

# The Consolidated Edison Multifamily Energy Efficiency Program Manual

June 10, 2022

## Version 2

*The rates and conditions found in this program manual are effective for completed application packages submitted on or after January 1, 2022. These rates and conditions will remain in effect until a new version is published. Submitted applications will be eligible for the rates and conditions in effect on the date of application to the program.*

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## 1 Program Overview

The Con Edison Multifamily Energy Efficiency Program (“MFEED”) offers incentives for installing energy-efficient electric and gas equipment and technologies. Energy efficiency can help improve the bottom line by reducing energy use and maintenance costs while increasing operating efficiencies. These upgrades can also help protect the environment. This Program Manual encompasses information on incentives and program rules for market rate buildings. Refer to the Statewide Affordable Multifamily Energy Efficiency Program Manual for information on incentives and program rules for affordable housing buildings. You can learn more at [www.coned.com/affordablehousing](http://www.coned.com/affordablehousing).

For MFEED there are two pathways for both gas and electric customers participating in the 2022 program year: the prescriptive path and the custom path. To get started, determine your project’s eligibility and path, complete a short application, and speak with one of our dedicated Energy Advisors or Con Edison’s implementation contractor, Willdan, with any questions about your energy-efficiency project. Once the project is approved and completed, the incentive is mailed to the customer, or directly to the Participating Contractor, with customer approval.

## 2 Program Eligibility

### 2.1 Customer Eligibility

Customers who are property owners or managers of existing affordable multifamily buildings with five (5) or more residential units are eligible to participate.

- **Utility Customer:** Customer must be a utility customer that receives gas and/or electric delivery service from Con Edison. For gas projects, customers with a service class of SC-14 or customers receiving service via a negotiated contract are not eligible for the program.
- **Building Characteristics:** The project must be an existing multifamily, residential building(s) with five (5) or more units in each building. **New Construction is not eligible for this program.**
- **Measure Eligibility:** Customer must not have applied for or received an incentive for the same eligible measure from NYSEERDA or any other utility. Please refer to the [Section 5](#) for measure eligibility requirements.
- **Installation Timeline:** Equipment **cannot be installed** before the customer allows for a pre-inspections, submits a signed preliminary incentive offer letter and receives the Notice to Proceed. For prescriptive projects, commitment letters serve as Notice to Proceed.
- **Construction Type:** Project must be an existing building(s). New construction is not eligible for this program.
- **Extent of Renovation:** The Program will accept renovations to existing structures defined as changes, additions, or deletions to any system or process that impacts an existing building’s energy consumption and/or cost not defined as new construction or substantial renovations (gut rehabs). Substantial Renovations (gut rehabs) are not eligible for the Program. These types of projects may be eligible for incentives through other utility or NYSEERDA programs serving new construction buildings. Substantial renovations are defined as one of the following types of projects:
  - Change of use and reconstruction of an existing building or space within
  - Construction work of a nature requiring that the building or space within be out of service for at least 30 consecutive days
  - Reconstruction of a vacant structure or space within

- **Intended Use:** The intended use of the building must be for residential purposes. Commercial facilities, such as motels/hotels, group homes, dormitories, shelters, monasteries, nunneries, assisted living facilities, and nursing homes are typically not eligible for the Program. Supportive housing, single room occupancy (SRO) facilities, and senior living residences that do not include nursing or hospitalization amenities are typically eligible for the Program. Supportive housing is defined as residences that are owned and operated by nonprofit organizations. Tenants are individuals and families who require affordable permanent housing and support services, have lease agreements, pay rent (often a percentage of their income), and abide by the terms of their lease. This group includes people who have been homeless, have histories of substance abuse, are coping with mental illness, have chronic physical illness, are young adults aging out of foster care, are homeless veterans, or are grandparents raising grandchildren.

## 2.2 Project Eligibility

In addition to all other requirements, all projects must also meet the following:

- All projects must be completed (all documents received, and project is ready for post inspection) by **November 15, 2022** in order to be guaranteed for 2022 incentive rates. Incentives for projects completed after this date may be reduced or subject to 2023 incentive rates.

## 2.3 Participating Contractor Eligibility

All Contractors who participate in the Con Edison Multifamily Program must be approved Participating Contractors and meet the following requirements:

- Complete a Participating Contractor application and submit a project into the Multifamily program. The Participating Contractor application will not be approved until the associated project is submitted to the Multifamily program for incentives
- Provide updated IRS Form W-9 and Certificate of Insurance policy (minimum \$1M General Liability) with the participating contractor application
- Attend Multifamily program training
- Complete at least 1 project in the program annually
- Adhere to the participating contractor participation requirements
- Adhere to program requirements
- Maintain an approved participating contractor status

Only Participating Contractors (PC) in good standing, consistent with the PC participation requirements, will be allowed to accept incentive payments on behalf of the customer.

## 2.4 Participating Contractor Participation Requirements

The goal of this policy is to verify that projects in the Program meet all Program requirements and customers are left satisfied with their Participating Contractor's performance.

### Probation and Expulsion Procedure

Based on the findings of Con Edison quality assurance and quality control activities, the Program will document and inform Participating Contractors of any deficiencies and any corrective actions that need to be taken. Participating Contractors who deliver inconsistent results will be considered for probation or expulsion. The following is the Program's disciplinary policy:

1. A warning, probationary, or suspension period may be used for participating contractors as an initial step towards expulsion. The participating contractor will be notified in writing that they are now subject to a warning or probationary period. The notification will outline the deficiencies that have been found, the period of warning or probation (time), and any corrective actions that the participating contractor must take in order to be re-instated to full participation status. Warning period is defined as a temporary notice in which the Participating Contractor must take corrective actions while they continue to participate in the program. Probationary period is defined as a **temporary removal** of a participating contractor from participation in the program.
2. If a participating contractor does not meet the corrective actions outlined in their notification of probation, then they will be subject to program expulsion. If a participating contractor receives a second probationary period in any twelve-month period, or if they are found to engage in misconduct, they will be subject to immediate program expulsion. The participating contractor will be notified in writing of their expulsion. The notification shall state the deficiencies found in their performance, the reason for expulsion, and potential steps (if any) the participating contractor could take in order to be reinstated. Reinstatement is never guaranteed and is left to the discretion of the Program.
3. If the participating contractor is placed under a disciplinary status within another Con Edison program then they may automatically be placed on probation/suspension in the Multifamily Program until the issue in the other program is resolved. The Program will make the determination based on the reason for probation. Participating Contractors must inform Multifamily staff via [ConEdMultifamily@Willdan.com](mailto:ConEdMultifamily@Willdan.com) of probation or expulsion from other Con Edison programs.
4. Program expulsion is defined as the **permanent removal** of the Contractor from the Program. All the privileges of Program participation will be revoked including but not limited to the use of all marketing materials associated with the Program.

## 2.5 Non-Wires Solutions (NWS) Adder Incentives Eligibility

Con Edison offers adder incentives for projects in eligible neighborhoods of Brooklyn and Queens which provide kW demand savings. Customers installing eligible measures may receive adder incentives up to \$1,650/kW for lighting measures and up to \$2,000/kW for eligible HVAC measures, capped at **100% of each measure cost, and 100% of the total project cost, including any and all offers through the Multifamily Energy Efficiency program**. NWS payments will be provided to the project payee in a separate check subsequent to receipt of the Multifamily Energy Efficiency Program incentive payment.

### 2.5.1 Measure Eligibility

Measures eligible for the adder incentive are marked in this manual with the term “(NWS Eligible).” The current offerings are prescriptive measures for lighting, (except LED exit signs, exterior relamp or rebalast, bi-level fixtures, occupancy sensors – high frequency, ultrasonic, infrared) packaged terminal air conditioners (PTAC), elevator modernization, cooling tower replacement (new measure offered), chiller replacement (new measure offered). Measures are not eligible for these offerings if they do not meet the requirements in section 2 of this document. Demand savings for calculation of the NWS adder incentives for these measures are based on the NYS TRM with a coincidence factor of 1.00. Non-lighting measures may be subject to additional Measurement and Verification requirements.

### 2.5.2 NWS Network Eligibility

The following neighborhoods are eligible for the NWS adder incentive.

- Brooklyn: Bedford-Stuyvesant, Brownsville, Bushwick, Clinton Hill, Crown Heights, Cypress Hills, East Flatbush and East New York



- Queens: Broad Channel, Forest Park, Glendale, Howard Beach, Kew Gardens, Long Island City, Maspeth, Middle Village, Ozone Park, South Ozone Park, Richmond Hill, Ridgewood, Sunnyside, Woodhaven, and parts of Elmhurst, Forest Hills, Rego Park, and Woodside.





## 3 Program Pathways

The Con Edison Multifamily Energy Efficiency Program (MFEED) offers incentives for installing energy-efficient electric and gas equipment and technologies. Energy efficiency can help improve the bottom line by reducing energy use and maintenance costs while increasing operating efficiencies.

There are two pathways for both gas and electric customers participating in the 2022 program year: the prescriptive path and the custom path. To get started, determine your project's eligibility and path, complete a short application, and speak with one of our dedicated Energy Advisors or Con Edison's implementation contractor, Willdan, with any questions about your energy-efficiency project. Once the project is approved and completed, the incentive is mailed to the customer, or directly to the Participating Contractor, with customer approval.

### 3.1 Program Process

#### 1. CHECK PROJECT AND EQUIPMENT ELIGIBILITY

- All installed equipment must meet or exceed specifications described in this Program Manual.

#### 2. SUBMIT AN APPLICATION PACKAGE

- An application package is required for all custom and prescriptive projects and includes the items listed below. When submitting your application package, please label these documents as shown below:
  - Completed program application. Applicant name must match name of Con Edison account holder. Filename: Owner's Agreement
  - Customer Proposal/Statement of Work. Filename: Statement of Work (Applicable for Custom Measure Applications)
  - Common Area Tool (if measure is listed). Filename: Electric Measure Tool or Gas Measure Tool
  - Cut sheets. Specific model(s) of the measure being used in the project must be highlighted on the cut sheets before submission. Filename: Cutsheet – *[Make - Model #]*
  - Any other measure specific documentation listed in this program manual or in guidance documents specific to the technology (custom projects) or requested to confirm savings calculations. Filename: *[Specify Document Type based on measure-specific requirements]*
  - Form W-9 of the incentive recipient. Form W-9 must be latest version available on IRS website. Form must be signed and dated in the program year. Filename: W9 Form
- Participating Contractors: Upload application package to SMART
- Customers: Email applications to your Energy Advisor or to [ConEdMultifamily@Willdan.com](mailto:ConEdMultifamily@Willdan.com) with a subject line of **New Multifamily Application – [Applicant Name]**.

#### 3. PRE-INSPECTION & INITIAL ENGINEERING REVIEW

- Willdan will pre-inspect the existing condition of your site. In order to be eligible for incentives work may not begin until this pre-inspection has been completed and Willdan has sent a Preliminary Incentive Offer Letter /Notice to Proceed.

#### 4. PRELIMINARY INCENTIVE OFFER LETTER / NOTICE TO PROCEED

- After the pre-inspection, your project will be reviewed, and you will receive a Notice to Proceed.
  - i. **Prescriptive projects** - you will receive an email from Willdan stating estimated project savings and incentives. This email serves as the Notice to Proceed and you may proceed with installation.

- ii. **Custom projects** - you will receive a Preliminary Incentive Offer Letter which includes an updated incentive offer, indicating project work may begin. The Preliminary Incentive Offer Letter must be signed by the Customer and Participating Contractor and returned to Willdan. Once returned signed you may proceed with installation.

## 5. INSTALL EQUIPMENT

- The Notice to Proceed allows 90 days to complete your project and submit your completion paperwork. Contact the program team if you think your project will require more than 90 days. The program must be notified in writing in order to approve the extension of this deadline.

## 6. SUBMIT COMPLETION PAPERWORK

- Submit your completion paperwork as soon as your project is completed. Completion paperwork should only be submitted after 100% of incentivized measures are installed. The completion paperwork includes:
  - Statement of Completion signed by Customer and Participating Contractor. Only costs directly related to incentivized measures should be included on the completion form.
  - For prescriptive projects, final invoices must be made available upon request. For custom projects, all invoices must be submitted.
  - All itemized final invoices and receipts must be submitted and broken out by product.
  - See the “Project Costs and Invoicing Requirements” section of this manual for invoicing requirements.

## 7. POST INSPECTION

- Con Edison and/or Willdan will inspect the new condition of the site to determine eligible incentives.

## 8. RECEIVE INCENTIVE PAYMENT

- Once your energy savings and incentives are finalized by the Program team, an incentive check will be mailed to you or your Participating Contractor.

Please reference [Section 5](#) for current information on eligible measures and requirements.

### 3.2 Incentive Payments

Prescriptive and custom incentives cannot exceed the customer’s project cost for eligible measure(s) listed in this Program Manual. Material and Labor costs submitted are subject to Con Edison review and may be capped for incentive calculations at our sole discretion. See additional invoicing requirements in the “Project Costs and Invoicing Requirements” section of this manual. The Form W-9 submitted must match the name of the payee as indicated on the program application. Participating Contractors on probation may not be allowed to accept incentive payments on behalf of the customer. Participating contractors who are in good standing with the program will be allowed to accept incentive payments on behalf of the customer with prior written approval by the customer.

### 3.3 Tax Liability

Incentives may be taxable for most taxpayers. If the incentive is more than \$600, it will be reported to the IRS and the customer will be provided with an IRS Form 1099, unless the customer has submitted documentation

that they are a tax-exempt entity as defined by the IRS. Con Edison is not responsible for any tax liability that may be imposed on any customer as a result of the payment of program incentives. All customers must supply their Federal Tax Identification number to Con Edison in order to receive a program incentive. Please consult with your tax professional for information on the tax treatment of the incentives.

### 3.4 Incentive Structure

**Table 3.4.1.A: Electric Incentives**

Common Area Lighting		
Installed Measure	Incentive Detail	MFEED Incentive \$
<b>LED Lighting</b>	Tube Lamps	\$10 per lamp
	Screw-in Lamps	\$6 per lamp
	Interior Fixtures	\$55 per fixture
	LED Exit Signs	\$10 per sign
<b>Exterior New Fixture</b>	HID Less than or equal to 100 W	\$80 per fixture
	HID Over 100 W	\$150 per fixture
	Non-HID Fixture Replacing Screw-in/Pin Based Lamp	\$55 per fixture
<b>Lighting Controls</b>	Bi-Level fixtures - Stairwell, corridor, parking garage	\$80 per fixture
	Bi-level fixtures - parking lot	\$70 per fixture
	Occupancy sensors	\$15 per sensor
<b>Miscellaneous</b>	Relamp and reballasting, retrofit kits	50% of fixture replacement incentive

Common Area Lighting incentives are capped at 85% of the customer's project cost.

Electric Custom Measures		
Installed Measure	Incentive Detail	MFEED Incentive \$
<b>Unitary Controls</b>	Any non-central building system control projects (e.g., Wi-Fi thermostats connected to an in-unit PTAC or PTHP) may be submitted as a custom project	\$0.16 per kWh
<b>Custom Other</b>	Other non-lighting efficiency upgrades not listed in this document may be eligible for performance-based custom incentive	\$0.60 per kWh

Electric Custom Measure incentives are capped at 70% of the customer's project cost.

Installed Measure	Incentive Detail	MFEEP Incentive \$
<b>AC - Central Unit Replacement</b>		\$0.60 per kWh
<b>Packaged Terminal Air Conditioner</b>		\$0.60 per kWh
<b>Elevator Modernization</b>		\$0.25 per kWh
<b>VFD</b>	<ul style="list-style-type: none"> <li>Prescriptive VFD applications include exhaust fan, make-up air fan, return fan, supply fan, water loop heat pump circulating pump, and boiler feed water pump</li> <li>Other VFD applications will need to be submitted as a custom project</li> </ul>	\$0.19 per kWh
<b>Blower Fan - with EC Motor for Furnace Distribution</b>		\$0.60 per kWh
<b>Circulator Pump - with EC Motor for Hydronic Distribution</b>		\$0.60 per kWh

HVAC measure incentives are capped at 70% of the customer's project cost.

**Table 3.4.1.B: Gas Incentives**

Common Area			
Installed Measure	Incentive Detail		MFEEP Incentive \$
<b>Hot Water Boilers</b>	Minimum Boiler Efficiency: Et or AFUE of 85% for boilers < 2,500 kBtu/h or 88% Ec for boilers > 2,500 kBtu/h		\$7 per MBH
<b>Condensing Boilers</b>	Minimum Boiler Efficiency: Et or AFUE of 90% for boilers < 2,500 kBtu/h or 93% Ec for boilers > 2,500 kBtu/h		\$9 per MBH
<b>Steam Boilers</b>	Minimum Boiler Efficiency: Et or AFUE 82%		\$7 per MBH
<b>Storage Tank Water Heaters</b>	Storage tank volume > 70 gallons and Et>90%		\$4,000 per tank
<b>Energy Management Systems</b>	Boiler control system with multiple temperature sensors for steam or water lines, flue gas, and indoor air, and remote system monitoring capability (250+ units may apply for the custom incentive rate)	# of Units	
		10-19	\$2,000
		20-40	\$4,000
		41-99	\$8,000
		100-249	\$12,000
<b>Linear Pipe Insulation</b>	< 2" pipe diameter		\$4 per linear ft
	> 2" pipe diameter		\$8 per linear ft
<b>Building Envelope</b>	Roof and wall insulation, window replacement		\$200 per MMBtu
<b>Steam Traps</b>	Covers the repair or replacement of steam traps in low pressure heating systems (<15 psig)		Common areas - \$300 per failed open trap
	Incentive includes credit towards completing the program required survey		All other radiators - \$100 per failed open trap

		Projects that are replacing 1,000+ traps will follow the custom pathway and will be subject to custom incentive rate.
<b>Boiler Clean and Tune</b>	This measure covers an advanced clean & tune procedure performed on a steam or hot water boiler (routine seasonal boiler tune-ups will not be incentivized)	\$750 per boiler \$1,150 for two-boiler plant \$1,800 for three-boiler plant

Common Area Gas incentives are capped at 85% of the customer's project cost.

<b>Packaged Measures</b>		
<b>Installed Measure</b>	<b>Incentive Detail</b>	<b>MFEED Incentive \$</b>
<b>Air Sealing</b>	This package will include repair and weather sealing of louver vents, exterior doors, common area windows, and the general perimeter of the basement.	\$3 per therm
<b>2-Pipe Steam Retro-Commissioning</b>	Treats heating imbalance issues by designing and installing: <ul style="list-style-type: none"> <li>a) Air vents on all main pipes (atmospheric systems)</li> <li>b) Thermostatic radiator valves and orifice plates on every radiator</li> <li>c) Clean and tune up of boiler and burner, including firing rate, draft adjustment, water cleaning, electronic pressure control, and combustion testing</li> <li>d) Steam trap repair throughout common areas</li> </ul>	\$4 per therm

Packaged Measure incentives are capped at 70% of the customer's project costs.

<b>Gas Custom Measures</b>		
<b>Installed Measure</b>	<b>Incentive Detail</b>	<b>MFEED Incentive \$</b>

<b>Unitary Controls</b>	Simple control equipment installations that do not allow for multiple data inputs (i.e. decision made on a single data point, is manually programmed/operated/or scheduled, or does not allow for real-time monitoring and control through a software package or building communications protocol). This includes Wi-Fi thermostats, thermostatic radiator valves, building management systems, and ventilation controls.	\$1 per therm
<b>Non-Simple Controls and Other</b>	Other energy efficiency upgrades not listed in this document may be eligible for custom incentives. Final custom measure eligibility, savings and incentives are determined at the sole discretion of the Program Administrator. Custom projects include but are not limited to: boiler economizers, linkageless burner controls, and heat pump boiler pre-heaters.	\$3 per therm

**Gas Custom incentives are capped at 70% of the customer's project costs.**

Direct Install	
Installed Measure	MFEED Incentive \$
Faucet Aerators (in-unit)	Free
Showerheads (in-unit)	Free

**Table 3.4.1.C: Secondary Steam and Oil Incentives**

Secondary Steam and Oil Incentives - Custom		
Installed Measure	Secondary Steam Incentive \$	Oil Incentive \$
Building Envelope	\$120/Mlbs	\$3.50/gal
Building Automation System - Controls	\$80/Mlbs	\$3.50/gal

Secondary Steam and Oil incentives are capped at 70% of the customer's project costs.

Refer to section 5.8.5 for documentation and technical requirements

## 4 Inspection Guidelines

### 4.1 Inspection requirements

All projects require pre- and post-inspections.

Reference the Inspection Checklist for measure-specific inspection criteria.

The Program Administrator and/or its IC must have reasonable access to the customer's facility for pre- and post-inspection of the installed energy-efficient measures. Pre-inspections must be completed before starting any installations to be eligible for incentives. In the case of a failed inspection, issues must be remedied by the contractor within a timeframe that is agreed upon by the contractor and the Program Administrator.



## 4.2 On-site & Virtual Inspections

Program Administrator will determine whether inspections are conducted on-site or virtually. In general, virtual pre- and post-inspections are acceptable. Acceptable forms of a virtual inspection are as follows:

Live video call walkthrough with the contractors or energy providers and the inspector; inspector takes screenshots and/or notes to document findings

Date and time-stamped pictures and/or video recordings that clearly existing equipment to be replaced (in case of pre-inspection) or the new energy efficient equipment (in case of post-inspection)

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## 5 Eligible Measures and Technical Requirements

The following guidelines outline the requirements for energy efficiency measures. All energy efficiency measures shall comply with these requirements where applicable.

All references to ECCC NYS are for the most recent version of the Energy Conservation Construction Code of New York State.

Measures not listed in these guidelines may still be eligible for incentives. Customers should submit these measures to the IC for evaluation. These measures may be subject to additional review and additional implementation requirements. Documentation submission requirements in Tables 5.1-5.9 list documentation that must be submitted prior to the pre-inspection and cut sheets must be submitted for all measures.

### 5.1 Common Area Lighting

**Table 5.1: Eligible Measures and Technical Requirements - Lighting**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Submission Requirements	Proposed Equipment and Installation Requirements
<b>Lamps and Fixtures</b>	<ul style="list-style-type: none"><li>• No existing LEDs<ul style="list-style-type: none"><li>○ Eligible existing fixtures include incandescent and fluorescent luminaires</li><li>○ Interior existing HID fixtures are not eligible</li></ul></li></ul>	<ul style="list-style-type: none"><li>• An inventory of existing fixtures must be provided, including:<ul style="list-style-type: none"><li>○ Documentation of existing fixture wattages supported by documentation, or program protocol values</li><li>○ Total hours of operation for the building and each area, as applicable</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>LED Lamps, including all lamps covered by ENERGY STAR and/or DLC (i.e., A, PAR, MR, PL, Globe, and Candelabra Type Lamps)</b><ul style="list-style-type: none"><li>○ Must be permanently mounted or hardwired</li><li>○ Minimum 3-year warranty</li></ul></li></ul>

			<ul style="list-style-type: none"> <li>• <b>LED Tubes, Including T8 Type Lamps that Are ‘Plug-and-Play’ or ‘Remote Driver’ Only</b> <ul style="list-style-type: none"> <li>○ ENERGY STAR® or DLC-certified</li> <li>○ Must comply with all UL 1598C retrofitted fixture standards if installing using a “remote driver” or “ballast bypass” type lamp</li> <li>○ Must have a minimum L70 rating of 50,000 hrs.</li> <li>○ Installation of a “Ballast bypass” or “remote driver” type lamps must be performed by a licensed electrician and the ballast must be removed and disposed of</li> <li>○ All Type-B/ballast bypass lamps should be installed per the manufacturer’s guidelines and comply with NYC Local Law requirements</li> <li>○ Must be permanently mounted or hardwired</li> <li>○ Minimum 3-year warranty</li> </ul> </li> </ul>
			<ul style="list-style-type: none"> <li>• <b>LED Fixtures and Retrofit Kits</b> <ul style="list-style-type: none"> <li>○ ENERGY STAR® or DLC - certified and UL-labeled</li> <li>○ New fixtures consist of a full housing and lamp module that replaces existing luminaire; retrofit kits consist of partial housing and lamp module that inserts into existing luminaire</li> <li>○ Interior fixtures and retrofits cover Linear Troffers, Recessed Downlights, Circular Surface Mounts, Wall Sconces, etc.</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>Exterior fixtures and retrofits cover Wall Packs, Flood Lights, Canopy, Garage, Pole-Tops, etc.</li> <li>Must be permanently mounted or hardwired</li> <li>Minimum 3-year warranty</li> </ul>
<b>Exit Signs</b>	<ul style="list-style-type: none"> <li>No existing LEDs <ul style="list-style-type: none"> <li>Eligible existing fixtures include incandescent or CFL exit sign</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>An inventory of existing fixtures must be provided, including: <ul style="list-style-type: none"> <li>Documentation of existing fixture wattages supported by documentation, or program protocol value</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>LED Exit Signs</b> <ul style="list-style-type: none"> <li>UL- listed</li> <li>Must be less than 5 watts per sign</li> <li>Must be permanently mounted or hardwired</li> </ul> </li> </ul>
<b>Re-Lamp Reballast</b>	<ul style="list-style-type: none"> <li>No existing LEDs <ul style="list-style-type: none"> <li>Eligible existing fixtures include incandescent and fluorescent luminaires</li> <li>Existing HID fixtures are not eligible</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>An inventory of existing fixtures must be provided, including: <ul style="list-style-type: none"> <li>Documentation of existing fixture wattages supported by documentation, or program protocol value</li> </ul> </li> <li>Total hours of operation for the building and each area, as applicable.</li> </ul>	<ul style="list-style-type: none"> <li><b>Re-Lamp Reballast</b> <ul style="list-style-type: none"> <li>New ballast must be electronic; new remote drivers can be used in place of a new ballast</li> <li>New lamps must be LED technology that conforms with all LED lamp measure requirements</li> <li>Includes conversions to tandem linear LED fixtures</li> <li>Must be done on a permanently mounted or hardwired fixture</li> <li>All interior and exterior fixture types are eligible except for Circular Surface-Mounts, Recessed Downlights, and Wall Sconces</li> <li>Care should be exercised to ensure that lamp and ballast/driver are compatible as per manufacturer</li> </ul> </li> </ul>

## 5.2 Lighting Controls

**Table 5.2: Eligible Measures and Technical Requirements – Lighting Controls**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Lighting Controls</b>	<ul style="list-style-type: none"> <li>No existing automated lighting controls</li> <li>For Bi-Level Lighting Controls: Eligible fixture types are LEDs only</li> </ul>	<ul style="list-style-type: none"> <li>An inventory of existing fixtures must be provided, including: <ul style="list-style-type: none"> <li>Documentation of existing fixture wattages supported by documentation, or program protocol value</li> <li>Total hours of operation for the building and each area, as applicable.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Occupancy Sensor Control</b> <ul style="list-style-type: none"> <li>UL-listed sensor</li> <li>Must be from a manufacturer whose components are listed on the DLC Network Lighting Controls QPL</li> <li>Technologies accepted include, but are not limited to, passive infrared, ultrasonic, and/or high frequency</li> <li>Controlled fixtures must use programmable start ballasts</li> <li>Cannot be installed in highly trafficked areas (e.g., lobbies, corridors, and stairwells)</li> <li>Must be permanently mounted or hardwired</li> </ul> </li> </ul>
			<ul style="list-style-type: none"> <li><b>Bi-Level Lighting Control</b> <ul style="list-style-type: none"> <li>Must be a complete (lamp + ballast) system as designed by the manufacturer</li> <li>Must be from a manufacturer whose components are listed as DLC Network Lighting Controls QPL</li> <li>Must have UL label</li> <li>Ballasts must be electronic and programmable start type if lamp(s) are being on/off controlled</li> <li>Fixture cannot exceed 30% of full wattage during unoccupied periods</li> <li>Must be code compliant with fail-safe features</li> <li>Must be permanently mounted or hardwired</li> <li>Work must comply with all applicable codes and regulations</li> </ul> </li> </ul>

### 5.3 Electric HVAC Measures

**Table 5.4: Eligible Measures and Technical Requirements –Electric HVAC Measures**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Air Conditioner – Central Unit Replacement (CAC)</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency than proposed equipment</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, description of existing load profile, and AHRI certificate must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Replacement equipment efficiency must exceed baseline efficiency compared to existing equipment and Energy Conservation Construction Code of New York State (ECCCNYS) to qualify for eligibility</li> <li>Replacements shall be one-for-one regarding capacity, with a tolerance of <math>\pm 10\%</math></li> </ul>
<b>Packaged Terminal Air Conditioner (PTAC)</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency than proposed equipment</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, description of existing load profile, and AHRI certificate (if applicable) must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Replacement equipment efficiency must meet or exceed baseline efficiency by 10% or better compared to ECCCNYS to qualify for eligibility</li> <li>Replacements shall be one-for-one regarding capacity, with a tolerance of <math>\pm 10\%</math></li> </ul>
<b>Variable Frequency Drive (VFD)</b>	<ul style="list-style-type: none"> <li>No existing VFD</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Must be tied to the control system and operate at variable frequencies as determined by the control system</li> <li>Prescriptive VFD applications include exhaust fan, make-up air fan, return fan, supply fan, water loop heat pump circulating pump, and boiler feed water pump</li> <li>Other VFD applications will need to be submitted as a custom project</li> <li>The following applications are ineligible: <ul style="list-style-type: none"> <li>VFDs installed in fixed - speed applications</li> <li>Installs that include entire pumping or ventilation system upgrades or replacements</li> </ul> </li> </ul>
<b>Blower Fan – with Electronically Commutated (EC) Motor for Furnace Distribution</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Retrofit of direct-drive Permanent Split Capacitor (PSC) motors with the installation of Electronically Commutated (EC) motors on fuel-fired furnace distribution system supply fans in residential applications</li> </ul>
<b>Circulator Pump – with Electronically Commutated (EC) Motor for Hydronic Distribution</b>	<ul style="list-style-type: none"> <li>Existing Unit of lower efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Replacement of standard efficiency permanent split capacitor (PSC) motor circulator pumps with electronically commutated (EC) motor circulator pumps in hydronic heating and cooling distribution systems</li> </ul>



## 5.4 Elevator Modernization

**Table 5.5: Eligible Measures and Technical Requirements – Elevator Modernization**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Elevator Modernization</b>	<ul style="list-style-type: none"> <li>• Retrofit of existing elevators only</li> <li>• Existing Unit of lower efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Motor Nameplate and ID number</li> <li>• Generator nameplate (if part of M-G set)</li> <li>• Motor transmission system (geared or gearless)</li> <li>• Motor drive make and model</li> <li>• Regenerative braking drive and/or braking resistors</li> <li>• Elevator nameplate (make, model, serial number, car capacity, rated top velocity, counterbalance weight)</li> <li>• Elevator number/ID</li> <li>• Elevator schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Elevator drive must be upgraded from lower efficiency to higher efficiency. Elevator drives are listed below from lowest efficiency to highest efficiency: <ul style="list-style-type: none"> <li>○ Motor-Generator (M-G) Set</li> <li>○ Silicon Controlled Rectifier (SCR) 6</li> <li>○ Silicon Controlled Rectifier (SCR) 12</li> <li>○ Pulse Width Modulation (PWM) Drives</li> <li>○ Variable Voltage Variable Frequency (VVVF) drives</li> </ul> </li> <li>• The drives may either be regenerative or non-regenerative</li> </ul>

## 5.5 Common Area Gas Measures

**Table 5.6: Eligible Measures and Technical Requirements – Common Area Gas Measures**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Boiler Replacement</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours and facility type</li> <li>Oil to Gas (OTG) conversions: <ul style="list-style-type: none"> <li>Submit Application with utility electric account</li> <li>Provide utility confirmation for gas conversion (e.g., new gas account #)</li> <li>Provide one year of fuel (oil) bills</li> <li>Provide cut-sheets of new boiler(s)</li> <li>Provide photos of existing boiler(s)</li> <li>Provide proposed installation date</li> <li>Conversion from Fuel Oil No. 2 and 4 are only</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Hydronic boiler Minimum Boiler Efficiency: Et or AFUE of 85% for boilers ≤ 2,500 kBtu/h or 88% Ec for boilers &gt; 2,500 kBtu/h</li> <li>Condensing boiler Minimum Boiler Efficiency: Et or AFUE of 90% for boilers ≤ 2,500 kBtu/h or 93% Ec for boilers &gt; 2,500 kBtu/h</li> <li>Steam boiler Minimum Boiler Efficiency: Et or AFUE 82%</li> <li>Annual Fuel Utilization Efficiency (AFUE) and thermal efficiency (Et) ratings must be sourced from the AHRI directory; if data is not available, only then may the manufacturer's rating may be used</li> </ul>
<b>Water Heater Replacement</b>	<ul style="list-style-type: none"> <li>Existing Water Heater that is less efficient than the proposed equipment</li> </ul>	<ul style="list-style-type: none"> <li>AHRI Certificate, if applicable</li> <li>Facility operation hours and facility type</li> </ul>	<ul style="list-style-type: none"> <li>Proposed equipment must be more efficient than existing equipment</li> <li>Proposed water heater must comply with applicable Energy Star requirements</li> <li>Proposed storage tank volume &gt; 70 gallons and Et&gt;90%</li> </ul>
<b>Energy Management Systems (EMS)</b>	<ul style="list-style-type: none"> <li>Building must have &gt;10 dwelling units</li> <li>No existing EMS</li> <li>Existing Boiler Controls with <b>NO</b> internet connection capability</li> </ul>	<ul style="list-style-type: none"> <li>Provide documentation to confirm building unit count</li> </ul>	<ul style="list-style-type: none"> <li>Meets "EMS Controls" definition: <ul style="list-style-type: none"> <li>Autonomous or rule-based decision making (i.e., not a user-entered program or schedule)</li> <li>Multiple data inputs (i.e., does not make decisions off a single data point)</li> <li>Real-time digital data</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>○ Real-time monitoring and control through a software package or by providing data through a building protocol (e.g., IP/BACnet/Modbus/Zigbee)</li> <li>• Must allow remote access or web-based monitoring (monitoring service agreement is not required)</li> <li>• Install minimum of 25% apartment sensors, on a variety of floors, and including one in the apartment at the end of each steam line (for steam systems)</li> <li>• Must include temperature sensors for the stack, domestic hot water supply, outdoor weather, heating water supply or return, and condensate (steam)</li> <li>• Must provide system training and manual to building operating staff</li> <li>• Must provide a screen shot showing all control components in good operation</li> <li>• Must allow multiple boiler systems to have staging capability</li> <li>• Provide verification of multiple boilers run times, (i.e., lead/lag)</li> <li>• Product certification from an OSHA approved Nationally Recognized Testing Laboratory (NRTL) (e.g., UL, ETL, CSA, IAPMO)</li> </ul>
<b>Pipe Insulation</b>	<ul style="list-style-type: none"> <li>• Existing pipe must be bare (the replacement of existing pipe insulation with new pipe insulation is ineligible)</li> <li>• Existing pipe must be located in an unconditioned space</li> <li>• Measure is intended for pipe insulation in common areas</li> </ul>	<ul style="list-style-type: none"> <li>• Boiler and /or water heater nameplate(s) and performance datasheets. Other heating/cooling equipment datasheets as relevant to the conditioned fluid flows</li> <li>• Pipe Insulation Survey must cover 100% of the heating distribution pipes (supply and return) in the common areas</li> </ul>	<ul style="list-style-type: none"> <li>• All piping in mechanical room and accessible piping in unconditioned spaces shall be insulated</li> <li>• Must meet minimum thickness requirements specified in the most recent version of the ECCCNY</li> <li>• Measure covers the installation of fiberglass, rigid foam, or cellular glass pipe insulation on uninsulated copper or steel piping within hot water or steam space heating distributions systems and DHW distribution systems</li> <li>• The following applications must go through the custom process for non-comprehensive projects: <ul style="list-style-type: none"> <li>○ Insulating jackets for boilers, tanks, fittings, or other equipment</li> <li>○ Pipe insulation on risers that go through tenant apartments</li> <li>○ Any pipes over 8 inches diameter</li> </ul> </li> </ul>

<b>Steam Traps</b>	<ul style="list-style-type: none"> <li>Existing <b>failed open</b> steam traps in low pressure heating systems (&lt; 15 psig)</li> </ul>	<ul style="list-style-type: none"> <li>Survey involving collecting basic information on the steam boiler plant and steam traps; in addition to using an ultrasonic meter to confirm whether each trap is working, failed open, or failed closed <ul style="list-style-type: none"> <li>Must perform a baseline survey of the steam traps that are intended to be repaired when the traps are in use for confirmation of proper function</li> </ul> Survey must be performed when the heat is on</li> <li>Surveyor must place a numbered tag on each common area trap and document this number in the Program Administrator-provided survey tool. The tags must remain in place until project close-out. All common area traps in a building must be tested. Projects with more than 60 common area traps may elect to test a minimum of 60 common area traps and apply the failure rate to the rest of the common area trap population. All in-unit sampling procedures apply to the common area population if sampling is pursued.</li> <li>For all apartment radiator traps within the building provide apartment number, room description, and location in the Program Administrator-provided survey tool. Trap location information will be used by Willdan to perform apartment trap testing.</li> </ul>	<ul style="list-style-type: none"> <li>All failed open and failed closed common area traps must be repaired or replaced. If sampling is implemented for common area traps, all untested traps must be repaired or replaced.</li> <li>All apartment traps must be repaired or replaced regardless of testing status.</li> <li>Repaired traps must include a new cap to indicate work was done on the trap.</li> <li>Upon completion of all trap repairs and/or replacements, the contractor must submit an updated copy of the survey tool with any pertinent scope changes and comments</li> <li>Upon receipt of all completion documents, the repaired steam traps will be inspected by Willdan to confirm proper installation of the measure.</li> <li>Common area trap incentive amounts will be granted in accordance with the number of traps found to be failed in the pre-installation inspection AND found to be operational in the post-installation inspection. Incentives will not be granted for traps that are repaired but inoperable regardless of the cause of failure.</li> <li>Apartment trap incentives will be granted based on the failure rate within the pre-installation inspection sample, multiplied across the entire apartment trap population. Incentives will be further reduced in the same fashion should failures persist in the post-installation inspection regardless of the cause of failure.</li> </ul>
<b>Boiler Clean and Tune</b>	<ul style="list-style-type: none"> <li>Hot water or steam boiler</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type</li> <li>A picture of nameplate with efficiency or a submittal/email from the manufacturer stating the efficiency <ul style="list-style-type: none"> <li>Pre and post combustion test results must be submitted along with completion documents</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Boiler Clean and Tune measure must be performed on each heating boiler within the central plant by a contractor with a master plumbers license and work experience in burner service</li> <li>This measure only covers an advanced clean and tune procedure performed on a steam or hot water boiler <ul style="list-style-type: none"> <li>Routine seasonal boiler tune-ups will not be incentivized</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• Must submit notification of the scheduled service date and time no less than three (3) days in advance</li> </ul>	<ul style="list-style-type: none"> <li>• Program may send out an inspector to observe the work</li> <li>• The advanced boiler clean and tune procedure involves the following items: <ul style="list-style-type: none"> <li>○ Perform a 'pre' steady state combustion test first</li> <li>○ Open the boiler's water chamber, skim oil and debris from the water surface, pour in detergent solution, complete full drain, and refill along with chemical treatment</li> <li>○ Tune burner to manufacturer's specifications to maximize its turndown ratio measure and adjust the gas supply pressure to reduce the low firing ratio the manufacturer's specified minimum and increase the high firing rate to the peak heating load level for the building</li> <li>○ Install a high-fire limit potentiometer and ensure burner mode switch is left in AUTO</li> </ul> </li> <li>• Perform a 'post' steady state combustion test</li> </ul>
<b>Master Air Venting</b>	<ul style="list-style-type: none"> <li>• This measure applies to one- or two-pipe steam distribution systems</li> <li>• Co- or Pre-requisite measures: Pipe Insulation and Boiler Clean and Tune must be installed in addition to this measure in order to qualify for the program <ul style="list-style-type: none"> <li>○ Can show proof of Boiler Clean and Tune through combustion analysis print out;</li> </ul> </li> <li>• Will determine on a case by case basis if the building fulfilled Boiler Clean and Tune and Pipe Insulation requirements prior to application to the program</li> </ul>	<ul style="list-style-type: none"> <li>• Must perform a baseline survey of the steam heating distribution system <ul style="list-style-type: none"> <li>○ Survey involves collecting basic information on the steam boiler plant and steam supply mains and risers, including any existing air vents</li> </ul> </li> <li>• Surveyor must prepare a layout sketch of the steam supply mains in the basement, including mark-offs for the new air vents to be installed</li> <li>• Upon completion of all air vent installations, must submit completed survey with information on upgrades for master air venting, and pipe layout sketch with any pertinent scope changes and comments</li> <li>• This measure will require M&amp;V</li> </ul>	<ul style="list-style-type: none"> <li>• Installer must remove any existing air vents that are either broken, incorrectly sized, or in the wrong location and cap the hole</li> <li>• Air vents must be installed in the vertical direction and at least 15" away from any elbows; trees should be used whenever installing multiple vents in the same location</li> <li>• For proper distribution balancing air vents should be sized and installed at the ends of 100% of the steam supply mains and risers</li> <li>• If riser tops are inaccessible the appropriate air vent should either be installed on the riser within the 2nd-to-top floor apartment or on the nearest radiator on its inlet side</li> </ul>

<b>Orifice Plate</b>	<ul style="list-style-type: none"> <li>• This measure applies to all radiators within a 2-pipe steam distribution system</li> <li>• Co- or Pre-requisite measure: Boiler Clean and Tune and TRVs must be installed in addition to this measure in order to qualify for the program</li> </ul>	<ul style="list-style-type: none"> <li>• Must perform a baseline survey of the steam heating distribution system</li> <li>• Survey involves collecting basic information on the steam boiler plant and a detailed "heat-load vs. radiator EDR" analysis on a sample of apartments; the apartment sample must minimally include one (1) apartment per each building line</li> <li>• This measure will require M&amp;V</li> </ul>	<ul style="list-style-type: none"> <li>• Heat-Load vs. Radiator EDR analysis should cover all the rooms and radiators in the apartment being sampled</li> <li>• Orifice plates must be sized for each size of radiator; the reduced heat output of any radiator must not fall below 100% of the heat load of the room it serves</li> <li>• Orifice plates must be installed for at least 70% of all apartment and common-area radiators, not including those on the top floor (top floor radiators cannot be restricted from venting air through the distribution system)</li> <li>• Upon completion of installations, must submit for review a checklist showing all radiators in the building and the orifice plates installed</li> </ul>
<b>Thermostatic Radiator Valves (TRVs)</b>	<ul style="list-style-type: none"> <li>• This measure applies to all radiators within a 2-pipe steam distribution system</li> <li>• Co- or Pre-requisite measure: Boiler Clean and Tune and Orifice Plates must be installed in addition to this measure in order to qualify for the program</li> <li>• This measure will only be accepted in 2PS projects which require M&amp;V</li> </ul>	<ul style="list-style-type: none"> <li>• Must perform a baseline survey of the steam heating distribution system</li> <li>• Survey involves collecting basic information on the steam boiler plant and a detailed "heat-load vs. radiator EDR" analysis on a sample of apartments; the apartment sample must minimally include one (1) apartment per each building line</li> </ul>	<ul style="list-style-type: none"> <li>• TRVs must be installed for at least 70% of all apartment radiators and 100% of all common-area radiators</li> <li>• Use a remote temperature sensing TRV on any enclosed radiators</li> <li>• Upon completion of installations, must submit a checklist showing all radiators in the building and the orifice plate and TRV that was installed</li> </ul>



## 5.6 In-Unit Measures

**Table 5.7: Eligible Measures and Technical Requirements – In-Unit Measures**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>LEDs</b>	<ul style="list-style-type: none"> <li>No existing LEDs</li> </ul>	<ul style="list-style-type: none"> <li>An inventory of existing fixtures must be provided, including: <ul style="list-style-type: none"> <li>Documentation of existing fixture wattages supported by documentation, or program protocol values</li> </ul> </li> </ul>	<p>Downstate</p> <ul style="list-style-type: none"> <li><b>LED A LAMPS</b> <ul style="list-style-type: none"> <li>ENERGY STAR®</li> <li>Minimum 3-year warranty</li> <li>Must be permanently mounted or hardwired</li> <li>All in-unit LEDs must be installed by subcontractors, and they are required to remove the old equipment for an inspection (bag and tag required for downstate).</li> </ul> </li> </ul> <p>Upstate</p> <ul style="list-style-type: none"> <li><b>LED LAMPS</b> <ul style="list-style-type: none"> <li>ENERGY STAR®</li> <li>Minimum 3-year warranty</li> <li>All in-unit LEDs must be installed by subcontractors, and they are required to remove the old equipment</li> </ul> </li> </ul>
<b>Faucet Aerators</b>	<ul style="list-style-type: none"> <li>Existing faucet aerators must be rated at a minimum flow rate of 2.2 GPM kitchen, 1.5 GPM bathroom.</li> </ul>	<ul style="list-style-type: none"> <li>Existing faucet aerators must be "bagged and tagged" for inspection</li> </ul>	<ul style="list-style-type: none"> <li>Up to four per unit</li> <li>&lt;=1.5 GPM installed in kitchen</li> <li>&lt;=1 GPM installed in bathroom</li> <li>New aerators must be certified as EPA WaterSense</li> </ul>
<b>Low-Flow Showerhead</b>	<ul style="list-style-type: none"> <li>Existing showerhead must be rated at a minimum flow rate of 2.0 GPM</li> </ul>	<ul style="list-style-type: none"> <li>Existing showerhead must be "bagged and tagged" for inspection</li> </ul>	<ul style="list-style-type: none"> <li>Swivel- or wand-type showerhead</li> <li>New showerhead must have a flow rate &lt; 2.0 GPM</li> <li>New showerhead must be certified as EPA WaterSense</li> </ul>

## 5.7 Building Envelope Measures

**Table 5.8: Eligible Measures and Technical Requirements – Building Envelope Measures\***

\*Building envelope measures must be associated with electric or gas savings

Technical Measure Guidelines - (Applies to both Comprehensive and Non-Comprehensive Projects)			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Roof and Wall Insulation</b>	<ul style="list-style-type: none"> <li>Pre-requisite: attic floor/top floor ceiling must be airsealed before attic/roof insulation is added</li> </ul>	<ul style="list-style-type: none"> <li>Minimum R-value stated in the latest NYS TRM</li> <li>Plans for and proof of addressing thermal bypasses in roofs</li> <li>Plans for and proof of addressing thermal bridging at the following points: slab edges, bulkheads, rim joists, and roof-to-wall connections.</li> <li>Any area with existing insulation must be documented</li> <li>Must submit HVAC equipment datasheets and nameplate photos</li> <li>Must submit building plans/layout detailing areas to be retrofitted</li> <li>Must submit photos of the completed work that clearly shows the depth of insulation installed</li> <li>Photos showing that the attic floor/top floor ceiling was airsealed before roof/attic insulation was installed</li> </ul>	<ul style="list-style-type: none"> <li>Must meet ECCCNYC code minimums</li> <li>Cavity insulation must be installed without compression or slumping</li> </ul>
<b>Window Replacement</b>	<ul style="list-style-type: none"> <li>This measure is only applicable to windows that serve as a barrier between conditioned spaces and outside air.</li> </ul>	<ul style="list-style-type: none"> <li>HVAC equipment datasheets and nameplate photos</li> <li>Building plans/layout detailing areas to be retrofitted</li> <li>Survey of quantities, sizes, and locations of the existing and proposed windows.</li> <li>Energy performance specifications (window type, frame type, U-value, gas</li> </ul>	<ul style="list-style-type: none"> <li>In all instances, new equipment must perform better than existing and must comply with or exceed ECCCNYC C402.4.</li> <li>For NYC: New equipment must perform better than existing and must comply with or exceed NYCECC C402.4. <ul style="list-style-type: none"> <li>For Low-Rise (up to 3 floors) buildings, specified windows shall be ENERGY STAR® labeled.</li> </ul> </li> </ul>

		<p>fill, SHGC, low-e type, and location) for proposed windows.</p> <ul style="list-style-type: none"> <li>• NFRC or other relevant rating agency's label(s).</li> </ul>	<ul style="list-style-type: none"> <li>○ If ENERGY STAR® labeled windows are not available, the specified windows must meet or exceed the ENERGY STAR® requirements for the building's location for U-value and Solar Heat Gain Coefficient (SHGC).</li> </ul>
<b>Air Sealing</b>	<ul style="list-style-type: none"> <li>• Buildings with broken mechanical louvers or missing exterior doors and windows are ineligible. The eligible existing conditions are cracked and missing window/door frame caulk, missing/poor condition weatherstripping, holes in building exterior from electrical/plumbing penetrations, leakage at roof/wall intersections, roof hatch.</li> <li>• Air sealing surveys must inspect the following areas to determine non-compliance. <ul style="list-style-type: none"> <li>○ Top of building – Roof cavity, bulkhead doors and walls</li> <li>○ Common areas, including stairwells, exterior walls, and common area windows.</li> <li>○ Basement locations, including basement walls, ceilings and doors.</li> <li>○</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A building survey with recorded measure specification (exterior door or windows) noting location, quantity and size/length</li> <li>• Photographic evidence showing current condition of non-compliance and compliance conditions for at least top of building, common areas and basement</li> <li>• Scope of work will detail how to remediate non-compliance by using visual inspection and photographic evidence</li> <li>• Building audits in which only door issues are detected will not be considered an acceptable air sealing project</li> </ul>	<ul style="list-style-type: none"> <li>• Includes partial sealing of fixed louvers with annealed glass in accordance with code</li> <li>• Includes exterior door weatherstripping, sweep, and threshold, or full replacement if needed</li> <li>• Includes repair of common area inoperable windows</li> <li>• Includes basement compartmentalization sealing as follows: <ul style="list-style-type: none"> <li>○ Install gaskets around trash shoot doors and other interior shaft access panels</li> <li>○ Caulk around all pipe and electrical penetrations through the exterior wall and ceiling or penetrating from an unconditioned interior space into a conditioned space</li> </ul> </li> <li>• Larger openings should either be sealed with expandable low VOC spray foam or foam board</li> </ul>

## 5.8 Custom Measures

**Table 5.9: Eligible Measures and Technical Requirements – Custom Measures**

Technical Measure Guidelines			
Measure	Existing Equipment	Documentation Requirements	Proposed Equipment and Installation Requirements
<b>Custom Measures:</b>  <b>Other energy-efficiency upgrades not listed in this document may be eligible for performance-based custom incentives at the rates listed in Section 3.2.2.</b>	<ul style="list-style-type: none"> <li>• Case by case per measure</li> </ul>	<ul style="list-style-type: none"> <li>• Facility operation hours, facility type</li> <li>• Utility usage data for past 12 months</li> <li>• All applicable information and supporting documents needed to calculate the savings of the custom energy efficiency measure</li> </ul>	<ul style="list-style-type: none"> <li>• New equipment must be more efficient than existing and must meet any applicable EECNYS requirements</li> </ul>
<b>Custom Measure: Insulation</b>	<ul style="list-style-type: none"> <li>• Insulation that encompasses non-linear piping, including insulating jackets for boilers, tanks, fittings (elbows, tees, valves), or other equipment</li> <li>• Uninsulated copper or steel piping with a nominal diameter greater than 8.00" in hot water and steam space heating and domestic hot water (DHW) distribution systems in unconditioned spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Boiler and/or water heater nameplate(s) and performance datasheets. Other heating/cooling equipment datasheets as relevant to the conditioned fluid flows</li> <li>• Pipe Insulation Survey must cover 100% of the heating distribution pipes (supply and return) in the common areas</li> </ul>	<ul style="list-style-type: none"> <li>• New insulation must meet minimum thickness requirements specified in the most recent version of the</li> <li>• EECNYS Minimum thermal resistance of R-3.</li> <li>• Permitted insulation types are fiberglass, rigid foam, or cellular glass pipe insulation.</li> <li>• Insulation must be installed on uninsulated copper or steel piping within hot water or steam space heating distributions systems and DHW distribution systems</li> <li>• Materials must be certified and rated in accordance with all pertinent ASTM thermal insulation standards may be installed under this measure</li> </ul>

<b>Custom Measure: Rooftop Exhaust Fan</b>	<ul style="list-style-type: none"> <li>Existing motor efficiency must be based off motor nameplate</li> <li>For motors with no nameplate efficiency, baseline efficiency based off the motor year installed can be used</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided.</li> <li>Proposed quantity to be replaced</li> <li>Description of what each fan serves</li> <li>Applicable fan timer schedules for baseline and proposed conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed motor must be higher than applicable minimum motor efficiency as stated in the latest EECNYS</li> <li>Proposed motor must not reduce total airflow unless ventilation calculations are provided indicating local code compliance</li> </ul>
<b>Custom Measure: VFDs</b>	<ul style="list-style-type: none"> <li>No existing VFD</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> <li>Description of what each proposed VFD will serve</li> </ul>	<ul style="list-style-type: none"> <li>The following applications are not eligible:</li> <li>New VFD replacing existing VFDs <ul style="list-style-type: none"> <li>VFDs installed in fixed speed applications</li> <li>Installation of entire pumping or ventilation system upgrades or replacements</li> </ul> </li> </ul>
<b>Custom Measure: Cooling Tower Replacement</b>	<ul style="list-style-type: none"> <li>Existing unit must be past its effective useful life as per the latest version of the NYS TRM</li> <li>Existing cooling tower must not have VFDs</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Cooling tower approach temperature of 6F under standard rating conditions.</li> <li>VFD installation for cooling tower fans/pumps are required by code and ineligible for incentives</li> </ul>
<b>Custom Measure: Chiller Replacement</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency than proposed equipment</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> </ul>	<ul style="list-style-type: none"> <li>Replacement equipment efficiency must exceed baseline efficiency compared to existing equipment and Energy Conservation Construction Code of New York State (EECNYS) to qualify for eligibility</li> </ul>
<b>Custom Measure: Ventilation Overhaul</b>	<ul style="list-style-type: none"> <li>Co- or Pre-requisite measures: Rooftop exhaust fans to be replaced No existing Constant airflow regulators (CARs)</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided.</li> <li>Proposed quantity to be replaced</li> </ul>	<ul style="list-style-type: none"> <li>Proposed motor must be higher than applicable minimum motor efficiency as stated in the latest EECNYS</li> <li>Kitchens and bathrooms shall be continuously ventilated to a minimum of 25 CFM as stated in the latest version of the NYC Mechanical code</li> </ul> <p>Note: Savings associated with shafts being cleaned and sealed should not be included</p>

	<p>installed within the registers</p> <ul style="list-style-type: none"> <li>Existing motor efficiency for exhaust fans must be based off motor nameplate</li> <li>For motors with no nameplate efficiency, baseline efficiency based off the motor year installed can be used</li> </ul>	<ul style="list-style-type: none"> <li>Description of what each fan serves</li> <li>Applicable fan timer schedules for baseline and proposed conditions.</li> <li>CFM measures and aerosol reports for the ductwork and shafts should include the existing and proposed conditions</li> <li>A total count of the kitchen and bathroom registers</li> </ul>	
<b>Custom Measure: Burner Replacement</b>	<ul style="list-style-type: none"> <li>Existing unit of lower efficiency than proposed equipment</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, and description of existing load profile must be provided</li> <li>Hours of operation must be allocated appropriately for each stage of modulating burners</li> </ul>	<ul style="list-style-type: none"> <li>Replacement equipment efficiency must exceed baseline efficiency</li> <li>New burners must be correctly tuned for optimum operational conditions</li> </ul>
<b>Custom Measure: Linkage-less Burner Control</b>	<ul style="list-style-type: none"> <li>Linkage-based controlled burners</li> <li>Measure cannot be combined with boiler replacement</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type</li> <li>A picture of nameplate with efficiency or a submittal/email from the manufacturer stating the efficiency</li> <li>Pre and post combustion test results must be submitted along with completion documents</li> </ul>	<ul style="list-style-type: none"> <li>All linkage-based controls are replaced with automatically controlled servo motors</li> </ul>
<b>Custom Measure: Energy or Heat Recovery</b>	<ul style="list-style-type: none"> <li>Building with ASHRAE 62.2-compliant exhaust fan system with no</li> </ul>	<ul style="list-style-type: none"> <li>Facility operation hours, facility type, description of existing load profile, and AHRI certificate must be provided</li> </ul>	<ul style="list-style-type: none"> <li>ASHRAE 62.2-compliant exhaust fan system equipped with AHRI certified ERV or HRV components</li> </ul>



Ventilators (ERVs or HRVs)	heat or energy recovery	• Nameplate photos for existing central heating and cooling systems	
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### 5.8.1 New Technology

Submission of projects deemed as new technology must provide a full custom analysis and additionally provide the following:

- Manufacturer-claimed savings as a percentage range
- Information on adoption by other utility energy efficiency programs (provide links or resources to verify)
- Reliable third-party studies on energy savings potential
- Product literature such as diagrams or videos showing how the product works
- Baseline metered or trended data
- Any additional information requested by the Program Administrators

Projects are accepted based on a review by the Program Administrators of the technology and may be approved, rejected, or requested to participate in additional M&V before being offered incentives. The approval of savings and incentives for new technologies is at the discretion of the Program Administrators and may be changed at any time.

### 5.8.2 Early Replacement-Custom

Energy efficiency upgrades for equipment that has not yet reached its Effective Useful Life (EUL) are able to apply for the Early Replacement incentive. **In this category, the measure is eligible for maximum energy savings and incentives. Energy savings are based on the existing equipment efficiency and operating conditions.** Early Replacement energy efficiency upgrades may be eligible for performance-based Custom incentives at custom measure rate. Final custom measure eligibility, savings and incentives are determined at the sole discretion of Con Edison.

Projects applying for incentives using the Early Replacement path are required to satisfy any measure eligibility criteria identified in other sections of this manual as applicable. For example, a project involving the installation of a new chiller must meet all of the program eligibility requirements for chillers in addition to the requirements listed in this section.

Following is the minimum information required for energy conservation measures (ECM's) related to early replacement of equipment.

For a measure to be eligible for early replacement incentives:

1. At the time of application, the existing equipment cannot exceed its Effective Useful Life (EUL) and should have at least 1 year of its EUL remained (see table below for more details on the EUL of eligible equipment).
2. The existing equipment must be fully functional.

Category	Measures	EUL (years)
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Compressed Air	Air Compressor	13
	Refrigerated Air Dryer	13
Domestic Hot Water	Indirect Water Heater	15
	Storage Tank Water Heater	15
	Tankless Water Heater	20
	Heat Pump Water Heater – Air Source (HPWH)	10
Heating, Ventilation and Air Conditioning (HVAC)	Air Conditioner (Rooftop Unit, PTAC)	15
	Heat Pump (Air Source, PTHP)	15
	Heat Pump (Water Source)	25
	Chiller (Air and Water Cooled)/ Air Handler	20
	Cooling Tower	15
	Combination Boiler & Water Heater	20
	Condensing Gas-Fired Unit Heater for Space	18
	Boiler (Hot Water, Steel Water Tube)	24
	Boiler (Hot Water, Steel Fire Tube)	25
	Boiler (Hot Water, Cast Iron)	35
	Boiler (Steam, Steel Water Tube)	30
	Boiler (Steam, Steel Fire Tube)	25
	Boiler (Steam, Cast Iron)	30
	Furnace (Gas-Fired)	23
	Unit Heater (Gas-Fired)	13
	Infrared Gas Space Heater	17
Other		
	High Performance Glazing (Windows)	20

*\*Please note that EUL values listed above are subject to change per the latest version of the TRM (Appendix P). The EUL values listed in the current TRM will take precedence.*

### Required Project Documentation

Projects with measures listed in the Technical Resource Manual (TRM) which includes those measures in the table below must provide the first set of requirements. Projects with measures not listed in the TRM must include all requirements on this sheet.

### All Projects Require Submission of the Following:

- A. A detailed scope of work that contains all equipment being proposed for replacement under early replacement. Must include the sequence of operation for the existing system.

- B. A formal cost proposal for the proposed new energy efficient equipment as well as the minimum code-compliant equipment as provided to the customer. Must include spec sheets, make and model number of the equipment on company letterhead<sup>1</sup>.
  - a. Cost proposal, spec sheets, make and model information of the higher efficient proposed equipment.
  - b. Cost proposal, spec sheets, and make and model information of code compliant proposed equipment.
- C. Cooling/heating capacity of the existing equipment and the proposed new energy efficient equipment and its efficiency rating
  - a. Supported by manufacturer's equipment spec sheets or industry standard performance testing results for existing equipment.
    - i. The NET capacity is to be used, and NOT the GROSS capacity (the net capacity is typically a little lower than gross, as it removed the fan power and associated heat from the calculation).
    - ii. In instances where the manufacture spec sheet is not retrievable (for very old, existing equipment), it is acceptable to use the building code or the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standard that was applicable the year the unit was installed.
- D. Age of the existing equipment
  - a. Supported by original invoice, bill of sale, construction permit, service log, or nameplate date
- E. Estimated remaining equipment life until total failure (beyond repairs)
  - a. This should be a best estimate based on the working condition of the existing equipment (at a minimum you should compare this to the EUL of the equipment per the TRM).
- F. Proof of equipment functionality
  - a. Supported by Con Edison pre-inspection while equipment is operating, building management system (BMS) trend data, equipment service log

**All Non TRM Measures Require the Following Additional Information**

- G. An engineering analysis of estimated energy consumption of the existing equipment, estimated energy consumption of the code compliant equipment and the proposed new energy efficient equipment.
  - a. The engineering analysis is for the code compliant equipment AND proposed equipment
- H. Each engineering analysis must include both summer peak kW load, kW nameplate, and annual kWh usage, or the annual gas usage (in therms) for gas projects.
- I. Each analysis must be provided in a datasheet format such as Excel with savings calculations and algorithms. Calculations in PDF format are not acceptable.

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<sup>1</sup> See TRM page 701-702, under Appendix M guidelines for Early Replacement Conditions

- a. Calculations must clearly define the baseline energy usage, code compliant energy usage, and the proposed energy usage.
  - i. Multiple measures to the same system should be interactive.
  - ii. If the measure is a unit replacement that is not defined in the NYS TRM, New York State Energy Code must be used as baseline.
- b. It is recommended to provide an explanation of the calculations used in the analysis.

### 5.8.3 Extended Life - Custom

Energy efficiency upgrades for equipment that has surpassed its Effective Useful Life (EUL) are able to apply for the Extended Life incentive. **In this category, the measure is eligible for maximum energy savings and incentives. Energy savings are based on the existing equipment efficiency and operating conditions.**

Extended Life energy efficiency upgrades may be eligible for performance-based Custom incentives at the custom measure rate. Final custom measure eligibility, savings and incentives are determined at the sole discretion of Con Edison.

The following is the minimum information required for energy conservation measures (ECM's) related to extended life equipment. **Only multifamily centralized equipment is applicable for extended life<sup>2</sup>.**

For a measure to be eligible for extended life equipment incentives:

1. At the time of application, the upgrade must meet the following criteria:
  - a. Age Rule: The equipment to be replaced must be aged at least 125% of its prescribed effective-useful life in cases where the age of the equipment can be determined to this extent. If the equipment is determined to be less than 125% of its EUL, it is not eligible for SC treatment regardless of consumption or any other factor.
  - b. Energy Use Rule: Applies only in cases in which the age of the existing equipment cannot be determined relative to 125%; existing equipment of most types must consume at least 20% more energy than the new high efficiency equipment to do the same amount of work, and at least 35% more for chillers.
2. There must be a history of significant repair or replacement with used equipment.
3. The existing equipment must be fully functioning.

### Required Project Documentation

Projects with measures listed in the Technical Resource Manual (TRM) which includes all measures in the table below must provide only the first set of requirements. Projects with measures not listed in the TRM must include all requirements on this sheet.

Category	Measures	EUL (years)
Compressed Air	Air Compressor	13
	Refrigerated Air Dryer	13
Domestic Hot Water	Indirect Water Heater	15
	Storage Tank Water Heater	15
	Tankless Water Heater	20
	Heat Pump Water Heater – Air Source (HPWH)	10

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<sup>2</sup> Multifamily centralized equipment applies to equipment serving building, building wings, or campuses rather than individual tenant units. Examples include boilers (space heating and DHW), furnaces, chillers, ventilations. For the central systems, the eligibility includes distribution devices and auxiliary equipment such as controls, motors, pumps, fans, air handling units, duct and pipeline mains. For example, apartment PTACs with hydronic hot water coils, served by a central hot water boiler.

Heating, Ventilation and Air Conditioning (HVAC)	Air Conditioner (Rooftop Unit, PTAC)	15
	Heat Pump (Air Source, PTHP)	15
	Heat Pump (Water Source)	25
	Chiller (Air and Water Cooled)/ Air Handler	20
	Cooling Tower	15
	Combination Boiler & Water Heater	20
	Condensing Gas-Fired Unit Heater for Space	18
	Boiler (Hot Water, Steel Water Tube)	24
	Boiler (Hot Water, Steel Fire Tube)	25
	Boiler (Hot Water, Cast Iron)	35
	Boiler (Steam, Steel Water Tube)	30
	Boiler (Steam, Steel Fire Tube)	25
	Boiler (Steam, Cast Iron)	30
	Furnace (Gas-Fired)	23
Refrigeration	Unit Heater (Gas-Fired)	13
	Infrared Gas Space Heater	17
	Air Cooled Refrigeration Condenser	15
Other	Equipment (Condensers, Compressors, and Refrigerated Case/ Walk-in Cooler or Freezer	15
	Clothes Washers	14
	High Performance Glazing (Windows)	20

*\*Please note that EUL values listed above are subject to change per the latest version of the TRM (Appendix P). The EUL values listed in the current TRM will take precedence.*

### **All Projects Require Submission of the Following:**

- A. A detailed scope of work that contains all equipment being proposed for replacement under extended life. Must include the sequence of operation for the existing system.
- B. A formal cost proposal for the proposed new energy efficient equipment as well as the minimum code-compliant equipment as provided to the customer. Must include spec sheets, make and model number of the equipment on company letterhead<sup>3</sup>.
  - a. Cost proposal, spec sheets, make and model information of the higher efficient proposed equipment.
  - b. Cost proposal, spec sheets, and make and model information of code compliant proposed equipment.
- C. Cooling/heating capacity of the existing equipment and the proposed new energy efficient equipment and its efficiency rating

<sup>3</sup> The TRM calls for use of the dual baseline method. It assumes that without the program, at the end of the default functional period (DFP) the customer would have installed equipment that meets the code and the customer would not have purchased any equipment until the future end of the DFP.

- a. Supported by manufacturer's equipment spec sheets or industry standard performance testing results for existing equipment.
  - i. The NET capacity is to be used, and NOT the GROSS capacity (the net capacity is typically a little lower than gross, as it removed the fan power and associated heat from the calculation).
  - ii. In instances where the manufacture spec sheet is not retrievable (for very old, existing equipment), it is acceptable to use the building code or the ASHRAE standard that was applicable the year the unit was installed.
- D. Age of the existing equipment
  - a. Supported by original invoice, bill of sale, construction permit, service log, or nameplate date
- E. Estimated remaining equipment life until total failure (beyond repairs)
  - a. This should be a best estimate based on the working condition of the existing equipment (at a minimum you should compare this to the EUL of the equipment per the TRM).
- F. Actual repair cost, including component replacement for at least the past 18-24 months
  - a. Supported by invoices or proof of payment
  - b. Total repair cost must be added and summarized in a document<sup>4</sup>
- G. Proof of equipment functionality
  - a. Supported by Con Edison pre-inspection while equipment is operating, BMS trend data, and/or equipment service log.

**All Non TRM Measures Require the Following Additional Information**

- H. An engineering analysis of estimated energy consumption of the existing equipment, estimated energy consumption of the code compliant equipment and the proposed new energy efficient equipment.
  - a. The engineering analysis is for the code compliant equipment AND proposed equipment
- I. Each engineering analysis must include both summer peak kW load, kW nameplate, and annual kWh usage, or the annual gas usage (in therms) for gas projects.
- J. Each analysis must be provided in a datasheet format such as Excel with savings calculations and algorithms. Calculations in PDF format are not acceptable.
  - a. Calculations must clearly define the baseline energy usage, code compliant energy usage, and the proposed energy usage.
    - i. Multiple measures to the same system should be interactive.
    - ii. If the measure is a unit replacement that is not defined in the NYS TRM, New York State Energy Code must be used as baseline.
  - b. It is recommended to provide an explanation of the calculations used in the analysis.

#### 5.8.4 Secondary Steam and Oil – Custom

The Program offers incentives to projects that reduce both electricity and district steam provided by Con

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Edison or oil. Such projects may receive incentives for the reduction of Secondary Steam or Oil. Secondary Steam or oil savings are defined as secondary savings achieved by a measure that primarily reduces electric energy use.

To qualify for Secondary Steam or Oil incentives, a project must:

1. Have an eligible Con Edison electric account
2. Have active Con Edison steam service for projects looking to claim secondary steam savings or provide annual oil (Fuel Oil No. 2 and 4 only) usage and proof of purchase for buildings looking to claim oil savings
3. Install one of the eligible measures. Measure must save both Con Edison electric energy and Con Edison steam energy or oil
4. Building with interruptible gas service is not eligible

The following measure/project types do not qualify for incentives:

1. Measures that save only Con Edison steam are not eligible for this program
2. Projects must not include installation of space heating and domestic hot water equipment fueled by gas, steam, or other delivered fuel

The following measures are eligible for secondary steam incentives:

1. Envelope upgrades to existing buildings that reduce the building cooling and heating loads.
2. Building Automation Systems (BAS) that reduce both Con Edison electricity and Con Edison steam consumption.

All Secondary Steam and Oil projects will be reviewed on a case by case basis to undergo M&V.

## **6 Project Costs and Invoicing Requirements**

When submitting invoices with completion certificates, customers must provide the Program Administrators with detailed invoices identifying the following:

- References to the project, including the project address, and related items listed in the scope of work that were approved by the program. Changes to the approved scope of work must be submitted to the Program Administrator and its IC for approval.
- Equipment installed (Make/Model Number): This is required to verify the equipment installed qualifies for Program incentives.
- Quantity, purchase, and delivery date of equipment installed: This is used to verify the quantity of equipment installed aligns with the Program application. (This is optional, unless requested by the Program Administrators.)
- Itemized labor and material costs for all installed equipment: This is required to verify individual costs.
- The final invoice provided to the Program Administrators must be the same invoice the customer is receiving and match the Certificate of Completion.
- Each line item must include a brief description. For example, include the equipment tag for an air handler as "AHU 13B", as well as the make and model number.

- If a PC is receiving incentives on behalf of a customer, a line item stating “Program credit” with an invoice credit must be documented on the invoice. The invoice credit must reflect the same incentive amount the customer would receive had they completed the submission themselves for the same project.
- In the event a custom project submitted for incentives is a portion of a larger scope that includes non-energy efficiency line items, the customer will must provide invoice(s) that clearly outline the specific project description and cost that is being applied to the project in the program.

## 7 Program Manual Revisions

The following is a summary of sections updated in this version of the manual. Review the entire manual to ensure your project is eligible in the program.

Section	Summary of Revisions
2.5 Non-Wires Solutions (NWS) Adder Incentives Eligibility	Measure eligibility and network eligibility were updated
3.4 Incentive Structure	Project caps were included in Program Manual for clarity  Steam trap projects with more than 1,000 traps will receive custom incentive rate.  Incentives added for secondary steam and secondary oil.
5 Eligible Measures and Technical Requirements	Clarification on measure guidelines for the following measures; Lamps and Fixtures, Boiler Replacement, Water Heater Replacement and Energy Management Systems.  New measure guidelines created for the following custom measures; Chiller Replacement, Ventilation Overhaul, Burner Replacement, Linkage-less Burner Control and Energy or Heat Recovery Ventilators.
5.8.4 Secondary Steam and Oil - Custom	New section created to describe program requirements for secondary steam and secondary oil incentives.

## 8 Terms and Conditions

**ELIGIBILITY:** Con Edison's Multifamily Energy Efficiency (MFEE) Program offers financial incentives for efficiency measures in common areas and eligible building systems to customers who are property owners or managers (customers) of multifamily residences with five or more dwelling units, as well as energy surveys. Customers must receive Con Edison gas and/or electric delivery service, and be in good standing. Incentives are available to customers for the purchase and installation of energy efficiency measures at the location where the qualifying project is to be installed. Con Edison will not offer financial incentives and/or rebates for the same eligible measure to those customers who have received financial incentives or rebates from the New York State Energy Research and Development Authority (NYSERDA) and/or another electric or gas utility company.

**QUALIFYING PROJECTS AND MEASURES:** Qualifying projects include electric or gas energy-efficiency measures identified as eligible for MFEE Program incentives by Con Edison's implementation contractor, Willdan, based on an energy survey of the building. Qualifying projects do not include any electric or gas energy-efficiency measures or energy efficiency equipment or services purchased, contracted for, or installed prior to the program start date.

**PROGRAM APPLICATION:** By signing this Program Application, the customer authorizes Willdan or its subcontractors to enter this building for the purposes of conducting an energy survey of the building's common area and individual units, installing MFEE Program measures in individual units, installing any energy-efficiency measures subsequently agreed to in a Scope of Work, inspecting installed measures, and evaluating the performance of installed measures.

**INCENTIVE AMOUNTS:** The amounts of the incentives for which qualifying projects are eligible are set forth in the program brochures. Con Edison's decision on these issues will be final. Con Edison reserves the right to change the measures and incentives at any time throughout the program cycle.

**CUSTOMER WORK AUTHORIZATION AND PROJECT WORK PLAN:** Willdan, or its subcontracted partners, will meet with the customer to discuss individual building objectives, provide information on alternatives, discuss process, and create a work project and schedule. Willdan may select and provide one or more approved installation subcontractors to complete the measure-installation work, or the customer may select one or more contractors from an approved list of participating contractors. To be included on the approved list, a contractor shall participate in a required Program Orientation, submit contractor-qualification forms, provide documentation of required insurance, agree to follow program guidelines and protocols, including program reporting and verification requirements, and otherwise be in good standing with Con Edison. Willdan may schedule and/or monitor the required installation services.

**IMPLEMENTATION OF WORK, PAYMENT OF INCENTIVES, INSPECTION REQUIREMENTS:** The customer must pay its share of the cost for each measure to be installed pursuant to the Scope of Work at a time not later than the completion of installation of that measure. When Willdan confirms that installation of a specific measure is satisfactorily completed, Willdan will arrange for payment of the incentive for that measure to the customer, either directly or by Con Edison, or, if authorized to do so by the building owner, directly to the installation contractor for that measure. Willdan's quality-assurance and/or quality-control inspectors and/or Con Edison, in their sole discretion, may schedule and conduct a post-installation inspection to ensure satisfactory measure installation. Incentive checks will be sent approximately six weeks after Willdan confirms satisfactory installation. With advance notice to the customer, following completion of the project and in order to provide Con Edison with an opportunity to review the operation of the energy-efficiency measures for program evaluation purposes, the customer agrees to cooperate with any effort by Con Edison or its contractors and subcontractors, to make or to have made follow-up visits to customer facilities, and the customer shall provide building energy system data, supporting documentation, and otherwise cooperate fully in support of this effort.

**CUSTOMER INFORMATION:** Customer agrees that Con Edison may provide customer information including name, account number, electric and/or gas consumption data and electric and/or gas energy savings to its third-party evaluation contractor for program evaluation purposes. The evaluation contractor will keep customer information confidential. Customer information may also be provided to the New York State Public Service Commission. Any customer information provided to the New York State Public Service Commission will be aggregated with information about other customers and not personally identifiable.

**TAX LIABILITY and CREDITS:** Con Edison is not responsible for any taxes which may be imposed on the customer as a result of measures installed under this program. Each customer must provide a valid Federal Tax I.D. number.

**DISPUTES:** Con Edison will have sole discretion to decide on the final resolution of any issues including but not limited to eligibility or incentives.

**PROGRAM CHANGES:** Con Edison reserves the right to change, modify, or terminate this program at any time without any liability except as expressly stated herein. Con Edison will honor all written commitments made in Scope of Work provided to customers prior to the date of any change, modification or termination of this program, provided that project installations are fully completed within the time specified in the Scope of Work.

**PROGRAM EXPIRATION:** This program will expire December 31, 2022, when funds are depleted, or when the program is terminated, whichever comes first.

**DISCLAIMER:** Con Edison and Willdan its implementation contractor, make no representations or warranties, expressed or implied, and do not guarantee that implementation of energy-efficiency measures or use of the equipment purchased or installed pursuant to this program will result in energy-cost savings. Accordingly, Con Edison recommends that all customers consider engaging qualified engineers or other qualified consultants to evaluate the risks and benefits, if any, of such implementation and use on energy consumption, cost savings, or operation of customers' facilities.

**INSTALLATION REQUIREMENTS:** All work must be in full compliance with the requirements of applicable laws, rules, and regulations of authorities having governmental and regulatory jurisdiction. Work must be performed by subcontractors or participating contractors approved by Willdan and Con Edison for participation in the MFEE Program. Additionally, work must be completed within 45 days of the commitment execution date on the Owner's Agreement document. Affordable housing projects must be completed within 12 months of the commitment execution date. In the removal of old equipment, the applicant confirms that, as a requirement of the program, the owner or any subcontractor carrying out installation of measures under this program shall remove and dispose of any and all equipment or materials that are replaced or removed in accordance with all applicable laws, rules, and regulations. If these requirements are not met, then Con Edison may cancel, withdraw, and revoke the incentive funds from the project.

## Glossary of Terms

*This glossary provides definitions of key terms used in this Program Manual.*

**Construction Complete Post Inspection:** The Program Administrators will inspect the condition of the site after completion of the project.

**Custom Project:** A project that includes custom measures. Custom measures are eligible measures that are not listed in the New York State Technical Resources Manual. Custom calculations are required to determine the amount of energy savings and incentive amount..

**Direct Install:** Direct install measures are available for free if installed by direct install contractors provided by the Implementation Contractors. In downstate NY projects, this includes in-unit measures such as LED lights, low flow showerheads, and faucet aerators. In upstate NY, with the exception of O&R, common area LED lights, exit signs, common area room occupancy sensors, and ½" and ¾" DHW pipe insulation are also considered direct install measures and are offered for free if installed by direct install contractors provided by the Implementation Contractor. If an upstate customer, with the exception of O&R, chooses a contractor that is not provided by the Implementation Contractor, they will receive the incentive outlined in Section 3.2.2, instead of receiving the measure for free.

**Eligible Customer:** Customers who are property owners or managers of existing affordable multifamily buildings with five (5) or more residential units.

**Energy Audit:** Energy audits are also known as energy assessments. For comprehensive projects, energy audits are conducted by approved Energy Providers before a project begins as part of the technical assistance process and will meet either an ASHRAE Level I+, AHSRAE Level II, or the IPNA standard. For non-comprehensive projects, audits may still be conducted, but they are not required to meet the standards required for comprehensive projects. During an audit, the Energy Provider will evaluate the building to identify energy efficiency opportunities and develop a scope of work.

**Energy Efficiency Measures (EEMs):** Energy-using appliance, equipment, control system, or practice whose implementation results in reduced energy use while maintaining a comparable or higher level of service. Categories of EEMs include HVAC measures; base load measures such as lighting, process loads, plug loads, etc.; envelope measures; and non-interactive measures such as service water heating.

**Energy Provider:** Approved Energy Providers complete energy audits through NYSERDA's FlexTech Program before a project begins to help customers identify energy efficiency opportunities and determine an initial scope of work and capital planning.

**FlexTech Program:** A NYSERDA program which shares the cost of and provides additional supporting regarding an energy audit to facilitate the implementation of clean energy and/or energy efficient technologies in a building.

**Implementation Contractor (IC):** The Program Administrator's Implementation Contractor oversees coordination of the project. Communication from the customer and/or Participating Contractor (PC) will be facilitated through the Program Administrator's IC.

**Incentive Cap:** The maximum incentive an Energy Efficiency Measure or project is eligible to receive through the Affordable Multifamily Energy Efficiency Program.

**In-Unit Measures:** Energy Efficiency Measures installed within the primary dwelling of a resident.

**Market Rate Multifamily Offering:** Multifamily programs offered to non-LMI Customers.

**New York State Research and Development Authority (NYSERDA):** A New York State public-benefit corporation established in 1975. NYSERDA offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels.

**Notice to Proceed:** An email outlining estimated project savings and incentives issued by the Program Administrator that triggers the start of work on a project. Any work started before the Notice to Proceed will not qualify for incentives.

**On-site Inspection:** A pre- or post-installation inspection that is done in-person by the Implementation Contractor or the Program Administrator.

**Participating Contractor (PC):** A contractor that will install Energy Efficiency Measures through the project. Participating Contractors must be approved by the Program. Participating Contractors may accept incentive payments on behalf of customers. The program can onboard contractors into the Participating Contractor network at any time.

**Preliminary Incentive Offer Letter (PIOL):** Issued after pre-inspection for custom projects, and after finalizing the scope of work for comprehensive projects. The PIOL includes an incentive offer and date range for which the offer is eligible. The PIOL must be signed by the customer and returned to the Program Administrator's IC within 30 days.

**Prescriptive Project:** A project that includes prescriptive measures only. Prescriptive measures are those listed in the New York State Technical Resource Manual (TRM) and have set incentive rates.

**Scope of Work:** A detailed explanation of work that will be performed as part of a contract or subcontract. It defines project-specific activities, deliverables, and timelines for a vendor providing services to the client.

**Statement of Completion (SOC):** A document that details the Energy Efficiency Measures that were installed through the project. Must be signed and submitted to the Program Administrator at project completion.

**Technical Assistance:** Services provided by Program Administrators and Energy Providers to help customers identify energy efficiency opportunities and develop comprehensive Scopes of Work. Energy audits are performed as a form of technical assistance.

**Technical Resource Manual (TRM):** The New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs - Residential, Multifamily, and Commercial/Industrial, known as the Technical Resource Manual (TRM), provides a standardized, fair, and transparent approach for measuring program energy savings across New York State's energy efficiency programs. To do so, the TRM provides standardized energy savings calculations and assumptions at the measure level for estimating energy and demand savings.

**Virtual Inspection:** A pre- or post-installation inspection that is done virtually by the Implementation Contractor or the Program Administrator. Virtual inspections will include either: 1) a live video call walkthrough with the contractors or energy providers and the inspector (inspector takes screenshots and/or notes to document findings); or 2) date and time-stamped pictures and/or video recordings that clearly existing equipment to be replaced (in case of pre-inspection) or the new energy efficient equipment (in case of post-inspection).