

## Lighting

Pacific Power provides incentives for many types of energy-efficient technologies. Please read the following sections carefully to ensure that you follow the appropriate steps for securing your incentive. Equipment may be subject to inspection prior to incentive payment.

Incentives for additional measures may be available. For more information about the FinAnswer Express program, eligibility requirements, incentive levels or other general inquiries, contact your local lighting dealer or Pacific Power. You can visit the program website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) and submit your inquiry online, or you can call our energy services hotline at 1-800-222-4335.

### HIGH-EFFICIENCY LIGHTING RETROFITS

**Measure description:** Lighting retrofit projects replace existing lighting systems and technologies with more efficient systems and technologies. Lighting retrofit projects are among the most effective energy saving opportunities available to commercial and industrial customers.

**Applicability:** Retrofit applications only.

**Equipment eligibility:** Pacific Power offers prescriptive or custom incentives for the installation of qualifying lighting fixtures. Lighting retrofit must be completed on or after January 19, 2012\* to be eligible for the incentives listed in this catalog. The new lighting system must use less energy than the existing or baseline lighting system.

- *Prescriptive Incentives* are offered for common lighting improvements as shown in Table 1 and are subject to project incentive caps.
- *Custom Incentives* may be offered for lighting retrofits for an upgrade that is not listed in Table 1, is NRTL certified, and saves energy over an existing or baseline fixture. Custom incentives equal \$0.10/kWh annual energy savings and are subject to project incentive caps.
- *Incentive Caps* apply to both prescriptive and custom incentives. The eligible incentive will be limited to 70 percent of the eligible project costs and will also be capped to maintain a simple payback greater than or equal to 1 year (including incentives).

**Prequalification required?** No. Incentives for high-efficiency lighting retrofits are available via a post-purchase incentive application process. Prequalification prior to placing purchase orders is recommended but not required.

*Note:* Pacific Power has a lighting calculation software tool for Retrofit projects. It is available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for retrofit projects. Visit our website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) for a current list of participating vendors. Contact a participating vendor or Pacific Power for next steps.

**Items to submit with application:** The following documents are required to be submitted with completed *Incentive Application for Post-purchase Lighting Projects* before incentive payment will be processed:

1. Dated sales receipt/invoice for the installed equipment.
2. Completed Pacific Power lighting software tool.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

\* For information on incentives for retrofit lighting projects completed prior to January 19, 2012, please call 1-800-222-4335.

**Table 1. Retrofit Lighting Efficiency Requirements & Incentive Levels**

Measure	Category	Eligibility Requirements	Customer Incentive
T8 Fluorescent	Standard	4' Lamp $\leq$ 32 Watts, Electronic ballast with Ballast Factor $\leq$ 0.88 (See Note 3)	\$3/Lamp
	Premium	4' CEE Qualified Reduced Wattage or High Performance Lamp and CEE Qualified Ballast as listed on CEE qualified ballast list <a href="http://www.cee1.org">www.cee1.org</a>	\$7/Lamp
	Premium Delamp	4' CEE Qualified Reduced Wattage or High Performance Lamp and CEE Qualified Ballast. Must remove one or more lamps and corresponding sockets within the same fixture.	\$21/Lamp Removed
	Relamp	Lamp wattage reduction $\geq$ 3 Watts, no ballast retrofit.	\$0.25/Lamp
	High Bay	4' CEE Qualified High Performance Lamp. Must replace T12HO, Incandescent, or HID in a high ceiling application.	\$20/Lamp
T5 Fluorescent	Standard	4' Nominal Lamp $\leq$ 28 Watts, Ballast Factor $\leq$ 1.0	\$5/Lamp
	Relamp	Lamp wattage reduction $\geq$ 3 Watts, no ballast retrofit.	\$0.25/Lamp
	High Bay	4' Nominal High Output Lamp	\$20/Lamp
Cold Cathode	Screw-in Lamp	All wattages	\$5/Lamp
Compact Fluorescent Lamp (CFL)	Hardwired Fixture	All wattages	\$5/Fixture
Ceramic Metal Halide (CMH)	CMH Lamp	All wattages	\$35/Lamp
Pulse Start Metal Halide (PSMH)	PSMH Fixture	All wattages > 500W	\$60/Fixture
	Electronic Ballast	Must be used in place of or replace a magnetic ballast	\$20/Ballast
Induction	Induction Fixture	All wattages, New fixtures only	\$125/Fixture
LED	Integral Screw-in Lamp	LED must be on qualified fixture list (see Note 7)	\$10/Lamp
	Recessed Downlight	LED must be on qualified fixture list (see Note 7)	\$10/Fixture
	Outdoor Area and Roadway	LED must be on qualified fixture list (see Note 7)	\$100/Fixture
	Parking Garage	LED must be on qualified fixture list (see Note 7)	\$100/Fixture
	High and Low Bay	LED must be on qualified fixture list (see Note 7)	\$100/Fixture

Notes for Table 1:

- To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced or the baseline lighting system as determined by Pacific Power.
- Incentives are capped at 70 percent of Energy Efficiency Project Costs and subject to the one-year payback cap.
- The incentive for the Standard T8 Fluorescent will no longer be available effective July 14, 2012.**
- Two-foot U-tube lamps may be substituted for four-foot linear fluorescent lamps.
- Incentives for T8 Premium Delamps may not be combined with other linear fluorescent lamp or fixture incentives. Complete fixture removals are not eligible.
- Incentives for T8 Relamps may not be combined with other linear fluorescent lamp or fixture incentives and will only be paid once per facility.
- LED fixtures and bulbs must be listed on the approved products list on at least one of the following websites:
  - Energy Star: [www.energystar.gov](http://www.energystar.gov)
  - Design Lights Consortium: [www.designlights.org](http://www.designlights.org)
  - Lighting Design Lab: [www.lightingdesignlab.com](http://www.lightingdesignlab.com)

BF = Ballast Factor

CEE = Consortium for Energy Efficiency

CFL = Compact Fluorescent Lamp

CMH = Ceramic Metal Halide

PSMH = Pulse Start Metal Halide

HID = High Intensity Discharge

HO = High Output

LED = Light-Emitting Diode

**Information on lamp and ballast recycling:** Fluorescent and High-Intensity Discharge (HID) lighting contains trace amounts of mercury and other toxic materials. Lamps and ballasts should always be disposed of properly in accordance with State and Federal regulations. Please consult with the California Department of Resources Recycling and Recovery (CalRecycle) for information on recycling lamps and ballasts.

## RETROFIT LIGHTING CONTROLS

**Measure description:** Lighting Controls help reduce energy use by turning off lighting equipment when it is not needed. Incentives for timeclock controls are not available.

**Applicability:** Retrofit applications only.

**Equipment eligibility:** Pacific Power offers prescriptive incentives for the installation of qualifying lighting controls. Lighting controls retrofit must be completed on or after January 19, 2012\* to be eligible for the incentives listed in this catalog. The new lighting controls must be installed where lighting controls were not previously present.

- Prescriptive Incentives are offered for lighting controls as shown in Table 2 and are subject to project incentive caps.
- Custom Incentives may be offered for lighting controls for an upgrade that is not listed in Table 2. Custom incentives for lighting controls require pre-qualified, custom analysis. Contact us at 1-800-222-4335 for additional information.
- Incentive Caps apply to lighting controls. The eligible incentive will be limited to 70 percent of the eligible project costs and will also be capped to maintain a simple payback greater than or equal to 1 year (including incentives).

**Prequalification required? No.** Incentives for lighting controls are available via a post-purchase incentive application process. Prequalification prior to placing purchase orders is recommended but not required. The controls must be listed in Table 2 to qualify for prescriptive incentives without prequalification. Retrofit lighting controls projects may apply for incentives using the *Incentive Application for Post-purchase Lighting Projects* along with the lighting calculation software tool. Please note that time clock controls are no longer available as of January 19, 2012.

\* For information on incentives for retrofit lighting controls projects completed prior to January 19, 2012, please call 1-800-222-4335.

**Table 2. Retrofit Lighting Efficiency Requirements & Incentive Levels**

Measure	Category	Eligibility Requirements	Customer Incentive
Lighting Control	Occupancy Control	PIR, Dual Tech, or Integral Sensor	\$75/Sensor
	Daylighting Control	Must control interior fixtures with qualifying dimming ballast(s)	\$75/Sensor
	Advanced Daylighting Control	Must incorporate both an occupancy sensor and daylighting sensor operating as part of the same control sequence in the same space.	\$150
	Dimming Ballast	Continuous, Stepped, or Bi-Level ballast or automated control that dims 50 percent or more of the fixture. Must be controlled by a qualifying occupancy or daylighting control.	\$15/Ballast

Notes for Table 2:

1. To be eligible for the incentives listed, the new lighting system must use less energy than the existing lighting system replaced.
  2. Incentives are capped at 70 percent of eligible Energy Efficiency Project Costs, and incentives will not be available to reduce the Energy Efficiency Project simple payback below one year.
  3. Incentives for Advanced Daylighting Controls may not be combined with other lighting control incentives.
- PIR = Passive Infra-Red  
 Dual Tech = Sensors combining ultrasonic and passive infra-red  
 LED = Light-Emitting Diode

**LED SIGNAGE (NON-GENERAL ILLUMINANCE) (RETROFIT ONLY)**

**Measure description:** Incentives for non-general illuminance are available for signage using LED technology. Incentives are available for four types of LED signs: LED Message Center Sign, LED Channel Letter Sign, LED Marquee/Cabinet Sign, and Exit Signs. Incentives for LED traffic light installations are not available.

- **Message center** signs display text and are commonly found on storefronts, restaurants, and arenas.
- **Channel letters** are individually illuminated letters and graphics that are typically found on storefronts.
- **Marquee/Cabinet signs** illuminate translucent signs from within.
- **Exit signs** direct people to the nearest building exit.

**Applicability:** Only retrofit projects may be eligible for the incentives listed in Table 3. In order to qualify for incentives, LED Message Center Signs must replace incandescent signage, LED Channel Letter Signs must replace neon signage, LED Marquee/Cabinet Signs must replace fluorescent signage, and LED Exit Signs must replace incandescent or fluorescent exit signs.

**Equipment eligibility:** To qualify for incentives listed below, equipment must be purchased and installed on or after January 19, 2012\*, and meet all other program terms and conditions.

**Items to submit with application:** The following documents are required to be submitted with completed *Incentive Application for Post-purchase Lighting Projects* before incentive payment will be processed:

1. Dated sales receipt/invoice for the installed equipment.
2. Completed Pacific Power lighting software tool.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required? No.** Incentives are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required. LED Exit Signs installed in conjunction with a High-Efficiency Lighting Retrofits should be included in the lighting calculation software for that project.

**Table 3. Efficiency Requirements, Incentive Levels & Equipment Codes**

Measure	Category	Eligibility Requirements	Customer Incentive
Non-general Illuminance (Retrofit Only)	LED Message Center Sign	LED replacing existing incandescent signage	\$5/Replaced Lamp
	LED Channel Letter Sign	LED replacing existing neon or fluorescent signage	\$5/Linear Foot
	LED Marquee/Cabinet Sign	LED replacing existing fluorescent signage	\$5/Linear Foot
	Exit Sign	LED or photoluminescent replacing existing incandescent or fluorescent	\$15/Sign

**Linear footage is calculated as follows:**

1. **Channel Letters** – The actual, measured linear footage of the LED illuminant. All measures are subject to verification via inspection prior to approval.
2. **Marquee/Cabinet Signs** – The linear footage of the fluorescent tubes being replaced by LED technology.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
LEDMSG	LED Message Letter	\$5/Lamp
LEDCHN	LED Channel Letter	\$5/Linear Foot
LEDMQE	LED Marquee/Cabinet Sign	\$5/Linear Foot
LEDEXI	LED Exit Sign	\$15/Sign

\* For information on incentives for Non-general Illuminance projects completed prior to January 19, 2012, please call 1-800-222-4335.

**LED REFRIGERATED CASE LIGHTING (RETROFIT ONLY)**

**Measure description:** Fixtures within refrigerated reach-in display cases are used to display refrigerated products. Replacing existing fluorescent lighting with energy efficient LED light bars reduces total lighting wattage and heat gain in the refrigerated space.

**Applicability:** Retrofit projects only may be eligible for incentives. LED technology must replace fluorescent lamps.

**Equipment Eligibility:** Equipment must be purchased and installed and meet all other program terms and conditions.

**Items to submit with application:** The following documents are required to be submitted with completed *Incentive Application for Post-purchase Lighting Projects* before incentive payment will be processed:

1. Dated sales receipt/invoice for the installed equipment.
2. Completed Pacific Power lighting software tool.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

**Prequalification required?** **No.** Incentives are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
LEDCLR	LED Case Lighting	\$10/Linear Foot

## NEW CONSTRUCTION/MAJOR RENOVATION HIGH-EFFICIENCY LIGHTING

**Measure description:** Installing high-efficiency lighting during construction or major renovation can be a cost-effective means of saving electricity.

**Applicability:** New Construction and Major Renovation projects only.

1. *New Construction:* A newly constructed facility or newly constructed square footage added to an existing facility.
2. *Major Renovation:* A change in facility use type or where the existing system will not meet owner/customer projected requirements within existing facility square footage.

**Interior equipment eligibility:** In order to qualify for interior new construction/major renovation lighting incentives listed in this catalog, the new construction/major renovation project must be completed on or after January 19, 2012\*. The whole building's total connected interior lighting power (watts/square foot) for new construction/major renovation projects must be 10 percent lower than the interior lighting power allowance calculated under California Energy Commission's 2008 Building Energy Efficiency Standards, Title 24 2008. See Tables 5a and 5b for more details.

**Exterior Equipment Eligibility:** In order to qualify for exterior lighting incentives listed in this catalog, equipment must be purchased and installed on or after January 19, 2012\* and meet all other requirements listed in the *Exterior Lighting* section of Table 4.

**Items to submit with application:** The following documents are required to be submitted with completed *Incentive Application for Post-purchase Lighting Projects* before incentive payment will be processed:

1. Dated sales receipt/invoice for the installed equipment.
2. Completed Pacific Power lighting software tool.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

*Note:* Pacific Power has an interior lighting calculation software tool for New Construction/Major Renovation projects. It is available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for new construction/major renovation interior lighting projects. Exterior lighting projects are calculated separately. Visit the program website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) for a current list of EEA participating vendors. Contact your EEA participating vendor or Pacific Power for next steps.

**Prequalification required?** No. Incentives for new construction/major renovation lighting upgrades are available via a post-purchase incentive application process. Prequalification prior to placing purchase orders is recommended but not required.

\*For information on incentives available for new construction/major renovation projects completed prior to January 19, 2012, please call 1-800-222-4335.

## NEW CONSTRUCTION/MAJOR RENOVATION HIGH-EFFICIENCY LIGHTING (CONT.)

**Table 4. New Construction and Major Renovation Lighting Incentives**

Measure	Category	Eligibility Requirements	Incentive
Interior Lighting	Lighting and Lighting Control	1. The total connected interior lighting power for New Construction/Major Renovation projects must be 10 percent lower than the interior lighting power allowance calculated under the applicable version of the State energy code. For New Construction/ Major Renovation projects not included in the State energy code, the total connected lighting power must be 10 percent lower than common practice as determined by Pacific Power. 2. Energy savings is subject to approval by Pacific Power.	\$0.08/kWh annual energy saved
Exterior Lighting	Induction Fixture	All wattages, New fixtures only	\$125/Fixture
	LED Outdoor Area and Roadway	LED must be listed on qualified fixture list (see Note 1)	\$100/Fixture
	LED Parking Garage	LED must be listed on qualified fixture list (see Note 1)	\$100/Fixture
	Lighting Control	Integral occupancy sensor which must control a linear fluorescent, induction, or LED fixture. Sensor must be installed on a continuous duty light.	\$75/Sensor

Notes for Table 4:

- LED fixtures and bulbs must be listed on the approved products list on at least one of the following websites:
  - Energy Star: [www.energystar.gov](http://www.energystar.gov)
  - Design Lights Consortium: [www.designlights.org/](http://www.designlights.org/)
  - Lighting Design Lab: [www.lightingdesignlab.com](http://www.lightingdesignlab.com)

**Table 5a 2008 Building Efficiency Standards Maximum LPDs for Complete Building Method**

THIS TABLE IS FOR REFERENCE ONLY

(2008 Building Efficiency Standards, Table 146-E, Complete Building Method Lighting Power Density Values)

Type of Use	Allowed Lighting Power (W/ft <sup>2</sup> )
Auditoriums	1.50
Classroom Building	1.10
Commercial and industrial storage buildings	0.60
Convention centers	1.20
Financial institutions	1.10
General commercial and industrial work buildings	
High bay	1.00
Low bay	1.00
Grocery stores	1.50
Library	1.30
Medical buildings and clinics	1.10
Office buildings	0.85
Parking Garages	0.30
Religious facilities	1.60
Restaurants	1.20
Schools	1.00
Theaters	1.30
All others	0.60

LED = Light-emitting Diode  
 LPD = Lighting Power Density

**Table 5b 2008 Building Efficiency Standards Maximum Lighting Power Densities (LPD) for Area Category Method Category**

**THIS TABLE IS FOR REFERENCE ONLY**

(2008 Building Efficiency Standards, Table 146-F, Area Category Method Lighting Power Density Values)

Primary Function	Allowed LPD (W/ft <sup>2</sup> )	Primary Function	Allowed LPD (W/ft <sup>2</sup> )
Auditorium	1.5 <sup>1</sup>	Laboratory, Scientific	1.4 <sup>4</sup>
Auto Repair	0.9 <sup>2</sup>	Laundry	0.9
Beauty Salon	1.7	Library - Reading areas	1.2
Civic Meeting Place	1.3 <sup>1</sup>	Library - Stacks	1.5
Classrooms, lecture, training, vocational room	1.2	Lobbies - Hotel lobby	1.1 <sup>1</sup>
Commercial and industrial storage (conditioned. & unconditioned.)	0.6	Lobbies - Main entry lobby	1.5 <sup>1</sup>
Commercial and industrial storage (refrigerated)	0.7	Locker/dressing room	0.8
Convention, conference, multipurpose and meeting centers	1.4 <sup>1</sup>	Lounge/recreation	1.1
Corridors, restrooms, stairs, and support areas	0.6	Malls and atria	1.2 <sup>1</sup>
Dining	1.1 <sup>1</sup>	Medical and clinical care	1.2
Electrical, mechanical, telephone rooms	0.7 <sup>2</sup>	Offices - > 250 square feet	0.9
Exercise center, gymnasium	1.0	Offices - < 250 square feet	1.1
Exhibit, museum	2.0	Parking garage - Parking Area	0.2
Financial transactions	1.2 <sup>1</sup>	Parking garage - Ramps and Entries	0.6
General commercial and industrial work - Low bay	0.9 <sup>2</sup>	Religious worship	1.5 <sup>1</sup>
General commercial and industrial work - High bay	1.0 <sup>2</sup>	Retail merchandise sales, wholesale showrooms	1.6
General commercial and industrial work - Precision	1.2 <sup>3</sup>	Tenant lease space	1.0
Grocery sales	1.6	Theaters - Motion picture	0.9 <sup>1</sup>
Hotel function area	1.5 <sup>1</sup>	Theaters - Performance	1.4 <sup>1</sup>
Housing, Public and Commons Areas - Multi-family, Dormitory	1.0	Transportation Function	1.2
Housing, Public and Commons Areas - Senior Housing	1.5	Waiting area	1.1 <sup>1</sup>
Kitchen, food preparation	1.6	All other	0.6

Footnotes for Table 146-F of Title 24 2008:

- 1) The smallest of the following values may be added to the allowed lighting power for ornamental chandeliers and sconces that are in addition to and switched or dimmed on circuits different from the circuits for general lighting:
  - a) One watt per square foot times the area of the task space that the chandelier or sconce is in; or
  - b) The actual design wattage of the chandelier or sconce.
- 2) The smallest of the following values may be added to the allowed lighting power for specialized task work:
  - a) 0.5 watt per square foot times the area of the task space required for an art, craft assembly or manufacturing operation; or
  - b) The actual design wattage of the luminaire(s) providing illuminance to the specialized task area. For spaces employing this allowance, the plans shall clearly identify all task spaces using these tasks and the lighting equipment designed to illuminate these tasks. Tasks that are performed less than two hours per day or poor quality tasks that can be improved are not eligible for this specialized task work allowance.
- 3) The smallest of the following values may be added to the allowed power for precision commercial and industrial work:
  - a) One watt per square foot times the area of the task space required for the precision work; or
  - b) The actual design wattage of the luminaire(s) providing the illuminance to the precision task area. For spaces employing this allowance, the plans shall clearly identify all task spaces using these tasks and the lighting equipment designed to illuminate these tasks. Tasks that are performed less than two hours per day or poor quality tasks that can be improved are not eligible for this precision task work allowance.
- 4) The smallest of the following values may be added to the allowed lighting power for specialized task work:
  - a) 0.2 watt per square foot times the area of the task space required for a lab in a school; or
  - b) The actual design wattage of the luminaire(s) providing illuminance to the specialized task area.

## **LIGHTING EQUIPMENT NOT ELIGIBLE FOR RETROFIT INCENTIVES**

The following technologies are not eligible to receive incentives through the FinAnswer Express program for retrofit projects.

### HID

- HPS-High Pressure Sodium
- MH-Metal Halide
- MV-Mercury Vapor

### Fluorescent

- Standard T8 Fluorescent Lamps: As of July 14, 2012 incentives will no longer available.
- T12 Fluorescent Lamps
- Screw-in Compact Fluorescent Lamps

### Controls

- Time Clock controls: As of January 19, 2012 incentives for time clock controls are no longer available.

### Incandescent

- All incandescent lamps are ineligible for incentives