

Consumers Energy Multifamily Energy Efficiency Program

Policies and Procedures Manual 2019 Program Year

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P.1 PROGRAM OVERVIEW

The Consumers Energy Multifamily Energy Efficiency Program (CEMEEP) provide incentives for multifamily customers who upgrade their facilities with energy efficient equipment. This incentive program is available to all customers who receive electric or natural gas delivery service from Consumers Energy. This document is intended to convey the rules, policies and procedures that govern the program, its administration, and customer participation. It is an accompanying document to the 2019 CEMEEP Incentive Catalog and Incentive Application forms.

Consumers Energy offers a comprehensive set of incentives under the CEMEEP to facilitate the implementation of cost-effective energy efficiency improvements for multifamily customers.

This document provides an overview of the various 2019 calendar year program offerings provided by CEMEEP. The following sections provide detailed information on the actual measures and specific program details related to each of the various Incentive offerings for 2019. Application forms for all programs are available on the Consumers Energy Energy Efficiency Programs website: www.ConsumersMultifamilySavings.com.

Incentives

Prescriptive Incentives are available for energy efficiency equipment upgrades and improvements including:

- Lighting
- Water Heating
- Space Heating
- Building Envelope

Incentives are paid based on the quantity, size and efficiency of the equipment. Incentives are provided for qualified equipment commonly installed in a retrofit or equipment replacement situation.

Custom Incentives are available to customers for less common or more complex energy saving measures installed in qualified retrofit and equipment replacement projects. Custom measure incentives are paid based on the first-year energy (kWh or MCF) savings. Projects where the measures are covered by the prescriptive incentive portion of the program are not eligible for a custom incentive. Applicants have the option to apply for a custom incentive for projects that involve an integrated solution with both prescriptive and custom measures.

Other incentives and services are available through the following programs:

- Income-Qualified
- New Construction

P.2 PROGRAM EFFECTIVE DATES

The CEMEEP offers incentives for the current program year until approved funds are exhausted or until Nov. 30 of each program year, whichever comes first. The effective dates of the CEMEEP and application submittal requirements are as follows:

- All 2019 CEMEEP projects must be completed and Final Applications (described herein) received no later than Nov. 30, 2019, to be eligible for the 2019 program Incentives.
- Subsequent program year budgets and plans will be made available towards the end of the existing program year. At the current time, Consumers Energy intends to provide the CEMEEP through the 2019 program year, per Public Act No. 295.

P.3 CUSTOMER ELIGIBILITY

The following rules pertain to customer eligibility for the CEMEEP:

- This program is available to multifamily customers of Consumers Energy. A multifamily customer is defined as a facility with three or more units per building. Qualified incentives must be installed at facilities served by Consumers Energy, and projects must result in an improvement in energy efficiency. Equipment must meet the specifications as explained in the 2019 Incentive Catalog and also as set forth in the 2019 Incentive application.
- For each site, there must be at least one meter that is on an eligible rate schedule. A list of eligible rate schedules can be found at www.ConsumersEnergy.com.
- Common areas of multifamily or mixed-use buildings are eligible under CEMEEP if on an eligible rate schedule.
- Customers cannot apply for nor receive incentives for the same product, equipment or service from more than one utility or one utility program. This limitation does not apply to project/s performed by customers with natural gas and electric service from different utilities when the project/s will result in both natural gas and electric savings.

P.4 PROJECT REQUIREMENTS

The CEMEEP includes the following project requirements:

- Projects must involve a facility improvement that results in a permanent reduction in electrical and/or natural gas energy use (kWh and/or MCF)
- All installed equipment must meet or exceed the specifications detailed in the 2019 Incentive Specifications
- Projects that are NOT eligible for an incentive include the following:
 - Fuel switching (e.g., electric to natural gas or natural gas to electric)¹
 - Installation of used equipment
 - Changes in operational and/or maintenance practices or simple control modifications that do not involve capital costs
 - On-site electricity generation
 - Projects that involve peak-shifting with no kWh savings
 - Projects involving renewable energy: i.e. geothermal, solar and/or wind
- Any measures installed at a facility must be sustainable and provide 100 percent of the energy benefits as stated in the application for a period of five years or for the life of the product, whichever is less. Replacement of incentivized products prior to five years or the life of the products is allowable as long as the originally incentivized products are replaced/removed as part of another project featuring kWh or MCF savings, and originally- claimed savings are still occurring at the facility. If the customer ceases to be a delivery service customer of Consumers Energy or removes the equipment or systems at any time during the five-year period or the life of the product, the customer may be required to return a prorated amount of incentive funds to Consumers Energy.
- Consumers Energy reserves the right to inspect proposed projects pre- and post- equipment installation. Pre-applications submitted with insufficient time allowed for CEMEEP to perform a pre-inspection before beginning construction will result in a failed inspection and possibly result in a cancelled application.

¹ May be eligible under the self-direct program, if overall Btuh are reduced at that facility

- The CEMEEP team reserves the right to inspect all projects to verify compliance with the program rules and verify the accuracy of project documentation. This may include pre- and/ or post-inspections, data collection, and interviews. The customer must allow access to records and installation sites for a period of five years after receipt of incentive payment.

P.5 INCENTIVE CAP LIMITS

Incentives are subject to limits to encourage equitable distribution of the funds among as many utility customers as possible. Incentive caps are annual, and are calculated based upon which program year the incentive is paid to the customer.

P 5.1 Customer Limits

The amount of incentives a facility or customer can receive is limited. A facility is defined as contiguous property for which a single customer is responsible for paying the Consumers Energy electricity and/or natural gas bill. A customer is defined as the organization under which the company (or companies) are owned or operated, regardless of who is responsible for paying the bill. Program year incentive limits are per facility for custom incentives as shown in Table 5-1 below.

Table 5-1: Program Year Incentive Limits

Incentive Caps	Eligible Incentive
Electric Incentives	100 percent of the calculated incentive up to \$50,000 per facility
Natural Gas Incentives	100 percent of the calculated incentive up to \$50,000 per facility
Custom Project Cost	Eligible Incentive
≤\$2,000	Up to 100 percent of project cost
\$2,000 - \$4,000	Up to \$2,000
>\$4,000	Up to 50 percent of project cost

The incentive limits are based on actual payments per facility and apply even if payments for some or all projects are paid to one or more contractors.

P 5.2 Income Qualified

A multifaceted program design has been established to accompany the efforts of the core programs within the multifamily sector. This program will provide increased incentive levels for many of the prescriptive offerings based on economic status. Properties with 66 percent or greater of tenants living at or under 200 percent of the federal poverty level and/or properties participating in affordable housing programs under HUD, USDA, LIHTC, or other entities meet the qualifications for the program. The Income Qualified program is exempt from program caps.

P 5.3 Prescriptive Measure Incentive Caps

The amount of a prescriptive incentive cannot exceed 100 percent of the cost of the project. Project costs may include the labor necessary to install the measure, and costs related with the disposal of the removed equipment. Internal labor costs may not be included in the total project cost. The Customer is responsible for providing sufficient documentation to validate the measure costs. Manufacturer, vendor, distributor, trade ally

or contractor provided incentives (credits, deductions, refunds, etc.) must be subtracted from the total installation costs.

Additionally, selected prescriptive incentives have limits and/or caps. Specific incentive caps are applied per measure, facility or project. These caps are specified in the 2019 CEMEEP Incentive Catalog and the 2019 Incentive Application.

P 5.4 Custom Project Incentive Caps

For custom projects, if the project incentive is greater than \$4,000, the project incentive cannot exceed 50 percent of the total project cost. Custom applications with a project cost less than or equal to \$4,000 are eligible for incentives up to 100 percent of the project cost or \$2,000, whichever is less. The project cap applies to the total project cost. Internal customer labor costs cannot be included in the total project cost. Consumers Energy reserves the right to apply this cap to individual custom incentives when incentive costs are greater than typical costs seen in this program.

P 5.5 New Construction

The new construction program encourages energy efficient building design and construction by supplying financial incentives to promote energy efficiency. Multifamily New Construction incentives will be offered for both in-unit and common area prescriptive measures.

For buildings that are 4 stories and above, Multifamily prescriptive incentives are available for In-Unit measures only. Buildings 4 stories and above may be eligible to receive prescriptive common area incentives through the Consumers Energy Business Energy Efficiency Program.

For buildings that are 3 stories and below, Multifamily prescriptive incentives are available for In-Unit measures and common area measures.

P.6 HAZARDOUS MATERIAL

All materials removed, including lamps and PCB ballasts, must be taken out of service permanently and disposed of in accordance with local, state, and federal codes and ordinances. The Applicant is responsible for being aware of any applicable codes and ordinances. Information about hazardous waste disposal may be found at: (www.michigan.gov/deq).

P.7 EQUIPMENT SPECIFICATIONS

Detailed equipment specifications for Prescriptive Measures are found in the 2019 CEMEEP Program Incentive Catalog. Please refer to the catalog for details.

P.8. HOW TO APPLY

The process of applying for an incentive under the CEMEEP designed to be simple and to involve as few steps as possible. The program staff is available during normal business hours to facilitate the application process.

P 8.1 Pre-notification Application

Funding is limited, and Pre-notification Applications are not a guarantee of program acceptance.

Consumers Energy will review final applications for eligibility and completeness. Pre-notification is **strongly encouraged** for all participants in order to pre-approve incentive levels and to reserve funding. Pre-notification Applications are **required** to be eligible for incentives for certain measures. Please reference the 2019 CEMEEP Incentive Application for details on which measures **require** pre-notification.

Pre-notification commits funds for a specific project based on the following criteria:

- Measures are completely installed within 90 days of project pre-notification approval from Consumers Energy.
- Customer has committed to commence work on the proposed measures within 30 days of project approval². It is the responsibility of the applicant to contact the
- CEMEEP Team if a project is delayed, substantially changed or cancelled.
- Funds that have been pre-approved for specific applications are not transferable to other projects, facilities/campuses, and/or customers.

² The CEMEEP Team reserves the right to contact the customer after the 30-day period has expired to ensure that the project is moving forward. The commitment may be cancelled if progress toward installation is not demonstrated.

- A complete faxed or e-mailed copy of the Pre-notification Application form initiates the review process. Funding reservations are only committed to a given project when the project details have all been approved.
- The Pre-notification Application for prescriptive incentives must include sufficient information (equipment specifications, quantities, etc.) to estimate the incentive amount.
- The Pre-notification Application for custom incentives must include an estimate of the annual energy savings, as well as sufficient descriptive information, including equipment performance data, operating schedules, load profiles, assumptions and calculations and other information to support the energy savings estimates.

P 8.2 Detailed Program Steps

- **Step 1. Eligibility Check.** Verify that your project is eligible and meets the project requirements as set forth for customer eligibility (Section P.3), project requirements (Section P.4) and incentive caps and limits (Section P.5)
- **Step 2. Obtain, Complete and Submit a Pre-notification Incentive Application.** Obtain a hard copy or access the 2019 CEMEEP Incentive Application form online at www.ConsumersMultifamilySavings.com. Complete all the required information as stated.
 - Pre-notification is strongly recommended for all projects. Contractors may complete the form on behalf of their customers, but all of the customer information and a customer contact name must be provided.
 - Applications received with missing documents or information are categorized as incomplete and will not be considered received or processed until all required information is submitted.
 - Upon pre-notification approval, incentive funds will be reserved for up to 90 days. A pre- inspection may be required.
 - For projects requiring pre-notification, work should not begin until the customer receives a reservation letter from the CEMEEP team.
- **Step 3. Project Installation.** Install the equipment or systems within 90 days of reservation.
- **Step 4. Assemble Required Documentation.** Assemble the required documentation of project completion and costs, and (for custom projects) documentation of energy savings within 60 days of project

completion. Obtain copies of the purchase orders or work order, statement of work, equipment specifications, and paid invoices showing the costs for labor and materials for the covered work; product model numbers, labor and materials cost should be shown separately. The documents should clearly indicate the equipment quantities and performance that is indicated in the Incentive Application. If the project equipment is included on several invoices it will be helpful if the Applicant prepares a summary sheet that itemizes the equipment and shows how the quantities on the application match those in the application.

- **Step 5. Obtain, Complete, and Submit a Final Application.** Obtain a hard copy, or complete and print out the Final Application form from the CEMEEP website: www.ConsumersMultifamilySavings.com. Please note that the Final Application form is the same as the Pre-notification Application form. If a Pre-notification Application was submitted, be sure to correct any incomplete or incorrect information and check the “Final Application” box under the Incentive Application type section. Also sign and include the Final Application Agreement page within the application. For Final Applications, sign and submit only after all equipment has been installed. A customer signature is required for payment. Applications received with missing documents or information are categorized as incomplete and will not be considered received or processed until all required information is submitted.

Final applications must be received within 90 days after reservation date, or 60 days after completion of the project – whichever is less. Final applications submitted after the deadline may not be eligible for incentives.

- **Step 6. Final Application Review.** The CEMEEP Staff will review the Final Application and the final project documentation. A post-inspection may be required for verification purposes. Please note that the actual incentive amount paid will be based on review of the Final Application and supporting project documentation of equipment installed, and will be subject to the program specifications, and terms and conditions in the application agreement. It is essential that the applicant comply with all terms and conditions and ensure that the equipment installed meets the required specifications. Equipment specifications and program terms and conditions can be found in the program application at www.ConsumersMultifamilySavings.com. Please note that a reservation does not guarantee an incentive. Multiple projects and reservations for projects at the same premise or customer may be subject to an annual cap. Incentive payment will be sent within six to eight weeks from the time that all the documentation is received, and the field inspection is complete.
- **Step 7. Measurement and Verification.** Some projects will be chosen for independent measurement and verification (M&V) purposes. If so, customer will be contacted by a utility representative. M&V may include obtaining logged data on individual project components.

P 8.3 Discrepancies

If it is determined that there are discrepancies between the incentive application and Consumers Energy’s on-site analysis, the CEMEEP staff will contact the customer to review these differences. This provides an opportunity for the customer and/or contractor to dispute the inspection results. After a period of 10 calendar days, if the customer and/or contractor has not contacted CEMEEP staff to discuss the inspection results, the revised incentive levels will be deemed final. If the customer and/or contractor disputes the inspection results, Consumers Energy’s representatives and the customer and/or contractor shall thereupon attempt in good faith to resolve such dispute promptly.

If the project scope has changed or Final Application funding request differs from the Pre- Notification Application reserved funding amount, the project will be reviewed in light of fund availability. Additional funding

above the reserved amount may be paid providing funds are available.

On occasion, an application may be received by CEMEEP that is of a sizable enough scale that verifying certain aspects of the project is extraordinarily difficult. In these instances, program staff will take all reasonable measures available to validate the exact scope of the project as best as possible. However, if the scope prohibits such exactness from being determined, an estimation will be determined as a substitute. For these types of projects, CEMEEP staff will cross-check certain areas of the facility with any documentation the customer and/or contractor may be able to provide that shows the scale of the project (floorplans, etc.), while also performing a more general walkthrough for the remaining areas to ensure the scope on the application is feasible. An example of where this may occur is a lighting project where hundreds of fixtures throughout a facility will be replaced with hundreds of new fixtures, and the inspector has determined it not feasible to count every fixture and verify the wattage/type of every fixture in the facility.

P 8.4 Reservation Extension Process

If the customer receives approval to move forward with a project but will need more than 90 days to complete the project, the customer may provide proof the project is progressing toward completion and request an extension of the reservation. Consumers Energy may grant a 30-day extension after reviewing project details. The granting or denying of the extension request is within the sole discretion of Consumers Energy.

If a customer receives one extension and it appears the project will not be completed until after the first extension has expired, the customer may provide additional proof the project is progressing toward completion and request a second 30-day extension. Consumers Energy may grant a second 30-day extension after reviewing project details. At the end of the second extension, customer must provide the Final Application, along with all required final documentation. Consumers Energy will not grant subsequent reservation extensions.

P 8.5 Forms

The CEMEEP Incentive Application form acts as both a Pre-notification Application form as well as a Final Application form.

If submitting a Pre-Notification Application, mail, fax or e-mail the completed application and associated worksheets to the CEMEEP Team for pre-notification and the reservation of funds. Contact information can be found at the end of this document (Section P.17).

To request payment for a completed project, submit the same forms. The Final Application must be fully completed and returned with a customer signature before incentives will be paid. The Final Application must also include all necessary final documentation such as paid, itemized invoices and/or receipts, cut sheets, and commissioning (operation) reports (Section P.10).

Applications received with missing documents or information are categorized as incomplete and will not be considered received or processed until all required information is submitted.

Please note: Consumers Energy reserves the right to conduct both pre- and post-inspections of all projects.

P.9 PAYMENT PROCESS

The CEMEEP incentive will be paid directly to customers OR to a third-party recipient. * Please indicate the

exact name of the designated payee and the appropriate TAX ID number on the Customer Information page of the Incentive Application, or on the Payment Release Authorization section on the Final Application Agreement page if it is a third-party recipient. If a contractor is to be paid directly, be sure to provide the contractor information on the Payment Release Authorization section on the Final Application Agreement Page, as well as the Contractor's TAX ID number.

*Except in the case where contractor is in probationary status. In such case, the incentive check will be paid directly to the customer.

P.10 DOCUMENTATION

For prescriptive measures, the final project documentation required includes detailed invoices listing specific equipment types and quantities purchased. Copies of invoices should be indicated as "paid", and itemized with the costs for equipment, labor, supplies, and other costs. Location or business name on the invoice should be consistent with the application information. Invoices must be dated within 60 days of the Final Application submittal.

Applicants may be asked to provide more detailed information on the equipment location to aid in the pre-and/or post-inspection process. Documents that indicate the performance factors that are used as a basis for the incentive must also be submitted with the Final Application. This includes, but is not limited to, the following:

- Manufacturer's product literature
- Product brochures
- Cut sheets

If the documented capacity or performance differs from the performance in the Pre-notification Application, the incentive will be adjusted accordingly. Failure to provide the documentation will delay the payment process and may result in no incentive payment.

Rebranding LED Lighting products do not qualify for an incentive unless the rebranded light is listed by Design Lights Consortium (DLC) or ENERGY STAR® under its rebranded name. Both the manufacturer and model number must match on the lamp/fixture, invoice, specification sheet and DLC/ENERGY STAR® listing. DLC allows re-branding of currently listed products through an alternative organization name under the Private Label Application. Some of the criteria to qualify are that products must be currently DLC listed and include a parent product to be eligible. The original equipment manufacturer (OEM) will be required to sign the application as well. For the application and full list of requirements, visit <https://www.designlights.org/solid-state-lighting/submit-a-product/private-label-applications/>

For custom measures, final documentation may include plans or specifications for the equipment or systems that are modified, paid invoices, equipment specification sheets or other information indicating performance over the full range of operation, documentation of operating schedule and loading profiles, commissioning reports or other documentation required by the CEMEEP engineering staff. Power or other operating measurements or monitoring may be required for verification of calculated energy savings prior to approval of incentive payments. See Section P.11 for guidelines on calculating and documenting energy savings of custom measures.

All Final Applications must be fully complete with final documentation and include the signature of the

customer and, if applicable, the designated third-party recipient of the incentive.

Applications must be received by Nov. 30, 2019 to apply for the 2019 program.

P.11 GUIDELINES FOR CALCULATING AND DOCUMENTING ENERGY SAVINGS OF CUSTOM MEASURES

The incentives for CEMEEP's custom projects are based on the calculated annual kilowatt-hour (kWh) or MCF savings. To be accepted as a basis for the incentive, the savings calculations must be developed using acceptable engineering calculation techniques supported by site-specific operating and equipment performance documentation. Applicants must also be aware that the incentive estimates are not final until after the measures have been installed and Consumers Energy has performed various measurement and verification (M&V) activities. The final incentive payment may be different from the reserved amount if the post-retrofit system operation or performance does not reflect the assumptions used to set the reserve amount.

The guidelines provide suggestions for submitting project documentation to ensure that the project qualifies as a CEMEEP custom measure and the savings estimates, and incentive applied for are actually realized. This section provides information to assist the applicant in calculating/measuring energy savings associated with the project.

The analysis methods and documentation details are recommendations and not requirements. These guidelines should help speed program staffs review of the project by helping meet the program requirements and by helping complete energy savings calculations.

Before an application is submitted as a custom project, please check that the measures are not included as part of the prescriptive program and if so, submit them on a prescriptive application. Prior to estimating the savings, identify the project payback period as well as the measure life. Life of the measure for custom applications should exceed the project payback period both of these factors will determine if the measure is eligible for the program as well as identify the applicable incentive. If there is any concern on qualifying for the program, please contact the program team for assistance.

For certain projects, in addition to energy savings calculations, the program may require measurement and verification (M&V) in order to qualify for an incentive. It is encouraged that custom incentive applicants review the International Performance Measurement and Verification Protocol (IPMVP) (www.evo-world.org) and review documents available through a web search on "Measurement and Verification" for some good discussion of the concepts behind project performance measurement. Any operational data that is available to support the energy use claims for the project can help validate savings calculations so please provide this data with the application. The program team can assist in identifying appropriate M&V procedures.

The following sections discuss general guidelines for project submittals. It is recommended that the applicant contact the CEMEEP Team prior to submitting a custom application, to discuss the data and documentation requirements, M&V requirements and savings estimation approach.

P 11.1 General Custom Incentive Guidelines

The CEMEEP offers custom incentives for those eligible improvements not included in the prescriptive measure list. Custom measures include measures that result in a reduction in electric and/or natural gas

energy use because of an improvement in system efficiency, i.e. a net decrease in energy use without a reduction in the level of service. For example, installing a lower wattage LAMP in place of a higher wattage lamp OF THE SAME TYPE will not qualify for an incentive. However, should the lighting system (i.e., lamp, ballast and fixture) demonstrably improve the total lumens per watt delivered, an incentive will be considered. The decision as to whether or not an improvement is eligible for a custom incentive is within the sole discretion of Consumers Energy.

Examples of custom measures include, but are not limited to, the following:

- Air Sealing
- HVAC Pump Resizing
- Lighting
- Weatherization

Incentives for custom measures are based on the electrical and/or natural gas energy savings that result from the energy efficiency measure installation and are calculated from the first year's kWh or MCF savings. The applicant must provide sufficient back-up descriptive information, equipment performance data, operating assumptions, measurements and calculations to support the energy savings estimates.

The payback period has to be between one and eight years. The total calculated incentives cannot exceed half of the measure cost, as described in Section P.5.

Payback period is calculated with the following equation:

$$\text{Measure Cost Simple Payback Period} = \frac{(\text{Installation Cost} - \text{Utility Incentive})}{(\text{Annual kWh Saved} \times \text{Electricity Rate}) + (\text{Annual MCF Saved} \times \text{Natural Gas Rate})}$$

To estimate first year energy (kWh or MCF) savings for retrofit projects, calculate the difference between the pre-retrofit or "base case" system energy (kWh or MCF) use and the post-retrofit or "efficient case" system kWh or MCF. First the applicant needs to define and describe the base case and efficient case system and operating conditions. The kWh and MCF savings calculations can be done in a number of ways that will depend on the specific measure that is installed and the percentage of the total use that the savings represents.

There are general requirements that are common to all custom projects as listed below:

- Concise project description: Describe BOTH the existing (pre-retrofit or "base case") system and the proposed (post-retrofit or "efficient-case") system. Be as precise, yet concise as possible in the descriptions — include specific quantities and equipment descriptions.
- Provide the quantity, make, model number and rated capacity of BOTH the existing and the new equipment that is being installed. Also provide other nameplate information like operating voltage and rated full load amps where appropriate. The scope of work from the proposal to the customer is often helpful to describe the new equipment.
- Provide copies of the manufacturer's specification sheets and/or performance rating sheets and the website address where further technical information about the equipment performance might be found.
- Identify equipment using the terminology or numbering system used by the customer. (e.g. "Replace HVAC pump #3 with a new HVAC pump.
- Provide copies of sketches, drawings, equipment lists, or inventories that help to clarify the scope.
- Describe the locations where the equipment is installed.
- Describe BOTH the facility operating hours and the equipment operating schedule for each day of the

week. Where equipment operation varies with days of the week or seasons, be sure to provide a description of the operation for all days of the week and all seasons.

- Describe equipment load conditions for the hours the equipment typically operates.
- Annotate all assumptions or constants used in engineering calculations.
- Provide the name of the person(s) conducting the savings calculations so that the CEMEEP Staff can discuss any questions.
- Use accepted engineering algorithms and procedures from recognized technical organizations such as ASHRAE, SMACNA, ANSI, etc.
- Use rated performance factors tested under accepted procedures specified by recognized rating agencies such as ARI, AGA, ANSI, ASTM, etc. Provide an explanation when equipment performance rating conditions vary from standard conditions.
- Provide expected measure life.

P 11.2 Acceptable Calculations Methods

Engineering Calculations

For measures with impacts over several small systems, sub-metering may be impossible. For these measures, an engineering calculation method is probably the simplest method to document savings. For most equipment types and efficiency measures there are well established engineering procedures and there are a number of public domain component or equipment performance models that are available to calculate pre- and post-energy use. One common modeling method is the “bin-method” in which the equipment pre- and post-energy requirements are identified for several fractional load “bins” (i.e. 25 percent, 50 percent, 75 percent and 100 percent load or temperature range bins) and the pre- and post-equipment performance in each load or temperature bin is applied to the loads and hours that the system operates in the bin over the year.

P 11.3 Custom Mechanical Measures

Note that some of the most common Mechanical measures are included in the list of prescriptive measures. These measures, including HVAC chiller or packaged AC unit replacement and variable frequency drives (VFDs or VSDs) for HVAC motors should be applied for under the prescriptive application. Common custom measures that may be applied for under the Custom HVAC Category might include:

- Process Heat Recovery
- VSD Retrofit for Multiple Air Compressor Plant and controls upgrades
- Variable Frequency Drive on Motors greater than 250-hp Tank Insulation

systems to meet the worst-case conditions occurring at a location. Definition adapted from the National Solar Radiation Data Base, link: http://rredc.nrel.gov/solar/old_data/nsrdb/1991-2005/tmy3/ accessed

Most (but not all) HVAC system measures are weather-dependent. As such, the preferred methods of estimating energy savings are building or system models that integrate local weather conditions with system loads and performance or “temperature bin” models. This section includes several acceptable methods for providing the savings analysis for HVAC measures. In all cases, it is important to document the pre- and post-retrofit conditions thoroughly. For most projects, the analysis will need to be calibrated and adjusted to reflect the weather variances, occupancy variations or internal load changes.

The following techniques may be employed for calculating project savings:

- Building models that are publicly available and well-documented, such as eQUEST, Energy Plus, and DOE2 are recommended for measures with building-wide or interactive effects. Proprietary vendor programs such as Trane Trace, Carrier HAP etc. may be accepted with appropriate documentation; without good documentation, these models cannot be utilized and offer little confidence in the results⁴.
- ASHRAE-based simplified calculation methodologies including the “bin methods” are usually useful to estimate the savings of many weather-dependent strategies such as economizer systems (water and air), heat recovery, ventilation control, or even VAV conversions. These methods can be easily calculated in a spreadsheet format so that the underlying assumptions can be easily followed. In many cases for retrofit projects the existing building energy use and energy use patterns can provide the basis for calibration for these methods.
- Simple spreadsheet analysis may be used for certain stand-alone retrofits such as carbon monoxide sensors for parking garages.
- For certain projects, a monitoring/metering approach may be the best means to document savings. The applicant should remember that it is simpler to verify the post-case, but it is the base case condition that requires documentation for program verification. Be sure to consider pre-project measurements when planning a future project. The following are some suggestion parameters for measuring pre- and post-retrofit:
 - Power (kW), energy (kWh), natural gas use (MCF)
 - Air flows, temperatures, water flows
 - Outdoor temperatures and humidity (however, may be available from other sources)
 - Building activity (people, hours, etc.)

⁴ The Saving Solutions review team may attempt to duplicate savings estimates using other tools and must be provided sufficient information to do so.

P 11.4 Custom Building Envelope Measures

Common custom measures that may be applied for under this category include:

- Window treatments like external or internal shading
- Door or window opening treatments that reduce infiltration

Accurately estimating envelope improvement measure energy savings is often difficult because their impacts involve a high degree of system and interactive effects. The best way to estimate the impacts of envelope treatments is to use a whole building model as described in the previous section. The models described provide the opportunity to describe the pre- and post- retrofit insulation and surface characteristics and do an excellent job of including all the system and any interactive effects.

However, setting up a whole building model to estimate the savings for envelope improvements is often not practical. There is a number of simplified degree-day or weather-based “bin analysis” methods that are sufficient to estimate the impacts of these measures. These methods are described in detail in the ASHRAE Handbooks. ASHRAE combined with local weather data files will provide most of the information and calculation procedures necessary to estimate savings resulting from building envelope measures. Some of the more common methodologies have been put into spreadsheet format and are available commercially online. The Department of Energy and some states have supported the development of analytical tools that are useful in isolating the savings for various envelope improvements such as the Cool Roof Rating Council (www.coolroofs.org/) tool. It is useful in estimating the impacts of roof insulation and treatments. The

performance characteristics and properties of various coatings and materials are also provided.

P 11.5 Unacceptable Documentation

This section lists methods that are not acceptable for calculating the energy savings for custom measures.

- Vendor-specific or proprietary analysis software will not be accepted unless the methods used are available for review and the input parameters are specific to the site.
- Simple percent of total kWh or MCF savings or percent of end use energy savings are not acceptable.
- Factors or percentages of savings achieved at other sites are not acceptable as documentation for custom savings unless there is an extensive body of statistically valid results.
- Using rules of thumb for calculating savings is not acceptable.
- Marketing materials from the manufacturer or distributor, their company's case studies, or savings claims based on non-standardized methods are not acceptable. For example, a manufacturer or distributor product savings claim that is not or was not verified by a certified third party will not be accepted.
- For intermittently operating equipment, the hours of operation must be documented in some fashion – either from logs, elapsed time meters, or daily observation of occupancy hours. If documentation is not provided, very conservative estimates must be used.
- Spot measurements as documentation of power or energy use are typically not acceptable for variable load equipment.
- Amperage can often be used as a proxy for true power (kW) measurements EXCEPT for systems where the power factor may vary significantly and often in variable speed drive situations (where the voltage may vary as well as the amperage). Contact the CEMEEP Team to verify monitoring needs where VSDs are installed.

P.12 TRADE ALLY AND CONTRACTOR REQUIREMENTS

The process of applying for an incentive under the Consumers Energy Multifamily Energy Efficiency Program (CEMEEP) is designed to be simple and to involve as few steps as possible. The program staff is available during normal business hours to facilitate the application process.

CEMEEP defines the following entities as follows:

- A customer is defined as a multifamily customer who receives electric or natural gas delivery service from Consumers Energy and who is upgrading their facilities with eligible energy efficient measures.
- A multifamily facility is defined as a facility with three or more units per building.
- A contractor is defined as either the installer, general contractor, A&E Firm, or supplier of qualifying equipment.
- A Trade Ally is a contractor in good standing with CEMEEP whose approved application has allowed them to register with CEMEEP.

P 12.1 Trade Ally Application Criteria

A Trade Ally is highly valuable to CEMEEP. They are the first to receive information about program changes, receive direct one-on-one communications with CEMEEP Outreach, their feedback (both positive and negative) helps shape program direction, and may receive financial bonuses and recognition for performance.

To become a Trade Ally, a contractor needs to:

- Contact the CEMEEP Program to obtain Trade Ally Program Application.

- Schedule a training session with an Energy Advisor to go over program details and application process.
- Submit initial Incentive Application.

To maintain Trade Ally status:

- Submit and complete at least one paid incentive project to the CEMEEP per program year
- Maintain good customer service performance and represent the CEMEEP appropriately
- Ensure that all company representatives are properly trained on the CEMEEP and one representative attends a mandatory Trade Ally training event on an annual basis
- Provide services in accordance with the CEMEEP's Policies and Procedures

Restrictions:

- Applicant must be either an installer, general contractor, A&E Firm, or supplier of qualifying equipment to be eligible as a registered Trade Ally
- Use of the Consumers Energy logo is strictly prohibited without the express written approval of Consumers Energy, including but not limited to marketing materials, websites, and business cards
- Co-branding is NOT allowed and will result in the removal or suspension as a registered Trade Ally
- The use of the term "partner" is not allowed under the CEMEEP
- Any instances of individuals or companies representing themselves as a Consumers Energy employee will result in the removal or suspension as a registered Trade Ally
- Contractor not in good standing or ineligible contractors cannot become Trade Allies

P 12.2 Trade Ally Actions and Process

CEMEEP has found the use of Trade Allies to be a powerful method of leveraging resources to obtain cost-effective energy-efficiency improvements for utility customers. This approach has served all participants well and has historically produced results with a high level of customer satisfaction. At the same time, it is important to keep in mind that a poorly performing Trade Ally may create obstacles for valued customers, as well as the entire program. Therefore, it is important to maintain oversight and mitigate any difficulties as rapidly as possible. In some instances, actions may be required to ensure program quality and success.

Maintaining Trade Ally Status:

To remain a CEMEEP Trade Ally in good standing, a Trade Ally must complete at least one paid project per program year and the Trade Ally must comply with all guidelines and requirements as stated in this Program Policies and Procedures Manual. Failure to do so may lead to removal as a registered Trade Ally, probation, or in severe circumstances, removal from the CEMEEP completely.

Criteria for Losing Trade Ally Status:

A Trade Ally is expected to be an ambassador of the program and subject to lose its Trade Ally status for any of the concerns listed in the Contractor's Criteria for Removal in the following section.

Disciplinary Process for Trade Allies:

- i. Upon identification of an issue or concern, CEMEEP will communicate the concerns to the Trade Ally as soon as is practicable or once all evidence or facts have been obtained. Communication will be by phone and/or in-person, followed by documentation sent to the Trade Ally via standard mail and/or e-mail. For highly severe concerns, the written
- ii. document may be delivered by Program staff.

- iii. CEMEEP will create a written record, a copy of which will be placed in the Trade Ally's or contractor's file and/or the Program Database.
- iv. CEMEEP will discuss potential resolutions with the Trade Ally and will be available for meetings with the Trade Ally to resolve the concern(s).
- v. If a satisfactory resolution cannot be achieved or the concern is repeated on additional applications, the Trade Ally will lose its status as Trade Ally and CEMEEP will categorize them as a "Contractor". A formal letter will be sent to a contractor. Ramifications of removal includes, but are not limited to:
 - 1. Termination of Trade Ally status, including removal from the online Trade Ally directory
 - 2. Restriction from using Trade Ally designation in communications, marketing materials and advertisements
 - 3. Removal from the Trade Ally Performance Reward program, and any other bonuses or financial offerings provided to Trade Allies in good standing
 - 4.
 - 5. Removal or disallowing of any additional offerings provided only to Trade Allies in good standing

Possibility of re-instatement of Trade Allies:

In its sole discretion, CEMEEP may consider reinstating the Contractor to status of Trade Ally on a case-by-case basis, generally after a period of not less than twelve (12) months from receipt of the expulsion letter. However, only very rare circumstances will justify re-instatement for a former Trade Ally who was removed for a highly severe concern.

P 12.3 Contractor Actions and Process

Not all Contractors will become Trade Allies, but Contractors are still an important aspect to the success of CEMEEP to obtain cost-effective energy-efficiency improvements for utility customers. At the same time, it is important to keep in mind that poorly performing Contractors may create obstacles for valued customers, as well as the entire program. Therefore, it is important to maintain oversight and mitigate any difficulties as rapidly as possible. In some instances, actions may be required to ensure program quality and success.

Criteria for removal:

A Contractor will be subject to complete removal from the Program based on the severity of the concern, or an accumulation of frequent, less severe concerns. We classify these concerns as non-compliance with Program Rules. These concerns are listed as follows:

- i. Highly severe concern. Items that may result in financial, legal and/or other risks to the CEMEEP and/or Consumers Energy customers. The following are considered highly severe concerns and may lead to immediate removal from the program:
 - 1. Fraud or misrepresentation on the part of the Contractor, including submitting a Final Application that requests an incentive payment on projects where installation has not started or forging or inserting customer signatures without prior written permission on the Final Application Agreement
 - 2. Refusal to honor warranties
 - 3. Violations of Michigan or local laws; for example, those concerning hazardous waste disposal
- ii. Severe concern. Items where customer satisfaction may be negatively impacted if not addressed. The CEMEEP will give the Contractor a reasonable time limit to resolve the issue. If the issue is not resolved satisfactorily, or is repeated on applications thereafter, the Contractor may be removed from the Program. The following are considered severe concerns:

1. Providing inaccurate information resulting in a significant overstatement of requested incentives (greater than fifty percent)
 2. Three (3) failed final inspections within a rolling 12-month basis. A failed inspection is defined as an inspection where a project file incentive is reduced by more than 15 percent on either a pre-application or a final application
 3. Failure to resolve failed inspection items or customer complaints within fourteen (14) calendar days
 4. Installations that do not meet program specifications and installation standards
 5. Receipt of two or more customer complaints within a program year
 6. Substituting and installing different products that do not comply with program rules after qualifying products were submitted and approved by the program during the pre-review process
 7. Using the incentive rebate as leverage against the Customer (i.e. refusing to submit the final application until the Customer fully pays all construction costs)
- iii. Administrative/cumulative concern. Items where a Contractor fails to adhere to stated Policies and Procedures and/or reasonable standards of professional conduct, which may not be widely visible to the customer. These situations will be monitored, and the Contractor will be put on probation, meaning that further disregard for program policies and procedures or standards of professional conduct may result in Contractor status removal. Examples include:
1. More than once, submitting incomplete or incorrect documentation that leads to file inaccuracies and/or delayed processing time
 2. Requesting incentives on material or products that do not meet program requirements
 3. One (1) failed final inspection within a rolling 12-month basis. A failed inspection is defined as an inspection where a project file incentive is reduced by more than fifteen percent
 4. Submitting a pre-application for a measure requiring pre-notification after the project has already been completed

Contractors who have had current or ongoing program concerns (as set forth in the above items i, ii, and iii) in the past 12 months are not eligible for Trade Ally status.

Disciplinary Process:

- i. Emailed/Phone Warning:
 1. Upon identification of an issue or concern, the CEMEEP will communicate the concerns to the Contractor as soon as is practicable or once all relevant evidence or facts have been obtained. Communication will be by email, phone and/or in-person, followed by documentation sent to the Contractor via standard mail and/or email. For highly severe concerns, the written document may be delivered by Program staff to confirm proof of receipt.
 2. CEMEEP will create a written record, a copy of which will be placed in the Contractor's file and/or the Program Database.
- ii. In-Person/Written Warning:
 1. If the issues or concerns continue, the Contractor will be requested to meet with CEMEEP staff to discuss the issues or concerns in person.
 2. This meeting will be followed up by a Non-Compliance documentation sent to the Contractor via standard mail and/or email.
 3. If the Contractor is unable to schedule and attend a meeting in a timely manner (within 14 calendar days of the initial request), written documentation will be sent to the Contractor via standard mail and/or email and the in-person meeting will not be necessary.

iii. Probationary Status

1. If a satisfactory resolution cannot be achieved or the concern is repeated on additional applications, the Contractor will be put on a probationary status. Ramifications of being placed on a probationary status includes, but are not limited to:
 - a. The Customer will be notified that the contractor they have selected is on a probationary status with CEMEEP
 - b. 100 percent pre and post inspections by CEMEEP on all files
 - c. Disallowing the Contractor to be designated as payee (third party check) where applicable
 - d. Disallowing custom incentives. While the Contractor is on a probationary status, it is only allowed to request prescriptive incentives. On a case-by-case basis, if CEMEEP considers the proposed technology sound and already well proven through independent third parties (ie: Lawrence Berkeley National Laboratory), CEMEEP may consider reviewing the custom pre-application; otherwise, custom pre-applications will be cancelled upon receipt
2. In its sole discretion, CEMEEP may consider removing a Contractor from a probationary status on a case-by-case basis, generally after a period of not less than twelve (12) months from receipt of the probationary letter
3. CEMEEP will create a written record, a copy of which will be placed in the Contractor's file and/or the Program Database

iv. Complete Removal

1. If while on a probationary status, a satisfactory resolution cannot be achieved, or the concern is repeated on additional applications, the Contractor will be removed from the program and banned from participating in any part of CEMEEP. Such contractors will be deemed "ineligible contractors".
2. Ineligible contractor status also extends to any of the contractor's affiliates
3. Ramifications of being an ineligible contractor who is banned from participating in the program includes, but are not limited to:
 - a. Completely removed from the entire CEMEEP portfolio, including applying for or receiving incentives or rebates for energy efficient projects, including those installed on the customer's behalf
 - b. Pre-applications under review by CEMEEP will be cancelled
 - c. Applications in CEMEEP's Waitlist status will be cancelled
 - d. Final Applications whose CEMEEP incentive funding has already been reserved will be maintained for the normal 90 days; no extensions will be granted. Reservations lasting longer than 90 days will be cancelled
 - e. Final Application received prior to the contractor deemed ineligible, will be honored; however, CEMEEP will 100 percent final inspect all projects and will only correspond directly with the customer. Incentive amount will only be paid directly to the customer; no third-party checks
 - f. Applications that are received for projects that involve the banned or ineligible Contractor either as the installer, general contractor, A&E Firm, or supplier of qualifying equipment, will be cancelled
4. In its sole discretion, the CEMEEP may consider reinstating a Contractor on a case-by-case basis, generally after a period of not less than eighteen (18) months from receipt of the expulsion letter. However, only very rare circumstances will justify re-instatement for a former contractor for who was removed for a highly severe concern
5. CEMEEP will create a written record, a copy of which will be placed in the Contractor's file and/or the Program Database

P 12.4 Trade Ally Terms and Conditions

1. If approved as a Consumers Energy Multifamily Energy Efficiency Programs Trade Ally, the Trade Ally shall offer and provide services to Consumers Energy's customers in accordance with the terms and conditions of the Consumers Energy Multifamily Energy Efficiency Programs (CEMEEP) as set forth below and as may be changed by Consumers Energy from time to time, in its sole discretion.
2. Trade Ally must comply with all CEMEEP guidelines and requirements promulgated by Consumers Energy and its designees (collectively, the CEMEEP team) to remain a Consumers Energy Multifamily Energy Efficiency Programs registered Trade Ally in good standing.
3. Trade Ally is not a contractor, subcontractor or agent of Consumers Energy. Consumers Energy shall have no liability for claims of any kind, whether based on contract, tort (including negligence and strict liability) or otherwise, for any loss or damage sustained or incurred by any third party relating to this Trade Ally application or the performance of services or participation by Trade Ally in the Program. Trade Ally hereby releases Consumers Energy from all liability for such claims. Trade Ally shall, to the fullest extent permitted by law, indemnify, defend and hold harmless Consumers Energy and its affiliates, and their respective officers, directors, agents, employees and representatives from and against any and all losses, claims, damages, expenses (including attorneys' fees and costs) and liabilities arising out of or based upon property damage or bodily injury to any person caused by or related to the performance of the services or participation by Trade Ally in the Program.
4. Except as otherwise permitted herein, Trade Ally shall not refer to Consumers Energy or any company affiliated with Consumers Energy in any advertising or other publication in connection with Trade Ally's participation in the Program or work performed by Trade Ally under the Program, without the prior written approval of Consumers Energy. Except as otherwise permitted herein, Trade Ally shall not, either directly or indirectly, publish or disclose any photographs, images, logos, copyrighted or trademark protected information of Consumers Energy or its affiliates; or use such information for the benefit of itself or any other person or entity without the prior written consent of Consumers Energy.
5. Trade Ally acknowledges and agrees that Trade Ally's participation in the Program is in no way to be construed as an endorsement by Consumers Energy of Trade Ally's work.
6. Information completed in the "Company Information", "Services", Market Segments and Service Territory sections of this application will be the information included in the Trade Ally directory. Consumers Energy provides the Trade Ally directory, a list of Consumers Energy Business Energy Efficiency Programs Trade Allies, for informational purposes only. Consumers Energy makes no warranty of any kind whatsoever, including, without limitation, the warranty of merchantability or fitness for purpose. Under no circumstances will Consumers Energy be liable for indirect, special, consequential, punitive or exemplary damages.

P:12 DEFINITIONS

Btu/h: British Thermal Units per hour

CEE®: Consortium of Energy Efficiency©

CFL: Compact Fluorescent Lamp

Customer: The customer is the organization under which the company (or companies) are owned or operated, regardless of who is responsible for paying the bill.

DLC: Design Lights Consortium

Facility: The primary criterion for determining the extent of a site is necessary for the incentive cap. A facility is defined as a customer at a single address having contiguous property.

Final Application: Once the project has been completed, the applicant is to submit a copy of the Application form with any information not completed in the Pre-Notification Application. The Final Application must include a signature and all appropriate backup documentation, including detailed invoices.

LED: Light-emitting Diode

Incentive: The incentive is the amount to be paid to the customer or contractor once the final project documentation has been approved.

Pre-notification: Pre-notification is the process of informing the program team of your project plans for pre-notification based on customer eligibility and project requirements. Pre-notification is required for all custom projects, for prescriptive projects with incentives for HVAC Energy Management Systems, electrically commutated motor replacement, all permanent lamp removal and the fluorescent T8 or T5 new fixture measures.

Program Year: The program year starts on Dec. 1 and ends on Nov. 30.

THD: Total Harmonic Distortion

P.14 SATISFACTION

Consumers Energy strives to ensure a high level of satisfaction with all aspects of the program. However, if any problems or concerns should arise, we encourage you to contact CEMEEP Hotline: 1-877-813-9617

If you have questions that the hotline staff cannot answer, they can provide you with the appropriate contact information or other resources to help answer your questions.

P.15 TAX IMPLICATIONS

Paid incentives that exceed \$600 are reported to the IRS on Form 1099. Incentive payments may have tax implications for businesses and/or contractors who receive them. The recipient is responsible for any and all tax payments that may result from an incentive payment.

Participating businesses and contractors are encouraged to consult their accountant or tax experts to determine implications.

P.16 DISCLAIMER

Consumers Energy does not guarantee the energy savings and does not make any warranties associated with the measures eligible for incentives under this program. Consumers Energy has no obligations regarding and does not endorse or guarantee any claims, promises, work, or equipment made, performed, or furnished by any contractors or equipment vendors that sell or install any energy efficiency measures.

P.17 CONTACT INFORMATION

Program Hotline: 1-877-813-9617



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Website: www.ConsumersMultifamilySavings.com
Mailing Address: Consumers Energy MultiFamily Energy Efficiency Programs
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