SOLAR ELECTRIC POWER COMPANY

PATHWAY LIGHTING DESIGN GUIDE

Navigating how to design a reliable solar lighting solution

SEPCO™ Solar Electric Power Co.

Pathways, walkways, bike paths, and such are a great way for people to get around without cars. These pathways should have good illumination for travelers moving around at night for safety and security. It is also a great way to show where the pathway leads and any obstacles that could be in the way.

Proper illumination can easily be achieved with LED light fixtures. Best of all, these light fixtures can be dark sky friendly and have task specific lighting without causing disturbances to the surrounding area. Finally, the lights can also reduce intensity and use motion for late night travelers, saving energy.

Pathways can be illuminated by various types of fixtures, from decorative overhead to bollard lights. Depending on the light level requirements of the project, and any other restrictions, the project can vary greatly. Working with a reputable lighting company will ensure that your pathway is illuminated properly.

The following overview goes over how and when a commercial lighting source should be considered for your pathway lighting needs and how solar power can benefit your next project.

Bike Paths

Bike paths are popping up everywhere to provide people who bike a safe way to get around, either for pleasure or commuting. Many programs, such as Rails to Trails, have worked on providing a safe way for people to enjoy using their bikes.

Illuminating bike paths properly ensure they provide a safe way for people to move about at night. This also gives the bicyclist a guide as to where the pathway is leading and any obstacles that may be in the way.

Walkways

Walkways through parks and around a community is a great way to keep their visitors safe. Illuminating the walkway can provide a way to move around after dark, for sport or for dog walking.

This type of lighting is especially helpful in residential communities, allowing residents to walk about at night, being visible to others while also providing safety to the residents to see if someone or something doesn't belong.

The implementation of LEDs allows for uniform lighting levels between various fixture sets. An old-style flood fixture which used to only produce a round area of light directly out from the fixture can now provide different distribution patterns and allow for lighting of different size signs with uniformity. SEPCO works with Hubbell Outdoor Lighting to provide different distribution patterns for every project maximizing the light output of each fixture.

LED lights also provide much better lighting with much less light loss from wasted light. Older style fixtures such as metal halide and high-pressure sodium had a lot of wasted light. The lumens of the lamp gets thrown in all directions and the fixtures were designed to push the light out everywhere with no real task lighting.

LEDs provide task specific lighting and are pushing the light in only in the area that requires lighting. This additional efficiency allows for the use of much less power, fewer lumens, and better overall lighting and uniformity.

KNOW WHAT GOES INTO DESIGNING A PATHWAY LIGHTING SYSTEM

Every project varies from one to the next from actual size to installation location, transit company needs, and design of the project. Understanding how each project is designed will help you navigate the process efficiently.

Step 1 – Find the pathway is in need of light

The first step is to find out what pathway or walkway requires illumination. Some areas may be located in a remote location, like at a park or along a railroad, where lighting is difficult to bring in due to lack of power.

Step 2 – Find out if electric is available

Is the electrical grid already nearby or would you need to call the power company to bring in electrical lines? If the electric needs to be brought to the area, how much is this going to cost? Depending on how far the grid electric is from the location of the needed lighting, this can be quite expensive. If the underground grid power has gone bad, look at the costs of trenching and repairing the area.

Step 3 – Determine the lighting requirements

How much lighting is needed for the illuminating the pathway? How long is the pathway that needs to be illuminated? Can the lights reduce after a set time to reduce impact on the surrounding area? Is the pathway in an area with high levels of ambient light? Or is it installed in a remote location with no competing light fixtures? These questions need to be answered before you can decide on how many fixtures and what wattages are required for completing the project.

Step 4 – Find all alternatives

Solar power pathway lights are an option to traditional electrical lights. Solar pathway lights do not need the electrical grid to be brought in as they are self-contained units that provide their own electric. LED light fixtures provide the best lighting solution by using lower amounts of power, better optics, and cost less in an overall solution.

Step 5 – Contact companies for quotes

The last step after gathering the above information is to contact companies for quotes. Just like anything else, get multiple quotes and weigh the pros and cons of every company and situation. The lowest quote is not always the best, so make sure to do your research on companies and products before you submit a purchase order.

Make sure your quotes come with an explanation of:

Battery Backup: *How much battery backup you are offering based on days? Some solar light manufactures offer 2-day backup which is actually a bad solar system assembly design. SEPCO provides a battery backup which has a minimum of 5 days storage. This lengthens the backup times while prolonging the life of the battery.*

Photometric Study: *A photometric layout allows you to see the foot-candle and light distribution for every project. Without the photometric study, there is no representation of the light the systems will produce.*

USING SOLAR LED LIGHTING SYSTEMS FOR YOUR PROJECT

Since solar powered pathway and walkway lights are self-contained, the installation will be a snap. Installing the solar power assembly either on a remote pole nearby the light fixtures or at the top of each pole with the light fixture will take less time and will not require additional trenching. This saves on costs and allows for the lighting to be implemented more quickly.

Solar lights that are in production for commercial applications such as signs, billboards, etc have a higher upfront cost, but they will pay for themselves immediately when looking at the total costs of installation for new construction or in areas where grid power is not feasible to bring in. These systems provide lighting for specific applications with different runtime settings. They also provide many days of stored power to provide continuous reliability, even during times of inclement weather.

Each system is built for the type and wattage lamp that will be utilized for the specific application. Lighting a large 40' flagpole or multiple flags will take much more power than lighting a small 20' single flag application. That makes the commercially manufactured solar lights more versatile to adapt from one job to the next. They range from small one LED fixture to multiple fixture setups to cover larger areas.

Solar lighting also has many excellent qualities. It is a green alternative to traditional lighting, it is low cost and practically maintenance free, and there is no power bill associated with utilizing solar since the power is not coming from the grid. Solar is also low voltage which makes it much safer to install and operate. Finally, solar lighting is renewable and promotes sustainability; its only requirement is the sun for operation.

THANK YOU FOR YOUR TIME!

Kindly get in touch to let us know if you have any questions.

One of our solar specialists would be happy to help you choose the best option for your Solar Lighting project and provide clean, renewable solar energy!

INFO@SEPCONET.COM
WWW.SEPCO-SOLARLIGHTING.COM

1521 SE PALM COURT
STUART, FL 34994
772-220-6615