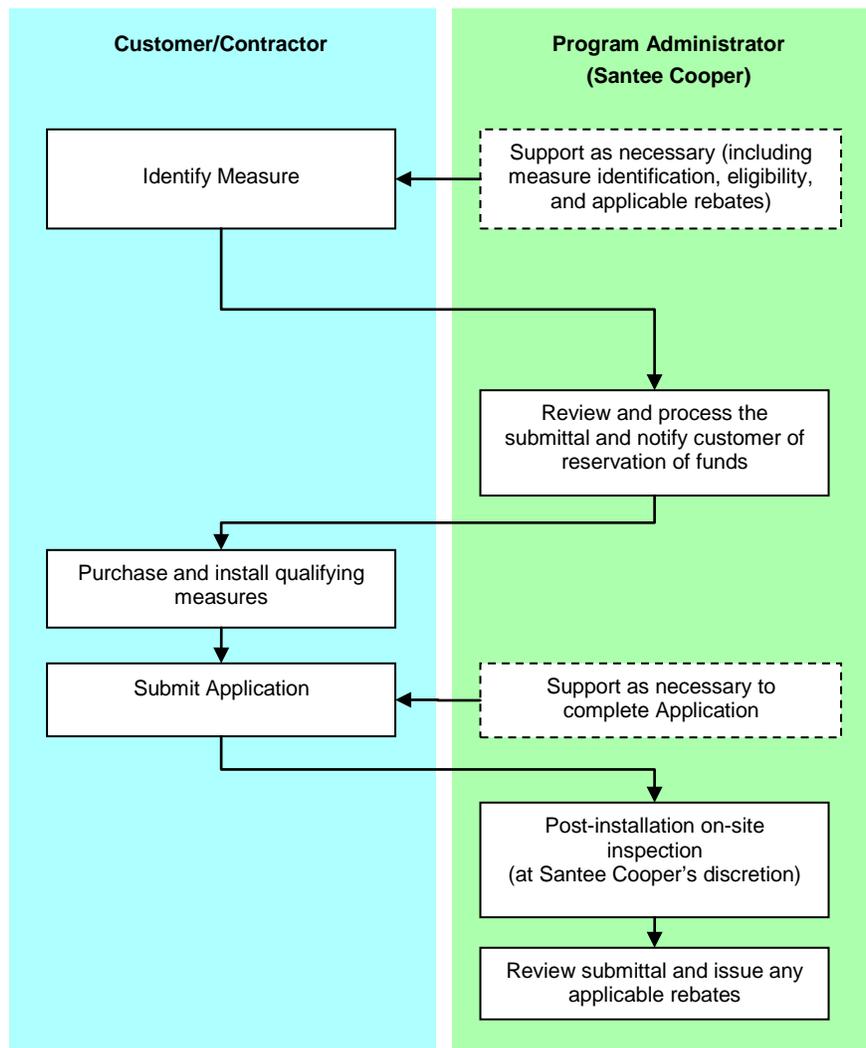
### 3.2.3 HVAC and Other Measures

Customers with HVAC and other measures can participate in this Rebate Program by following these basic steps:

- Step 1: Purchase and install the qualifying measures
- Step 2: Submit a Rebate Application and all required documentation including W9 form with valid Tax ID

Figure 3-3 below shows a graphical representation of the participation process.

Figure 3-3: Participation Process for HVAC and Other Measures



### 3.2.4 Submittals

Customers can send their submittals via USPS to:

Santee Cooper Commercial Prescriptive Rebate Program  
1229 38th Avenue North, #112  
Myrtle Beach, SC 29577

Questions about the Rebate Program should be directed to a Program Administrator at:

Phone: (843) 347-3399 x3910  
Toll-Free Fax: (855) 505-5061  
E-mail: [commercial.energy@santecooper.com](mailto:commercial.energy@santecooper.com)

### 3.2.5 Site Inspections

Santee Cooper, at its sole discretion, may inspect the associated facility prior to or after approving the Customer Rebate Application or Lighting Workbook. The inspection may include a telephone survey and/or site visit. Customers grants Santee Cooper reasonable ingress to and egress from the relevant facility during normal business hours for inspection purposes. Discrepancies from information listed on Application or incorrect installation may delay or void rebate payment. Customers will be notified upon completion of the inspection if any discrepancies were identified.

For Program quality control, Santee Cooper, at its sole discretion, may conduct site visits and/or telephone surveys to evaluate and/or monitor the rebated measures at any time up to two years after work is completed. Such visits may include the installation of temporary monitoring equipment. Customers must allow Santee Cooper and its sub-contractors reasonable ingress and egress from the associated facility during normal business hours for these evaluations and/or monitoring equipment installations.

## 3.3 TRADE ALLY PARTICIPATION PROCESS

Participating contractors and equipment vendors have the option of becoming a member of Santee Cooper's Trade Ally Program (TAP) (but membership is not required to participate). A number of advantages of becoming a TAP member include, but are not limited to, contact information posted on Santee Cooper's website, free Program training, Rebate Program information and updates. TAP members can utilize the services of Santee Cooper's Trade Ally Coordinator to answer questions about the Program, inquire about equipment and customer eligibility, and estimate cost and energy savings. Please refer to Santee Cooper's Trade Ally Program Manual or contact Santee Cooper's Trade Ally Coordinator ([SCTradeAlly@nexant.com](mailto:SCTradeAlly@nexant.com) or 855-259-0077 (toll free) for further details.

Detailed information on measure eligibility, rebate amounts, and participation information are provided in the following Equipment Catalogs:

- Lighting equipment
- HVAC equipment (includes variable frequency drives (VFDs) for HVAC equipment)
- Building envelope and other facility equipment
- Commercial refrigeration equipment (includes ENERGY STAR qualified commercial appliances)
- Pumps and Motors

## LIGHTING IMPROVEMENT MEASURES

This Lighting Equipment Catalog describes the eligibility requirements and rebate amounts for qualifying lighting equipment, occupancy sensors and daylight sensors under Santee Cooper's Commercial Prescriptive Rebate Program (Rebate Program). It also includes instructions on how to complete the Rebate Application and information regarding any required additional documentation. This Rebate Program provides rebates for many types of energy efficient technologies. Please read the following sections carefully to ensure that you purchase and install qualifying equipment.

In order to qualify for rebates through this Rebate Program, all equipment and work must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017, with work and applications completed by November 30 of the year the project is started.
- Qualifying equipment and materials employed must be new.
- Qualifying measures must be completed in a manner that meets or exceeds all applicable code and regulatory requirements.
- The equipment that is removed and replaced with more energy efficient equipment cannot be re-installed elsewhere and must be disposed of in accordance with all applicable local, state, and federal codes and regulations.
- Measure may be installed in either retrofit or new construction / major renovation applications subject to limitations pertaining to each measure listed in this catalog.

Pre-qualification of eligible measures under this Rebate Program is required for retrofit lighting equipment, occupancy sensors and daylight sensors. Additional eligibility and submittal requirements for lighting technologies, including new construction lighting projects, are outlined in this Equipment Catalog.

Rebates for additional measures may be available. For more information about Santee Cooper rebates, eligibility requirements, rebate levels, other Santee Cooper energy-efficiency programs, or general inquiries, visit the program's Web site at [ReduceTheUse.com](http://ReduceTheUse.com), email us at [commercial.energy@santeecooper.com](mailto:commercial.energy@santeecooper.com), or contact Santee Cooper at (843) 347-3399 x3910.

## RETROFIT LIGHTING EQUIPMENT

**Measure Description:** Lighting technologies are constantly improving. Older lighting systems are typically less efficient and may cost considerably more to operate than newer efficient technologies available today. Careful application of readily available high efficiency lighting equipment can produce significant long-term energy savings while providing excellent lighting quality for Lighting Retrofit projects.

**Applicability:** Rebates are available for qualified lighting equipment installed as part of a new construction or retrofit project. ***Lighting retrofit project applicants must submit a Retrofit Lighting Workbook prior to equipment purchase and installation.***

**Equipment Eligibility:** Lighting equipment that results in a verifiable installed wattage reduction is eligible for a rebate, provided that the following criteria are met:

### Retrofit Lighting:

New four foot T8 fluorescent lamps retrofitted to existing fixtures must be rated at 80 CRI or higher and 90 lumens or higher per watt or be a qualifying lamp under the CEE High-Performance Commercial Lighting Systems Initiative. Associated ballasts must have a power factor of at least 0.9 and a total harmonic distortion of less than 20%<sup>1</sup>. Fixture replacements must also meet these minimum eligibility standards.

<sup>1</sup> Qualifying lamps are listed on CEE's website at <http://library.cee1.org/content/commercial-lighting-qualifying-products-lists>.

Eligible HID systems must use ceramic metal halides or pulse start metal halides.

Retrofit work involving de-lamping is eligible provided that the capability to re-install additional lamps into a fixture is eliminated (this includes permanent removal of lamp, ballast, socket, and/or luminaires) and is accompanied by an upgrade to qualifying lighting equipment at the same time.

### **LED Lighting / Solid State Lighting (SSL):**

To qualify for rebates, any **general luminance** LED/SSL product submitted must be listed on at least one of the approved Qualified Product List options: Energy Star, DesignLights Consortium (DLC), or Lighting Design Lab (LDL). Documentation of LED/SSL product listing must be included for each product type submitted for rebates and must be included as a part of the submitted project documentation.

Note: LED exit signs and LED channel letter signage is exempt from this requirement. LED exit signs must replace an existing incandescent or fluorescent exit sign and must be a complete fixture replacement. Equipment must be Underwriters' Laboratories (UL) approved. Refer to "LED Channel Letter Signage" section of Lighting Equipment Catalog for rebate requirements.

All **non-general luminance or specialty** LED/SSL products, as defined below, does not require qualification by one of the three options below, and must be submitted via the Custom Rebate Program.

**Interior:** All lighting equipment contributing to the lighting power density (LPD) of a space falls into the general luminance category. All LED/SSL equipment contributing to LPD must be reviewed by DLC, Energy Star, or LDL to be eligible for incentive.

**Exterior:** All lighting on the exterior of a building that contributes illuminance for safety, security, or function of a building is also considered to be in the general luminance category. All LED/SSL equipment used for exterior illumination must be reviewed by DesignLights Consortium (DLC), Energy Star, or Lighting Design Lab (LDL) to be eligible for incentive.

### **Non-general Luminance or Specialty Lighting Key Definitions**

**Signage and Specialty:** Any sign (monument, cabinet, channel letter, etc.) is considered non-general luminance. Indirect or cove lighting, refrigerated case lighting<sup>2</sup>, as well as theater/stage lighting is considered non-general or specialty lighting. LED/SSL equipment of these types is not currently reviewed by DLC, Energy Star, or LDL.

### **Summary of Participation Criteria**

- Non-general luminance or specialty lighting (i.e. LED Message Center, Channel Letter, and Stage Lighting) requires NRTL certification, but does not require pre-qualification through one of the options listed above.
- Non-general luminance lighting is handled via the Custom program. Specialty LED lighting, when routed through the Custom program, measurement and verification (M&V) will be required and will vary based on the nature of the project. To obtain verification of the run-time hours, the project may require either customer validation or independent monitoring.
- Customers are strongly encouraged to confirm with contractors/vendors that a manufacturer's or installer's warranty on this type of equipment will be honored.

<sup>2</sup> Refrigerated case lighting has been added to the DLC Qualified Product List; but, at this time, DLC qualification is not an eligibility requirement for case lighting projects. However, customers and trade allies are strongly encouraged to use DLC-qualified products for case lighting projects. Refer to Commercial Refrigeration Equipment Catalog for qualifying and rebate information.

**Note: Santee Cooper does NOT endorse any of the LED products on the above mentioned lists. Santee Cooper reserves the right to review, approve and/or reject any LED product on a case by case basis.**

**Ineligible Lighting Measures:**

- Measures with energy savings due solely to behavioral changes
- Installation of T12 fluorescent lighting technology
- Screw-in incandescent
- Standard metal halide or any high pressure sodium lighting fixture
- De-lamping without upgrading to qualifying lighting equipment

**Instructions for Rebate Application<sup>3</sup>:** The application for lighting technologies is **not** the same as the application for all other measures. Retrofit Lighting projects require the submittal of a Retrofit Lighting Workbook in electronic format for pre-approval by Santee Cooper. This is a computer spreadsheet file which can be downloaded from the Santee Cooper website (www.RTU4business.com) or obtained by contacting the Program Administrator or a participating Trade Ally or contractor.

- Before work is started, follow the instructions accompanying the Retrofit Lighting Workbook, submit the Workbook with the project “as planned”<sup>4</sup>. The completed Retrofit Lighting Workbook spreadsheet will automatically calculate the electrical reduction and rebate amount expected from your lighting project. This Workbook can be filled in by the contractor performing the work, and must be signed by the Santee Cooper customer requesting the rebate.
- Upon receiving approval of the “as planned” Workbook by Santee Cooper, purchase and install eligible equipment.
- After completion of project, submit “As Installed” Retrofit Lighting Workbook.
  - Along with “As Installed” Workbook, submit dated sales receipt or paid invoice including material and labor as applicable.
  - For LED lighting, include documentation such as a specification sheet demonstrating Energy Star, DesignLights Consortium (DLC), or Lighting Design Lab (LDL) qualification.

**Measure Rebate:** Rebates for lighting equipment upgrades are paid based on the wattage reduction as computed in the Retrofit Lighting Workbook at the following amounts:

- Screw-in CFLs: \$0.15 per watt reduced
- All other lighting equipment upgrades: \$0.30 per watt reduced.

## **NEW CONSTRUCTION LIGHTING EQUIPMENT**

**Measure Description:** Lighting technologies are constantly improving. An added value for new buildings which incorporate readily available high efficiency lighting equipment can be lower air conditioning requirements and significant long term energy savings. Modern lighting technologies are often a perfect fit for saving energy in New Construction projects.

**Applicability:** Rebates are available for qualified lighting equipment installed as part of a new construction project.

<sup>3</sup> Rebate Application, Terms and Conditions, and Customer and Contractor information forms are included in the Lighting Workbook.

<sup>4</sup> “As Planned” and “As Installed” Retrofit Lighting Workbooks should be the same except for any approved changes made during project work.

**Equipment Eligibility:** Lighting equipment that results in a verifiable installed wattage reduction is eligible for a rebate, provided that the following criteria are met:

**New Construction Lighting:**

New T8 fluorescent lamps must be rated at 80 CRI or higher and 90 lumens or higher per watt. Associated ballasts must have a power factor of at least 0.9 and a total harmonic distortion of less than 20%.

The New Construction lighting project must produce a 10% (or greater) installed wattage reduction from ASHRAE 90.1-2007 lighting power density specifications by building type as described in Table L-1. A New Construction Lighting Workbook must be submitted for each included building.

**LED Lighting / Solid State Lighting (SSL):**

New construction LED /SSL qualifying criteria is the same as for retrofit lighting shown above.

**Ineligible Lighting Measures:**

- Installation of T12 fluorescent lighting technology
- Screw-in incandescent or CFLs
- Standard metal halide or any high pressure sodium lighting fixture
- LED exit signs

**Instructions for Rebate Application:** The application for lighting technologies is **not** the same as the application for all other measures. New Construction Lighting projects require the submittal of a New Construction Lighting Workbook in electronic format. This is a computer spreadsheet file which can be downloaded from the Santee Cooper website ([www.RTU4Business.com](http://www.RTU4Business.com)) or obtained by contacting the Program Administrator or a participating Trade Ally or contractor.

A New Construction Lighting Workbook must be submitted for each included new building. After construction is finished, follow the instructions accompanying the New Construction Lighting Workbook. The completed New Construction Lighting Workbook spreadsheet will automatically calculate the electrical reduction and rebate amount expected from your lighting upgrade. This Workbook can be filled in by the contractor performing the work, and must be signed by the Santee Cooper customer requesting the rebate. The following information must also be submitted with the Lighting Workbook:

- Dated sales receipt or paid invoice including material and labor as applicable
- Documented confirmation of facility square footage
- If an interior lighting certificate is used to determine eligible and ineligible wattage for the Lighting Workbook, it must be submitted for review as well.

**Measure Rebate:** Rebates for lighting equipment upgrades are paid at \$0.30 per watt of reduced electricity usage as computed in the New Construction Lighting Workbook. The baseline lighting power densities are shown in Table L-1 (below). These amounts are compared with the actual installed lighting to arrive at the savings difference for the new construction rebate. The completed Lighting Workbook automatically computes the electrical reduction.

**Table L-1. Baseline Lighting Power Densities for New Construction Measures**

Building Area Type	W/ft <sup>2</sup>	Building Area Type	W/ft <sup>2</sup>
Automotive Facility	0.9	Multi-Family	0.7
Convention Center	1.2	Museum	1.1
Court House	1.2	Office	1.0
Dining: Bar Lounge/Leisure	1.3	Parking Garage	0.3
Dining: Cafeteria/Fast Food	1.4	Penitentiary	1.0
Dining: Family	1.6	Performing Arts Theater	1.6
Dormitory	1.0	Police/Fire Station	1.0
Exercise Center	1.0	Post Office	1.1
Gymnasium	1.1	Religious Building	1.3
Healthcare-Clinic	1.0	Retail	1.5
Hospital	1.2	School/University	1.2
Hotel	1.0	Sports Arena	1.1
Library	1.3	Town Hall	1.1
Manufacturing Facility	1.3	Transportation	1.0
Motel	1.0	Warehouse	0.8
Motion Picture Theater	1.2	Workshop	1.4

## OCCUPANCY & DAYLIGHT SENSORS

**Measure Description:** Modern available lighting Occupancy sensors and Daylight sensors can reduce electrical energy consumption by reliably turning off appropriate lighting equipment when an area is unoccupied or suitably lit by sunlight. This can reduce costs by saving electricity used to run the lights.

**Applicability:** New construction and retrofit installations, where not required by ASHRAE 90.1-2007

**Equipment Eligibility:** Rebates will be offered to customers installing lighting controls as a part of retrofit or new construction / major renovation projects provided the measures meet the following requirements:

1. Sensors must be new and installed in a manner that meets or exceeds applicable code regulations
2. Sensors must be hard-wired and permanently installed (no plug-based devices)
3. Installations must comply with manufacturer’s guidelines on coverage and maximum controlled watts

The eligibility criteria for daylight sensors are:

1. Daylight sensors must control a minimum of 45 watts

The eligibility criteria for lighting occupancy sensors are:

1. Sensors can be passive infrared, ultrasonic, or dual-technology
2. Fixture-mounted sensors must control a minimum of 30 watts
3. Wall-mounted sensors must control a minimum of 30 watts
4. Ceiling-mounted sensors must control a minimum of 175 watts
5. Sensors or installations with the ability to disable sensor function (other than for maintenance) are NOT eligible

**Instructions for Rebate Application:** The application for lighting technologies is *not* the same as the application for all other measures. **Qualified Lighting Sensor projects require the submittal of a Lighting Workbook in electronic format for pre-approval by Santee Cooper.** Lighting Sensor projects that are part of another qualified Lighting Project can be included in that Project’s Lighting Workbook. This is a computer spreadsheet file which can be downloaded from the Santee Cooper website (www.RTU4Business.com) or obtained by contacting the Program Administrator or a participating Trade Ally or contractor.

Follow the instructions accompanying the appropriate Lighting Workbook. The filled in Lighting Workbook spreadsheet will automatically calculate the rebate amount expected from your lighting sensor project. This Workbook can be filled in by the contractor performing the work, and must be signed by the Santee Cooper customer requesting the rebate. The following items must also be submitted with the Lighting Workbook:

- Dated sales receipt or paid invoice including materials and labor as applicable
- Manufacturer’s equipment specification sheet demonstrating compliance with equipment eligibility requirements

**Measure Rebate:** Rebate amounts for qualifying occupancy sensors are located in Table L-2:

**Table L-2. Lighting Controls Rebate Amounts**

Measure	Incentive
Area Day Lighting Controls	\$45 / sensor
Building Occupancy Fixture-Mounted Lighting Controls (Infrared and Dual Technology)	\$10 / sensor
Building Occupancy Wall-Mounted Lighting Controls (Infrared and Dual Technology)	\$10 / sensor
Building Occupancy Ceiling-Mounted Lighting Controls (Infrared and Dual Technology)	\$50 / sensor

## LED CHANNEL LETTER SIGNAGE

**Measure Description:** Channel letters are individually illuminated letters and graphics that are common in both indoor and outdoor applications. Replacing fluorescent or neon units with energy-efficiency LED channel letter signage can lead to energy savings.

**Applicability:** New construction and retrofit applications

**Equipment Eligibility:**

The eligibility criteria for the channel letter signage measure are:

- Installed signage must use LED technology for all signage needs.
- For retrofit projects, LED technology must replace incandescent, neon, or fluorescent illumination.

**Items to Submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. **Please note: Annual operating hours must be recorded on Rebate Worksheet in Rebate Application to be eligible for rebate.**

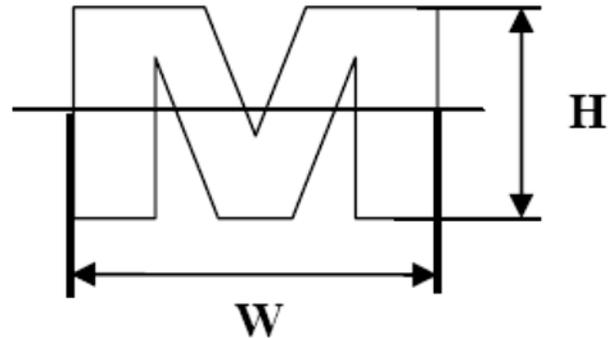
**Instructions for Rebate Application:** LED channel lighting signage projects should use the 2016-2017 Customer Rebate Application, not the Lighting Workbook. Pre-approval is not required for

this measure; however if the lighting project at the facility includes other eligible lighting measures, pre-approval for the entire project is required.

After completion of the project, complete the 2016-2017 Customer Rebate Application. On the Rebate Application note the “Efficiency” as the letter height (H) in linear feet and the “Measure size” as the letter width (W) in linear feet, as described below.

To calculate the measure size and incentive, conduct the following steps to properly measure the LED channel letter signage:

1. Measure the width (W) of each individual letter at the centerline. **Do not** measure the distance between letters.
2. Measure the height of each letter (H).
3. Select the appropriate measure associated with the measured letter height.
4. Multiply the incentive in Table L-3 by the letter width (W).
5. Add the incentive for each letter to calculate the total incentive.



**Measure Rebate:** Rebate amounts for qualifying LED channel letter signage are located in Table L-3:

**Table L-3. LED Channel Letter Signage Rebate Amounts**

Equipment Code	Measure	Unit	Incentive
LEDSMCHSIGN	Channel Letter Signage (≤ 2 ft high)	Linear Foot	\$2.50 / Linear Foot
LEDLGCHSIGN	Channel Letter Signage (> 2 ft high)	Linear Foot	\$5.00 / Linear Foot

## LED Pool Lighting

**Measure Description:** LED pool lights are required for safety in commercial swimming pools. Existing pool lights can be retrofitted with new LED lamps or replaced by new LED fixtures resulting in decreased energy consumption.

**Applicability:** Rebates are offered to customers installing new LED lamps or LED fixtures in existing pools.

**Equipment Eligibility:** LED pool light lamps or fixtures that result in a verifiable installed wattage reduction are eligible provided that the following criteria are met:

- Lamps and/or fixtures must meet or exceed SCDHEC minimum pool lighting level requirements
- Lamps and/or fixtures must be rated for pool installations

**Instructions for Rebate Application:** The application for lighting technologies is **not** the same as the application for all other measures. LED Pool Lighting projects require the submittal of a Retrofit Lighting Workbook in electronic format for post-install approval by Santee Cooper. This is a computer spreadsheet file which can be downloaded from the Santee Cooper website ([www.RTU4business.com](http://www.RTU4business.com)) or obtained by contacting the Program Administrator or a participating Trade Ally or contractor.

- Before work is started, follow the instructions accompanying the Retrofit Lighting Workbook. The completed Retrofit Lighting Workbook spreadsheet will automatically calculate the electrical reduction and rebate amount expected from your lighting project. This Workbook

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can be filled in by the contractor performing the work, and must have the Terms and Conditions signed by the Santee Cooper customer requesting the rebate.

- During construction, the contractor will need to take detailed pictures of the fixture(s) being removed and the fixture(s) being installed.
- After completion of project, submit “As Installed” Retrofit Lighting Workbook.
  - Along with “As Installed” Workbook, submit dated sales receipt or paid invoice including material and labor as applicable.

**Measure Rebate:** Rebates for lighting equipment upgrades are paid based on the wattage reduction as computed in the Retrofit Lighting Workbook at the \$0.40 per watt reduced

## HVAC IMPROVEMENT MEASURES

This HVAC Equipment Catalog describes the eligibility requirements and rebate amounts for qualifying HVAC measures and equipment under Santee Cooper's Commercial Prescriptive Rebate Program (Rebate Program). It also includes instructions on how to complete the Rebate Application and information regarding any required additional documentation. This Rebate Program provides rebates for many types of energy efficient technologies. Please read the following sections carefully to ensure that you purchase and install qualifying equipment.

In order to be eligible for rebates through this Rebate Program, all equipment must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017, with work and applications completed by November 30 of the year the project is started.
- Qualifying equipment and materials must be new.
- Qualifying measures must be completed in a manner that meets or exceeds all applicable code and regulatory requirements.
- The equipment that is removed and replaced with more energy-efficient equipment cannot be re-installed elsewhere and must be disposed of in accordance with all applicable local, state, and federal codes and regulations.
- Measure may be installed in either retrofit or new construction / major renovation applications subject to limitations pertaining to each measure listed in this catalog section.

Pre-qualification of HVAC eligible measures under this Rebate Program is not required. Additional eligibility and submittal requirements for HVAC technologies are outlined in this Equipment Catalog.

Rebates for additional measures may be available. For more information about Santee Cooper rebates, eligibility requirements, rebate levels, other Santee Cooper energy efficiency programs, or general inquiries, visit the program's Web site at [ReduceTheUse.com](http://ReduceTheUse.com) email us at [commercial.energy@santecooper.com](mailto:commercial.energy@santecooper.com), or contact Santee Cooper at (843) 347-3399 x3910.

### SINGLE-PHASE SPLIT AND PACKAGED AIR – COOLED HEAT PUMPS

**Measure Description:** Higher efficiency heat pumps use less electricity but perform as well as standard units. The electricity saved through greater efficiency can pay dividends for years through lower operating costs.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Residential type, single-phase split and packaged heat pumps are eligible for rebates if they are air-cooled units that meet or exceed all of the applicable efficiency ratings shown in Table H-1 at Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard Rating Conditions. Residential type, single-phase split and packaged air conditioning units are not eligible for rebates under this program.

Rebates are also offered to contractors performing HVAC tune-ups on existing equipment. These rebates are shown in Table H-7.

Window and room air conditioners are **not** eligible for these rebates.

Units located within ½ mile of the oceanfront, or within the distance recommended by the equipment manufacturer, whichever is greater, must have corrosion resistant outside coil materials or coils coated with a factory-applied (or equal), anti-corrosive coating. Corrosion resistance must meet or exceed ASTM B117.85 standards.

**Rebates:**

Two levels of rebates are available for single phase air-cooled heat pumps based on the AHRI-rated cooling capacity of the installed equipment. Rebates will be paid for the highest efficiency level for which the unit qualifies. The rebate levels are listed in Table H-1 below.

**Table H-1. Eligibility Requirements and Rebate Amount for Single Phase Air-to-Air Unitary Heat Pumps**

Tier	System Type	Equipment Code	Efficiency Requirement	Rebate Per Unit
Tier 1	Split/Packaged System	HP1P15T1	>= 15 SEER	\$300
Tier 2	Split/Packaged System	HP1P17T2	>= 17 SEER	\$500

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturers specification sheets documenting full-load and part-load efficiency or unit AHRI reference number(s)
3. Documentation supporting ASTM B117.85 anticorrosive coating installed on coils or corrosion resistant coil materials, if required because of proximity to the oceanfront

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as the AHRI SEER, EER and HSPF/COP values, and the “Measure Size” as the AHRI-rated cooling capacity at Standard Test Conditions in tons (1 ton = 12,000 Btu/h).

### 3 PHASE AIR – COOLED HEAT PUMPS AND UNITARY AIR CONDITIONERS

**Measure Description:** Higher efficiency heat pumps and air conditioners use less electricity but perform as well as standard units. The electricity saved through greater efficiency can pay dividends for years through lower operating costs.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Three-phase commercial air-cooled heat pumps and unitary air conditioners that exceed applicable South Carolina Energy Code (currently IECC 2009) at Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard Rating Conditions are eligible for rebates. Equipment must be efficiency rated by AHRI, meet applicable AHRI standards, be UL listed and use a minimum ozone-depleting refrigerant. Split system equipment components must comprise a matched system per AHRI. Eligible equipment must also have a manufacturer's commissioning form completed during equipment installation and testing.

Rebates are also offered to contractors performing HVAC tune-ups on existing equipment. These rebates are shown in Table H-7.

Units located within  $\frac{1}{2}$  mile of the oceanfront, or within the distance recommended by the equipment manufacturer, whichever is greater, must have corrosion resistant outside coil materials or coils coated with a factory-applied (or equal), anti-corrosive coating. Corrosion resistance must meet or exceed ASTM B117.85 standards.

**Rebates:** Rebates for 3-phase split and package unitary systems will be based on energy savings achieved relative to code-compliant equipment, as computed in the HVAC Calculator. The rebate level for all eligible unitary HVAC equipment is \$0.30/kWh saved.

#### Items to submit with Rebate Application:

1. Santee Cooper HVAC calculator
2. Dated sales receipt or paid invoice including materials and labor as applicable
3. Manufacturers specification sheets documenting full-load and part-load efficiency or unit AHRI reference number(s)
4. Documentation supporting ASTM B117.85 anticorrosive coating installed on coils or corrosion resistant coil materials, if required because of proximity to the oceanfront

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as the AHRI SEER, EER and HSPF/COP values, and the “Measure Size” as the AHRI-rated cooling capacity at Standard Test Conditions in tons (1 ton = 12,000 Btu/h).

## CHILLERS (CHILLED WATER SYSTEMS EQUIPMENT)

**Measure Description:** Chillers (chilled water systems) are commonly used to provide cooling for a variety of building types and process loads. Chillers come in many different types (centrifugal, rotary, screw, scroll, and reciprocating) and typically reject heat either through air-cooled or water-cooled condensers. High efficiency chillers can yield significant long term energy cost savings compared to standard efficiency units.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Chillers must:

- Equal or exceed the minimum efficiency requirements in either Path A or Path B per Table H-2 below as rated in accordance with Air Conditioning & Refrigeration Institute (ARI<sup>1</sup>) Standard 550/590
- Reflect Variable Frequency Drives (VFD) installed on the chiller compressor in the Integrated Part Load kW/ton rating, if applicable
- Not be a backup service unit
- Not serve cooling loads more than 20% process related
- Air-cooled condensers located within ½ mile of the oceanfront, or within the distance recommended by the equipment manufacturer, whichever is greater, must have corrosion resistant outside coil materials or coils coated with a factory-applied (or equal), anti-corrosive coating. Corrosion resistance must meet or exceed ASTM B117.85 standards.

**Items to submit with Rebate Application:**

1. Santee Cooper HVAC calculator
2. Dated sales receipt or paid invoice including materials and labor as applicable
3. Manufacturer's equipment specification sheet showing the unit's Full Load and Integrated Part Load kW/ton ratings at ARI<sup>1</sup> rated conditions
4. Documentation supporting ASTM B117.85 anticorrosive coating installed on coils or corrosion resistant coil materials, if required because of proximity to the oceanfront

**Instructions for Rebate Application:** In the Rebate Application mark the "System Parameters" as the chiller type and heat rejection method (e.g. water-cooled centrifugal), "Efficiency" as the ARI<sup>1</sup>-rated Full Load and Integrated Part Load kW/ton ratings (including impacts of compressor VFD if applicable) and the "Measure Size" as the ARI<sup>1</sup>-rated cooling capacity at Standard Test Conditions in tons (1 ton = 12,000 Btu/hr).

**Measure Rebate:** Equipment that meets the minimum Full Load and Integrated Part Load Value (IPLV) (in kW/ton) efficiency requirements for either Path A or Path B shown in Table H-2 will be paid an equipment rebate of \$10/ton. For units **exceeding** the minimum efficiency requirements, an **additional rebate** of \$350/ton times the IPLV efficiency increase in kW/ton above the minimum efficiency is paid using the following equation (lower IPLV kW/ton = higher efficiency):

Chiller Rebate = (Tons x \$10/ton) + (Tons x \$350 x (Min Eligible IPLV kW/ton – Chiller rated IPLV kW/ton))

**Example:**

The rebate for a 200 ton air-cooled chiller with condenser with an IPLV kW/ton of 1.00 kW/ton is:

$$(200 \text{ tons} \times \$10/\text{ton}) + (200 \text{ tons} \times \$350/(\text{kW}/\text{ton}) \times (1.10 \text{ kW}/\text{ton} - 1.00 \text{ kW}/\text{ton})) = \$9,000$$

<sup>1</sup> ARI merged into AHRI in 2008. ARI labeled ratings are still in use for certain equipment types.

**Table H-2. Efficiency Requirements and Rebates for Chillers**

Chiller Type	Size (tons)	Program Eligibility minimum requirements			
		Path A		Path B	
		Full Load (kW / ton)	Integrated Part Load (kW / ton)	Full Load (kW / ton)	Integrated Part Load (kW / ton)
Air-Cooled (With Condenser)	All	1.20	0.90	N/A	
Water-Cooled (Reciprocating, Rotary, Screw, Scroll)	< 75	0.73	0.60	0.75	0.57
	≥ 75 & < 150	0.73	0.58	0.75	0.55
	≥ 150 & < 300	0.63	0.55	0.67	0.51
	≥ 300	0.58	0.51	0.60	0.46
Water-Cooled (Centrifugal)	< 150	0.60	0.56	0.61	0.42
	≥ 150 & < 300	0.60	0.56	0.61	0.42
	≥ 300 & < 600	0.54	0.52	0.56	0.38
	≥ 600	0.54	0.51	0.56	0.38

**Rebate Amount:** \$10/ton + (\$350/ton)(IPLV<sub>min</sub> – IPLV), where IPLV is in kW/ton

**VARIABLE REFRIGERANT FLOW/MINI-SPLIT SYSTEMS**

**Measure Description:** Variable refrigerant flow (VRF) systems are equipped with a variable speed DC compressor that is powered through an inverter drive. This technology allows the compressor to vary speed so that it is only delivering the optimum amount of refrigerant to the system according to the cooling (or heating) load. These systems can have single or multiple fan/coil units.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** VRF/Mini-split systems are eligible for rebates if they meet or exceed all of the applicable efficiency ratings shown in Table H-3 for air conditioning units and Table H-4 for heat pump units at Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 1230 Rating Conditions.

Equipment must be efficiency rated by AHRI, meet applicable AHRI standards, be UL listed and use a minimum ozone-depleting refrigerant. Split system equipment components must comprise a matched system per AHRI.

Units located within **½ mile of the oceanfront, or within the distance recommended by the equipment manufacturer, whichever is greater**, must have corrosion resistant outside coil materials or coils coated with a factory-applied (or equal), anti-corrosive coating. Corrosion resistance must meet or exceed ASTM B117.85 standards.

**Items to submit with Rebate Application:**

1. Santee Cooper HVAC calculator
2. Dated sales receipt or paid invoice including materials and labor as applicable
3. Manufacturers specification sheets documenting full-load and part-load efficiency or unit AHRI reference number(s)



4. Documentation supporting ASTM B117.85 anticorrosive coating installed on coils or corrosion resistant coil materials, if required because of proximity to the oceanfront

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as the AHRI SEER, EER and HSPF/COP values, and the “Measure Size” as the AHRI-rated cooling capacity of the condensing unit at Standard Test Conditions in tons (1 ton = 12,000 Btu/h).

**Measure Rebate:** Equipment that meets all minimum efficiency criteria listed in Table H-3 below will be paid an equipment rebate of \$250/ton

**Table H-3. Eligibility Requirements and Rebate Amounts for VRF/Mini-Split Air Conditioners**

AC Size	Equipment Code	Minimum Efficiency Requirements
<65,000 Btu/h	ACVRF65	14.0 SEER
≥65,000 Btu/h and <135,000 Btu/h	ACVRF135	11.3 EER 15.9 IEER
≥135,000 Btu/h and <240,000 Btu/h	ACVRF240	11.1 EER 15.4 IEER
≥240,000 Btu/h	ACVRFL	10.3 EER 13.3 IEER

**Table H-4. Eligibility Requirements and Rebate Amounts for VRF/Mini-Split Heat Pumps**

AC Size	Equipment Code	Minimum Efficiency Requirements
<65,000 Btu/h	HPVRF65	14.0 SEER 8.0 HSPF
≥65,000 Btu/h and <135,000 Btu/h	HPVRF135	11.1 EER 15.9 IEER 3.4 COP
≥135,000 Btu/h and <240,000 Btu/h	HPVRF240	10.7 EER 15.4 IEER 3.3 COP
≥135,000 Btu/h and <240,000 Btu/h with heat recovery	HPVRF240R	10.5 EER 16.3 IEER 3.3 COP
≥240,000 Btu/h	HPVRFL	10.3 EER 13.3 IEER 3.3 COP
≥240,000 Btu/h with heat recovery	HPVRFLR	10.3 EER 13.3 IEER 3.3 COP

## VARIABLE FREQUENCY DRIVES FOR HVAC

**Measure Description:** Variable Frequency Drives (VFDs) are electronic controls that regulate motor speed and torque, resulting in reduced energy consumption under variable load conditions. This can reduce electrical use and may increase equipment life.

**Applicability:** Rebates are offered to customers installing VFDs on HVAC equipment in a retrofit application provided that the following additional criteria are met:

- VFDs are installed on motors capable of reduced speed operation
- VFDs are installed on motors in air handling units greater than or equal to 1 horsepower and less than or equal to 200 horsepower
- Previously installed throttling or bypass devices used as system load controls such as inlet vanes, bypass dampers, three-way valves, or throttling valves are permanently removed, or disabled
- VFD speed is automatically controlled by appropriate means, such as: differential pressure, flow, or temperature

**Measure Eligibility:** Motors must operate more than 2,000 hours per year. Used or refurbished VFDs, VFDs required by IECC 2009, and VFDs on chillers are not eligible for this rebate.

VFDs larger than 200 hp, installed on chillers, or installed on non-HVAC equipment may be eligible for rebates under the Santee Cooper Commercial Custom Rebate program. For more information about this program, contact the Program Administrator **before** you purchase your equipment.

The following VFD measures are excluded from consideration for rebates:

- Variable frequency drives required by IECC 2009 (e.g., VAV fan motors greater than 10 horsepower in new construction projects)
- VFDs on chillers (this measure may be eligible in the Commercial Custom program)
- Fan and pump operations that would otherwise be regulated by on/off cycling
- Used or rebuilt VFDs, or VFDs in New Construction projects.
- Motors with less than 2,000 annual operating hours

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** In the Rebate application, mark the “Efficiency” as “NA” and the “Measure Size” as the nameplate motor size of the affected motor.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table H-5.

**Table H-5. VFD Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
VFD	HVAC VFD 1 ≤ and ≤ 200 HP	HP	\$50 / HP

## PACKAGED TERMINAL UNITS

**Measure Description:** Packaged Terminal Air Conditioners (PTACs) and Packaged Terminal Heat Pumps (PTHPs) are designed primarily to provide complete cooling or cooling and heating for a room or small zone and are specifically for permanent through-the-wall installation. These electrically-powered units are generally sized under 13,500 Btu/hr, are typically designed to be installed in a separate through-the-wall sleeve on an exterior wall, and are typically found in hotels. This is not the same as a window unit air conditioner or heat pump adapted for through-the-wall use. Higher efficiency units generally cost less to operate.



**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** PTAC and PTHP units must have ARI<sup>2</sup>-certified efficiencies that meet or exceed the minimum requirements shown in Table H-6. Heat Pumps must meet both efficiency requirements. Equipment must be correctly sized, purchased new and installed, and meet all other program terms and conditions.

All units located within ½ mile of the oceanfront, or within the distance recommended by the equipment manufacturer, whichever is greater, must have corrosion resistant outside coil materials or coils coated with a factory-applied (or equal), anti-corrosive coating. Corrosion resistance must meet or exceed ASTM B117.85 standards.

**Items to submit with Rebate Application:**

1. Santee Cooper HVAC calculator
2. Dated sales receipt or paid invoice including materials and labor as applicable
3. Manufacturers specification sheets documenting unit ARI<sup>2</sup> reference number(s) and efficiency(ies)
4. Documentation supporting ASTM B117.85 anticorrosive coating installed on coils or corrosion resistant coil materials, if required because of proximity to the oceanfront

**Instructions for Rebate Application:** In the Rebate application, mark the “Efficiency” as the ARI<sup>2</sup>-rated EER (and COP for PTHP units) and the “Measure Size” as the ARI<sup>2</sup>-rated cooling capacity at Standard Test Conditions in Btu/hr (1 ton = 12,000 Btu/hr).

**Measure Rebate:** Rebate amounts for qualifying measures are listed below in Table H-6.

**Table H-6. PTAC and PTHP Efficiency Requirements and Rebate Amounts**

Equipment Type	Size Category	Equip. Code	Minimum Efficiency Requirement	ARI <sup>2</sup> Standard	Rebate (\$/ton)
Package Terminal Air Conditioners (PTAC)	≤ 8,000 Btu/hr	PTAC80	11.8 EER	310/380	\$50
	> 8,000 and ≤ 10,500 Btu/hr	PTAC105	11.4 EER		
	> 10,500 and ≤ 13,500 Btu/hr	PTAC135	10.7 EER		
	> 13,500 Btu/hr	PTACL	10.0 EER		
Package Terminal Heat Pumps (PTHP)	≤ 8,000 Btu/hr	PTHP80	11.8 EER & 3.3 COP Heating	310/380	
	> 8,000 and ≤ 10,500 Btu/hr	PTHP105	11.4 EER & 3.2 COP Heating		
	> 10,500 and ≤ 13,500 Btu/hr	PTHP135	10.7 EER & 3.1 COP Heating		
	> 13,500 Btu/hr	PTHPL	10.0 EER & 3.0 COP Heating		

## HVAC TUNE-UPS

**Measure Description:** This Rebate Program offers rebates for “Tune-Ups” of existing systems. The eligibility requirements and rebate levels are described below. PTACs, PTHPs, and Mini-split/ VRF units are not eligible for these rebates. Tune-ups help ensure that the units are performing as designed. This can improve performance which saves electricity.

<sup>2</sup> ARI merged into AHRI in 2008. ARI labeled ratings are still in use for certain equipment types.

**HVAC tune-ups must be performed by a contractor to be eligible for rebate. The Program pays the rebate directly to the contractor. Santee Cooper will randomly inspect a minimum of (5) tune ups per trade ally per program year and may inspect any and all other tune up projects.**

**Applicability:** Retrofit (existing installations) only

**Measure Eligibility:**

1. Equipment must have the proper air flow
2. Equipment must have proper temperature difference across the evaporator coil in air-conditioning mode
3. The Santee Cooper HVAC Tune-up form must be completed by a technician
4. Equipment must not have received a Santee Cooper tune-up rebate in the last three years
5. **Tune-up forms must be submitted within 30 days of tune-up work completion**

**Items to submit for rebate:**

1. Completed applicable Tune-up Form signed by a technician
2. Photos are not required but contribute validity and verification of individualized completions.

**Rebates:** The rebate for air-cooled unitary air conditioners and heat pumps will be paid according to Table H-7 below.

**Table H-7. Tune-up Rebate Amount**

Rebate Measure	Equipment Code	Rebate (\$/system)
Tier 1: < 5-tons	HVTU	\$50 rebate to contractor
Tier 2: >= 5-tons	HVTU	\$100 rebate to contractor

**DUCT SEALING AND INSULATION**

**Measure Description:** Substandard ducting can allow energy loss through insufficient duct insulation and duct air leakage. Ducts that are properly sealed and insulated are more efficient. This puts more of the heated or cooled air where it belongs. This can improve comfort and lower energy use.

**Applicability:** Retrofit (existing installations) only

**Measure Eligibility:** Incentives will be offered to customers installing retrofit duct sealing and insulation on existing ductwork provided that:

- Facilities must have one or more central-ducted heat pump systems each with a capacity less than 65,000 Btu/hr
- Duct sealing reduces duct leakage to no more than 20% total cubic feet per minute (CFM)
- Eligible duct insulation must be R-6 or greater
- Existing systems with initial testing results of less than 20% leakage are not eligible for rebates
- Only systems requiring repair are eligible for rebates
- New construction is NOT eligible for this rebate

See Appendix D of the Commercial Prescriptive Rebate Program Manual for details of acceptable duct testing procedures, requirements, documentation, and duct repair recommendations.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Completed Duct Sealing Form signed by a technician

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and the “Measure Size” as number of heat pump units serving the duct work that was insulated and sealed.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table H-8.

**Table H-8. Duct Sealing and Insulation Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENDSI	Duct Sealing and Insulation	System	\$200/System

The following is an example for a VFD measure being installed

Parameter	Measure 1	Measure 2	Measure 3
Equipment code	VFD		
Project type (Retrofit or New Construction)	New Construction		
Installation date	2/1/2016		
Facility Location (Distance from oceanfront)	Mechanical Room		
Location of installed measure (e.g. roof, mechanical room)	Supply Fan		
EE Measure end use (e.g. supply fan, CHW pump)	NA		
Age of replaced equipment (for retrofits)	NA		
Replaced (existing) HVAC equipment Manufacturer	NA		
Replaced (existing) HVAC equipment Model number	NA		
New equipment Dealer name	Acme VFDs		
New equipment Manufacturer	Widget VFD, LLC		
New Equipment Model number	ABC123		
Annual operating hours <sup>1</sup>	5,304		
Efficiency(ies) (as described in Equipment Catalog)	NA		
EE Measure size (as described in Equipment Catalog)	10		
EE Measure rebate (\$) (e.g. HVAC: \$50/ton*10 tons=\$500)	\$500		
Number of measures	2		
Total rebate (\$) (# of Measures*Measure Rebate)	1000		

**Equipment Schedule for VFD's**

Days	Hours	Annual Hours
Monday-Friday	6:00-8:00	3,640
Saturday Sunday	6:00-10:00	1,664
	Total	5,304

## BLDG ENVELOPE/SYSTEMS IMPROVEMENT MEASURES

This Building Envelope and Facility Systems Improvements Catalog describes the eligibility requirements and rebate amounts for qualifying **Building Envelope and Facility Systems** measures and equipment under Santee Cooper's Commercial Prescriptive Rebate Program (Rebate Program). It also includes instructions on how to complete the Rebate Application and information regarding any required additional documentation. This Rebate Program provides rebates for many types of energy efficient technologies. Please read the following sections carefully to ensure that you purchase and install qualifying equipment.

In order to be eligible for rebates below through this Rebate Program, all work and equipment must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017, with work and applications completed by November 30 of the year the project is started.
- Qualifying equipment and materials must be new.
- Qualifying measures must be completed in a workmanlike manner that meets or exceeds all applicable code and regulatory requirements.
- The equipment that is removed and replaced with more energy efficient equipment cannot be re-installed elsewhere and must be disposed of in accordance with all applicable local, state, and federal codes and regulations.
- Measure may be installed in retrofit / major renovation applications subject to limitations pertaining to each measure listed in this catalog section.

Pre-qualification of building envelope eligible measures under this Rebate Program is not required. Specific eligibility and submittal requirements for **building envelope and systems technologies** are outlined below in this Equipment Catalog.

Rebates for additional efficiency measures may be available. For more information about Santee Cooper rebates, eligibility requirements, rebate levels, other Santee Cooper energy efficiency programs, or general inquiries, visit the program's Web site at [ReduceTheUse.com](http://ReduceTheUse.com), email us at [commercial.energy@santecooper.com](mailto:commercial.energy@santecooper.com), or contact Santee Cooper at (843) 347-3399 x3910.

## ATTIC AND ROOF INSULATION

**Measure Description:** Additional insulation in the ceilings and roofs of facilities can reduce the energy losses between the indoors and outdoors. Facilities lacking an appropriate amount of insulation typically cost more to heat or cool and provide less occupant comfort.

**Applicability:** Retrofit (existing installations) only

**Measure Eligibility:**

The eligibility criteria for the attic and roof insulation measure are:

- The insulation must cover the entire roof area in spaces with mechanical cooling and/or heating in use
- The pre-existing insulation rating must be less than R-19
- The total insulation rating after installation must be R-38 or greater
- The insulation must meet 2009 IECC & Amendments and have a Manufacturer Certification Statement

The following facility types are NOT eligible for this rebate:

- New Construction
- Facilities with dropped ceilings

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as the R-value of the insulation installed (for example, if the pre-existing insulation level was R-11 and the final total insulation level after project completion was R-38, the insulation installed would be R-27); and note the “Measure Size” as the total square footage of the roof.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table E-1.

**Table E-1. Roof Insulation Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENRI30	Attic/Roof Insulation	Square Foot	\$0.15/square ft.

**COOL ROOF**

**Measure Description:** Dark colored roofing absorbs considerable heat from the sun in the summer. A reflective “cool roof” can greatly reduce this undesirable solar heating of the building. Installing an ENERGY STAR® qualified reflective “cool roof” or ENERGY STAR qualified reflective “cool roof” coating reduces hot weather cooling needs which can save air conditioning energy costs and can also improve comfort.

**Applicability:** Retrofit (existing installations) only

**Measure Eligibility:**

The eligibility criteria for the cool roof measure are:

- The roofing must be installed over occupied spaces with mechanical cooling
- The roofing must comply with ENERGY STAR reflective roof products requirements. Specific products eligible for the rebate are listed in the “Products > Roof Products” section of the EPA ENERGY STAR website ([www.energystar.gov](http://www.energystar.gov))
- New construction is NOT eligible for this rebate

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with rebate eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as the solar reflectance of the roof installed and the “Measure Size” as the square footage of the roof installed.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table E-2.

**Table E-2. Cool Roof Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENCR	Cool Roof	Square Feet	\$0.10/sq-ft.

## REFLECTIVE WINDOW FILM

**Measure Description:** Window film can significantly reduce solar heat gain and increase solar reflectance on windows that do not have it. This can improve comfort, reduce glare and reduce air conditioning costs.

**Applicability:** Retrofit (existing installations) only

The eligibility criteria for the reflective window film measure are:

- The installed window film must have a Solar Heat Gain Coefficient (SHGC) rate of 0.39 or less
- Only windows with eastern, southern, and western exposure are eligible
- The windows cannot be more than 50% shaded by external elements (such as trees, buildings, awnings etc.) during cooling season
- The windows must be part of or directly affect the conditioned space
- New construction is NOT eligible for this rebate

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as the SHGC rating of the window film and the “Measure Size” as the square footage of the glazing covered by the installed film.

**Measure Rebate:** Rebate amount for qualifying measures is listed in Table E-3.

**Table E-3. Reflective Window Film Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENWIFL	Reflective Window Film	Square Foot of glazing	\$0.40/square ft.

## ENERGY EFFICIENT WINDOWS

**Measure Description:** Older windows, especially single pane windows are much less energy efficient than windows available today. They can be replaced with double or triple-pane energy efficient windows to reduce energy loss and improve comfort.

**Applicability:** Retrofit (existing installations) only

**Equipment Eligibility:**

The eligibility criteria for the window replacement measure are:

- The windows must have a manufacturer’s rating of less than or equal to 0.40 for both SHGC and U-Factor.
- New construction is NOT eligible for this rebate

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements, including window SHGC and U-factor rating

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as the SHGC and U-factor rating of the windows installed and the “Measure Size” as the square footage of the windows installed.

**Measure Rebate:** Rebate amount for qualifying measures are listed in Table E-4.

**Table E-4. Energy Efficient Window Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENWIES	Energy Efficient Windows	Square Foot	\$0.75/square ft.

## WEATHER STRIPPING

**Measure Description:** Installing weather stripping can reduce energy losses due to infiltration of outside air to conditioned space, decrease the load on HVAC equipment, and improve occupant comfort.

**Applicability:** Retrofit (existing installations) only

**Equipment Eligibility:**

The eligibility criteria for the weather stripping measure are:

- The weather stripping must be installed at boundaries of conditioned space (spaces with mechanical cooling and/or heating)
- New construction is NOT eligible for this rebate

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as “NA” and the “Measure Size” as the total length of weather stripping installed in linear feet.

**Measure Rebate:** Rebate amount for qualifying measures is listed in Table E-5.

**Table E-5. Weather Stripping Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ENWS	Weather Stripping	Linear Foot	\$0.05/linear ft.

## WORKSHEET

The following is an example for roof insulation added to an existing building.

Parameter	Measure 1	Measure 2	Measure 3
Equipment code	ENRI30		
Project type (Retrofit or New Construction)	Retrofit		
Installation date	5/1/2016		
Equipment location (e.g. roof, mechanical room)	Roof		
Equipment end use (e.g. supply fan, CHW pump)	Insulation		
Age of replaced equipment (for retrofits)	Acme		
Dealer name	Acme		
Manufacturer	NA		
Model number	NA		
Annual operating hours	NA		
Efficiency(ies) (as described in Equipment Catalog)	R-19		
Measure size (as described in Equipment Catalog)	2,000 ft <sup>2</sup>		
Measure rebate (\$) (e.g. HVAC: \$50/ton*10 tons=\$500)	\$300		
Number of measures	1		
Total rebate (\$) (# of Measures*Measure Rebate)	\$300		

## COMMERCIAL REFRIGERATION AND APPLIANCE MEASURES

This Commercial Refrigeration and Appliance Equipment Catalog describes the eligibility requirements and rebate amounts for qualifying **commercial refrigeration equipment efficiency upgrades and ENERGY STAR<sup>®</sup> qualified commercial appliances** under Santee Cooper's Commercial Prescriptive Rebate Program (Rebate Program). It also includes instructions on how to complete the Rebate Application and information regarding any required additional documentation. This Rebate Program provides rebates for many types of energy efficient technologies. Please read the following sections carefully to ensure that you purchase and install qualifying equipment.

In order to be eligible for rebates through this Rebate Program, all equipment and work must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017, with work and applications completed by November 30 of the year the project is started.
- Qualifying equipment and materials must be new.
- Qualifying measures must be completed in a manner that meets or exceeds all applicable code and regulatory requirements.
- The equipment that is removed and replaced with more energy efficient equipment cannot be re-installed elsewhere and must be disposed of in accordance with all applicable local, state, and federal codes and regulations.
- Measure may be installed in either retrofit or new construction / major renovation applications subject to limitations pertaining to each measure listed in this catalog section.

Pre-qualification of eligible refrigeration and appliance measures under this Rebate Program is not required. Additional eligibility and submittal requirements for commercial refrigeration and appliance technologies are outlined in this Equipment Catalog.

Rebates for additional measures may be available. For more information about Santee Cooper rebates, eligibility requirements, rebate levels, other Santee Cooper energy efficiency programs, or general inquiries, visit the program's Web site at [ReduceTheUse.com](http://ReduceTheUse.com), email us at [commercial.energy@santeecooper.com](mailto:commercial.energy@santeecooper.com), or contact Santee Cooper at (843) 347-3399 x3910.

### ANTI-SWEAT HEATER (ASH) CONTROLS

**Measure Description:** When a refrigerator operates at a temperature below the dew point temperature of the surrounding air, condensation will form on the outside of the case. Anti-sweat heaters (ASH) prevent condensation from forming on display cases by heating the display case frame. This is necessary to allow customers to see inside cases and prevent excess moisture build-up. Anti-sweat heaters are generally set to run all the time, regardless of the relative humidity and dew point of the surrounding air. In addition to causing a significant electrical draw, the heat from the anti-sweat devices causes an increased refrigeration load. ASH controls are devices that sense the relative humidity in the air or condensation on the refrigerator's glass and turn the heater on only when it is needed. This can save electricity.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** ASH controller must sense humidity or condensation and adjust heater accordingly. Rebates are not available when rebates are also paid for high-efficiency doors.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer's specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as “NA” and the “Measure Size” as the length of the case(s) controlled in feet.

**Measure Rebate:** Rebate amounts for qualifying measures are listed below in Table R-1.

**Table R-1. Anti-Sweat Heater Control Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFASHL	Anti-Sweat Heater Controls Frozen Foods Applications	Length of Case (Linear Foot)	\$15 / linear ft
RFASHM	Anti-Sweat Heater Controls Refrigerated Foods Applications	Length of Case (Linear Foot)	\$15 / linear ft

### AUTO CLOSER FOR MAIN & REACH-IN REFRIGERATOR & FREEZER DOORS

**Measure Description:** An auto closer is a device that automatically closes a refrigerator or freezer door. This may be applied to the main door of a walk-in unit or the door of a reach-in display case. It prevents excess heat from entering the cooler, thereby reducing the load on the compressor and the electricity used. Auto closers typically close a door completely, even if left open as little as one inch.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Auto closer for main refrigerator doors must firmly close door when door is within 1” of full closure. Auto closer for reach-in refrigerator doors must be applied to a door with a minimum perimeter of 15’ and must firmly close door when door is within 1” of full closure.

**Items to submit with rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” and “Measure Size” as “NA”.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-2.

**Table R-2. Door Auto Closer Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFWAC	Auto Closer Main Walk-in Unit Doors	Each	\$100 / each
RFRAC	Auto Closer Reach-In Display Case Doors	Each	\$75 / each

### LED DISPLAY CASE LIGHTING

**Measure Description:** Most refrigerated cases are illuminated to provide better view of the product. LED lighting can be installed to increase lighting efficacy and reduce heat load on the refrigeration compressors.

**Applicability:** Only retrofit installations

**Measure Eligibility:** Lighting must replace a T12 or T8 lamp in a display case and include appropriate high efficiency ballast (or LED power supply).<sup>1</sup>

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application note the “Efficiency” as “NA” and the “Measure Size” as the total number of lamps installed.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-3.

**Table R-3. High Efficiency Case Lighting Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
T12RFLED	T12 retrofit to LED Lighting for Display Case	Lamp	\$10 / lamp
T8RFLED	T8 retrofit to LED Lighting for Display Case	Lamp	\$8 / lamp

**DOOR GASKETS FOR GLASS & SOLID DOORS**

**Measure Description:** Gaskets provide a seal around the refrigerator door to prevent outside air from entering the cooler when the door is closed. Old or damaged door gaskets can lead to outside air leaks, resulting in higher refrigeration loads and excess frost build up on the evaporator. Replacing the damaged gasket can achieve a stronger seal, and help reduce refrigeration load.

**Applicability:** Only retrofit installations

**Measure Eligibility:** Replacement gaskets must meet or exceed the refrigerator manufacturer’s specifications including dimensions, materials, attachment method, style, compression, and magnetism.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Gasket manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as “NA” and the “Measure Size” as the total door perimeter in linear feet.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-4.

**Table R-4. Door Gasket Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFDGGL	Door Gaskets for Glass Doors Frozen Foods Application	Door Perimeter (Linear Foot)	\$3 / linear ft.
RFDGGM	Door Gaskets for Glass Doors Refrigerated Foods Application	Door Perimeter (Linear Foot)	\$3 / linear ft.
RFDGSL	Door Gaskets for Solid Doors Frozen Foods Application	Door Perimeter (Linear Foot)	\$3 / linear ft.
RFDGSM	Door Gaskets for Solid Doors Refrigerated Foods Application	Door Perimeter (Linear Foot)	\$3 / linear ft.

<sup>1</sup> Refrigerated case lighting has recently been added to the DLC Qualified Product List; but at this time, DLC qualification is not an eligibility requirement for case lighting projects. However, customers and trade allies are strongly encouraged to use DLC-qualified products for case lighting projects.

**ELECTRONICALLY COMMUTATED MOTORS**

**Measure Description:** An electronically commutated motor (ECM) is a fractional horsepower direct current (DC) motor used most often in commercial refrigeration applications such as refrigeration and display cases. ECMs use less electricity than standard motors.

**Applicability:** New construction and retrofit installations

**Measure Eligibility:** All ECMs installed in refrigeration cases up to 1 HP in size may qualify for an incentive. This rebate is not available when rebates are paid for high-efficiency display cases.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s equipment specification sheet

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and the “Measure Size” as the nameplate motor size.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-5.

**Table R-5. Electronically Commutated Motor (ECM) Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
ECMREF	Refrigeration Application	Motor	\$50 / motor

**EVAPORATOR FAN CONTROLLER FOR WALK-IN COOLERS**

**Measure Description:** Most walk-in coolers are cooled by forced air convection over an evaporator. The evaporator fan generally operates continuously, regardless of the cooling needs. In addition to consuming unneeded power, the fan motors produce heat that increases the refrigeration load of the system. Evaporator fan controllers sense the status of the cooling system and adjust the usage of the fan motor accordingly. Controllers can operate by cycling the fans off or by slowing the fan speed as appropriate. This saves energy by reducing the power drawn by the motor, as well as decreasing the load on the refrigeration system by eliminating the excess heat from the fan motor.

**Applicability:** New construction and retrofit installations

**Measure Eligibility:** Must control a minimum fan load of 1/20 HP and reduce fan power by at least 75% when operating at reduced speed.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as “NA” and the “Measure Size” as the size (in HP) of the controlled evaporator fan(s).

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-6.

**Table R-6 Evaporator Fan Controller for Walk-in Cooler and Display Case Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFWEFC	Evaporator Fan Controller for Walk-in Coolers	Each	\$50 / each
RFDFEC	Evaporator Fan Controller for Display Case	Each	\$25 / each

**LOW TEMPERATURE COMPRESSORS**

**Measure Description:** Low temperature compressors require considerable energy and run-time to keep refrigerated cases cold. Low temperature compressors with an energy efficiency rating (EER) of over 5.2 are more efficient. This saves money by reducing electrical consumption.

**Applicability:** New construction and retrofit installations

**Measure Eligibility:** Low temperature compressor, must serve a case/area that operates under 0°F, and have an EER of over 5.2. This compressor must not be a back-up.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and the “Measure Size” as the tonnage of the installed compressor.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-7.

**Table R-7. Low Temperature Compressor Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
RFMLT	Low Temperature Compressor	ton	\$50 / ton

**HIGH-EFFICIENCY DOORS FOR LOW TEMPERATURE DISPLAY CASES**

**Measure Description:** High-efficiency doors generally include double or triple paned glass that helps prevent conductive heat loss from the display case. These doors also minimize the need for anti-sweat heat. This measure is often referenced as “Special Doors with Low/No Anti-Sweat Heat.”

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Only available for low temperature applications ( $\leq 0^\circ\text{F}$ ). Must be a low/no anti-sweat door with total amperage less than 0.39 amps per door at 120 volts. This rebate is not available when rebates are paid for anti-sweat heater controls.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” and “Measure Size” as “NA”.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-8.

**Table R-8. High-Efficiency Doors for Low Temperature Display Cases Rebate Amount**

Equipment Code	Measure Description	Unit	Rebate
RFHEDL	High-efficiency Doors for Display Case Frozen Foods Applications	Each	\$75 / each

### HIGH-EFFICIENCY OPEN AND REACH-IN DISPLAY CASES

**Measure Description:** Stores use refrigerated open and reach-in (units with glass doors) display cases to allow customers to see and access the contents. High-efficiency display cases include features such as energy efficient lighting and electronically commutated fan motors. These technologies reduce electrical consumption.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Display case equipment must have T-8 lamps with electronic ballasts (or better) and electronically commutated motors (ECMs).

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and the “Measure Size” as the length of the unit in feet.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-9.

**Table R-9. High Efficiency Open and Reach-In Display Case Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFODCM	High-efficiency Open Display Case Refrigerated Foods Applications	Length of Case (Linear Foot)	\$20 / linear ft
RFRDCL	High-efficiency Reach-In Display Case Refrigerated Foods Applications	Length of Case (Linear Foot)	\$70 / linear ft
RFRDCL	High-efficiency Reach-In Display Case Frozen Foods Applications	Length of Case (Linear Foot)	\$150 / linear ft

### NIGHT COVERS FOR OPEN VERTICAL AND HORIZONTAL DISPLAY CASES

**Measure Description:** Refrigerated display cases in food stores are often left open to allow customers to easily see and access the contents of the case. This causes the refrigerator compressors to work over-time to compensate for the warming caused by the infiltration of store air. Night covers are blinds that can be used to cover the open display case during the night time when it is not necessary for the contents of the case to be visible. This can save electricity every night.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Night covers must be permanently installed on display cases and put in use for at least 6 hours nightly.

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as “NA” and the “Measure Size” as the linear footage of the installed cover.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-10.

**Table R-10. Night Cover Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFVONC	Night Covers for Vertical Open Display Cases	Length of Case (Linear Foot)	\$7 / linear ft.
RFHONC	Night Covers for Horizontal Open Display Cases	Length of Case (Linear Foot)	\$7 / linear ft.

### INSTALLING DOORS ON OPEN DISPLAY CASES

**Measure Description:** Refrigerated display cases in food stores are often left open to allow customers to easily see and access the contents of the case. This causes the refrigerator compressors to work over-time to compensate for the warming caused by the infiltration of store air. Some open display cases may be retrofitted with doors and frames to reduce the infiltration into the case.

**Applicability:** Retrofit installations only

**Equipment Eligibility:** Doors must be permanently installed on refrigerated display cases

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** On the Rebate Application, note the “Efficiency” as “NA” and the “Measure Size” as the horizontal linear footage of the installed doors.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-10.

**Table R-10. Night Cover Rebate Amounts**

Equipment Code	Measure Description	Unit	Rebate
RFDOORM	Door Retrofit for Open Display Cases Refrigerated Foods Applications	Length of Case (Linear Foot)	\$25 / linear ft.
RFDOORL	Door Retrofit for Open Display Cases Frozen Foods Applications	Length of Case (Linear Foot)	\$25 / linear ft.

### STRIP CURTAINS FOR WALK-IN AND REFRIGERATED WAREHOUSE SPACES

**Measure Description:** Strip curtains are flexible (typically clear plastic) barriers that cover the door to a walk-in refrigerator or refrigerated warehouse. They are used to allow spaces to be easily accessed with equipment or products, while reducing the infiltration of warm outside air. Strip curtains generally replace direct openings to unrefrigerated spaces. These curtains can substantially reduce the unwanted loss of cooled air thus saving electricity required for refrigeration.

**Applicability:** Only retrofit installations

**Equipment Eligibility:** Install strip curtains on doorways of walk-in refrigerators or freezers or doorways to refrigerated warehouses. Strip curtains replacing worn or other existing curtains are not eligible.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and the “Measure Size” as the width of the affected doorway.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-11.

**Table R-11. Strip Curtains Rebates**

Equipment Code	Measure Description	Unit	Rebate
RFSCN	Strip Curtains Walk-in & Refrigerated Warehouse Spaces	Width of door (Linear Foot)	\$5 / linear ft.

**ENERGY STAR VENDING MACHINES, ICE MACHINES, AND REFRIGERATORS**

**Measure Description:** Many facilities use commercial refrigerators, refrigerated beverage vending machines and/or ice machines in their operation. ENERGY STAR qualified refrigerators and vending and ice machines are generally more efficient. These machines are typically in constant use. Higher efficiency means less electricity used.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:** Refrigerators must be ENERGY STAR qualified glass, mixed or solid door commercial refrigerators<sup>2</sup>. Vending machine must be a refrigerated beverage dispensing vending machine and be ENERGY STAR qualified. The ice machine must be ENERGY STAR qualified and have a capacity of at least 100 lbs of ice/day.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable
2. Manufacturer’s specification sheets demonstrating compliance with equipment eligibility requirements

**Instructions for Rebate Application:** On the Rebate Application, mark the “Efficiency” as “NA” and for Ice Machines, mark “Measure Size” as the capacity of pounds of ice per day.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table R-12.

<sup>2</sup> Rebates for the purchase of ENERGY STAR residential-size refrigerators as well as for recycling pre-1993 refrigerators are available through Santee Cooper’s Refrigerator Rebate Program. Please see the following website for more details: [https://www.santeecooper.com/portal/page/portal/santeecooper/mybusiness/refrigerator\\_business](https://www.santeecooper.com/portal/page/portal/santeecooper/mybusiness/refrigerator_business)

**Table R-12. ENERGY STAR Appliance Rebate Amounts**

<b>Equipment Code</b>	<b>Measure Description</b>	<b>Unit</b>	<b>Rebate</b>
APIM100	ENERGY STAR Ice Machine 100-500 lbs/day	Machine	\$250 / Machine
APIM500	ENERGY STAR Ice Machine 500-1000 lbs/day	Machine	\$400 / Machine
APIM1000	ENERGY STAR Ice Machine over 1,000 lbs/day	Machine	\$500 / Machine
APRBVM	ENERGY STAR Refrigerated Beverage Vending Machine	Machine	\$90 / Machine
APCR	ENERGY STAR glass-, mixed-, or solid-door commercial refrigerator	Refrigerator	\$70 / Refrigerator

### SAMPLE REBATE WORKSHEET

The following is an example for a replacement of a cooler with One (1) 20 foot, high efficiency, low-temperature, reach-in cooler.

Parameter	Measure 1	Measure 2	Measure 3
Equipment code	RFRDCL		
Project type (Retrofit or New Construction)	Retrofit		
Installation date	2/1/2017		
Equipment location (e.g. roof, mechanical room)	Retail Area		
Equipment end use (e.g. supply fan, CHW pump)	Reach-in Cooler		
Age of replaced equipment (for retrofits)	30		
Dealer name	Acme Cooler Install		
Manufacturer	Cooler Widgets		
Model number	DEF456-1		
Annual operating hours	8,760		
Efficiency(ies) (as described in Equipment Catalog)	NA		
Measure size (as described in Equipment Catalog)	20		
Measure rebate (\$) (e.g. HVAC: \$50/ton*10 tons=\$500)	\$3,000		
Number of measures	1		
Total rebate (\$) (# of Measures*Measure Rebate)	\$3,000		

## PUMPS/ MOTORS MEASURES

In order to be eligible for rebates below through this Rebate Program, all work and equipment must meet the following requirements:

- Equipment and materials must be purchased and all work initiated between December 1, 2015 and November 30, 2017, with work and applications completed by November 30 of the year the project is started.
- Qualifying equipment and materials must be new.
- Qualifying measures must be completed in a workmanlike manner that meets or exceeds all applicable code and regulatory requirements.

Rebates for additional efficiency measures may be available. For more information about Santee Cooper rebates, eligibility requirements, rebate levels, other Santee Cooper energy efficiency programs, or general inquiries, visit the program’s Web site at [ReduceTheUse.com](http://ReduceTheUse.com), email us at [commercial.energy@santeecooper.com](mailto:commercial.energy@santeecooper.com), or contact Santee Cooper at (843) 347-3399 x3910.

### VARIABLE SPEED POOL FILTER PUMP

**Measure Description:** Commercial water features, such as pools, fountains, waterfalls, etc., are required to have one or more filter pumps that clean the water. The filtration “turn-over” rate can be much lower during hours that the pool is not open. Variable speed pool filter pumps & motors can be slowed down to accommodate lower turn-over rates during times when the pool or water feature is closed or has less activity.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:**

- Used or refurbished Variable Speed Pumps are not eligible for this rebate.
- All work and equipment must meet the requirements of Pumps/ Motors Measures above to be eligible for rebates through this Rebate Program.

**Items to submit with Rebate Application:**

1. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** In the Rebate application, mark the “Efficiency” as “NA” and the “Measure Size” as the nameplate motor size of the removed filter pump motor.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table PM-1

**Table PM-1. Variable Speed Pool Filter Pump Rebates**

Equipment Type	Size Category	Equip. Code	Rebate (\$/HP)
Pool Filter Pump	1-5 HP	PVFD	\$300

**VARIABLE FREQUENCY DRIVE (SET AT CONSTANT REDUCED SPEED)**

**Measure Description:** A variable frequency drive (VFD) may be used to reduce the speed of a pump on commercial water features, such as lazy rivers, pools, fountains, waterfalls, etc. The Prescriptive Program allows deemed savings for VFDs that are essentially set at a constant, reduced speed from normal operation.

VFDs that continuously vary speed according to dynamics such as building occupancy, time-of-day, temperature, and other operational factors, will continue to be addressed under the Custom Program. An example of a VFD that will vary according to business dynamics include domestic water pumping that will fluctuate according to building occupancy.

**Applicability:** New construction and retrofit installations

**Equipment Eligibility:**

- Used or refurbished VFDs are not eligible for this rebate.
- Retrofit replacements only. No New Construction projects.
- All work and equipment must meet the requirements of Pumps/ Motors Measures above to be eligible for rebates through this Rebate Program.
- VFD must be capable of being locked at reduced speed setting either physically or by use of a password.

**Items to submit with Rebate Application:**

2. Dated sales receipt or paid invoice including materials and labor as applicable

**Instructions for Rebate Application:** In the Rebate application, mark the “Efficiency” as “NA” and the “Measure Size” as the nameplate motor size of the of the pump motor on which the VFD is installed.

**Measure Rebate:** Rebate amount for qualifying measures are listed below in Table PM-2

**Table PM-2. Variable Frequency Drive (set at constant reduced speed) Rebates**

Equipment Type	Equip. Code	Rebate (\$/HP)
Variable Frequency Drive (constant setting)	CVFD	\$250



**SAMPLE REBATE WORKSHEET**

The following is an example for roof insulation added to an existing building.

Parameter	Measure 1	Measure 2	Measure 3
Equipment code	CVFD		
Project type (Retrofit or New Construction)	Retrofit		
Installation date	5/1/2016		
Equipment location (e.g. roof, mechanical room)	Mechanical room		
Equipment end use (e.g. supply fan, CHW pump)	Lazy river pump		
Age of replaced equipment (for retrofits)	Enter if applicable		
Dealer name	Pumps R Us		
Manufacturer	Acme		
Model number	BR-549		
Annual operating hours	Annual VFD run hours		
Efficiency(ies) (as described in Equipment Catalog)	NA		
Measure size (as described in Equipment Catalog)	Nameplate motor size of the installed VFD pump		
Measure rebate (\$) (e.g. HVAC: \$50/ton*10 tons=\$500)	15 HP x \$250 = \$3750		
Number of measures	2		
Total rebate (\$) (# of Measures*Measure Rebate)	\$7500		

**Is my facility eligible for this Program?**

The facility is eligible for the Program if it is served by Santee Cooper under one of the following commercial rate schedules: GA, GB, GV, GT, GL, TP, and TA. New construction and retrofit projects are eligible for the majority of rebates, as listed in Section 2 of this manual. Specific eligibility questions should be directed to Santee Cooper by phone (843-347-3399 x3910) or email ([commercial.energy@Santeecooper.com](mailto:commercial.energy@Santeecooper.com)).

**When will I receive my rebate from Santee Cooper?**

After an eligible measure is installed and the completed Customer Rebate Application (for all measures except lighting measures) or final documentation (for lighting measures) is received, you will receive your rebate subject to final inspection.

**What if I am installing a measure in a leased property and my tenant is responsible for the electric bill?**

Eligibility is determined based on the information on the electric account for the building where the equipment is installed. Rebates will be paid to the name and address on the electric account.

**How long will this program be available?**

The 2016-2017 Rebate Program is available between December 1, 2015 and November 30, 2017. Equipment and materials must be purchased, all work initiated and completed, and final Rebate Application submitted prior to November 30 of the year the project is started.

Santee Cooper anticipates the Rebate Program to be an integral part of its future resource plan moving forward, but reserves the right to cancel or modify the Program at any time.

**Where can I find out more about this Program?**

Customers can learn more about the Rebate Program and other Santee Cooper programs in the following ways:

- Web: [www.ReducetheUse.com](http://www.ReducetheUse.com)
- Telephone: (843) 347-3399 x3910
- Toll-Free Fax: (855) 505-5061
- Email: [commercial.energy@SanteeCooper.com](mailto:commercial.energy@SanteeCooper.com)

The following customer forms are included:

- Terms and Conditions
- Customer Rebate Application
- HVAC Tune-Up Form
- Duct Sealing and Insulation Form

## 2016-2017 Terms and Conditions

Santee Cooper is implementing the Commercial Rebate Program to provide customers with rebates to facilitate the installation of qualifying energy efficient measures. The following terms and conditions apply to the program:

**Eligibility.** To participate in the applicable Santee Cooper Commercial Rebate Program (the "Rebate Program"), Participant must comply with the eligibility requirements and program participation requirements as set forth in the Program Manual for the Rebate Program provided with these Terms and Conditions.

**Other Conditions.** No agreement or understanding to modify the terms and conditions of this Rebate Program shall be binding upon Santee Cooper unless in writing and signed by Santee Cooper's authorized agent. Notwithstanding the foregoing, the terms of the Rebate program are subject to change or modification by Santee Cooper with or without notice at any time. Santee Cooper reserves the right to discontinue the Rebate Program without notice.

Rebate Program payments will be in the form of a check and made out to the Participant or its designee. Rebates will be processed approximately six weeks after Santee Cooper or its agent's timely receipt of a completed rebate form along with proof of sale. Incomplete or inaccurate applications are subject to delay or denial of Rebate. Santee Cooper reserves the right to make final determination in its sole discretion of Rebate Program eligibility and amount of rebate. Should Participant fail to provide a valid taxpayer identification number, any payment provided under the Rebate Program will be subject to withholding pursuant to federal regulations.

All materials issued to the Applicant by Santee Cooper as information pertaining to this Rebate Program, including but not limited to, the Program Manual and appendices thereto (collectively the "Program Manual"), shall be deemed included in these terms and conditions as if set forth verbatim herein. To the extent there is any conflict between the language of the Program Manual and terms set forth herein, the terms set forth herein shall prevail.

**Indemnification.** Participant will indemnify and hold harmless Santee Cooper and its affiliates, subsidiaries, joint ventures, officers, directors, employees, agents (including its program administrator Nexant, Inc. ("Nexant")), successors, and assigns (collectively the "Indemnified Parties") from and against all liability claims and demands, including any damages, losses, liabilities or expenses (including without limitation court costs and reasonable attorneys' fees) which arise as a result of the Participant's action or inaction which relates in any way to this Rebate Program, including the submission of fraudulent rebates. Notwithstanding the foregoing, this indemnification is in addition to any indemnity and/or insurance obligations between the Participant and the Indemnified Parties.

**IN NO EVENT SHALL THE INDEMNIFIED PARTIES BE LIABLE TO PARTICIPANT FOR ANY CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR DIRECT DAMAGES, INCLUDING LOST PROFITS, ARISING FROM OR OTHERWISE IN CONNECTION WITH THIS REBATE PROGRAM.**

**SANTEE COOPER AND NEXANT MAKE NO REPRESENTATIONS, WARRANTIES, OR GUARANTEES OF ANY KIND WITH RESPECT TO THE QUALITY, DESIGN, MANUFACTURE, CONSTRUCTION, SAFETY, PERFORMANCE, INSTALLATION, OR EFFECTIVENESS OF EQUIPMENT CONNECTED TO THE REBATE PROGRAM. SANTEE COOPER AND NEXANT DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE OR APPLICATION AND NON-INFRINGEMENT WITH RESPECT TO THE EQUIPMENT. RESPONSIBILITY FOR DELIVERY AND WORKMANSHIP RELATED TO ANY MATERIALS OR EQUIPMENT THAT PARTICIPANT PROCURES UNDER THE REBATE PROGRAM EXCLUSIVELY RESTS WITH PARTICIPANT OR OTHER THIRD PARTY. NEITHER SANTEE COOPER NOR NEXANT ASSUMES ANY RESPONSIBILITY FOR THE REPRESENTATIONS, WARRANTIES OR GUARANTEES WITH RESPECT TO THE QUALITY, DESIGN, MANUFACTURE, CONSTRUCTION, SAFETY, PERFORMANCE, INSTALLATION, OR EFFECTIVENESS OF THE EQUIPMENT OR OVERSIGHT OF CONTRACTOR SERVICES UTILIZED BY PARTICIPANT. NEITHER SANTEE COOPER NOR NEXANT GUARANTEES THAT INSTALLATION AND OPERATION OF THE EQUIPMENT WILL RESULT IN REDUCED ENERGY USAGE OR COST SAVINGS.**

**Representations and Warranties.** Participant represents, warrants, and covenants that it has and/or shall undertake all of its duties, and those matters incident thereto, under this rebate program in a good and workmanlike manner, and in a manner that will fully comply with all applicable local, state, and federal laws and regulations; and, that it is legally authorized by license or otherwise, insofar as such authorization is required, to perform all duties required by it under this rebate program, and that its participation in this rebate program will not result in the breach of any contract to which it is a party.

Neither Santee Cooper nor Nexant is responsible for any tax liability which may be imposed on the Participant as a result of any rebate payment. Participant may be responsible for the tax reporting to the IRS of any rebate payments directed to third parties. Neither Santee Cooper nor Nexant is providing tax advice, and any communications to such parties is not intended to be used, and cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code.

Participant agrees that Santee Cooper shall have the right, upon written notice to Participant, to examine all records and data of Participant pertaining to its participation in the Rebate Program.

The laws of the State of South Carolina shall govern the interpretation, validity, and effect of these Terms and Conditions, the parties' performance thereunder, and all matters incident thereto.

By signing below, applicant acknowledges and agrees that:

- I have read and understand all Terms and Conditions, participation procedures, customer eligibility, and measure qualifications in the Program Manual for the Santee Cooper's 2016-2017 Commercial Rebate Program being applied for. I have also read and understand all Terms and Conditions in this form.
- I certify as the building owner or the owner's authorized representative that all the information contained within submitted applications is true and factual.
- The undersigned applicant shall defend, protect, indemnify and hold harmless Santee Cooper and its board members, officers, employees, servants, and agents (the "Indemnified Parties") against all claims, losses, expenses, damages, demands, judgments, causes of action, suits, and liability of every kind and character whatsoever ("claims") arising out of or incident to, or related in any way to, directly or indirectly, participation in the Commercial Rebate Program; provided however, that applicant shall not be required to indemnify and hold harmless any Indemnified Party against claims adjudicated to have been caused by the Indemnified Party's gross negligence or willful misconduct.
- The federal government may require that a 1099 be issued to you, the customer, for the rebate amount paid to you or your contractor. Please consult with your tax professional for tax implications.

Business Classification (Must Check One Only, Required for all businesses, including non-profits):

Corporation     Partnership     Sole Proprietor/Individual     LLC     Non-Profit     Other: \_\_\_\_\_

Business Name \_\_\_\_\_

Federal Tax ID # (9 digits) \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name (please print) \_\_\_\_\_

Title \_\_\_\_\_



# 2016-2017 Santee Cooper Commercial Prescriptive Rebate Program Customer Rebate Application



## Rebate Application Instructions

This Rebate Application is required for participation in the Commercial Prescriptive Rebate Program (Rebate Program) for projects installing qualifying non-lighting measures. The Lighting Workbooks required for lighting projects are available online at [www.RTU4Business.com](http://www.RTU4Business.com). Complete participation information and eligibility specifications are included in the 2016-2017 Commercial Prescriptive Rebate Program Manual, also available at [www.RTU4Business.com](http://www.RTU4Business.com).

This application packet contains the following parts:

- General Information
- Rebate Payment Information
- Rebate Worksheet

To participate in this Rebate Program, please follow the following steps:

1. **Read** the 2016-2017 Program Manual for a complete description of program eligibility requirements and the participation process.
2. **Read** the Terms and Conditions document and sign.
  - Signing the Terms and Conditions document accepts the terms and conditions of this Rebate Program.
3. **Purchase and Install** qualifying equipment and/or initiate and complete work between December 1, 2015 and November 30, 2017.
4. **Complete** the following forms included with this Rebate Application:
  - **General Information** – Include all required customer and account information.
  - **Rebate Payment Information** – Rebates will be mailed to customer's electric account billing address. If customer would prefer for the check to be designated to someone other than the customer, complete the Payment Release Information on page three of this application.
  - **Rebate Worksheet** – Include all required product information including: product type, install date, dealer name, manufacturer, model number(s), efficiency, size, quantity, and rebate amount. Dealers or contractors may assist with the completion of the rebate worksheet.
5. **Complete** any required supplemental forms for the energy efficiency measures being installed, if applicable.
5. **Submit** a current W9 form for the customer applying for the rebate.
6. **Retain** a copy of all completed application forms and all required documentation, such as invoices and contracts. Submitted applications will become the property of Santee Cooper.
7. **Submit** the completed forms and required documentation, including dated sales receipt or invoice, by November 30, 2017 to:

Santee Cooper Commercial Prescriptive Rebate Program  
1229 38<sup>th</sup> Avenue North, #112  
Myrtle Beach, SC 29577  
Toll-Free Fax: (855) 505-5061  
Email: [commercial.energy@SanteeCooper.com](mailto:commercial.energy@SanteeCooper.com)

**For More Information.** For more information about this Rebate Program, measure eligibility, rebates, or other Santee Cooper programs please contact us:

- Online at [www.ReducetheUse.com](http://www.ReducetheUse.com)
- By phone at (843) 347-3399 x3910
- By email at [commercial.energy@SanteeCooper.com](mailto:commercial.energy@SanteeCooper.com)

### General Information

**Important:** Energy efficiency measures must be purchased, installed, and/or completed at a qualifying customer facility **prior** to submitting the Rebate Application unless otherwise noted in the Equipment Catalog. Please allow 6 weeks for application and rebate processing following complete documentation submittal and post-installation inspection procedures. Rebates will not be paid for ineligible or incomplete applications.

Business name (as it appears on Santee Cooper Bill) Federal Tax ID (EIN) or Social Security #

Santee Cooper Account number(s) where measure(s) to be installed (located on Santee Cooper Bill)

Santee Cooper Meter number(s) where measure(s) to be installed (located on Santee Cooper Bill)

Address where measure(s) to be installed City State Zip

Contact name Contact phone number Contact fax number Email

Electric account billing address (if different from the installation address) City State Zip

Is Contractor a Santee Cooper Trade Ally?  Yes  No

Contractor name

### Building Information

Primary building use:

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Automotive Facility         | <input type="checkbox"/> Hotel                   | <input type="checkbox"/> Police/Fire Station |
| <input type="checkbox"/> Convention Center           | <input type="checkbox"/> Library                 | <input type="checkbox"/> Post Office         |
| <input type="checkbox"/> Court House                 | <input type="checkbox"/> Manufacturing Facility  | <input type="checkbox"/> Religious Building  |
| <input type="checkbox"/> Dining: Bar Lounge/Leisure  | <input type="checkbox"/> Motel                   | <input type="checkbox"/> Retail              |
| <input type="checkbox"/> Dining: Cafeteria/Fast Food | <input type="checkbox"/> Motion Picture Theater  | <input type="checkbox"/> School/University   |
| <input type="checkbox"/> Dining: Family              | <input type="checkbox"/> Multi-Family Housing    | <input type="checkbox"/> Sports Arena        |
| <input type="checkbox"/> Dormitory                   | <input type="checkbox"/> Museum                  | <input type="checkbox"/> Town Hall           |
| <input type="checkbox"/> Exercise Center             | <input type="checkbox"/> Office                  | <input type="checkbox"/> Transportation      |
| <input type="checkbox"/> Gymnasium                   | <input type="checkbox"/> Parking Garage          | <input type="checkbox"/> Warehouse           |
| <input type="checkbox"/> Health Care - Clinic        | <input type="checkbox"/> Penitentiary            | <input type="checkbox"/> Workshop            |
| <input type="checkbox"/> Hospital                    | <input type="checkbox"/> Performing Arts Theater | <input type="checkbox"/> Other _____         |

Building Size: \_\_\_\_\_

Temperature Set-points:

Number of Floors: \_\_\_\_\_

Heating Cooling

Year Built: \_\_\_\_\_

Occupied \_\_\_\_\_ °F \_\_\_\_\_ °F

Percent Conditioned: \_\_\_\_\_

Un-occupied \_\_\_\_\_ °F \_\_\_\_\_ °F

Operating Hours: \_\_\_\_\_

### Rebate Payment Information

Mail rebate check to:       Billing Address                       Other (complete release below)

Rebate check reference (15 character maximum)

### 3<sup>rd</sup> Party Release (Payment Release Information)

**Important: Complete this section only if rebate payment is to be directed to someone other than the customer indicated above. Please note that the federal government may require that a 1099 be issued to you, the customer, for the rebate amount paid to your contractor. Please consult with your tax professional for tax implications.**

I AM AUTHORIZING THIS REBATE PAYMENT TO THE THIRD PARTY NAMED BELOW AND I UNDERSTAND THAT I WILL NOT BE RECEIVING THE REBATE PAYMENT CHECK FROM SANTEE COOPER. I ALSO UNDERSTAND THAT MY RELEASE OF PAYMENT TO THE THIRD PARTY DOES NOT EXEMPT ME FROM THE REBATE REQUIREMENTS OUTLINED IN THE APPLICATION.

Authorized by (please print)	Signature of Authorized	Date
------------------------------	-------------------------	------

Check should be made payable to:

Payee: business name	Contact phone number
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Payee Federal Tax ID (EIN) or Social Security #

Payee mailing address	City	State	Zip
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### Rebate Worksheet

**Important:** This form is to be completed and submitted to Santee Cooper with the Rebate Application. Please refer to the Equipment Catalog(s) for measure eligibility requirements, rebate amounts and codes. Dealers or contractors may assist in the completion of this form. Attach additional sheets as necessary.

Parameter	Measure 1	Measure 2	Measure 3
Equipment code			
Project type (Retrofit or New Construction)			
Installation date			
Facility Location (Distance from oceanfront)			
Location of installed measure (e.g. roof, mechanical room)			
EE Measure end use (e.g. supply fan, CHW pump)			
Age of replaced equipment (for retrofits)			
Replaced (existing) HVAC equipment Manufacturer			
Replaced (existing) HVAC equipment Model number			
New equipment Dealer name			
New equipment Manufacturer			
New Equipment Model number			
Annual operating hours <sup>1</sup>			
Efficiency(ies) (as described in Equipment Catalog)			
EE Measure size (as described in Equipment Catalog)			
EE Measure rebate (\$) (e.g. HVAC: \$50/ton*10 tons=\$500)			
Number of measures			
Total rebate (\$) (# of Measures*Measure Rebate)			

### Application Checklist

Before submitting this application please verify the following:

- Did you read and understand the eligibility requirements in the Equipment Catalog?
- Have you included a dated sales invoice?
- Did you attach any additional documentation listed in the Equipment Catalog?
- Did you include your account number?
- Did you sign the Terms and Conditions Form?

**SEND COMPLETED REBATE APPLICATIONS TO:**  
 Santee Cooper Commercial Prescriptive Rebate Program  
 1229 38<sup>th</sup> Avenue North, #112  
 Myrtle Beach, SC 29577

Toll-Free Fax : (855) 505-5061      Email : [commercial.energy@SanteeCooper.com](mailto:commercial.energy@SanteeCooper.com)

<sup>1</sup> IF VFD Application, please specify the equipment schedule(s)

# 2016-2017 Santee Cooper Commercial Prescriptive Rebate Program HVAC Tune-up Form



Sheet Number \_\_\_\_ of \_\_\_\_

Total Number of Units Tuned-Up \_\_\_\_\_

## INSTRUCTIONS

- 1) HVAC tune-ups must be serviced and tested in accordance with the requirements specified within the 2016-2017 Commercial Prescriptive Rebate Program Manual guidelines.
- 2) The Program pays HVAC Tune-up rebates directly to the Trade Ally or non-Trade Ally contractor. All contractors (Trade Ally or non-Trade Ally) must submit a copy of this HVAC Tune-up form (customer signature is not required).
- 3) This form must be signed by the service technician who performed the system measurements and verified all data.
- 4) Actions taken during HVAC tune-ups are intended to reduce energy consumption through improved efficiency.
- 5) As this rebate is paid directly to the contractor to help offset the additional costs of performing a proper HVAC tune-up, an IRS 1099 will be issued to contractor to report income (if over \$600). Check with your tax professional for your tax implications.

## CONTRACTOR'S INFORMATION

HVAC Contractor's Name \_\_\_\_\_  
 Technician's Name (printed) \_\_\_\_\_  
 Certification# (if applicable) \_\_\_\_\_  
 Date of tune-up \_\_\_\_\_  
 Federal Tax ID (EIN) \_\_\_\_\_

## CUSTOMER'S INFORMATION

Customer's Name \_\_\_\_\_  
 Meter Base No. \_\_\_\_\_  
 Customer's Phone # (\_\_\_\_) \_\_\_\_\_  
 Project Site Address \_\_\_\_\_

## STEP 1-CONDENSING UNIT (SPLIT SYSTEMS) OR PACKAGE UNIT INFORMATION

Unit No.	Make (Brand)	Model Number	Unit Location or Designation & Area Served (Identifying it from other units at this location)	Is refrig. pipe insul. missing/deteriorated	Was pipe insul. replaced	Tons
1						
2						
3						
4						

## STEP 2-MATCHING AIR HANDLER (FAN/COIL) INFORMATION

Unit No.	Make (Brand)	Model Number	Air Handler Unit Location (where is it located in the building)	Strip Heat kW (if avail.)	Condensate Drain has P-trap & flows freely
1					
2					
3					
4					

## STEP 3-CONTROLS

Unit No.	Measured Control Volts	Clg Set Point	Htg. Set Point	Does t'stat turn unit on/off at set points (Y/N)	If no, was t'stat repaired/replaced (Y/N)	Is t'stat mounted on outside wall or near heat source	If yes, was t'stat insulated from outside wall, moved or was heat source moved
1							
2							
3							
4							



**STEP-4 ELECTRICAL POWER**

Unit No.	Volts with Unit On	Compressor Rated Amps	Compressor Actual Amps	Was Comp. replaced	OD Fan Rated Amps	OD Fan Actual Amps	Was OD fan replaced	ID Fan Rated Amps	ID Fan Actual Amps	Was ID Fan replaced
1										
2										
3										
4										

**STEP 5-FANS AND AIR FLOW**

Unit No.	Filter(s) Cleaned or Replaced	ID Coil Cleaned	OD Coil Cleaned	Measured Air Handler CFM	Method of Measuring CFM*	Outside Temp.	Measured Cooling TD Across Indoor Coil**	CFM Per Cooling Tons	Was CFM Adjusted to 350-425 CFM/ton
1									
2									
3									
4									

\* (1)Static Pressure & Blower Table; (2) Anemometer (with grille manufacturer's free area); (3)pressure matching (using duct blaster)

\*\* Check TD after 5-10 minutes cooling run time. If cooling TD across evaporator coil is less than 17° or greater than 21° (and airflow is correct), refrigerant charge must be checked using Method 1 or 2 shown in STEP 6. When the outdoor temperature is below 55°, the charge must be checked on all heat pumps using method 3. Otherwise proceed to step 7.

**STEP 6-REFRIGERANT CHARGE ( REQUIRED IF EVAP. COIL COOLING TD IS <17° OR >21°)**

Unit No.	Refrig Type	Outside Temp.	METHOD 1 <sup>1</sup>		METHOD 2 <sup>2</sup>		METHOD 3 <sup>5</sup> (Req. for HP's)		Was Refrig. Added or removed
			Measured Super-heat (before/after)	Manuf. listed Super-heat	Measured sub-cooling (before/after)	Manuf. listed sub-cooling	Comp. Discharge Temperature <sup>3</sup> (before/after)	Discharge Temp minus Outside temp <sup>4</sup> (before/after)	
1									
2									
3									
4									

<sup>1</sup> Recommended for units with fixed orifice metering device (record super-heat before and after any refrigerant charge change)

<sup>2</sup> Recommended for units with Thermal Expansion Valve (record sub-cooling before and after any refrigerant charge change)

<sup>3</sup> Required for all heat pumps when outside temperature < =55° (record temperatures before and after any refrigerant change)

<sup>4</sup> Discharge temp minus the ambient temp should equal 110°-125° Fahrenheit for properly charged system

<sup>5</sup> Manufacturer's heat pump heating charge table may be used (submit a copy of table with tune-up form)

**STEP 7-TECHNICIAN'S SIGNATURE**

I hereby certify that all HVAC equipment has been serviced in accordance with the manufacturer's guidelines, and that all the above information is accurate. Contractor agrees to hold Santee Cooper harmless for any damages incurred as a result of contractor's negligence. I understand that Santee Cooper requires a completed copy of this document prior to final processing of rebate requests.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



# 2016-2017 Santee Cooper Commercial Prescriptive Rebate Program Duct Sealing and Insulation Form



## INSTRUCTIONS

- 1) Duct Sealing and Insulation must be installed according to the requirements specified within the 2016-2017 Commercial Prescriptive Rebate Program Manual guidelines.
- 2) HVAC contractors are required to complete the appropriate sections of this form as applicable per equipment type.
- 3) Existing systems with initial testing results of less than 20% leakage are not eligible for rebates
- 4) Only systems requiring repair are eligible for rebates
- 5) Santee Cooper must receive a completed copy of this form, a completed 2016-2017 Santee Cooper Commercial Prescriptive Rebate Program application, and all required supplemental documentation prior to release of a rebate check.
- 6) All data must be properly recorded and submitted by the start-up technician. NOTE: Incomplete information cannot be processed under the Commercial Prescriptive Program.
- 7) **The service technician and a HVAC quality assurance designee, i.e. the service manager, must sign the back of this form.**

## CONTRACTOR'S INFORMATION

HVAC Contractor's Name \_\_\_\_\_

Technician's Name (printed) \_\_\_\_\_

Certification# (if applicable) \_\_\_\_\_

Date of Testing/Repair: \_\_\_\_\_

## CUSTOMER'S INFORMATION

Customer's Name \_\_\_\_\_

Premise# or Service Address \_\_\_\_\_

Customer's Phone # (\_\_\_\_) \_\_\_\_\_

Meter Base Number: \_\_\_\_\_

## STEP 1 - EXISTING HEAT PUMP SYSTEM INFORMATION

Unit No.	Make (Brand)	Condenser (or package unit) Model Number	Air Handler Model Number (if split system)	Cooling (tons)	Describe location of ductwork
1					
2					

## STEP 2 - AIR FLOW TESTING AND DUCT LEAKAGE TESTING

CFM Pre-Testing Methods\* (Complete one of the following processes):

<input type="checkbox"/>	Pressure Matching (e.g. Duct Blaster)	Air Handler measured ESP _____ IWC Calibrated Fan CFM _____	Duct Blaster Static Pressure _____ IWC CFM/ton _____
<input type="checkbox"/>	Flow Grid	Supply Static Pressure _____ IWC CFM _____	Flow Grid Pressure _____ IWC CFM/Ton _____
<input type="checkbox"/>	Anemometer and Manufacturer's Return Grille Performance Table	Air Velocity _____ FPM Return Grille (Net Free Sq. Ft.) _____ CFM = fpm x NFSF = _____	Make of Return Grille _____ Model of Return Grille _____ CFM/Ton _____
<input type="checkbox"/>	Manometer with Manufacturer Blower Table	Fan Speed _____ Measured External Static Pressure (ESP) _____ IWC Manufacturer's Blower Table CFM _____	CFM/Ton _____

\*All data should be recorded after a minimum operating time of 15 minutes while the fan speed is set according to nominal design capacity. Airflow testing required to be within 350 to 425 CFM/ton.

## LEAKAGE PRE-TESTING METHOD (COMPLETE ONE OF THE METHODS LISTED BELOW)

<input type="checkbox"/>	Duct pressurization	Airflow through the fan _____ *Pressurize ducts to match system operating pressures	Leakage measurement % _____
<input type="checkbox"/>	Blower door subtraction	Whole house leakage _____ Leakage difference _____	Leakage after grills are sealed _____

**STEP 3 - DUCT IMPROVEMENTS**

Unit No.	Whole duct system inspection findings	# of leaks sealed <sup>2</sup>	# of gaps sealed <sup>3</sup>	Ducts insulated in unconditioned area <sup>4</sup>	New filter installed
1					
2					

1. Once upgrades are made and CFM is within 350 to 425 CFM/ton, proceed to STEP 4
2. Sealed leaks and connections with mastic, metal tape, or an aerosol-based sealant
3. Seal gaps behind registers and grills where the duct meets the floor, wall, or ceiling
4. Insulate ducts in unconditioned areas with insulation that carries an R-value of 6 or higher

**STEP 4 - POST AIRFLOW TESTING AND DUCT LEAKAGE TESTING**

CFM Post-testing Methods (complete the same method used in pre-testing activities after repairs are made):

<input type="checkbox"/>	Pressure Matching (e.g. Duct Blaster)	Supply Static Pressure _____ IWC	Calibrated Fan CFM _____	CFM/Ton _____
<input type="checkbox"/>	Flow Grid	Flow Grid Pressure _____ IWC		CFM/Ton _____
<input type="checkbox"/>	Anemometer and Manufacturer's Return Grille Performance Table	Air Velocity _____ FPM	Make of Return Grille _____	
		Return Grille (Net Free Sq. Ft.) _____	Model of Return Grille _____	
		CFM = fpm x NFSF = _____		CFM/Ton _____
<input type="checkbox"/>	Manometer with Manufacturer Blower Table	Fan Speed _____	Measured External Static Pressure (ESP) _____ IWC	
		Manufacturer's Blower Table CFM _____		CFM/Ton _____

\*All data should be recorded after a minimum operating time of 15 minutes while the fan speed is set according to nominal design capacity. Airflow testing required to be within 350 to 425 CFM/ton. **IF CFM IS NOT WITHIN REQUIRED RANGE, REPEAT STEP 3.**

**LEAKAGE POST-TESTING METHOD\* (complete the same method used in pre-testing activities after repairs are made):**

<input type="checkbox"/>	Duct pressurization	Airflow through the fan _____	Leakage measurement % _____
		*Pressurize ducts to match system operating pressures	
<input type="checkbox"/>	Blower door subtraction	Whole house leakage _____	Leakage after grills are sealed _____
		Leakage difference _____	

\*Duct Leakage Test: No more than 20% total CFM duct leakage and 50% improvement on existing leakage.

**TECHNICIAN'S SIGNATURE**

I hereby certify that all duct sealing and insulation has been installed in accordance with the 2016-2017 Commercial Prescriptive Rebate Manual guidelines, and that all the above information is accurate. I understand that Santee Cooper requires a completed copy of this document and all essential supplemental information prior to final processing of rebate requests.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

A HVAC tune-up is designed to improve the operation of existing HVAC systems that may be currently operating below their design efficiency.

**HVAC tune-ups must be performed by a contractor to be eligible for rebate. The Program pays the rebate directly to the contractor.**

General tune-up, inspection, cleaning of the system, and proper refrigerant charge testing conducted by the HVAC contractor are eligible for rebate. The participating contractor must conduct and document the following information:

Requirements

- Check thermostat settings to ensure the heating and cooling system turns on and off at the programmed temperatures
- Tighten all electrical connections and measure voltage and current on motors
- Lubricate moving parts as required
- Check and clean the condensate drain if needed
- Check system controls to ensure proper and safe operation
- Inspect, clean, or change the air filter
- Clean indoor and outdoor coils, note coil conditions after cleaning
- Check refrigerant charge and adjust it if necessary to make sure it meets requirements
- Clean and adjust blower components to provide proper system airflow

Please see the “Santee Cooper Commercial Prescriptive Rebate Program, 2016-2017 HVAC Tune-Up Form” for more specific details.

Duct Sealing is designed to improve the operation of existing heat pump systems that may be currently operating below their design efficiency. The Program offers customer rebates to be applied to duct leakage testing and sealing conducted by a participating contractor. Participating contractors must follow the acceptable procedures, requirements, documentation, and duct repair recommendations listed below.

#### Acceptable Procedures

- Duct pressurization test through a calibrated fan or orifice (duct registers are sealed, a fan is attached to one opening, the ducts are pressurized to match the system operating pressures, and the amount of air flowing through the fan is quantified).
- Blower door subtraction method (a calibrated fan measures whole-building leakage, then the duct grilles are sealed and the house re-measured; the difference is the amount of leakage attributable to the duct system)

#### Requirements

- Measure airflow across the indoor coil as per stated above in acceptable procedures and verify the CFM meets the requirements of ACCA Standard 5, and
- No more than 20% total CFM duct leakage (the total duct leakage requirement pertains to the percentage of CFM leakage as compared to the overall air handling fan flow operating at design conditions; the airflow leakage shall be based on the higher design airflow i.e. the higher of the winter heating airflow or of the summer cooling airflow), or 50% improvement on existing leakage or until 20% leakage requirement is met. Refer to specific equipment method for system pressurization requirements for testing.
- Existing systems with initial testing results of less than 20% leakage are not eligible for rebates.
- Only systems requiring repair are eligible for rebates.

#### Duct Repair Recommendations if CFM is not within the acceptable range

- Inspect the entire duct system
- Conduct minor repairs or replacement of damaged ducts
- Seal leaks and connections with mastic, metal tape, or an aerosol-based sealant
- Seal gaps behind registers and grills where the duct meets the floor, wall, or ceiling
- Insulate ducts in unconditioned areas with insulation that carries an R-6 value or higher
- Include a new filter as part of any duct system improvement
- Re-test the airflow after repairs are completed to insure requirements are met

Please see the “Duct Sealing and Insulation Form, Commercial Prescriptive Rebate Program” for more specific details.



ACCA: Air Conditioning Contractors of America

AHRI: Air-Conditioning, Heating, and Refrigeration Institute

ANSI: American National Standards Institute

ARI: Air-Conditioning and Refrigeration Institute, which has become AHRI. ARI standards have been renamed as AHRI standards and compliance with AHRI standards is inclusive of ARI standards.<sup>1</sup>

ASHRAE: American Society of Heating, Refrigerating, and Air-Conditioning Engineers

Btu/h (British thermal units per hour): energy that is produced or rejected from a system.

CEE: Consortium for Energy Efficiency

CFM (cubic feet per minute): measurement of airflow.

COP (coefficient of performance): the ratio of heating or cooling to energy consumption, in consistent units.

CRI (color rendering index): a measure of a lamp's ability to render colors accurately.

ECM (electronically commutated motor): ultra high-efficiency programmable brushless DC motor.

EER (energy-efficiency ratio): the ratio of net cooling capacity in Btu/hour to total rate of electric input in watts.

Facility: For the purposes of Santee Cooper's energy-efficiency programs, a customer facility is defined as one or several contiguous or adjacent buildings owned or operated by a single customer.

Glazing: the glass portion of a window

HID (high intensity discharge): a general group of lamps consisting of mercury, metal halide, high pressure sodium, and low pressure sodium lamps.

hp (horsepower): unit of power equal to 746 watts.

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<sup>1</sup> See <http://www.ahrinet.org/Pages/ShowMeMore.aspx?src=single&lpk=908> and <http://www.ashrae.org/publications/detail/16574> for press releases.

HSPF (heating seasonal performance factor): a single number figure of merit expressing the seasonal heating efficiency of heat pumps, in Btu/watt-hour. The term is generally applied to heat pump systems less than 65,000 Btu/hour.

HVAC: heating, ventilation, and air-conditioning

IECC: International Energy Conservation Code

IEER (integrated energy-efficiency ratio): a single number figure of merit expressing cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities for the equipment. As of 1/1/10, IEER superseded IPLV for unitary HVAC equipment greater than or equal to 65,000 Btu/hour in ASHRAE standard 90.1-2007.

IPLV (integrated part load value): a single-number figure of merit based on part-load EER, COP, or kW/ton expressing part-load efficiency for air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities for the equipment.

IECC: International Energy Conservation Code

IPLV (integrated part-load value): a single number figure of merit based expressing part-load efficiency for chillers on the basis of weighted operation at various load capacities.

lbs: pounds

LED: light-emitting diode

LEED (Leadership in Energy and Environmental Design): an internationally recognized green building certification system developed by the U.S. Green Building Council (USGBC).

PTAC: packaged terminal air-conditioner

PTHP: packaged terminal heat pump

R-value: a measure of thermal resistance used in the building and construction industry.

SEER (seasonal energy-efficiency ratio): the total cooling output of an air conditioner or heat pump during its normal annual usage period for cooling, in Btu, divided by the total electric energy input during the same period, in watt hours.

SF: square foot

SHGC (Solar Heat Gain Coefficient): a measurement of the amount of solar radiation through a piece of glass or door material.

T12, T8, T5: types of fluorescent lamps.

UL: Underwriters Laboratories Inc.

VAV (variable air volume): a technique for controlling the capacity of a heating, ventilating, and/or air-conditioning (HVAC) system.

VFD (variable frequency drive): a system for controlling the rotational speed of an alternating current electric motor by controlling the frequency of the electrical power supplied to the motor.

VRF (variable refrigerant flow): a system equipped with a variable speed DC compressor that is powered through an inverter drive. This technology allows the compressor to vary speed so that it is only delivering the optimum amount of refrigerant to the system according to the cooling (or heating) load.

The commercial energy code used in South Carolina, effective January 1, 2014, is the International Energy Conservation Code (IECC) 2009. HVAC standards for IECC 2009 are based on ASHRAE Standard 90.1-2007.



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