

Lighting Technologies

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.

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 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 are the most common and effective energy conservation opportunities available to commercial and industrial customers.

Applicability: Retrofit applications only.

Equipment eligibility: Pacific Power offers prescriptive or custom incentives for qualifying lighting equipment. To be eligible for the incentives listed in Table 1, an incentive agreement must be in place on or after February 24, 2012. The new lighting system must use less energy than the existing/ 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/ 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? Yes. Contact a participating vendor or Pacific Power to get started. A pre-installation inspection of existing lighting may be required. Ensure that you sign a FinAnswer Express Incentive Agreement before you sign any purchase orders for equipment or installation services.

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 for a current list of participating vendors. Contact a participating vendor or Pacific Power for next steps.

Post-installation inspection: An inspection of the installed equipment may be required prior to incentive payment.

Items to submit prior to incentive payment: In addition to the items required for the project pre-approval, invoices with itemized labor and materials are required to be submitted before incentive payment will be made.

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 Washington Department of Ecology for information on recycling lamps and ballasts. Information on collection programs or recyclers can be found on the Hazardous Waste & Toxics Reduction Program website: www.ecy.wa.gov/programs/hwtr/index.html

Table 1. Retrofit Lighting Efficiency Requirements & Incentive Levels

Measure	Category	Eligibility Requirements	Customer Incentive
T8 Fluorescent	Standard	4' Lamp ≤ 32 Watts, Electronic ballast with Ballast Factor ≤ 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 http://www.cee1.org	\$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 ≥ 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 ≤ 28 Watts, Ballast Factor ≤ 1.0	\$5/Lamp
	Relamp	Lamp wattage reduction ≥ 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 8)	\$10/Lamp
	Recessed Downlight	LED must be on qualified fixture list (see Note 8)	\$10/Fixture
	Outdoor Area and Roadway	LED must be on qualified fixture list (see Note 8)	\$100/Fixture
	Parking Garage	LED must be on qualified fixture list (see Note 8)	\$100/Fixture
	High and Low Bay	LED must be on qualified fixture list (see Note 8)	\$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 the 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 4' 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.
- Qualified equipment lists referenced in Table 1 are available online at pacificpower.net/wattsmart.
- 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
 - Design Lights Consortium: www.designlights.org/
 - Lighting Design Lab: www.lightingdesignlab.com

BF = Ballast Factor

CEE = Consortium for Energy Efficiency

CFL = Compact Fluorescent Lamp

CMH = Ceramic Metal Halide

HID = High Intensity Discharge

HO = High Output

LED = Light-Emitting Diode

PSMH = Pulse Start Metal Halide

RETROFIT LIGHTING CONTROLS

Measure description: Lighting Controls help reduce energy use by turning off lighting equipment when it is not needed.

Applicability: Retrofit applications only.

Equipment eligibility: Pacific Power offers prescriptive incentives for qualifying installations of lighting controls. Equipment must be purchased and installed on or after February 24, 2012* in order 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? Prequalification is recommended, but not required for retrofit projects involving controls only where the controls are included in Table 2. Projects involving controls only (listed on Table 2) may apply for incentives using the *Incentive Application for Post-purchase Lighting Projects along with the lighting calculation software tool*.

Prequalification is required for controls installed as part of a lighting retrofit project and for custom incentives. For projects involving both lighting controls and fixtures, contact us or a participating EEA vendor *prior to* purchasing equipment. This applies to projects with custom incentives as well. For further information, please reference the High-Efficiency Lighting Retrofit section of this catalog above.

* For information regarding incentives for prequalified retrofit lighting controls projects prior to February 24, 2012, please contact us.

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
	Timeclock	Must control on/off schedule of lighting equipment	\$20/timeclock
	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 Sign. 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 incentives listed in Table 5. In order to qualify for incentives, LED Message Center Signs must replace incandescent signage, LED Channel Letter Signs must replace neon or fluorescent signage, LED Marquee/Cabinet Signs must replace fluorescent signage, and LED Exit Signs must replace incandescent or fluorescent exit signs.

Equipment eligibility: Equipment must be purchased and installed on or after February 24, 2012*, and meet all other program terms and conditions.

*For information regarding equipment purchased prior to February 24, 2012, please contact us.

Items to submit with the incentive application:

1. Dated sales receipt/invoice with install date and retailer/contractor name, address and phone number.
2. 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 Retrofit should be included in the required prequalification process of that project.

Table 3. Efficiency Requirements, Incentive Levels & Equipment Codes

Measure	Category	Equipment Code	Eligibility Requirements	Customer Incentive
Non-general Illuminance (Retrofit Only)	LED Message Center Sign	LEDMSG	LED replacing existing incandescent signage	\$5/Lamp Replaced
	LED Channel Letter Sign	LEDCHN	LED replacing existing neon or fluorescent signage	\$5/Linear Foot
	LED Marquee/ Cabinet Sign	LEDMQE	LED replacing existing fluorescent signage	\$5/Linear Foot
	LED Exit Sign	LEDEXI	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 measurements may be subject to verification via inspection prior to approval.
2. **Marquee/Cabinet Signs** – The linear footage of the fluorescent tubes being replaced by LED technology.

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 the Incentive 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 with install date and retailer/contractor name, address and phone number.
2. A copy of the product specifications.
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

REFRIGERATED CASE OCCUPANCY SENSOR (RETROFIT ONLY)

Measure description: Refrigerated case occupancy sensors provide energy savings by turning off lighting and managing product temperature efficiently when the area surrounding the case is unoccupied.

Applicability: Retrofit projects only may be eligible for incentives. Equipment must be installed in an existing refrigerated case with existing LED lighting or as part of an LED case lighting retrofit.

Equipment eligibility: Occupancy sensor control equipment must be purchased and installed on or after February 24, 2012, and meet all other program terms and conditions. This measure is intended for refrigerated cases only.

Items to submit with application:

1. Dated sales receipt/invoice with install date and retailer/contractor name, address and phone number.
2. Itemized listing of quantity, description, manufacturer, model number and other identifying information as appropriate.
3. Manufacturer’s equipment specification sheet.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification required? No. Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
REFOCS	Refrigerated Case Occupancy Sensor	\$1 / controlled linear foot of LED lighting

NEW CONSTRUCTION/MAJOR RENOVATION HIGH-EFFICIENCY LIGHTING

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

Applicability:

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 February 24, 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 Washington energy code.

Exterior equipment eligibility: In order to qualify for exterior lighting incentives listed in this catalog, equipment must be purchased and installed on or after February 24, 2012* and meet all other requirements listed in the *Exterior Lighting* section of Table 4.

Items to submit for project approval: To qualify for incentives, please submit the following:

1. Dated sales receipt/invoice.
2. Completed and Signed Customer Incentive Application/Agreement for Lighting Incentives.
3. Completed Pacific Power lighting software tool.
4. 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 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 February 24, 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 WSEC 2009. For New Construction/ Major Renovation projects not included in the WSEC 2009, 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 on qualified fixture list (see Note 2)	\$100/Fixture
	LED Parking Garage	LED must be on qualified fixture list (see Note 2)	\$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 operating 8760 hours per year.	\$75/Sensor

Notes for Table 4:

1. Qualified equipment lists referenced in Table 4 are available online at pacificpower.net/wattsmart.
2. 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
 - Design Lights Consortium: www.designlights.org/
 - Lighting Design Lab: www.lightingdesignlab.com

LED = Light-emitting Diode

WSEC = Washington State Energy Code

Table 5. Washington State Energy Code 2009 Maximum Lighting Power Densities (LPD)

(Washington State Energy Code 2009, Table 15-1, Effective 1/1/2011)

Business Type ¹	LPD ² (W/ft ²)
Automotive facility	0.85
Convention center	1.10
Courthouse	1.10
Cafeterias, fast food establishments ⁵ , restaurants/bars ⁵	1.20
Dormitory	0.85
Dwelling units	1.00
Exercise center	0.95
Gymnasia ⁷ , assembly spaces ⁷	0.95
Health care clinic	1.00
Hospital, nursing homes, and other Group I-1, I-2 Occupancies	1.20
Hotel/motel	1.00
Laboratory spaces (all spaces not classified "laboratory" shall meet office and other appropriate categories)	1.62
Laundries	1.20
Library ⁵	1.20
Manufacturing facility	1.20
Museum	1.00
Office buildings, office/administrative areas in facilities of other use types (including but not limited to schools, hospitals, institutions, museums, banks, churches) ^{5,6,9}	0.91
Parking Garage	0.20
Penitentiary and other Group I-3 Occupancies	0.90
Police/Fire Station	0.90
Post Office	1.00
Retail ⁸ , retail banking, mall concourses, wholesale stores (pallet rack shelving)	1.33
School buildings (Group E Occupancy only), school classrooms, day care centers	1.00
Theater, motion picture	0.97
Theater, performing arts	1.25
Transportation	0.80
Warehouses ⁹ , storage areas	0.50
Workshop	1.20
Plans Submitted for Common Areas Only⁶	
Main floor building lobbies ³ (except mall concourses)	1.10
All building common areas, corridors, toilet facilities and washrooms, elevator lobbies, including Group R-1 and R-2 Occupancies	0.8

Footnotes for Table 15-1 of 2009 Washington State Energy Code:

1. In cases in which a general use and a specific use are listed, the specific use shall apply. In cases in which a use is not mentioned specifically, the *Unit Lighting Power Allowance* shall be determined based upon the most comparable use specified in the table. See Section 1512 for exempt areas.
2. The watts per square foot may be increased, by 2% per foot of ceiling height above 20 feet, unless specifically directed otherwise by subsequent footnotes.
3. The watts per square foot of room may be increased by 2% per foot of ceiling height above 12 feet.
4. For all other spaces, such as seating and common areas, use the *Unit Lighting Power Allowance* for assembly.
5. The watts per square foot of room may be increased by 2% per foot of ceiling height above 9 feet.
6. For conference rooms and office less than 150 ft² with full height partitions, a Unit Lighting Power Allowance of 1.1 w/ft² may be used.
7. For indoor sport tournament courts with adjacent spectator seating over 5,000, the *Unit Lighting Power Allowance* for the court area is 2.60 W/ft².
8. Display window illumination installed within 2 feet of the window, provided that the display window is separated from the retail space by walls or at least three-quarter-height partitions (transparent or opaque) and lighting for free-standing display where the lighting moves with the display are exempt.

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

Incandescent

All incandescent lamps are ineligible for incentives

LED

LED traffic lights