



Commercial LED Lighting Program - 2012

Program Summary



CenterPoint Energy's Commercial LED Lighting Program is implemented by Ecova as an independent contractor. For more information about CenterPoint Energy's energy efficiency incentive programs, please visit www.centerpointefficiency.com.

Agenda

LED Lighting Program - 2012

- ▷ **About CenterPoint Energy**
- ▷ **Program Overview**
- ▷ **Program Objectives**
- ▷ **Benefits of LEDs**
- ▷ **Program Policies & Eligibility Requirements**
- ▷ **Project Incentive Structure**
- ▷ **Project Roles and Process**
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About CenterPoint

- ▶ CenterPoint Energy is an electric transmission and distribution utility regulated by the Public Utility Commission of Texas (PUCT) and mandated by the PUCT to offset its demand growth by a certain percentage each year through energy efficiency programs. Therefore, CenterPoint Energy pays incentives or rebates to program participants for the installation of high efficiency equipment that produces measurable and verifiable demand savings.

Program Overview

- ▶ The CenterPoint Commercial LED Lighting Program offers incentives for CenterPoint customers to upgrade parking lots, garages, and other outdoor facilities with energy-efficient LED lighting and controls.
- ▶ Incentives are based on verified on-peak demand and annual energy savings resulting from the installation of LED measures and lighting controls.
- ▶ Ecova has been contracted by CenterPoint to implement the Commercial LED Lighting Program as an independent contractor.
- ▶ Funding for the Commercial LED Lighting Program is provided by statutory funds.

Program Objectives

- ▶ Provide incentives for customers to upgrade parking lots, garages, and other facilities with LED lighting and controls
- ▶ Increase awareness of LED lighting technology
- ▶ Introduce LED lighting technology into the marketplace
- ▶ Develop an infrastructure of trained LED installation and maintenance service providers

- ❑ New laws passed in last session of Texas Legislature that call for amendments to the current energy efficiency rules.
- ❑ Public Utility Commission has interpreted the new laws and released a 'Staff Strawman Rule' which is still being discussed in workshops by utilities, interveners, PUC staff, etc.
- ❑ Substantive rules could be amended by mid-year, which ***may or may not*** impact current programs, incentives paid, etc.

Benefits of LEDs

Benefits of LEDs

- ▶ **Energy savings:** LEDs can produce more light per watt than conventional high-intensity discharge lamps (metal halide and high-pressure sodium) and may therefore require less energy to produce the same amount of light.
- ▶ **Operational savings:** LEDs can have long life spans (50,000+ hours), which reduce the frequency of costly maintenance and replacement service.
- ▶ **Light quality:** LEDs produce a clean, bright light, which can improve safety and visual comfort while enhancing property values.
- ▶ **Environmental:** LEDs contain no mercury or lead.
- ▶ **Durability:** LEDs are very tolerant of temperature variations, vibrations, and on/off cycles, and can be tightly sealed to prevent interior accumulation of dirt, insects, and moisture.

LED Light Quality

Benefits of LEDs



Installation of LED parking lot lights (left) compared with HPS lights (right) shows the difference in color appearance and distribution.

(Used by permission of BetaLED)

Sample Project Incentives

New Construction - Parking Garage

Baseline		Installed		Savings			
kW	kWh	kW	kWh	kW	kWh		
31.2	257,899	9	74,360	22.2	183,539	TOTAL	
				Incentives =	\$ 5,106.00	\$ 25,695.46	\$30,801.46

Non-Profit - Parking Garage

Baseline		Installed		Savings			
kW	kWh	kW	kWh	kW	kWh		
29.9	235,893	14.2	111,764	15.7	124,129	TOTAL	
				Incentives =	\$ 3,532.50	\$ 14,895.48	\$ 18,428.00

New Construction - Parking Garage

Baseline		Installed		Savings			
kW	kWh	kW	kWh	kW	kWh		
220.7	1,740,376	50.09	394,892	170.61	1,345,484	TOTAL	
				Incentives =	\$ 38,398.55	\$ 161,458.09	\$ 199,856.64

Payback Example

Benefits of LEDs

EXAMPLE CASE - Parking Garage (7,884 annual operating hours; \$0.10/kWh electricity rate)

PRE-INSTALLATION:

- 100 x 175-watt metal halide fixtures (lamp + magnetic ballast= 209-W fixture)
- \$70 re-lamp cost per fixture every 10,000 hours
- \$100 re-ballast cost per fixture every 60,000 hours
- 164,776 kWh annual energy use / 20.9 kW demand
- Annual operating cost x 100 fixtures = \$23,308

POST-INSTALLATION:

- 100 x 79-watt LED fixtures
- \$650 installed cost per fixture (lifetime: 50,000 hours)
- 62,284 kWh annual energy use / 7.9 kW demand
- Annual operating cost x 100 fixtures = \$6,228

TOTAL PROJECT COST:	\$62,000
On-Peak Demand Reduction	13.0 kW
ANNUAL ENERGY SAVINGS:	102,492 kWh (62% reduction)
PROGRAM INCENTIVE:	\$17,339 (28% of total project cost)
CUSTOMER PAYBACK PERIOD:	2.6 years

Program Policies & Eligibility Requirements

Customer Eligibility

Program Policies & Eligibility Requirements

- ▶ Commercial, governmental, not-for-profit, and other facilities receiving service from CenterPoint are eligible to participate.
 - ▶ Customers must receive distribution service voltages (≤ 34.5 kV), with the exception of educational, not-for-profit, and governmental facilities receiving transmission service voltage (≥ 69 kV)
 - ▶ Residential customers are not eligible



Project Eligibility

Program Policies & Eligibility Requirements

- ▶ Eligible applications include parking garages, parking lots, outdoor walkways, facility exteriors, and other outdoor lighting.
- ▶ Participants must not be participating in another CenterPoint energy efficiency program for the same energy-saving measures.
- ▶ New construction and retrofit projects are eligible.
- ▶ Street and traffic-signal lighting are not eligible.
- ▶ The Project must meet all applicable local, state, and federal regulations and permit requirements.

Measure Eligibility

Program Policies & Eligibility Requirements

- ▶ Eligible LED lighting products* meet the requirements of one of the following qualifying programs:
 - ▷ **ENERGY STAR®:**
http://www.energystar.gov/index.cfm?c=ssl.pr_commercial
 - ▷ **DesignLights Consortium™:**
<http://designlights.org/solidstate.about.php>
 - ▶ LED product manufacturers and distributors will know whether a product is listed by the DLC.
 - ▷ LED products that have been previously approved for incentives by a Texas electric utility are likely also qualified for incentives under this program.
- ▶ The Program may also evaluate and qualify proposed LED lighting products on a project-by-project basis in a market-neutral, non-discriminatory manner.

* LED replacement lamps are not eligible for incentives under this program.

Measure Eligibility Cont.

Program Policies & Eligibility Requirements

- ▶ Proposed LED products will be evaluated using the applicable ENERGY STAR® or DesignLights Consortium criteria, standards and testing requirements in effect at the time of Project approval
 - ▶ *see Program Manual for complete criteria*
- ▶ LM-79 (efficacy) and LM-80 (lifetime) testing
- ▶ In-Situ Temperature Measurement Test
- ▶ All applicable Underwriters Laboratory (UL) safety specifications

Qualified Service Providers

Program Policies & Eligibility Requirements

- ▶ Two categories of Qualified Service Providers with different authorized roles and eligibility requirements:
 - ▷ **INSTALLATION** Service Providers (contractors)
 - ▶ exclusively may perform installations
 - ▶ may also perform any other Project-related services.
 - ▶ *Projects must use an approved Installation Service Provider.*
 - ▷ **CONSULTATION** Service Providers (consultants, distributors, manufacturers, etc.)
 - ▶ may provide services other than installation, such as recommending lighting/control measures, designing the installation, etc.
 - ▶ *Customers may choose to engage an approved Consultation Service Provider at their own discretion.*

Service Provider Qualification

Program Policies & Eligibility Requirements

- ▶ To be approved for participation in the Program, all Service Providers must:
 - ▷ Meet applicable Service Provider eligibility requirements
 - ▷ Submit a Service Provider Application
 - ▷ Sign the Service Provider Agreement
 - ▷ Receive Program training
- ▶ A Customer's preferred Service Provider may submit a Service Provider Application for approval and training to participate in the Program.
- ▶ Customers using an in-house lighting installation team may designate a representative from their team to sign the Service Provider Agreement, receive training, and be approved to participate in the Program.

Installation Service Providers

Program Policies & Eligibility Requirements

- ▶ Eligibility requirements for **Installation** Service Providers include:
 - ▷ Hold an Electrical Contractor business license
 - ▷ Be or employ a licensed Master Electrician
 - ▷ Show proof of financial responsibility
 - ▷ Follow U.S. Department of Labor's Occupational Safety & Health Administration (OSHA) electrical standards
 - ▷ Provide proof of required insurance:
 - ▶ Commercial General Liability (at least \$1m)
 - ▶ Workers' Compensation
 - ▶ Employer's, Automobile and Excess Umbrella Liability
 - ▶ See Program Manual for specific eligibility requirements

Consultation Service Providers

Program Policies & Eligibility Requirements

- ▶ Eligibility requirements for **Consultation** Service Providers:
 - ▶ Show proof of financial responsibility (e.g., annual reports, 10-K's, financial statements, Certificate of Good Standing)
 - ▶ Provide proof of General Liability insurance coverage of at least \$500,000
 - ▶ LED lighting product manufacturers and distributors that apply to become Program-qualified Consultation Service Providers must provide evidence that at least one of their products is on the DesignLights Consortium's Qualified Products List or has been previously approved for incentives by a Texas utility.
 - ▶ NOTE: Manufacturers and distributors are not required to be Program-qualified Consultation Service Providers in order to have their LED products approved for incentives.

Service Provider Agreement

Program Policies & Eligibility Requirements

- ▶ Benefits for Approved Service Providers:
- ▶ Listed on the Web site
- ▶ Authorized to use proprietary, protected Project tools and materials, including:
 - ▷ Savings Calculators, Payback Estimator, Project Application
- ▶ Gain valuable experience and reputation in the growing market for LED lighting services

NOTE: Any energy savings resulting from work performed by an unapproved Service Provider will not be eligible for Program incentives, as per the Customer's Project Agreement.

Project Application Deadline

Program Policies & Eligibility Requirements

- ▶ **The deadline to complete ALL 2012 Projects is November 30, 2012 – No exceptions**
- ▶ A Project Application is not complete until it includes all required forms and supplementary materials
- ▶ Installation Notices that are received after the deadline may not be reviewed for the 2012 Program year

Project Incentive Structure

Incentives

Project Incentive Structure

- ▶ CenterPoint provides incentives to customers based on a project's estimated on-peak* demand and annual energy savings resulting from the installation of LED measures
- ▶ Incentive rates for 2012:
 - ▷ **\$230/kW** for on-peak* demand savings
 - ▷ **\$0.14/kWh** for annual energy savings

** The on-peak demand period is defined as the hours from 1 p.m. to 7 p.m., Monday through Friday, June through September, excluding federal holidays.*

Equations for Savings

Project Incentive Structure

- ▶ Estimated On-Peak Demand Savings (kW):

$$\text{Baseline On-Peak Demand (kW)} - \text{On-Peak Demand (kW) After Installation}$$

- ▶ Estimated Annual Energy Savings (kWh):

$$\text{Baseline Energy Use (kWh)} - \text{Energy Use (kWh) After Installation}$$

- ▶ Stipulated Annual Operating Hours and Peak Coincidence Factors are used as part of the deemed savings method
 - ▶ Customers and/or Service Providers may also choose to log run time hours and submit them for verification

Incentive Limitations

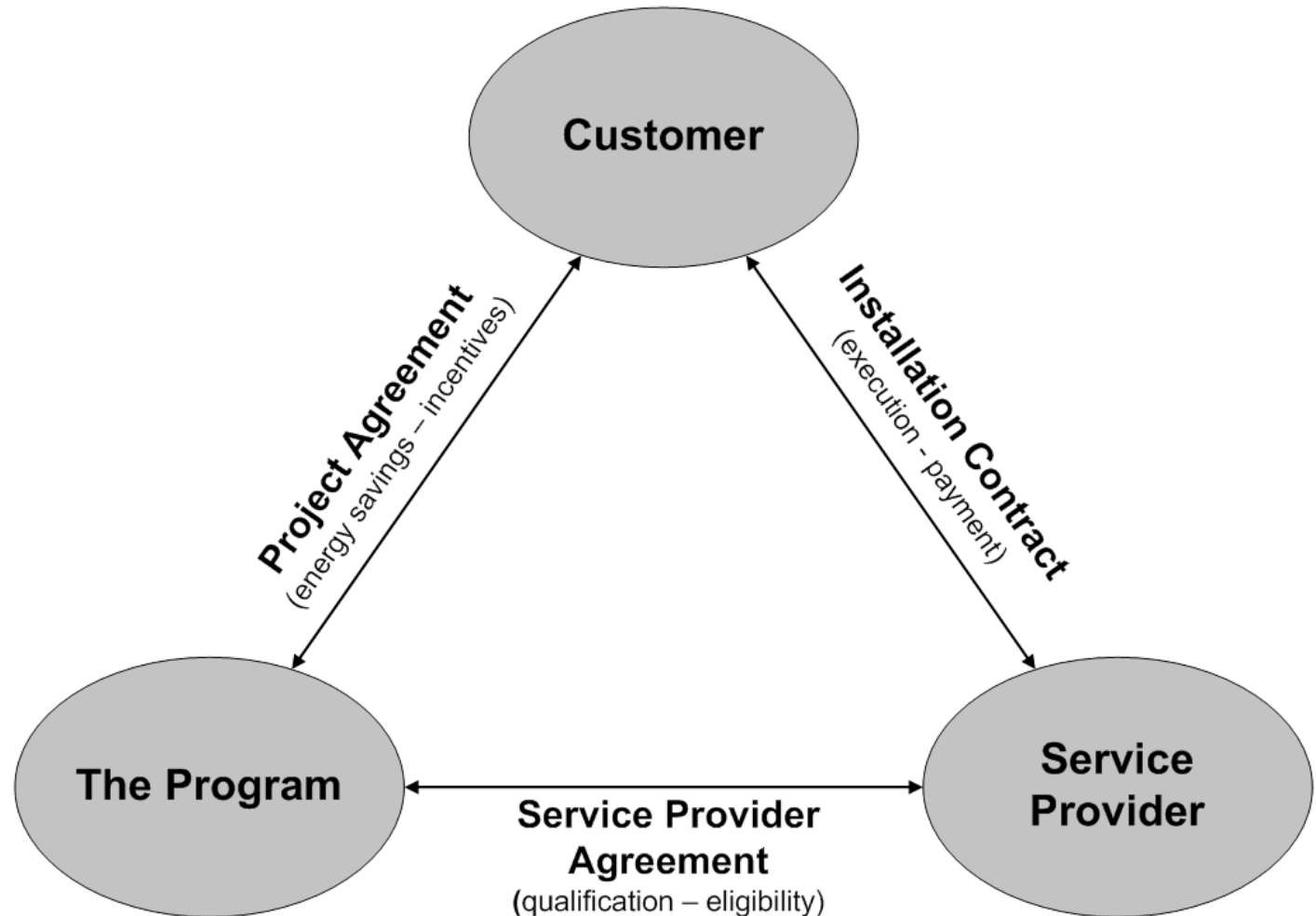
Project Incentive Structure

- ▶ **Minimum Project Size:** Must produce at least 20,000 kWh annual energy savings or 2 kW peak-demand reduction.
- ▶ **Customer Annual Incentive Cap:** Incentives available for any single Customer's project/s are limited to 30% of the Program year's initial annual incentive budget.
- ▶ **Project Incentive Cap:** Incentives will be limited to 80% of the final installed cost of the LED lighting Project.
- ▶ **Project Payback Limitation:** For Projects that would result in less than a one-year Customer payback period for Customers, incentives will be adjusted to limit payback to at least one year.

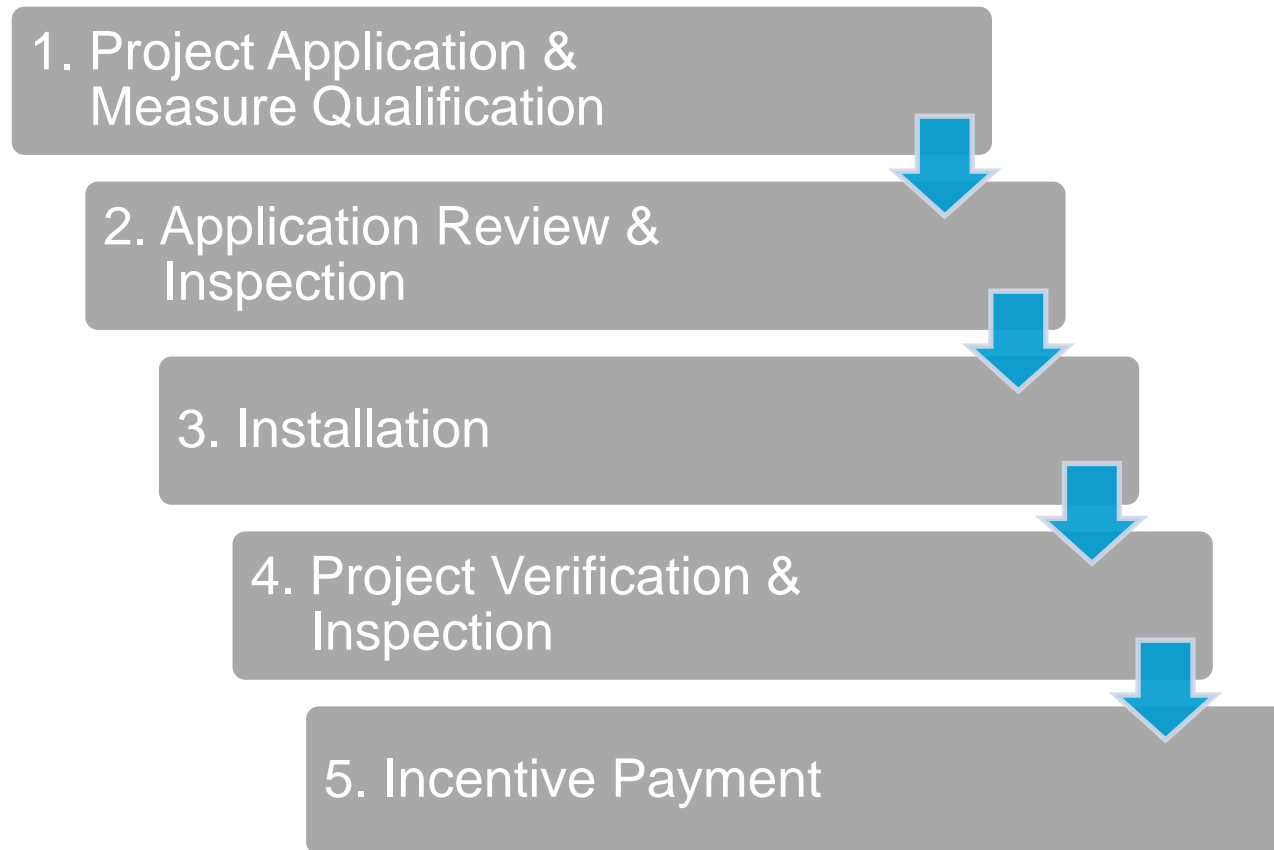
Project Roles and Process

Project Structure

▶ Project Roles and Process



▶ Project Roles and Process



**See Program Manual for detailed information about the Project process*

Step 1: Project Application

Project Roles and Process

- ▶ Verify Project eligibility
 - ▷ Ecova conducts initial on-site visit of customer's project site
- AND**
- ▷ Service Provider and/or customer provides Ecova with the installation site's ESI ID for verification
- ▶ Service Provider submits test reports (including LM-79 and LM-80) and other measure data to Ecova

Step 1: Project Application

Project Roles and Process

- ▶ Service Provider conducts Field Audit of the site:
 - ▷ Inventory and photograph existing lighting to be upgraded
 - ▷ Create LED Installation Recommendation and price quote (constitutes Contractor's estimate and bid)
 - ▷ Calculate Project savings and incentives
 - ▷ Timeline (start date, milestones, completion date)

Step 1: Project Application

Project Roles and Process

- ▶ Service Provider prepares Project Application
 - ▷ Describes site, measures to be installed, estimated on-peak demand and annual savings, and estimated incentive payments
- ▶ Customer signs Project Agreement
- ▶ Completed Project Application is submitted to Ecova

Step 2: Application Review

Project Roles and Process

- ▶ Ecova evaluates LED product data against eligibility requirements to qualify the proposed LED fixture
- ▶ Ecova conducts Pre-installation Inspection to:
 - ▷ Verify baseline conditions documented in Project Application and savings calculations
 - ▷ Verify feasibility of installing proposed measures
 - ▷ Ensure installation of new measures has not already begun

Step 2: Application Review

Project Roles and Process

- ▶ Upon approval of the Project Application, Ecova signs the Project Agreement
 - ▶ This serves as the contract and incentive agreement between the Program and Customer
- ▶ Ecova sends notification to proceed with installation

Step 3: LED Installation

Project Roles and Process

- ▶ Customer and Service Provider enter into legal contract, including payment terms, for LED installation (the Program is not a party to this contract)
- ▶ Service Provider performs installation of LED measures according to timeline
- ▶ Service Provider keeps Ecova updated on installation progress, issues, etc
- ▶ Ecova monitors installation and schedule
- ▶ Upon completion, Service Provider submits Installation Notice

Step 4: Post-installation Inspection

Project Roles and Process

- ▶ Ecova conducts Post-installation Inspection to verify that installed LED measures:
 - ▶ Match the Project Application
 - ▶ Are installed properly and functioning at optimal levels

Step 5: Incentive Payment

Project Roles and Process

- ▶ After Project passes the Post-Installation Inspection, the incentive payment is processed
- ▶ Incentive check delivered to customer in 4 to 6 weeks

Program Web site

Project Roles and Process

- ▶ **www.CenterPointEfficiency.com**

- ▶ Under “Business Energy Efficiency Programs,” select “**Advanced Lighting Program - Commercial**” (or click [here](#))

- ▶ The Program Web site will serve as the source for all updated program information, including:

- ▶ Program Manual
 - ▶ Program Summary
 - ▶ Program Presentation
 - ▶ List of Qualified Service Providers
 - ▶ Service Provider Application



Program Contact Information

Calvin Burnham, P.E., CEM

Staff Consulting Engineer

CenterPoint Energy

Calvin.Burnham@CenterPointEnergy.com

(712) 207-3423

Butler Nooner

Program Manager, Ecova

bnooner@ecova.com

(214) 500-3714

Website

www.CenterPointEfficiency.com

Under "Business Energy Efficiency Programs," select
"Advanced Lighting Program - Commercial"
(or click [here](#))

FAX

866-651-5201