



**conEdison**

# **Real-Time Energy Management (RTEM) Pilot Program Guidelines**

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Program Year 2024

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## 1. Pilot Program Overview

The Consolidated Edison Company of New York, Inc. (Con Edison) Real-Time Energy Management (RTEM) pilot program offers incentives for implementing operational energy conservation measures identified by RTEM systems.

RTEM (sometimes also known as Monitoring-Based Commissioning or Energy Management Information Systems) is a combined hardware and cloud-based software solution that continuously monitors equipment performance to detect faults and identify opportunities to optimize energy use. Implementing recommended measures can reduce energy and maintenance costs while increasing operating efficiencies.

The key elements of RTEM are:

- Collection and visualization of building data from energy-consuming systems
- Data analysis through automated fault detection and diagnosis (FDD) and energy information systems (EIS) to identify issues and operational ECMs
- A process for implementing operational measures based on analytics and verifying savings

Projects accepted into the RTEM Pilot Program will install/calibrate RTEM systems and will then be eligible for incentives over a three-year period. In the first year after installation/commissioning, participants will submit up to two incentive applications for operational measures implemented at accepted project sites within the previous 4-12 months.

In the second and third years, participants will submit one incentive application per year per project site for different operational measures implemented within the previous 12 months. All incentive applications must be submitted within 39 months of RTEM system installation.

Applications will include the list of implemented measures, along with engineering calculations and all pre- and post-data necessary to validate the calculations.

To get started, determine your project’s eligibility, and complete an RTEM Pilot Program Application. If you have any questions, please email [RTEM@conEd.com](mailto:RTEM@conEd.com).

Projects will be reviewed in order of submission and only commercial and multifamily buildings with centrally controlled building systems will be accepted. All RTEM projects must be installed and Completion Certificate documents must be returned to Con Edison by December 15, 2024.

RTEM customers are encouraged to participate in Con Edison’s [Smart Usage Rewards](#) demand response program.

## 2. Program Process



## 2.1 Project Enrollment & RTEM Installation

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### Verify Eligibility

- Verify eligibility for the Pilot Program (customer, site, and project) as specified in the [Eligibility Requirements section](#).
- To be eligible for incentives, installation of RTEM may not begin until a Notice to Proceed has been issued by Con Edison.

### Submit Program Application Package

A Program Application package is required for all RTEM projects. Customers or Participating Contractors should email applications to [RTEM@conEd.com](mailto:RTEM@conEd.com) with a subject line of “RTEM Pilot Program Application – [Site Address]”. The Program Application Package must include the items listed below with the specified file names:

- **Completed RTEM Pilot Program Application Form:** Account name must match the name of the Con Edison account holder (customer). (Filename: Program Application – [Site Address])
- **Scope of Work and Installation Timeline:** A detailed scope of work that contains a description of the RTEM system, all building systems being monitored, and the timeline for installation and commissioning. (Filename: Scope of Work – [Site Address])
- **Cost Estimate for Proposed Work:** Costs for RTEM installation and subscription. See notes about format and eligible expenses below. (Filename: Cost Estimate – [Site Address])

Con Edison may request a demo of the RTEM system to confirm eligibility.

### Notice to Proceed & Completion Certificate

Con Edison will issue a Notice to Proceed stating that the project has been accepted into the RTEM program, at which point RTEM system installation can begin. Con Edison will simultaneously provide a Completion Certificate. Once RTEM installation is complete, the Customer and Participating Contractor must sign and return the following documents:

- Completed Completion Certificate
- An installation commissioning report including all actual and virtual data points that will be monitored.
- Detailed invoices that meet the following criteria:
  - o The final invoice provided to Con Edison must be the same invoice the customer is receiving and match the Certificate of Completion.
  - o Eligible costs include equipment and labor costs (except customer internal labor) related to hardware equipment and setup, software setup, software subscription, and/or fees for RTEM consultant and other related services. Other costs will not be included with the total project cost when making incentive calculations, including costs related to taxes, internal labor, shipping, administration, and project management and engineering. Labor and material costs shall be presented as separate line items.
  - o Each line item must include a brief description.
  - o In the event a RTEM project submitted for incentives is a portion of a larger scope, the customer will provide invoice(s) that clearly outline the specific project description and costs that is being applied to the project in the program.

After the RTEM system is fully commissioned, participants will submit an installation commissioning report with the actual and virtual data points to be monitored. Con Edison will then remotely review the system and confirm it is functioning as specified. After this review is complete, customers will receive a Program Enrollment Notice and a Project ID number.

## 2.2 Measure Identification

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Customers and/or Participating Contractor will use the RTEM system to continuously identify and recommend operational measures.

## 2.3 Measure-Level Pre-Approval (Optional)

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The Customer or Participating Contractor can submit recommended measures to Con Edison for pre-approval before implementation. This is recommended for at least the first set of identified measures.

To secure pre-approval:

- Customer or Participating Contractor will submit a completed Measure Information Spreadsheet marked for “pre-approval” and required supporting documentation
- Con Edison will provide pre-approval to implement the identified measures including:
  - Agreed upon timeframe of trend data and other data requirements
  - Estimated incentive amount based upon projected pre-approved savings, which will be subject to inspection and post-verification

## 2.4 Measure Implementation

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Implement the recommended measures.

**Note:** Customers are responsible for monitoring, tracking, and maintaining implemented measures. Con Edison may verify that implemented measures are not manually overridden and continue to be monitored by the RTEM system during the 3-year period in which RTEM projects are eligible for incentives. Overriding implemented measures in ways that reduce or eliminate energy savings might result in deductions to future RTEM incentives for a given project.

## 2.5 Incentive Application Package

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Customers or Participating Contractors must email a complete Incentive Application Package to RTEM@conEd.com with a subject line of “RTEM Incentive Application [#] – [Site Address]”. The Incentive Application Package must include the items listed below with the specified file names:

- Completed **RTEM Incentive Application Form** (Filename: Incentive Application – [Site Address])
- **Form W-9 of specified incentive recipient** as indicated in the signed application. The Form W-9 submitted must match the name of the payee as indicated on the RTEM Pilot Program Application and must be the latest version available on the IRS website at the time of application to the Pilot Program. (Filename: Form W-9– [Site Address])
- Completed **Measure Spreadsheet** – All implemented measures for which the applicant is seeking incentives must be listed and numbered in a table that also includes calculated energy savings. (Filename: Measures – [Site Address])
- **Energy Savings Analysis and Supporting Data** – All calculations must use generally accepted engineering practices and all calculation methodologies must be clearly documented. Supporting documentation must include:

- o All relevant pre- and post-implementation trend data demonstrating:
  - ◆ The implementation of the measure
  - ◆ The mechanical impact resulting in energy usage (e.g., both reduced static pressure and fan speed)
  - ◆ Continued compliance with building occupant requirements (e.g., satisfactory ventilation, indoor air quality)
- o Sufficient equipment design information and/or TAB (Testing, Adjusting & Balancing) reports for equipment relevant to implemented measures
- o As-built control drawings (if available) that are relevant to affected systems and implemented measures.
- o Baseline and post-implementation control logic (control improvement projects only)
- Post-implementation control logic should include the settings and formulas programmed in the BAS for all relevant conditions.
- Exception for Automated System Optimization (ASO) projects only: If precisely documenting a control logic is impractical, customers may instead submit trend data that covers all seasons relevant to the implemented measure. See section 3.2 for a definition of ASO projects
  - o A separate file should be provided for each implemented ECM, based on the number assigned in the Measure Spreadsheet (Filename: Calculations – Measure 1, Calculations – Measure 2, etc.)
  - o If there are interactive effects between different measures included in the application, those interactive effects should be noted and accounted for in the savings calculations
  - o A weather bin analysis using TMY3 data should be used for weather dependent measures. Bin analyses should align with Con Edison’s Weather Normalization Standards Memo unless Con Edison grants a written exception.
- **Date of Implementation** – Invoices, work order or operational log entry proving measure implementation and date of implementation. (Filename: Implementation – [\[Site Address\]](#))
- **Measure Costs** – If any costs were incurred to implement measures, supporting invoices and receipts must be provided. These costs will increase the maximum incentives available for this application. (Filename: Costs – Measure 1, Costs – Measure 2, etc.)
- **RTEM System and Service Costs** – Costs for RTEM installation, subscription, or associated services that have been incurred since the site began participating in the RTEM Pilot Program. (Filename: RTEM Costs – [\[Site Address\]](#))
- **RTEM System Recommendations Report** – Report must include all significant RTEM system recommendations (including capital upgrade recommendations) made since the previous incentive application and their status. For the first incentive application, report must include all significant RTEM system recommendations since the RTEM system was installed (Filename: RTEM Recommendations– [\[Site Address\]](#))

Each specific measure will only be incentivized once, so each application must include new measures that were not previously incentivized.

## 2.6 Technical Review

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Con Edison will review submitted materials to verify energy savings calculations, including the site’s energy baseline and assumptions used in the energy analysis for each measure.

## 2.7 Inspection

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Con Edison will perform a site inspection to verify the building equipment information provided along with any other data points needed to verify energy savings calculations and whether program requirements have been met. All reviews by Con Edison, including Con Edison's post-inspection, serve only to determine the appropriateness of incentive payments and do not otherwise review the sufficiency of work performed.

Consistent with the contract between Con Edison and the Participating Contractor and without limitation, the Participating Contractor shall comply with applicable laws, ordinances, regulations, codes, and all Con Edison requirements applicable to the Program.

## 2.8 Final Technical Review

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Once inspection is concluded, Con Edison will perform a final technical review incorporating any post-inspection findings.

# 3. Eligibility Requirements

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## 3.1 Customer and Site Eligibility

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- Eligible sites must have directly metered commercial or industrial electric Con Edison accounts and more than 300 kW average peak demand on a rolling 12-month basis. Note: the size requirement for RTEM is greater than for the Commercial & Industrial and Multifamily Energy Efficiency Program.
- To be eligible for gas incentives, sites must also have Con Edison gas accounts and must not have service class of SC-14 and must not receive gas service via a negotiated contract.
- Sites must have building automation systems (BAS) or building management systems (BMS) already installed that will be integrated with the selected RTEM system.
- Site must not have received incentives from NYSEERDA's RTEM program.
- Site must not have received Con Edison incentives for a BAS installation or upgrade.
- Savings from RTEM systems should not overlap from previously incentivized measures through the C&I or Multifamily programs such as VFDs and EC motors
- Control systems must be in working order and must be capable of interfacing successfully with the selected RTEM system.
- Customer must plan to have the site occupied year-round.
- Sites must have dedicated building management staff or a service contractor capable of implementing RTEM-recommended energy conservation measures. At least one of these individuals should hold one of the following certifications: PE (any state), BEMP, HPDP, BCxP, CEM, CBCP, EMP.
- Customer must commit to energy monitoring for a minimum of 3 years.
- Multifamily sites must have centrally controlled cooling systems

Customers may apply for incentives for multiple sites they own or manage, provided that each participating site meets the eligibility criteria stated above.

## 3.2 Project Eligibility

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Eligible RTEM projects must include the following capabilities, as further detailed in the RTEM Program Application:

### Energy Information System:

- Captures operational trend data at intervals of 15 minutes or less
- Captures energy usage trend data at intervals of 60 minutes or less
- Energy consumption visualization
- Energy usage KPI tracking
- Energy performance analysis
- Operational data visualization
- Measurement and verification of energy savings
- Energy reporting and data export
- Can normalize for weather

### Fault Detection and Diagnostics:

- FDD key performance (KPI) tracking
- Fault detection
- Fault prioritization
- Fault reporting and data export
- System recommendations based on transparent engineering calculations

### Data Management and Storage:

- Database support with sufficient capacity to store all energy usage data from meters/submeters for a period of at least 3 years
- Detects data quality issues
- Stores recommendations and the date of recommendation for at least 1 year. System should also allow for updating the status of recommendations
- Has local data store to buffer data elements without loss during cloud connectivity interruptions
- Tracks manual overrides of programmed schedules and setpoints

### RTEM projects applying for Automated System Optimization (ASO) incentive levels must also meet the following requirements:

- Automated control based on parameters identified by optimization algorithms (e.g., start-up, ramp-down, settings, setbacks)
- All changes to sequences must be documented
- Changes to system should be based on thermal load and indoor air quality requirements
- ASO cannot be used to control systems that require personal supervision under the applicable fire code

**Note:** Projects that only control lighting systems are not eligible.

In addition to meeting all other requirements of the Pilot Program, projects for which a Notice to Proceed has been issued must have RTEM installed and a signed and returned Certificate of Completion within 90 days of the issuance of the Notice to Proceed.



### 3.3 Measure Eligibility

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Eligible measures must affect the operations of equipment that has already been installed. Eligible measures must be related to building systems monitored by the RTEM system and have been identified by the RTEM system itself.

Some examples of common measures are:

- Reducing equipment runtime
- Eliminating simultaneous heating and cooling
- Optimizing economizer operation
- Optimizing supply air temperature
- Optimizing ventilation rates
- Optimize zone/setback temperature setpoints
- Optimize chilled water temperature reset
- Optimizing ventilation rates
- Instituting volume control for pumps and fans
- Replacing leaky valves

Minor repairs and upgrades (e.g. replacing a leaky valve) are eligible measures under the RTEM program. However, customer capital projects or energy efficiency measures requiring the installation of new equipment will not be eligible for RTEM incentives and should seek incentives from Con Edison's [C&I Energy Efficiency Program](#).

Sensors and software that optimize systems that are already controllable can be incentivized by RTEM. However, controls that extend the reach of BAS to additional building systems are not eligible for RTEM incentives; customers should seek incentives for these BAS upgrade projects from Con Edison's [C&I Energy Efficiency Program](#).

Measures that achieve electric and gas savings are eligible for incentives, provided the customer, site, and individual accounts meet the eligibility criteria detailed above. Measures can also receive incentives for Con Edison district steam savings if those measures also have electric and/or gas savings. A measure that only saves Con Edison district steam is not eligible for incentives.

Measures that impact the operation of equipment that was incentivized by Con Edison will not be eligible for incentives.

### 3.4 Participating Contractor Eligibility

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All contractors who participate in the RTEM Pilot Program must be approved Participating Contractors and do the following:

- Complete a Participating Contractor application and submit a project into the RTEM program. The Participating Contractor application will not be approved until the associated project submits a RTEM Pilot Program Application
- Provide updated IRS Form W-9 and Certificate of Insurance policy (minimum \$1M)
- Complete a Participating Contractor Agreement
- Attend RTEM program orientation
- Adhere to program requirements
- Maintain an approved Participating Contractor status

Please note that the RTEM pilot program doesn't distinguish between "contractors", "service providers" and "system

providers.” A participating contractor may play any, all, or none of these roles within a given project. In instances where the vendor, acting as the system provider, does not directly undertake the on-site tasks and instead subcontracts the work to a service provider or installer, the system provider will require to submit the workers’ compensation and associated documentation from the service provider who is performing on site work.

Only Participating Contractors in good standing, consistent with the Participating Contractor participation requirements, will be allowed to participate in the RTEM Pilot Program.

### **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. 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.

## **4. Incentives**

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### **4.1 Incentive Rates & Payment**

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Con Edison will provide incentives as follows:

Savings from systems controlled by Automated System Optimization (ASO)

- \$0.35 per kWh of electricity saved
- \$5 per therm of gas saved
- \$80 per MLb of secondary Con Edison district steam savings (associated measure must also have electric and/or gas savings)

Savings from systems monitored by RTEM Fault Detection Systems

- \$0.20 per kWh of electricity saved
- \$2.50 per therm of gas saved
- \$40 per MLb of Con Edison district secondary steam savings (associated measure must also have electric and/or gas savings)

An additional incentive of \$0.10 per kWh of electricity savings will be provided for measures impacting heat pump operations.

The full incentive amount will be paid to the payee indicated on the Pilot Program Application. Note that installing an RTEM system does not guarantee an incentive. Incentives will only be paid for realized energy savings.

### **4.2 Incentive Maximums**

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Incentives cannot exceed 50% of the cost of eligible measure(s) plus the RTEM costs. RTEM costs may include hardware, software setup, software subscription, and/or service costs. All costs submitted are subject to Con Edison review and may be capped for incentive calculations at Con Edison’s sole discretion. Customer internal labor costs will not be included with total project cost when calculating incentive caps.

### 4.3 Tax Liability

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Incentives may be taxable for most taxpayers. If an 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 because of the payment of program incentives. All customers must supply their Federal Tax Identification number to Con Edison to receive a Program Incentive. Please consult with your tax professional for information on the tax treatment of the incentives.

## 5. Measurement & Verification (M&V)

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The overall intent of M&V for RTEM projects is to assess the accuracy of savings calculations and to assist Con Edison with information necessary for the planning of future programs. All participating customers receiving incentives must agree to facilitate any Con Edison M&V activities for 24 months following implementation of operational measures. Con Edison may contact the applicant to obtain the information necessary for the completion of each activity. Customers' timely responses are critical to ensuring that M&V activities are completed on time.