



OPPD security lighting brightens your outdoor areas.

OPPD Security Lighting Program

An outdoor light provides dusk-to-dawn lighting, offering an extra measure of security for your home. Outdoor lighting that eliminates shadows can discourage prowlers and makes your property more secure. It also can expand the amount of time you are able to spend on recreational or maintenance activities after dark.

If you have an outdoor area that needs more lighting, you may wish to consider the OPPD Security Lighting Program. It's simple – you don't have to buy light fixtures, and you only pay for the electric service. OPPD furnishes, installs, owns and maintains the security light, which is mounted on a utility pole near your home. The lights will operate automatically each night from dusk to dawn.

The lights are available in these sizes:

Residential Lights: 175-watt

Commercial Lights: 175-watt and 200-watt

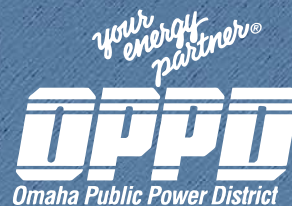
OPPD will install a security light, and then bill only \$8.66 per month, plus tax, for the energy use of a 175-watt mercury-vapor lamp, or \$11.65 per month, plus tax, for the energy use of a 200-watt high-pressure sodium lamp. If an OPPD pole is not located in an area where a security light would be beneficial to you, OPPD will set an additional pole and extend service within certain specifications for a nominal monthly fee.

For more information on security lights, or to initiate an order, call OPPD Customer Care Services at (402) 536-4131 or toll-free at 1-877-536-4131.



Safeguard Your Home with Security Lighting

For more about lighting or other energy information, call OPPD's Energy Advisor at 636-3850, or outside the metropolitan area, call toll-free 1-800-648-2658, or contact your local OPPD office.



www.oppd.com

Energy Plaza
444 South 16th Street Mall
Omaha, NE 68102-2247



Two Options for Security Lighting

If you wish to add outdoor security lighting to your home, you can take part in OPPD's Security Lighting Program and/or install your own light fixtures.

OPPD Security Lighting Program: If you have a larger outdoor area that needs additional light, consider having OPPD install a light on a utility pole near your home. More details are on the inside panel of this brochure.

Installing Your Own: If you prefer to purchase and install your own fixtures, the following tips will help you decide what to buy.

Choose from a Variety of Lighting Styles

Security lighting fixtures come in a broad range of styles and prices. Fixtures can be mounted on the house, porch, deck, on a post in the yard, or on the ground.

There are numerous types of automatic controls available for security lighting:

- ◆ **Time-Based Controls** activate and deactivate lights at predetermined times.
- ◆ **Photocells** sense when natural light falls below a predetermined level. Lights are activated at this point and deactivated when daylight returns.
- ◆ **Ultrasonic Controls** activate lights when they sense motion, with most units having adjustable sensitivity controls.

Cost Comparisons

When deciding which type of security lighting will best suit your needs, you may want to consider operating costs in addition to price.

Oftentimes, the least expensive light initially may cost you more in energy costs over the life of the product. When determining the life-cycle costs for your security lighting needs, consider purchasing cost, operating cost and bulb replacements. Some bulbs will last much longer than others, so replacement costs may impact your decision.

Fixtures Available from Lighting Suppliers

Of the three families of lighting – incandescent, fluorescent, and high intensity discharge (HID) – only incandescent and HID are the most appropriate for year-round outdoor use. Fluorescent lights, unless operated in a thermally protected fixture or specially designed for cold temperatures, generally have difficulty starting and maintaining their light output during the winter months.

Incandescent

These bulbs are the least efficient (10 to 20 lumens per watt¹) and have a relatively short life (750 to 2,000 hours). However, they will generally be the least expensive, have instant on/off switching as well as dimming capability, and have very little light loss over the life of the bulb. These bulbs are available in a wide variety of styles, from narrow spotlights (to accent a particular object) to wide floods. They also come in low voltage, which are most appropriate for landscape, walkway, and decorative outdoor lighting. The more rugged quartz halogen lamps should be selected for fixtures in which the bulb may be directly exposed to the elements.

High-Intensity Discharge

High-Intensity Discharge (HID) lamps all require several minutes to warm up to achieve full brightness. Once warmed, they operate much more efficiently than incandescent and have a much longer lamp life. The HID family of lamps generally fits the security light application very well. Lamps in this family include:

- ◆ **High-Pressure Sodium Lights**
 - orange/yellow appearance
 - very energy efficient (100 to 140 lumens per watt)
 - very long life (in excess of 24,000 hours) with little light loss
 - lamp of choice for many security applications and parking lot lighting
- ◆ **Metal Halide Lights**
 - white in appearance (shifts toward blue at end of lamp life)
 - excellent color rendering²
 - energy efficient (48 to 90 lumens per watt)

- long life (7,500 hours at lower wattages and up to 20,000 at higher)
- moderate dimming of bulb over lamp life
- generally chosen when crisp, white light is desired and color discrimination is important
- excellent for general illumination, architectural accenting (facade lighting) or security applications
- generally, a higher-cost bulb

◆ Mercury Vapor Lights

- white to bluish-white in appearance
- very long life (24,000 hours), but dim appreciably over time
- low efficiency (30 to 65 lumens per watt)
- generally, the least expensive of the HID family

Comparison of Lighting Types

	Incandescent	Mercury Vapor	Metal Halide	High-Pressure Sodium
Lumens per Watt ¹	10-40	50-60	80-125	100-140
Average Rated Life Hours	750-2,500	24,000	7,500-20,000	24,000
Color Rendering ²	Good	Good to Poor	Excellent	Fair
Wattage Range	60-150	40-175	100-175	30-100
Starting-to-Full Brightness Time	Instant	4-7 min.	4-7 min.	3-4 min.
Restart Time	Instant	4-7 min.	4-7 min.	3-4 min.
Cost of Lamp	Low	Medium	High	Medium
Cost to Install	Low	Medium	High	Medium
Cost to Operate	High	Medium	Medium	Low

¹ **Lumens per Watt** – The amount of luminance produced by a light source divided by the number of watts of power needed to produce it. Efficiency increases as the lumens per watt increase.

² **Color Rendering** – This is how colors look under a particular light source. Scales range from 0 (monochromatic) to 100 (best color rendering).