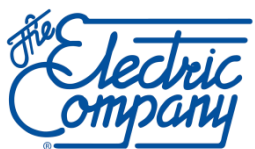


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2014 PROGRAM MANUAL

# Large Commercial MTP

El Paso Electric



El Paso Electric

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## PROGRAM OVERVIEW

### BACKGROUND

The El Paso Electric Large Commercial Market Transformation Program (MTP), herein referred to as the Program, was developed in 2009 to comply with the State of Texas energy efficiency goals to reduce peak electric demand. In 1999, the state legislature passed Senate Bill 7 (SB 7), which restructured the state's electric utility industry and set initial energy efficiency goals for investor-owned utilities. In 2007, House Bill 3693 (HB 3693) was passed and expanded these energy efficiency goals.

**The Program and all associated services are available to Participants at NO COST.**

### PROGRAM OBJECTIVES

The 2014 Large Commercial MTP is a market transformation program offered to large commercial electric distribution customers in the El Paso Electric Company's Texas service area.

Program Objectives include:

- Encourage delivery of energy efficiency products and services to the target market segment(s).
- Transform these markets over time by addressing specific barriers that hinder adoption of energy efficient technologies and practices.
- Provide a suite of educational and supporting services to facilitate the implementation of energy efficiency projects.

The Program seeks to accomplish these objectives through a variety of services. First, the Program helps senior managers and facility supervisors operate their buildings more efficiently by understanding the technical and financial benefits of investing in energy efficiency and developing a plan to make energy efficiency improvements. Customers enrolling in the Program, referred to as Participants, receive technical and energy management assistance to help them make decisions about cost effective investments in facility energy efficiency. Participants also receive direct cash incentives for completed energy efficiency projects.

Other program services may include the identification and evaluation of opportunities for energy efficiency measures and communications support. The Program works with Participants to determine the most appropriate set of services to offer in order to address both immediate and longer-term needs.

While the Program does provide technology recommendations, it does not require specific technologies or end uses. Instead, the Program provides a framework through which the Participant can receive incentives for implementing and installing a wide range of measures at their sites.

The Program, in addition to the Participants, involves the Program Sponsor (El Paso Electric Company) and the Program Implementer (CLEAResult). The roles and responsibilities of each are defined in the "Program Roles & Responsibilities" section below.

#### NOTES

El Paso Electric will not directly market any energy efficiency-related products or services to the Participants. Entering into an agreement with El Paso Electric does not imply El Paso Electric's endorsement or approval of any products or services. El Paso Electric makes no representation of the benefits of any particular technology or energy efficiency measure eligible for incentives under this Program. The selection of an energy efficiency measure is at the discretion of the Participant.

#### PROGRAM ELIGIBILITY

**To be eligible to participate in the 2014 Large Commercial MTP, customers must be an EPE non-residential customer with a maximum demand that exceeds 100 kW at any one facility in Texas or a total demand of at least 250 kW at all facilities owned by the same customer (again, facilities must be located within EPE's Texas service territory).** Customers with a demand that does not exceed the 100 kW/250 kW minimum are eligible to participate in EPE's Small Commercial Solutions Program. Customers who are in the K-12, higher education, or local government sectors are excluded from this Program and are asked to participate in the EPE SCORE<sup>SM</sup> Program instead. Please note that a customer is defined by a single Tax ID number. Multiple locations of one organization are thereby considered a single customer, regardless of how many El Paso Electric account numbers they may have.

**For a specific facility to be eligible for financial incentives in the program, the facility must receive electric service from El Paso Electric and be located in Texas.**

To participate in this Program, please see the "Program Enrollment/Contacts" section at the end of this manual.

#### PROGRAM ROLES & RESPONSIBILITIES

##### PROGRAM SPONSOR

El Paso Electric is responsible for:

- Conducting and/or assigning formal on-site pre- and post-installation inspections of eligible projects to approve kW and kWh savings and incentive amounts,
- Authorizing and issuing incentive payments for completed projects, and
- Overseeing the Program Implementer.

## PROGRAM IMPLEMENTER

CLEAResult was selected by El Paso Electric to serve as the Program Implementer for the 2014 Large Commercial MTP. CLEAResult is responsible for:

- Conducting outreach to potential Participants,
- Approving Participants eligibility and enrollment,
- Providing some or all of the following services, based on the specific Participant's needs, as assessed by El Paso Electric and CLEAResult: education, training, technical assistance, and PR/communications support,
- Reviewing and approving Project Application Forms, and
- Making recommendations for higher efficiency options.

## PROGRAM PARTICIPANT

Program Participants will be asked to fulfill a combination of the following requirements, determined in conjunction with CLEAResult:

- Commit to the terms of the Program's Letter of Intent (LOI) (see "Program Enrollment/Contacts" section for additional details),
- Submit Project Application Forms and all necessary supporting documentation for eligible energy efficiency projects in order to reserve incentives,
- Exert its best efforts to approve, fund, and install cost-effective energy efficiency projects identified through the Program by November 30<sup>th</sup>,
- Notify CLEAResult when projects are completed, and
- Provide access to project facilities and ample lead time both before and after project completion for inspection of the baseline and post-retrofit condition. New construction projects do not require any inspections prior to project completion.

## NOTES

El Paso Electric Company will not reimburse Participant for any costs incurred by participating in the Program. Financial incentives for demand savings are paid to Participants upon verification and approval of completed energy efficiency projects.

## INCENTIVES

There are a number of program incentives available to Participants in order to assist with identification, evaluation, and implementation of eligible energy efficiency projects. Program incentives include a mix of cash and non-cash incentives as described below. CLEAResult will work with enrolled Participants to determine the appropriate non-cash incentives to provide in addition to assisting with identification and development of projects that may be eligible for cash incentives.

Because the Program offers both cash and non-cash incentives, Participants who enroll in the Program agree to utilize the cash incentives provided by this Program, as opposed to those offered in the Standard Offer energy efficiency programs offered by El Paso Electric.

### NON-CASH INCENTIVES

**TECHNICAL ASSISTANCE & PROJECT IDENTIFICATION** – The Program provides technical support to help Participants identify and evaluate energy efficiency opportunities in order to determine which projects are viable. As part of this service, the Program also educates senior decision makers on project financing options where funding sources are not immediately available.

**COMMUNICATIONS & PUBLIC RELATIONS SUPPORT** – The Program provides press releases and other communications support to inform the community about the steps their area businesses are taking to improve the energy performance of their facilities, reduce operating costs, and use budget dollars more efficiently.

### CASH INCENTIVES

The Program provides financial incentives, based upon reductions in peak electric demand (kW) at a Participant's facility. These incentives help the Participant to "buy down" the incremental cost of purchasing more energy-efficient equipment and are meant to encourage adoption of construction and maintenance practices which will reduce energy operating costs.

**The incentives for eligible energy efficiency measures are: \$240 per peak kW reduced.**

### INCENTIVE BASIS

Funding is available to pay incentives for eligible energy efficiency projects in Participants' facilities. These incentive dollars are paid for reductions in peak electric demand (kW).

Demand savings will be calculated as the one-hour average reduction in demand on the utility system throughout the utility system's peak periods. The Summer peak period consists of the hours from one p.m. to seven p.m., during the months of June, July, August, and September, excluding weekends and Federal holidays. The Winter peak period consists of the hours of six a.m. to ten a.m.

and six p.m. to ten p.m. , during the months of December, January, and February, excluding weekends and Federal holidays.

Cash incentives received through the Program will be based on a project's reductions in peak demand (kW) as described above. Demand will be calculated using one of three Measurement & Verification (M&V) approaches.

1. **Deemed or Stipulated Savings:** The most common approach, deemed or stipulated savings are based on standardized values or simple formulas for a range of measures in representative building types. This approach is suitable for a variety of projects where demand savings may be estimated to a reasonable degree of accuracy without additional M&V. Variables such as operating hours, coincident usage with peak electric demand period, and energy consumption of existing equipment are assumed in these cases according to previously gathered field data. The Participant is not required to perform any M&V with Deemed Savings. This approach is designed for use with most HVAC Measures and lighting efficiency and controls Projects. Example: replacing DX units or T12 lamps and ballasts with new, higher efficiency alternatives do not typically require field measurements.
2. **Simplified Measurement and Verification (Simple M&V):** This method is commonly used for lighting retrofits in typical commercial applications, but can also apply to certain HVAC Measures. Savings values using this approach are based on simple engineering calculations using typical equipment characteristics and operating schedules developed for particular applications, with some short term testing or simple metering. Please contact CLEAResult if you have questions about engaging in M&V activities. An M&V plan is required to be submitted before the project begins for this approach. Example: peak electric demand and annual energy savings from a chiller replacement can be determined using the simple approach by comparing rated efficiencies of high-efficiency equipment to standard equipment, and using kW spot-metering and simple long-term kWh metering.
3. **Measured Savings or Full M&V:** With this option, actual measurements and analysis through metering, billing or regression analysis, or computer simulation are relied upon to calculate peak electric demand savings and energy savings. There are specific M&V procedures based on the International Performance Measurement and Verification Protocol (IPMVP). This Protocol serves as the starting point for standard industry practice and specifies how and what M&V procedures are to be used in calculating demand and energy savings. More information about the IPMVP may be found at [www.evo-world.org](http://www.evo-world.org). Project Sponsors selecting this option must submit an M&V Plan with their Project Application. Each proposed M&V Plan must be approved by EPE before any associated measures may be installed. Please contact CLEAResult if you have questions about engaging in M&V activities. Example: a compressed air project at a manufacturing facility would require continuous monitoring of power for 2 weeks before the retrofit and then again for 2 weeks after the project was completed.



The savings methodologies described above differ in terms of detail and rigor and some are chosen based upon the predictability of equipment operation, availability of evaluation data from previous programs, and benefits of the chosen measurement and verification approach relative to its cost.

Please note that Participants may be responsible for the arrangement of and costs associated with M&V activities for a project (if either Simplified or Full M&V approaches are selected). These activities/costs are NOT required for program participation but may be justified for specific projects.

**Projects that will require either Simplified or Full M&V methodologies MUST be  $\geq 20$  kW in peak electric demand savings in order to qualify in the Program.**

### INCENTIVE RESERVATION

Cash incentives are subject to availability and reservation. In order to receive cash incentives from the Program, Participants must first reserve incentives by completing and submitting a Project Application Form detailing the scope and timeline for each individual project and providing the Program Implementer (CLEAResult) with all necessary supporting documentation (please see "Project Eligibility" section below for "Project Definition & Requirements"). CLEAResult will review submitted Project Application Forms and approve eligible projects for an initial incentive reservation. The incentive reservation amount may be adjusted during the course of the program year, according to changes in the estimated demand savings and provided that the budget is able to accommodate any additional incentives that need to be reserved. CLEAResult will update the Participant if any significant changes are made to the incentive amount reserved for their projects. El Paso Electric Company is not required to pay the Participant in excess of 100% of the original incentive reserved for a particular project if the Program is fully subscribed at the time of project completion. For more information, please see the "Funding Limitations" section below.

More detailed information about the Project Application process for reserving cash incentives from the Program is provided in the "Project Eligibility" section.

### INCENTIVE PAYMENT

Any cash incentives received through the Program are paid directly to the Participant after the project is completed, verified, and, if necessary, a post-installation inspection is conducted. Funds will be delivered no later than the last day of the program year once the project is completed and verified. For projects that are utilizing either Simplified or Full M&V savings methodologies, incentive payments will be made upon completion of all verification activities.

### FUNDING LIMITATIONS

Both the cash and non-cash incentive budgets available through the Program are limited and are made available to Participants on a first come, first served basis (i.e. in the order in which the

project applications are received). Cash incentives from the program must be less than 100% of the project cost.

In the event that incentive reservations exceed the program budget for incentives, the Program is considered fully or over-subscribed. Project Applications that are submitted to the Program after it is fully subscribed will be added to a project wait list. Any Participant submitting projects that are unable to receive cash incentives in the current program year due to oversubscription may choose to continue with their installation without incentives or delay the project and reapply for incentive funds during the next program year when additional incentive budget becomes available.

## PROJECT ELIGIBILITY

### PROJECT DEFINITIONS & REQUIREMENTS

A project, for Program purposes, is defined as one or more (1+) proposed peak demand savings measure types at one (1) facility owned and/or operated by the Participant.

All measures must meet the following requirements:

- Must result in a measurable and verifiable electric demand reduction in demand on the utility system throughout the utility system's peak periods. The Summer peak period defined as the hours from one p.m. to seven p.m., during the months of June, July, August, and September, excluding weekends and Federal holidays. The Winter peak period defined as the hours of six a.m. to ten a.m. and six p.m. to ten p.m. , during the months of December, January, and February, excluding weekends and Federal holidays.
- Must produce electric demand savings through an increase in energy efficiency.
- Full incentives are based on measures that have a useful life of at least 10 years. Equipment with shorter measure lives may receive a pro-rated incentive amount but require documentation of their useful life.
- New equipment must exceed minimum equipment efficiency standards (see discussion on "Efficiency Standards," below).

Comprehensive projects that include a range of measure types are encouraged. For example, light fixture retrofits and split system replacements at the same facility could constitute one (1) project while light fixture retrofits at a number of different facilities would be treated as separate projects. Participants are encouraged to pursue multiple projects in any given program year.

### ELIGIBLE MEASURES

The energy efficiency upgrade measures in the list below are measurable by Deemed Savings calculations and are eligible in the Program. Savings based on the Deemed Savings approach

apply where no unusual conditions exist. Deemed Savings measures require no short-term testing or long-term metering.

All other measures outside of the below list require the use of Simplified or Full M&V. Please contact your program representative for more information.

1. LIGHTING EFFICIENCY

- i. Lamp and Ballast Replacements
- ii. High-Intensity Discharge (HID) Fixture Replacements
- iii. Hard-Wired CFLs
- iv. LED Lights, Traffic Signals, etc. (must be ENERGY STAR or Design Lights Consortium rated fixtures, otherwise CLEAResult must approve of the fixture wattage independently)

2. DX AIR COOLED EQUIPMENT

- i. Unitary Air Conditioner
- ii. Unitary Heat Pumps

3. WATER/AIR CHILLING EQUIPMENT (CHILLERS)

- i. Screw—Air Cooled
- ii. Reciprocating—Air Cooled
- iii. Reciprocating—Water Cooled
- iv. Rotary/Screw/Scroll—Water Cooled
- v. Centrifugal—Water Cooled

4. BUILDING ENVELOPE (Retrofit/Replacement projects only)

- i. Roofing
- ii. Windows

5. PREMIUM EFFICIENCY MOTORS (Retrofit/Replacement projects only)

## ENERGY EFFICIENCY STANDARDS

El Paso Electric has designed the 2014 Large Commercial MTP to encourage electric energy efficiency improvements that exceed the efficiency gains typically achieved in retrofit or new construction projects. Consequently, demand savings credit will be based only on reductions that exceed current industry accepted minimum efficiency standards, where applicable.

The equipment efficiency standards listed below represent current savings baselines for use with Deemed Savings-eligible measures. These baselines are current as of the writing of this manual but are subject to change.

Please see the Appendix for minimum performance standards for new equipment.

<b>Equipment Type</b>	<b>Applicable Baseline</b>
Cooling Equipment- Unitary Equipment, Early Retirement	Retrofit: Applicable ASHRAE 90.1 Efficiency Standard of the year when replaced system is manufactured  New Construction: ASHRAE 90.1- 2007
Cooling Equipment- Unitary Equipment, Replace on Burnout	All: ASHRAE 90.1- 2007
Cooling Equipment- Non-Unitary Equipment	Retrofit: ASHRAE 90.1- 1989 (or existing equipment efficiency)  New Construction: ASHRAE 90.1- 2007
Lighting Equipment	Retrofit: Table of Standard Fixture Wattages*  New Construction: ASHRAE 90.1- 2007
Motors	Retrofit Only: Existing Equipment
Building Envelope	Retrofit Only: Existing Equipment/System

\* Based on 1992 EPACT and subsequent modifications

## PROJECT APPLICATION PROCESS

Once a Participant has joined the Program by signing a Letter of Intent (LOI), they may begin submitting projects via a Project Application Form to apply for incentives. The purpose of the Project Application process is to provide Participants with the security of knowing they have reserved Program incentive funds. There is no financial commitment required to reserve incentives in the Program.

Once submitted, written approval of Project Application Form by the Program Implementor is required before incentive funds are reserved. Please note that multiple projects may be included on a single Project Application Form and that multiple Project Application Forms may be submitted throughout the program year. Eligible projects must result in peak electric demand savings for El Paso Electric customers and have a completion date before November 30, 2014.

For more information on project eligibility, documentation requirements, and project protocols for retrofit and new construction projects, please refer to the “**Retrofit Project Guidelines**” and “**New Construction Project Guidelines**” documents, which are included in the Appendices Section of this Manual.

Below is a step-by-step process by which a Participant may identify a renovation or new construction project opportunity and have it accepted into the Program with financial incentives reserved. The cash incentive for a project is paid at the completion of this process:

- Project Identification
- Pre-Installation Inspection (Retrofit Projects Only)
- Project Application Submission
- Project Application Review & Incentive Reservation
- Project Installation
- Post-Installation Inspection
- Incentive Payment

#### PROJECT IDENTIFICATION

CLEAResult works with individual Participants to assist them in assessing their equipment, facilities and operations to identify eligible energy efficiency projects. Depending upon the level of Program participation or time of year, the Program may not be able to provide direct assessment assistance to all Participants.

#### PRE-INSTALLATION INSPECTION

- For a retrofit project:
  - A pre-installation inspection must pass before any installation work can begin.
  - Participant will coordinate with CLEAResult to set up pre-installation inspection (allow up to four weeks).
  - Program inspector will be sent to the site or sites to visually confirm and document the existence and condition of the equipment to be replaced, including make, model and serial number where applicable.
  - The Participant will provide a knowledgeable representative to accompany the inspector on the pre-installation inspection.
- For a new construction project:
  - Participant must submit a full set of stamped construction drawings (A/M/E/P) (in electronic, PDF file format) to CLEAResult for review. These drawings are the supporting documentation for new construction projects.
  - The Program cannot reserve incentive funds without this complete set of drawings for review.

### PROJECT APPLICATION SUBMISSION

- CLEAResult will coordinate with Participant to create and submit a Project Application Form once the pre-installation inspection (retrofit projects) or plan review (new construction projects) has been completed.
- Submitted Project Application Form must include the following:
  - Estimated Demand (kW) savings
  - Estimated project timelines (must be completed by November 30, 2014)
  - Signature of Participant
- The purpose of the Project Application Form is to submit the proposed project into the Program, and to formally apply for program incentive dollars
- Multiple projects may be submitted through a single Project Application Form
- Participant is responsible for following up with the Program to confirm receipt of any submitted Project Application Forms
- The Project Application Form can be submitted:
  - Electronically (scan & email or fax):  
[epeincentives@CLEAResult.com](mailto:epeincentives@CLEAResult.com)  
**(866) 379-5583**
  - Hard copies can be sent to the following addresses:  
**EPE Large Commercial MTP Project Applications**  
**Attn: Aaron Aguilera**  
**5822 Cromo Dr., Suite 201**  
**El Paso, TX 79912**

### PROJECT APPLICATION REVIEW & INCENTIVE RESERVATION

- Project Application Forms will be reviewed and funds reserved on a "first come, first served" basis established by the time and date stamp of the CLEAResult fax or email system.
- CLEAResult will review each Project Application Form for completeness, accuracy and qualification of measures before approving the Project Application Form.
- Incentive funds estimated in the Project Application Form are not officially reserved until CLEAResult approves the Project Application Form by counter-signing the document and returning the Form to the Participant.
- Please note that the Participant signing the form is simply applying for funds and is not guaranteed a reservation.
- If any corrections and/or modifications to the application are necessary, CLEAResult will inform the Participant.
- Once reviewed and approved, CLEAResult will forward the counter-signed Project Application Form, which will state the incentive amount reserved by the Program.

**Once approved, reserved incentive funds for a specific project are valid for 60 calendar days from the application approval date.** Within the 60 days, the Participant must provide written documentation of project progress (e.g. Purchase Order, Invoice, Contractor Bid, RFP, Contract Award Letter, etc.) to maintain the project's reserved incentive funds. If project progress can not be substantiated within the 60 days, the reserved funds will be released for other projects applying to the Program.

Approval of a particular Project Application Form may be denied for a variety of reasons, including, but not limited to:

- The form is incomplete,
- The Participant fails to meet program eligibility requirements,
- The Participant fails to submit the required supporting documentation,
- The Participant is found to have made material misrepresentations in the form, or
- The Participant fails to comply with applicable federal, state and local laws and regulations.

If approval of a Project Application Form is denied, CLEAResult will follow up with the Participant to request specific information or recommend specific steps to revise the Form. The Participant can submit the revised Project Application Form and CLEAResult will consider it for approval, based on the date of re-submission.

#### WAITLIST

In the event that all incentive funding has been reserved, additional Project Application Forms submitted will be placed on a waitlist in the order that they are received by CLEAResult. Participants will be notified of their project's position on the waitlist. If additional incentive funding becomes available, waitlisted projects will be approved in the order received until the funding is fully reserved.

#### PROJECT INSTALLATION

- For **retrofit projects**, Participant may proceed with project installation once the pre-installation inspection has been conducted.
- For **new construction projects**, a Participant may proceed with project installation once plans have been reviewed, equipment has been selected, and Project Application Form has been submitted.
- During installation, or construction, Participant is to notify CLEAResult of any changes to the project scope, equipment selection, or timeline.
- Project Application Forms are approved under the condition that project installations will be completed by **November 30<sup>th</sup>** in the program year of the submitted Form. Project installations not completed by November 30<sup>th</sup> of the program year will forfeit the incentive funds that have been reserved for that project.

- Note: Project installations that are not completed by November 30<sup>th</sup> will be allowed to re-apply for incentive funds for the following program year, under the same conditions listed above in the "Project Application Review & Incentive Reservation" section.

By no later than **June 30<sup>th</sup>** of the program year, Participants with approved Project Application Forms must confirm with CLEAResult, that they will complete their project installations by November 30<sup>th</sup> in the current funding year. Participants that fail to meet this notice requirement risk forfeiting the incentive funds that have been reserved for that project.

#### POST-INSTALLATION INSPECTION

- After the project has been installed, the Participant must:
  - Notify CLEAResult of the project's completion
  - Work with CLEAResult to confirm, and update if necessary, the supporting documentation:
    - Lighting: If quantity, fixture type, etc. differ from original Lighting Survey Form, update form accordingly
    - HVAC: If equipment type (SEER or EER rating) differs from originally submitted information, update accordingly
  - Coordinate with CLEAResult to schedule a post-installation inspection to verify that the equipment has been installed as indicated. The Participant must provide a knowledgeable representative to accompany the inspector as well as provide any equipment needed to verify installed measures (e.g. ladder for lighting inspections) on the post-installation.
  - At the sole discretion of CLEAResult, projects less than 6 kW may not require completed inspections. However, all projects require submitted contracts and itemized invoices.

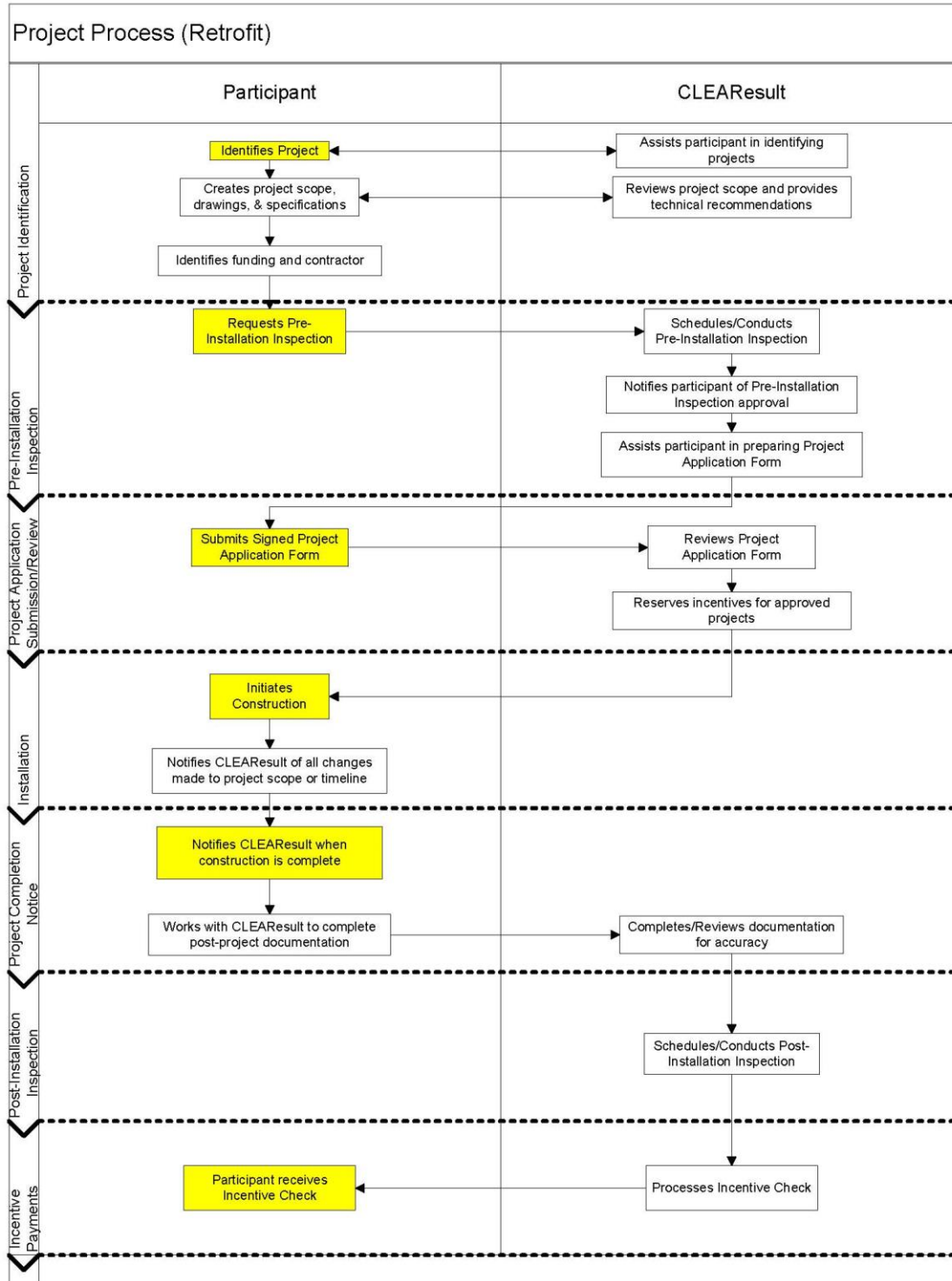
#### INCENTIVE PAYMENT

Using the results of the post-installation inspection, CLEAResult will:

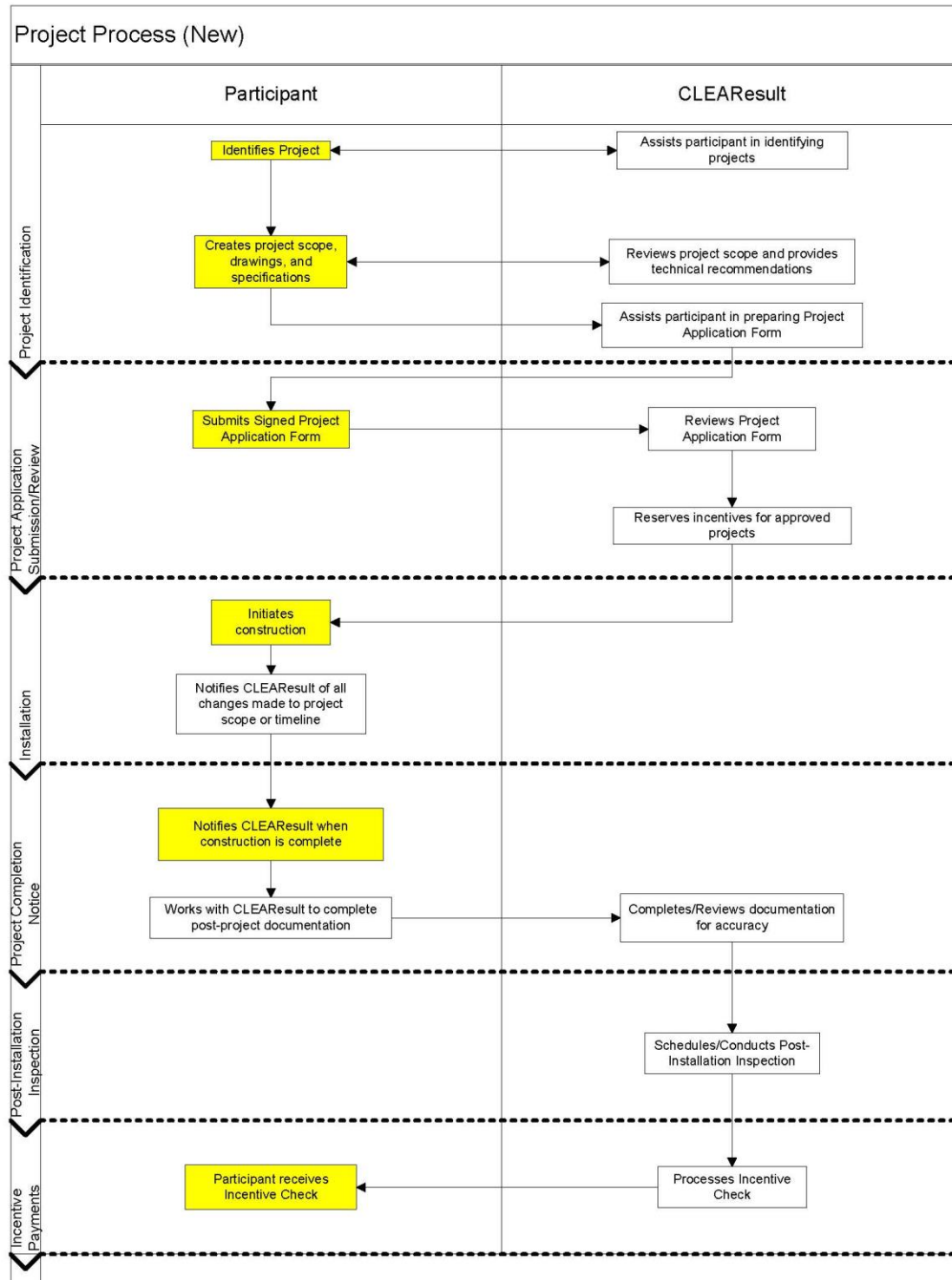
- Determine the project's eligible peak demand savings (kW).
- Pay the Participant an incentive amount based on the Demand Savings
  - The Program is not under any obligation to pay more incentives than the amount reserved by the Project Application Form for any project.
  - If greater savings are achieved than the amount reserved and budget is available, the Program has the option to pay Participant additional incentives.
  - For additional details on how incentive payments are determined, scheduled, and paid, please see the "Incentives" section of the Program Manual.



## WORKFLOW- RETROFIT PROJECTS



## WORKFLOW- NEW CONSTRUCTION PROJECTS



## PROGRAM ENROLLMENT/CONTACTS

To enroll in the Program, potential Participants execute a Letter of Intent (LOI) and submit it to CLEAResult. An example of the LOI is included in the "Appendices" section of this Program Manual.

**Electronic copies of the signed LOI may be submitted electronically (scanned and emailed or faxed) to:**

**[epeincentives@CLEAResult.com](mailto:epeincentives@CLEAResult.com)**

**(866) 379-5583**

**Hard copies of the signed LOI may be mailed to:**

**EPE Large Commercial MTP**

**Attn: Aaron Aguilera**

**5822 Cromo Dr., Suite 201**

**El Paso, TX 79912**

For additional information about the Program, please contact one of the program representatives:

Araceli Perea

Sr. Energy Efficiency Program Coordinator

El Paso Electric

PO Box 982

El Paso, TX 79960

(915) 543-4197

[araceli.perea@epelectric.com](mailto:araceli.perea@epelectric.com)

or

Aaron Aguilera CLEAResult

5822 Cromo Dr., Suite 201

El Paso, TX 79912

(915) 255-4289

[aaron.aguilera@CLEAResult.com](mailto:aaron.aguilera@CLEAResult.com)

## DISCLAIMERS

### CONFIDENTIALITY

The Program is subject to oversight by the Public Utility Commission of Texas (PUCT), which may request a copy of any program materials received by CLEAResult or El Paso Electric Company. A Participant's sensitive company and project information submitted to the Program, such as financial statements and project costs, will be treated confidentially to the fullest extent possible and will not be provided directly to outside parties other than the PUCT. Neither CLEAResult nor El Paso Electric will be liable to any Participant or other party as a result of public disclosure of any submittals.

### FALSE, MISLEADING OR INCORRECT INFORMATION

CLEAResult will discontinue its evaluation of all submittals from any Participant who submits false, misleading or incorrect information. If an evaluation is discontinued under these circumstances, CLEAResult will return all of the Participant's submittals.

### FORMAL COMPLAINTS

Please contact CLEAResult to raise any issues/concerns that have arisen during participation in the Program:

Aaron Aguilera CLEAResult  
5822 Cromo Dr., Suite 201  
El Paso, TX 79912  
(915) 255-4289  
[aaron.aguilera@CLEAResult.com](mailto:aaron.aguilera@CLEAResult.com)

Also, a formal complaint may be submitted to the PUCT at any time by using the following address and contact information:


Public Utility Commission of Texas  
Office of Customer Protection  
P.O. Box 13326  
Austin, TX 78711-3326  
phone: (512) 936-7120, or in Texas (toll-free) 1-888-782-8477  
fax: (512) 936-7003  
e-mail: [customer@puc.state.tx.us](mailto:customer@puc.state.tx.us)  
internet address: [www.puc.state.tx.us](http://www.puc.state.tx.us)  
Relay Texas (toll-free) 1-800-735-2989

DISCLAIMER OF WARRANTIES

Participant acknowledges and agrees that any review or inspection by El Paso Electric or CLEAResult of Participant's facilities/premises or of the design, construction, installation, operation or maintenance of the energy efficiency equipment installed or to be installed in connection with the Program is solely for the information of El Paso Electric. In performing any such inspection or review or in accepting the installed equipment for the award of incentives, Participant acknowledges and agrees that El Paso Electric or CLEAResult makes no guarantee, representation or warranty whatsoever as to the economic or technical feasibility, capability, safety or reliability of the equipment, its installation by a project contractor or its compatibility with Participant's facilities.

PROGRAM IMPLEMENTER IS AN INDEPENDENT CONTRACTOR

CLEAResult is an independent contractor and is not authorized to incur obligations on behalf of El Paso Electric. El Paso Electric is not responsible for the truth or validity of any representation not contained in the Program Manual or Letter of Intent.



## DEFINITIONS

**Deemed Savings** – a set of pre-determined, validated estimates of energy and peak demand savings attributable to energy efficiency measures in particular types of application that an electric utility may use instead of energy and peak demand savings determined through measurement and verification activities.

**Demand Savings (kW)** – peak demand savings that have been approved using one of the eligible measurement and verification protocols as set forth in this Program Manual.

**Letter of Intent** – non-binding agreement signed and submitted by a potential Participant, stating their intent to participate in the Program.

**Participant** – an eligible utility customer who has formally committed to participating in this Program.

**Peak demand** – electrical demand at the times of highest annual demand on the utility's system.

**Peak demand reduction** – reduction in demand on the utility system throughout the utility system's peak period.

**Peak periods** – The Summer peak period consists of the hours from 1:00 p.m. to 7:00 p.m., during the months of June, July, August, and September, excluding weekends and Federal holidays. The Winter peak period consists of the hours of six a.m. to ten a.m. and six p.m. to ten p.m., during the months of December, January, and February, excluding weekends and Federal holidays.

**Post-Installation Inspection** – inspection performed after installation of new equipment. Post installation inspection verifies actual installed measure(s) to verify resulting deemed or measured and verified demand and energy savings.

**Pre-Installation Inspection** – inspection performed prior to any replacement of existing equipment, device, or structural energy efficiency measures (windows, window film, roof coatings, etc). to validate and collect data on existing equipment and measures.

**Project Application Form** – form used to reserve financial incentives through the Program, Participants must complete and sign this document, which details the location, scope, and start/completion dates for each project that is being submitted. Once submitted, the Program will review Project Application Forms and will approve incentive reservations for projects provided the Program is not oversubscribed.

**Reserved Incentive Payment** – contained in the Project Application Form (once approved by the Program Implementer), this is the amount of incentives reserved in the Program budget for the list of committed projects.

**FREQUENTLY ASKED QUESTIONS (FAQS)****1. What is the Large Commercial MTP?**

The Large Commercial MTP is an energy efficiency program designed to assist El Paso Electric Company's commercial customers to reduce peak electric demand and annual energy usage by providing access to technical knowledge, energy assessments, and financial incentives to improve the efficiency of their buildings.

**2. Who is eligible to participate in the Large Commercial MTP?**

Please see the "Program Eligibility" section of this Program Manual for exact details. In general, the Program is offered to select commercial customers that own/operate facilities within the El Paso Electric Company's Texas service territory.

**3. What does the Program cost?**

Participants PAY NOTHING for participating in the Program. El Paso Electric Company provides all of the support and incentives for the Program. THE FINANCIAL INVESTMENT ANY PARTICIPANT MAKES IS FOR THE ENERGY EFFICIENCY MEASURES THEY INSTALL IN THEIR FACILITIES.

**4. What incentives are available through the Program?**

The Program offers both cash and non-cash incentives to Participants in order to assist with a specific organization's needs. Financial incentives may be available for energy efficiency projects, depending on the budget available at the time of your Project Application Form submission. Other program services, such as technical assistance and communications support, are made available according to the needs of each Participant.

**5. How does a customer enroll in the Program?**

An eligible customer may participate in the Program by submitting a Letter of Intent (LOI) to CLEAResult. Please see the "Program Enrollment/Contacts" section for additional details. Also, a sample LOI is included in the "Appendices" section.

**6. What are the next steps after initial enrollment in the Program?**

- a) Program Implementer (CLEAResult) will contact Participant to discuss what, if any, technical assistance is needed to identify energy efficiency projects.
- b) CLEAResult and the Participant work collaboratively to appropriately characterize potential energy efficiency projects, including estimated electric demand (kW) and energy savings (kWh).

- c) Participant selects projects for the current program year and works with CLEAResult to prepare a Project Application Form detailing the scope and timeline of each individual project.
- d) For projects retrofitting or replacing existing equipment, a pre-installation inspection must be conducted at the project site prior to the Participant submitting the Project Application Form. The pre-installation inspection is REQUIRED for ALL retrofit projects. New construction projects do not require a pre-installation inspection.
- e) Assuming the project(s) passes any requisite pre-installation inspections, Participant then submits a completed/signed Project Application Form.
- f) CLEAResult reviews Project Application Form(s) for accuracy and reserves incentives according to estimated reductions in peak electric demand (kW).
- g) CLEAResult returns approved Project Application Form(s) to Participant.
- h) The Participant completes the energy efficiency project.
- i) The Participant notifies CLEAResult that the project is completed. Please note that all projects that are to receive a financial incentive from the 2014 Large Commercial MTP must be completed by **November 30, 2014** in order to allow time for verification of the project.
- j) For all projects, a post-installation inspection will be conducted at the project site.
- k) CLEAResult communicates final project savings/incentive amounts to the Participant.
- l) El Paso Electric Company pays final incentive amount to Participant by check or direct deposit.
- m) CLEAResult follows up with the Participant regarding future energy efficiency projects.

7. Who decides what energy efficiency technologies to install and who installs them?

Participants decide what energy efficiency measures to implement at their site(s) and how they are implemented. The Program offers only improved access to assistance for identification and evaluation of energy efficiency opportunities. The Program does NOT provide any installation of energy efficiency measures.

8. How are energy efficiency opportunities determined?

The Program Implenter works with each Participant to assess energy efficiency opportunities in both existing facilities and with new construction projects using a combination of facility walk- throughs, energy performance benchmarking analysis, and staff interviews.



## APPENDICES

1. Minimum Performance Standards for New Equipment
  - a. Lighting
  - b. HVAC
  - c. Roofing
  - d. Motors
2. Program Enrollment Information
  - a. Letter of Intent (LOI)- Prospective Participants
  - b. Letter of Intent (LOI) Addendum – Existing Participants
3. Program Participation Information (By Project Type)
  - a. Project Application Form
  - b. Retrofit Project Guidelines
  - c. New Construction Project Guidelines

## MINIMUM PERFORMANCE STANDARDS FOR NEW EQUIPMENT

### LIGHTING STANDARDS

#### OVERVIEW

The Table of Standard Fixture Wattages contains reference data for estimating demand and energy savings in the Program for lighting measures. The Table assigns identification codes and demand values (watts) to common fixture types (fluorescent, incandescent, HID, LED, etc.) used in commercial applications. The Table wattage values for each fixture type are averages of various manufacturers' laboratory tests performed to ANSI test standards. By using standardized demand values for each fixture type, the Table simplifies the accounting procedures for lighting equipment retrofits.

If a project uses a fixture type not listed in the Table, CLEAResult may be able to assign an appropriate demand value to that fixture. The request should include all information required to uniquely identify the fixture type and to fix its demand. If possible, the request should be supported by manufacturer's ANSI test data.

The Lighting Equipment Survey Form is linked to a copy of the Standard Wattage Table and looks up wattage values for fixture codes automatically. For this reason, Participants should use only the identification codes included in the Table.

#### MINIMUM EFFICIENCY REQUIREMENTS

In order to be eligible for program incentives, new lighting fixtures and equipment must meet the following requirements:

- Appropriate fixture code and demand value must be available from the Table of Standard Fixture Wattages; exceptions may be allowed at program's discretion.
- All 4-foot linear fluorescent lamps must be considered premium lamps as defined by the Consortium for Energy Efficiency (CEE) and as published on the CEE website.
  - <http://www.cee1.org/com/com-lt/lamps-ballasts.xls>
- All other T8 lamps (2-foot, 3-foot, U-Bend, 30W 4-foot, and 8-foot T8 lamps) must meet the requirements listed in the table below:

Lamp Description	Rated Lamp Life (Hrs)	Color Rendering Index (CRI)	Initial Lumens per Lamp	Mean Lumens per Lamp
U-Bend T8 Lamps	≥ 24,000	≥ 80	≥ 2,950	≥ 2,750
U-Bend T8 Reduced Wattage Lamps	≥ 18,000		≥ 2,800 (30W) ≥ 2,950 (28W) ≥ 2,950 (25W)	≥ 2,600 (30W) ≥ 2,430 (28W) ≥ 2,185 (25W)
8-foot T8 Lamps	≥ 18,000		≥ 5,900	≥ 5,490
8-foot T8 Reduced Wattage Lamps	≥ 18,000		≥ 5,700	≥ 5,400
4-foot T8 30W Reduced Wattage Lamps	≥ 20,000		≥ 2,800	≥ 2,600
3-foot T8 and Reduced Wattage Lamps	≥ 20,000		≥ 1,900	≥ 1,785
2-foot T8 and Reduced Wattage Lamps	≥ 20,000		≥ 1,175	≥ 1,105

- All ballasts must qualify as “premium efficiency” according to the National Electrical Manufacturers Association (NEMA) standard, which is available here:
  - [http://www.nema.org/gov/energy/efficiency/upload/nema\\_premium\\_electronic\\_ballast\\_program.pdf](http://www.nema.org/gov/energy/efficiency/upload/nema_premium_electronic_ballast_program.pdf)
- All compact fluorescent lamps (CFLs) must be ENERGY STAR-qualified
  - <http://www.energystar.gov/>
- All light emitting diode lights (LEDs) must be either ENERGY STAR or DesignLights Consortium (DLC) qualified
  - <http://www.designlights.org/solidstate.about.php>

Please note that new construction and major renovation projects are not subject to the same lamp, ballast, and fixture requirements as listed above. New construction lighting savings are based on lighting power density (LPD), meaning that a Watts per square foot requirement is used in place of the specific retrofit equipment requirements described above.

## HVAC STANDARDS

### OVERVIEW

Cooling equipment installed under the program must exceed the minimum new equipment efficiency standards shown in the tables below. In addition, the minimum baseline efficiencies define the baseline for calculating energy savings. Baseline and minimum new equipment efficiency ratings are provided in Table 1 through Table 8 below:

- Unitary air conditioners and heat pumps (air cooled, evaporatively cooled, or water cooled)
- Packaged-terminal air conditioners and heat pumps
- Room air conditioners and heat pumps
- Water-source and ground-water source heat pumps
- Water- and air-cooled water chilling packages

### MINIMUM EFFICIENCY REQUIREMENTS

Tables 1 through 8 below are based on American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1989 and ASHRAE Standard 90.1-2007. The tables present the minimum efficiencies requirements for particular types of cooling equipment. The baseline efficiency for existing equipment shall be established as the 1989 standard efficiency. The baseline for equipment for which rating conditions are not provided shall be defined as the energy consumption of the actual existing equipment. For replace on burnout and new construction projects, ASHRAE Standard 90.1-2007 will be the default unless superseded by Federal guidelines.

For projects involving early retirement of unitary HVAC equipment, please use the baseline performance standards shown in table 9 below. Minimum efficiency requirements are the same, whether the project is replaced on burnout/new construction or early retirement.

TABLE 1: UNITARY AIR CONDITIONERS AND HEAT PUMPS, AIR COOLED, ELECTRIC, <135,000 BTU/HR (< 11.25 TONS) CAPACITY, - EXCEPT PACKAGED TERMINAL AND ROOM AIR CONDITIONERS

Mode	Cooling Capacity		Rating Condition, °F db	Type	Baseline Performance Standard <sup>1</sup>	Minimum Performance Standard <sup>2</sup>	Minimum Performance Standard (Part Load)
	Btu/hr	tons					
Air Conditioner	< 65,000	< 5.42	Seasonal	Split	13 SEER	13 SEER	N/A
	< 65,000	< 5.42	Seasonal	Packaged	13 SEER	13 SEER	N/A
	≥ 65,000 & < 135,000	≥ 5.42 & < 11.25	95	Packaged and Split	11.0 EER	11.0 EER	11.4 IEER
Heat Pump	< 65,000	< 5.42	Seasonal	Split	13 SEER	13 SEER	N/A
	< 65,000	< 5.42	Seasonal	Packaged	13 SEER	13 SEER	N/A
	≥ 65,000 & < 135,000	≥ 5.42 & < 11.25	95	Packaged and Split	10.8 EER <sup>10a</sup>	10.8 EER <sup>11a</sup>	11.4 IEER

TABLE 2: UNITARY AIR CONDITIONERS AND HEAT PUMPS – EVAPORATIVELY COOLED, ELECTRIC, <135,000 BTUH (< 11.25 TONS) COOLING CAPACITY

Cooling Capacity		Rating indoor air °F db / °F wb	Rating outdoor air °F db/°F wb	Baseline Performance Standard <sup>3</sup>	Minimum Performance Standard <sup>4</sup>	Minimum Performance Standard (Part Load)
Btu/hr	tons					
< 65,000	< 5.42	80/67	95/75	9.3 EER	12.1 EER	N/A
≥ 65,000 & < 135,000	≥ 5.42 & < 11.25	80/67	95/75	10.5 EER	11.3 EER 12.0 EER (HP)	N/A

<sup>1</sup> Reference: New Federal guidelines, <sup>10a</sup> Manufacturer Standard

<sup>2</sup> Reference: New Federal guidelines, <sup>11a</sup> Manufacturer Standard

<sup>3</sup> Reference: ASHRAE Standard 90.1-1989, Table 10-2.

<sup>4</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.A.

TABLE 3: WATER-COOLED AIR CONDITIONERS AND HEAT PUMPS, ELECTRIC, &lt;135,000 BTUH (&lt; 11.25 TONS) CAPACITY.

Equipment	Cooling capacity, BTU/h	Rating Condition, air °F db / °F wb	Rating Condition, entering water °F	Baseline Performance Standard <sup>5</sup>	Minimum Performance Standard <sup>6</sup>	Minimum Performance Standard (Part Load)
Water cooled heat pumps	< 65,000	80/67	85	9.3 EER	-	N/A
			86	-	12.0 EER <sup>†</sup>	N/A
	≥ 65,000 and <135,000	80/67	85	10.5 EER	-	N/A
			86	-	12.0 EER	N/A
Ground water cooled heat pumps	< 135,000	80/67	70	11.0 EER	-	N/A
			59	-	16.2 EER	N/A
Water cooled unitary air conditioners	< 65,000	80/67	85	9.3 EER	-	N/A
			86	-	12.1 EER	N/A
	≥ 65,000 and <135,000	80/67	85	10.5 EER	-	N/A
			86	-	11.3 EER	N/A

† For units with capacities less than 17,000 Btu/h, the minimum efficiency is 11.2 EER.

TABLE 4: PACKAGED TERMINAL AIR CONDITIONERS AND HEAT PUMPS, AIR-COOLED, ELECTRIC

Baseline Performance Standard	Minimum Performance Standard
8.1 EER	8.3 EER

<sup>5</sup> Reference: ASHRAE Standard 90.1-1989, Table 10-3 and Table 10-5.

<sup>6</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.B.

TABLE 5: ROOM AIR CONDITIONERS AND ROOM AIR CONDITIONER HEAT PUMPS, ELECTRIC

Category	Capacity, BTUH	Baseline performance standard (EER) <sup>7</sup>	Minimum Performance Standard (EER) <sup>8</sup>
<b>Without reverse cycle and with louvered sides</b>	< 6,000	8.0	9.7
	≥ 6,000 and <8,000	8.5	9.7
	≥ 8,000 and <14,000	9.0	9.8
	≥ 14,000 and <20,000	8.8	9.7
	≥ 20,000	8.2	8.5
<b>Without reverse cycle and without louvered sides</b>	< 6,000	8.0	9.0
	≥ 6,000 and <20,000	8.5	8.5
	≥ 20,000	8.2	8.5
<b>With reverse cycle and with louvered sides</b>	All	8.5	8.5
<b>With reverse cycle and without louvered sides</b>	All	8.0	8.0

<sup>7</sup> Reference: ASHRAE Standard 90.1-1989, Table 10-4B.<sup>8</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.D.

**TABLE 6: LARGE UNITARY AIR CONDITIONERS AND HEAT PUMPS, ELECTRIC,  $\geq 135,000$  BTUH ( $\geq 11.25$  TONS) CAPACITY**

Equipment Type	Cooling Capacity		Baseline Performance Standard <sup>9</sup>		Minimum Performance Standard <sup>10</sup>		Minimum Performance Standard (Part Load)
	Btuh	tons	EER	kW/ton	EER	kW/ton	IEER
Air cooled air conditioners	$\geq 135,000$ & $< 240,000$	$\geq 11.25$ & $< 20.00$	10.8	1.111	10.8	1.111	11.2
	$\geq 240,000$ & $< 760,000$	$\geq 20.00$ & $< 63.33$	9.8	1.224	9.8	1.224	10.1
	$\geq 760,000$	$\geq 63.33$	9.5	1.263	9.5	1.263	9.8
Water or evaporatively cooled air conditioners	$\geq 135,000$	$\geq 11.25$	9.4	1.277	10.8	1.111	N/A
Air cooled heat pumps	$\geq 135,000$ & $< 240,000$	$\geq 11.25$ & $< 20.00$	10.4	1.154	10.4	1.154	N/A
	$\geq 240,000$	$\geq 20.00$	9.3	1.290	9.3	1.290	9.2 (IPLV)
Air cooled condensing units	$\geq 135,000$	$\geq 11.25$	9.9	1.212	10.1	1.188	N/A
Water or evaporatively cooled condensing units	$\geq 135,000$	$\geq 11.25$	12.9	0.930	13.1	0.916	N/A

<sup>9</sup> Reference: ASHRAE Standard 90.1-1989, Table 10-6.<sup>10</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.A and Table 6.2.1.B.



TABLE 7: WATER CHILLING PACKAGES, ELECTRIC

Equipment Type	Cooling Capacity (tons)	Baseline Performance Standard <sup>11</sup>		Minimum Performance Standard <sup>12</sup>		Minimum Performance Standard (Part Load)	
		COP	kW/ton	COP	kW/ton	IPLV	kW/ton
Water cooled, positive displacement (rotary screw, scroll)	< 150	3.80	0.926	4.45	0.790	5.20	0.676
	≥ 150 and <300	4.20	0.837	4.90	0.718	5.60	0.628
	≥ 300	4.70	0.748	5.50	0.639	6.15	0.572
Water cooled, centrifugal	< 150	3.80	0.926	5.00	0.703	5.25	0.670
	≥ 150 and <300	4.20	0.837	5.55	0.634	5.90	0.596
	≥ 300	4.70	0.748	6.10	0.577	6.40	0.550
Air cooled with condenser	< 150	2.70	1.303	2.80	1.256	3.05	1.153
	≥ 150	2.50	1.407	2.80	1.256	3.05	1.153
Air cooled without condenser	All	3.10	1.135	3.10	1.135	3.45	1.019

TABLE 8: WATER CHILLING PACKAGES, GAS ABSORPTION

Equipment Type	Cooling Capacity	Baseline Performance Standard <sup>13</sup> (COP)	Minimum Performance Standard <sup>14</sup> (COP)
Air-cooled absorption, single-effect	All capacities	0.48	0.60
Water-cooled absorption, single-effect	All capacities	0.60	0.70
Absorption double effect, direct-fired	All capacities	0.95	1.00
Absorption double effect, indirect-fired	All capacities	0.95	1.00

<sup>11</sup> Reference: ASHRAE Standard 90.1-1989, Table 10-7.<sup>12</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.C.<sup>13</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.C.<sup>14</sup> Reference: ASHRAE Standard 90.1-1999, Table 6.2.1.C.

TABLE 9: EARLY RETIREMENT BASELINE PERFORMANCE STANDARDS

Equipment Size (tons)	Equipment Type	Manufacture Date				
		< 1990	1990-1991	1992-2001	2002-2005	2006-Present
< 5.42	Split	Treat as Replace on Burnout	10.0	10.0	10.0	13.0
	Packaged		9.7	9.7	9.7	13.0
5.42 – 11.25 <sup>15</sup>	All		8.9	8.9	9.9	9.9
11.25 – 20.00	All		8.0	8.3	9.1	9.1
20.00 – 63.30	All		8.0	8.3	8.8	8.8
> 63.30	All		7.8	8.5	8.8	8.8

## ROOFING STANDARDS

### OVERVIEW

Projects involving replacement or retrofit of an existing roofing structure may be eligible for deemed savings and/or incentive payments in this program.

### MINIMUM EFFICIENCY REQUIREMENTS

All roofs must satisfy the ENERGY STAR® roofing spec:

[http://www.energystar.gov/index.cfm?c=roof\\_prods.pr\\_crit\\_roof\\_products](http://www.energystar.gov/index.cfm?c=roof_prods.pr_crit_roof_products)

1. Low Slope roofs (surfaces with a slope of 2:12 inches or less) must have an initial solar reflectance of  $\geq 0.65$ . After 3 years, the solar reflectance must be  $\geq 0.50$ .

Steep Slope roofs (surfaces with a slope greater than 2:12 inches) must have an initial solar reflectance of  $\geq 0.25$ . After 3 years, the solar reflectance must be  $\geq 0.15$ .

## MOTOR STANDARDS

### OVERVIEW

For motors installed under the program, the equipment must exceed the minimum efficiency standards shown in Table B.1. In addition, the minimum efficiencies define the baseline for calculating demand and energy savings in New Construction projects and for retrofit motors < 25hp. The baseline for calculating demand and energy savings for retrofit motors  $\geq 25$ hp are defined in Table B.2. The M&V Guidelines for motor measures describe the application of these

<sup>15</sup> Baseline performance standards for equipment size up to 11.25 tons are expressed in SEER rating; all others are EER

equipment efficiency standards for estimating baseline demand and energy use and measure demand and energy savings.

The minimum efficiencies of permanently wired, poly-phase motors that are at least one horsepower in size and that are used for fan, pumping, and conveyance applications are defined in Table B.1. Table B.1 is based on ASHRAE Standard 90.1m-1995.

Note, however, that the following motors are exempt from these requirements:

- Motors in appliances.
- Refrigeration compressor motors.
- Multi-speed motors.
- Motors that are used as components of cooling equipment where the motors are part of the efficiency ratings listed in the Standard Cooling Equipment Tables.

The efficiency values given in Table B.2 should be used to determine the equipment baseline. Equipment installed under the Programs must exceed the standards shown in order to be eligible for incentives.

# MINIMUM EFFICIENCY REQUIREMENTS

TABLE 1: MINIMUM NOMINAL FULL-LOAD MOTOR EFFICIENCY FOR SINGLE SPEED POLY-PHASE OPEN MOTORS

Motor	Horsepower	2-Pole	4-Pole	6-Pole	8-Pole
Open	1.0	--	81.5	78.5	72
	1.5	81.5	82.5	82.5	74
	2.0	82.5	82.5	84	84
	3.0	82.5	85.5	85.5	85.5
	5.0	84	86.5	86.5	86
	7.5	86.5	87.5	87.5	87.5
	10.0	87.5	88.5	89.5	88.5
	15.0	88.5	90.2	89.5	88.5
	20.0	89.5	90.2	90.2	89.5
	25.0	90.2	91	91	89.5
	30.0	90.2	91.7	91.7	90.2
	40.0	91	92.4	92.4	90.2
	50.0	91.7	92.4	92.4	91
	60.0	92.4	93	93	91.7
	75.0	92.4	93.6	93	93
	100.0	92.4	93.6	93.6	93
	125.0	93	94.1	93.6	93
	150.0	93	94.5	94.1	93
	200.0	94.1	94.5	94.1	93

TABLE 2: MINIMUM NOMINAL FULL-LOAD MOTOR EFFICIENCY FOR SINGLE SPEED POLY-PHASE ENCLOSED MOTORS

Motor	Horsepower	2-Pole	4-Pole	6-Pole	8-Pole
Enclosed	1.0	74	81.5	78.5	72
	1.5	81.5	82.5	84	75.5
	2.0	82.5	82.5	85.5	81.5
	3.0	84	86.5	86.5	82.5
	5.0	86.5	86.5	86.5	84
	7.5	87.5	88.5	88.5	84
	10.0	88.5	88.5	88.5	87.5
	15.0	89.5	90.2	89.5	87.5
	20.0	89.5	90.2	89.5	88.5
	25.0	90.2	91.7	91	88.5
	30.0	90.2	91.7	91	90.2
	40.0	91	92.4	92.4	90.2
	50.0	91.7	92.4	92.4	91
	60.0	92.4	93	93	91
	75.0	92.4	93.6	93	92.4
	100.0	93	94.1	93.6	92.4
	125.0	94.1	94.1	93.6	93
	150.0	94.1	94.5	94.5	93
	200.0	94.5	94.5	94.5	93.6

PROGRAM ENROLLMENT INFORMATION















PROGRAM PARTICIPATION INFORMATION