

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.

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.

Equipment Eligibility: Qualifying lighting equipment is shown in Table 1. In order to qualify for lighting incentives, the whole building's total connected interior lighting power (watts/square foot) for new construction/major renovation projects required to comply with the energy code, must be 10 percent lower than the interior lighting power allowance calculated under the applicable version of the California energy code (See Table 2). The date of the building permit application shall establish the applicable version of the energy code.

For new construction/major renovation projects not required to comply with the energy code, the total connected lighting power must be 10% lower than common practice as determined by Pacific Power. Equipment must be purchased and installed, and meet all other program terms and conditions.

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

1. Dated sales receipt/invoice (to confirm date of equipment installation).
2. Completed and Signed Customer Incentive Application/Agreement for Lighting Incentives (2 pages).
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 a lighting calculation software tool 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 projects. 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? Incentives for new construction/major renovation lighting upgrades are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required.

NEW CONSTRUCTION/MAJOR RENOVATION HIGH EFFICIENCY LIGHTING (CONT.)
Table 1. New Construction and Major Renovation Lighting Incentives

Category	Install	Customer Incentive
Premium T8 Fluorescent Fixture Upgrade [Lamps with initial lumens \geq 3100 or wattage \leq 30 W; electronic ballasts with BF \leq 0.8]	4' - 1 or 2 Premium T8 lamp(s) + EB	\$7
	4' - 3 or 4 Premium T8 lamps + EB	\$10
T5 Fluorescent Fixture Upgrade	2 T5HO lamps (nominal 4') + EB (interior fixtures)	\$24
	3 T5HO lamps (nominal 4') + EB (High Bay)	\$48
	4 - 7 T5HO lamps (nominal 4') + EB(s) (High Bay)	\$60
	\geq 8 T5HO lamps (nominal 4') + EB(s) (High Bay)	\$120
	1 T5 lamp (nominal 4') + EB (interior fixtures)	\$12
	2 T5 lamps (nominal 4') + EB (interior fixtures)	\$30
	3 T5 lamps (nominal 4') + EB (interior fixtures)	\$36
T8 Fluorescent Fixture Upgrade (High Bay)	4' \geq 4 T8 lamps + EB(s) (High Bay)	\$45
High Intensity Discharge (HID) Upgrades (Based on lamp wattages)	\leq 100W Ceramic Metal Halide	\$20
	$>$ 100W Ceramic Metal Halide	\$40
	$>$ 500W Pulse Start MH	\$36
Lighting Controls	Integral occupancy sensor	\$30
	Daylighting control (See Note 3)	\$0.10 per connected watt
	Bi-level controlled fixtures with integral occupancy sensor (per fixture)	\$35
LED Lighting	Indoor LED channel letter signage \leq 2' high	\$4/linear foot
	Indoor LED channel letter signage $>$ 2' high	\$6/linear foot
	Outdoor LED channel letter signage \leq 2' high	\$2/linear foot
	Outdoor LED channel letter signage $>$ 2' high	\$3/linear foot

Notes for new construction and major renovation lighting incentives:

1. Incentives are not available for lighting controls required under the applicable version of the California energy code.
2. The total connected interior lighting power for New Construction/Major Renovation projects required to comply with the energy code must be 10 percent lower than the interior lighting power allowance calculated under the applicable version of the California energy code. For New Construction/Major Renovation projects not required to comply with the energy code, the total connected lighting power must be 10% lower than common practice as determined by Pacific Power.
3. Incentives are not available for lighting controls required under the applicable version of the California energy code. Incentives are not available for daylighting controls and bi-level fixtures if utilized to comply with the applicable version of the California energy code. See Section 146 of the California State Energy Code Title 24-2008 for specific details on daylighting control and other interior control requirements.
4. Two-foot U-tube lamps may be substituted for 4' linear fluorescent lamps in the above table.
5. Electronic ballasts for High Bay T8 fixtures are required to have a ballast factor (BF) \leq 1.2 to be eligible for incentives.
6. To determine the length of LED channel letter signs, measure the length of individual letter at the centerline and add the individual values; do not measure the distance between letters.
7. Incentives are not available for LED traffic light upgrades.

HO = High Output

VHO = Very High Output

LED = Light-emitting diode

Table 2. California State Energy Code Maximum Lighting Power Densities (LPD)
 (California State Energy Code Title 24-2008, Table 146-E)

Type of Use	LPD (watts/sq. ft.)
Auditoriums	1.5
Classroom building	1.1
Commercial and industrial storage buildings	0.6
Convention centers	1.2
Financial institutions	1.1
General commercial and industrial work buildings	
High-bay	1.0
Low-bay	1.0
Grocery stores	1.5
Library	1.3
Medical buildings and clinics	1.1
Office buildings	0.85
Parking garages	0.3
Religious facilities	1.6
Restaurants	1.2
Schools	1.0
Theaters	1.3
All others	0.6

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 and custom incentives for qualifying lighting equipment as follows:

- *Prescriptive Incentives* are offered for common lighting improvements as shown in Table 3 and are subject to project incentive caps detailed below. Equipment listed in Table 3 is eligible for the listed incentive when retrofit on a one-for-one basis.
- *Custom Incentives* are offered for lighting retrofits where fixture counts change or the specific retrofit is not listed in Table 3. Incentives are not available for equipment listed only in the "Replace" column. Custom incentives equal \$0.10/kWh annual energy savings and are subject to project incentive caps as detailed below.
- *Incentive Caps:* Eligible incentives are limited for projects in two ways:
 - The incentive will be capped to maintain a simple payback greater than or equal to 1 year (including incentives).
 - The eligible incentive will be limited to 60% of the eligible project cost.

Prequalification Required? Incentives for retrofit lighting upgrades are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required.

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

Items to submit prior to incentive payment: To qualify for incentives, please submit the following:

1. Dated sales receipt/invoice showing labor and material costs.
2. Completed and Signed Customer Incentive Application/Agreement for Lighting Incentives (Two (2) pages).
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 a lighting calculation software tool 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 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.

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 Toxic Substances Control (DTSC) or the Integrated Waste Management Board for information on recycling lamps and ballasts. Information on collection programs or recyclers can be found on the DTSC website: <http://www.dtsc.ca.gov/HazardousWaste/UniversalWaste/index.cfm>

Table 3. Retrofit Lighting Efficiency Requirements & Incentive Levels

Category	Replace	With	Customer Incentive
Fluorescent Fixture Upgrade to Standard T8 Fixtures [Standard T8 lamps and electronic ballasts with ballast factor (BF) ≤ 0.88]	4' - 1 or 2 T12 lamp(s) + 1 magnetic ballast (MB)	4' - 1 or 2 T8 lamps + 1 electronic ballast (EB)	\$6
	4' - 3 or 4 T12 lamp(s) + MB(s)	4' - 3 or 4 T8 lamps + EB	\$12
	8' - 1 or 2 T12 lamp(s) + MB(s)	4' - 2, 3 or 4 T8 lamps + EB	\$12
	8' - 1, 2, 3 or 4 T12 lamps + MB(s)	8' - 1, 2, 3 or 4 T8 lamps +EB	\$12
	8' - 1, 2, 3 or 4 T12 HO/VHO lamps + MB(s)	8' - 1, 2, 3 or 4 T8 HO/VHO lamps +EB(s) (See Note 5)	\$18
Fluorescent Fixture Upgrade to 4' Premium T8 Fixtures [Lamps with initial lumens ≥ 3100 or wattage ≤ 30 W; electronic ballasts with BF ≤ 0.8]	4' - 1 or 2 T12 lamp(s) + MB or Standard T8 lamp(s) + EB	4' - 1 or 2 Premium T8 lamp(s) + EB	\$12
	4' - 3 or 4 T12 lamps + MB(s) or Standard T8 lamps + EB	4' - 3 or 4 Premium T8 lamps + EB	\$18
	8' - 1 or 2 T12 lamp(s) + MB(s)	4' - 2, 3 or 4 Premium T8 lamps + EB	\$20
Fluorescent Delamping and Standard T8 Fixture Upgrade [Standard T8 lamps and electronic ballasts (EB) with BF ≤ 0.88. Fixture removal is not eligible]	4' - 2 T12 lamps + MB	4' - 1 Standard T8 lamp +EB	\$12
	4' - 3 T12 lamps + MB(s)	4' - 2 or 1 Standard T8 lamp +EB	\$18
	4' - 4 T12 lamps + MB(s)	4' - 3 Standard T8 lamps +EB	\$18
	4' - 4 T12 lamps + MB(s)	4' - 2 or 1 Standard T8 lamp +EB	\$30
Fluorescent Delamping and Premium T8 Fixture Upgrade [Lamps with initial lumens ≥ 3100 or wattage ≤ 30 W; electronic ballasts with BF ≤ 0.8. Fixture removal is not eligible]	4' - 2 T12 lamps + MB	4' - 1 Premium T8 lamp +EB	\$18
	4' - 3 T12 lamps + MB(s)	4' - 1 or 2 Premium T8 lamp +EB	\$24
	4' - 4 T12 lamps + MB(s)	4' - 3 Premium T8 lamps +EB	\$24
	4' - 4 T12 lamps + MB(s)	4' - 1 or 2 Premium T8 lamp +EB	\$35
T8 Fluorescent Lamp Upgrade	≥ 32 W T8 lamp	≤ 30 W T8 lamp (See Note 4)	\$0.50
Compact Fluorescent Lighting (CFL)	Incandescent	< 10W (nominal) CFL hardwire fixture	\$10
	Incandescent	≥ 10W and < 20W (nominal) CFL hardwire fixture	\$15
	Incandescent	≥ 20W (nominal) CFL hardwire fixture	\$20
T5 Fluorescent Fixture Upgrade	≥ 250 W MH, MV or HPS	3 T5HO lamps (nominal 4') + EB (High Bay)	\$70
	≥ 400 W MH, MV, or HPS	4, 5, or 6 T5HO lamps (nominal 4') + EB (High Bay)	\$75
	≥ 750 W MH, MV or HPS	≥ 8 T5HO lamps + EB(s)	\$110
	4' - 4 T12 lamps + MB(s)	2 T5 lamps (nominal 4') + EB (interior fixtures)	\$30
	4' - 4 T12 lamps + MB(s)	2 T5HO lamps (nominal 4') + EB (interior fixtures)	\$25
High Intensity Discharge (HID) Upgrades (based on lamp wattages)	Incandescent or tungsten	≤ 100W Ceramic Metal Halide	\$25
	≥ 400W MH, MV or HPS	≤ 320W Ceramic Metal Halide	\$100
	≥ 750W MH, MV, or HPS	≤ 400 W Ceramic Metal Halide	\$120
	≥ 150W and ≤ 250W MH, MV, or HPS, or ≥ 150W incandescent	≥ 125W and ≤ 175W Pulse Start MH	\$50
	> 250W and ≤ 400W MH, MV, or HPS	≥ 175W and ≤ 320W Pulse Start MH	\$60
	> 400W MH, MV, or HPS	≤ 400W Pulse Start MH	\$100
	≥ 1000W MH, MV or HPS	≤ 750W Pulse Start MH	\$100

Category	Replace	With	Customer Incentive
High Intensity Discharge (HID) Upgrades (continued)	≥ 250 W & < 750 W MH, MV, or HPS	4' - 4, 5, or 6 T8 lamps + EB(s) (High Bay)	\$75
	≥ 750 W MH, MV or HPS	4' - ≥8 lamp T8 + EB(s) (High Bay)	\$100
Exit Signs	Incandescent or fluorescent exit sign	Light Emitting Diode (LED) or Electro luminescent (EL) Exit Sign (1 or 2 faced)	\$15
	Incandescent or fluorescent exit sign	Photo luminescent or Tritium	\$20
Lighting Controls	Wall switch or no control	Wall or Ceiling Mounted Occupancy Sensor (per sensor)	\$35
	No control	Integral occupancy sensor	\$30
	No control	Photocell (per sensor) (exterior lights only)	\$20
	No control	Time clock (per control)	\$20
	No control	Daylighting controls	\$0.10/connected watt
	No control	Bi-level controlled fixtures with integral occupancy sensor (per fixture)	\$35
LED Lighting	Indoor incandescent, neon, or fluorescent signage	LED channel letter signage ≤ 2ft high	\$4/linear foot
		LED channel letter signage > 2ft high	\$6/linear foot
	Outdoor incandescent, neon, or fluorescent signage	LED channel letter signage ≤ 2ft high	\$2/linear foot
		LED channel letter signage > 2ft high	\$3/linear foot
	Fluorescent refrigeration case lighting	LED case lighting	\$10/linear foot
	Incandescent, neon or fluorescent signage	LED fixed or scrolling message center signage	See Note 7

Notes for retrofit lighting incentives:

1. Incentives are capped at 60 percent of energy efficiency project costs and subject to a one-year payback cap.
2. Two-foot U-tube lamps may be substituted for 4' linear fluorescent lamps in the lighting incentive table.
3. For retrofits of existing equipment, lighting incentives will be paid on a one-for-one equipment replacement basis. If fixture counts are changing, the project may be eligible for a custom energy efficiency incentive.
4. Incentives for T8 fluorescent lamp upgrades may not be combined with other fluorescent fixture incentives and will only be paid once per facility.
5. T8 high-output/very high-output (HO/VHO) and high bay T-8 electronic ballasts are required to have a ballast factor (BF) ≤ 1.2 to be eligible for incentives.
6. To determine the length of LED channel letter signs, measure the length of individual letter at the centerline and add the individual values; do not measure the distance between letters.
7. LED fixed or scrolling message center signage incentives are \$0.10 per kilowatt-hour of annual energy savings (see Note 1). Savings is subject to Pacific Power approval.
8. Incentives are available via a post-purchase incentive application.
9. Incentives are not available for LED traffic light upgrades.
10. Lighting equipment listed only in the "Replace" column is not eligible for incentives.

CFL = Compact Fluorescent Lamp
HPS = High Pressure Sodium
LED = Light-emitting diode

HO = High Output
MV = Mercury Vapor
MH = Metal Halide

LED CHANNEL LETTERS

Measure Description: Channel letters are individually illuminated letters and graphics that are typically found on storefronts. Channel letters that are installed or retrofit with high efficiency LED illumination are eligible for incentives. Incentives for LED traffic light installations are not available.

Applicability: New construction/major renovation and retrofit projects may be eligible for incentives. For retrofit projects, LED technology must replace incandescent, neon or fluorescent illumination.

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

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.

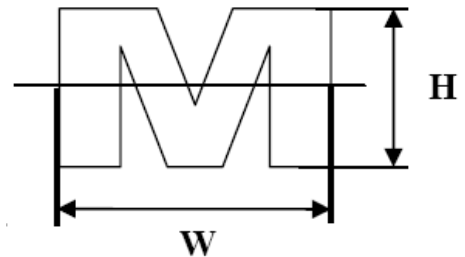
Prequalification Required? No. Incentives are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required.

Table 4. Channel Letter Efficiency Requirements, Incentive Levels & Equipment Codes

Location	Type	Letter Height	Incentive / Unit	Equipment Code
Indoor	Retrofit	≤ 2 ft. High	\$ 4 / Linear ft.	LEDCIR
		> 2 ft. High	\$ 6 / Linear ft.	LEDCIR
	New Construction	≤ 2 ft. High	\$ 4 / Linear ft.	LEDCIN
		> 2 ft. High	\$ 6 / Linear ft.	LEDCIN
Outdoor	Retrofit	≤ 2 ft. High	\$ 2 / Linear ft.	LEDCOR
		> 2 ft. High	\$ 3 / Linear ft.	LEDCOR
	New Construction	≤ 2 ft. High	\$ 2 / Linear ft.	LEDCON
		> 2 ft. High	\$ 3 / Linear ft.	LEDCON

To calculate the incentive, conduct the following steps:

1. Measure the width of each individual letter at the centerline. **Do not** measure the distance between letters.
2. Measure the height of each letter (H).
3. Select the incentive associated with the Project Type and Letter Height (H).
4. Multiply the incentive in Table 4 by the letter width (W).
5. Add the incentive for each letter to calculate the total incentive.



Note: Pacific Power has a lighting calculation software tool available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for LED Channel Letter projects. Visit our website at pacificpower.net/wattsmart for a current list of participating vendors.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
LEDLTR	LED Message Letter	\$0.10 / kWh (60% cost cap and 1-year simple payback cap apply)

LED MESSAGE CENTER SIGNS

Measure Description: Message center signs display text and are commonly found on storefronts, restaurants, and arenas.

Applicability: Message center retrofit projects that replace incandescent, neon or fluorescent lamps with LED illumination are eligible for incentives. **New installations of message center signs are not eligible for incentives.**

Equipment Eligibility: It is recommended to contact your lighting vendor or Pacific Power prior to purchasing your equipment to calculate incentives for message center signs, but is not required. Equipment must be purchased and installed, and meet all other program terms and conditions.

Items to submit for project approval:

1. Dated sales receipt/invoice with install date and retailer/contractor name, address and phone number
2. A completed copy of Table 5.
3. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

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

Note: Pacific Power has a lighting calculation software tool available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for retrofit LED Message Center Sign projects. Visit our website at pacificpower.net/wattsmart for a current list of participating vendors.

Table 5. LED Message Center Sign Information Table

Customer Name	
Facility Address	
Facility City, State, Zip	
Pacific Power Account Number	
Pacific Power Rate Schedule	
Rated power use of existing sign (watts)	
Rated power use of new LED sign (watts)	
Estimated Project Cost	
Weeks Operated per year	
Open major holidays (circle one)	YES NO

Operating Schedule (hours in use per day)						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
LEDMSG	LED Message Center Sign	\$0.10 / kWh (60% cost cap and 1-year simple payback cap apply)

*To calculate project savings and incentives, contact Pacific Power on our energy savings hotline at 1-800-222-4335 or via e-mail to: ca.lighting@pacificpower.net. Energy and demand savings are subject to Pacific Power approval.