



HAPCO SOLAR POLE FAQs



**SOLAR TODAY.
BRIGHTER TOMORROW.™**

Hapco solar poles are state-of-the-art lighting solutions that operate independently of the power grid, using cylindrical solar panels to convert sunlight into electricity. They are energy-efficient, environmentally friendly, and cost-saving, and are commonly used to illuminate residential streets, parking lots, parks, universities, schools, hospitals, and other public spaces.

In this guide, we will cover everything you need to know about solar poles, including their benefits, how they work, installation considerations, and maintenance requirements. Let's dive in!

1. How do I know if my project is suitable for solar power?

Solar power can be a great option in many applications. Are you interested in implementing sustainable design principles that are better for the environment? Is it difficult or costly to run power to where you would need a traditional light pole? Is maintenance after the sale an important feature? Does your location allow for a clear view to the sky? Your local Hapco Rep is a Solar Lighting professional and can assist in determining project viability. Visit our online ZIP code driven HAPCO REP LOCATOR for contact information.

2. What information is required for a solar pole system design?

The type of application is always a good starting point. It will tell us if there are specific light level requirements or if we can use IES recommended practices. Power requirements (Watts) is also required. The project address is also important as it helps us with the solar capabilities and design. Operational requirements are also needed as there are various lighting and dimming options to apply. And finally, fixture mounting heights helps us align the overall power requirements and aluminum pole design to meet photometric needs.

3. Can the solar pole be customized to match specific project requirements?

We understand that lighting applications are not created equally and want to make sure your expectations are matched with our design. Parking lots, jogging paths, public recreational areas, residential neighborhoods and sprawling military bases are just a few of the opportunities for solar pole lighting.

4. Are there design limitations with a Hapco solar pole system?

While every solar system has limitations, our truly revolutionary design incorporates monocrystalline solar panels, LiNMC batteries, smart algorithms and lifetime aluminum poles that makes us the best option in the solar lighting world. Our technologies and efficiencies will allow the Hapco Solar Pole to work when many competitors fall short.

5. What light fixtures will work with the Hapco Solar Pole?

The Hapco system is light fixture independent. This means that virtually any luminaire model can be used on the solar pole. With a couple of LED driver questions, we can confirm compatibility, or we offer a readily available standard option.

6. Is it possible to power multiple light fixtures?

Yes, it is possible to power multiple light fixtures with a Hapco Solar Pole. For example, you can use double mast arms to install two light fixtures, make use of spot lights, or get a custom designed product.

7. Are there any special building or zoning requirements for solar poles?

Every location has different requirements. Typically, if you are able to utilize a traditionally powered light pole there should be no reasons why a solar pole would not also be allowed. In many instances a solar pole offers conveniences like not having to trench power, not having to wait to connect to an existing grid, and in general less disruption to the area.

8. How do I maintain and clean my solar panels?

Hapco Solar Poles are constructed with the highest quality Schott borosilicate glass, which provides excellent optical clarity and outstanding transmission properties while delivering significantly increased durability and abrasion resistance. Its smoothness and vertical orientation resists dirt and dust accumulation. Unlike flat panel alternatives, no periodic maintenance is required of a Hapco Solar Pole system.

9. How does a cylindrical solar module compare to a flat panel option?

Our cylindrical solar module's design is optimized for the toughest time of the year when the inclination of the sun is at its lowest and the system needs to generate as much solar power as it can to overcome the shortest days of the year in late December and early January. Did you know that cylindrical panels generate more energy than flat panels in wintertime? They also perform much better with EPA and wind load ratings. A flat solar panel will also collect more dirt and dust, which reduces its performance.



10. How much energy can the Hapco Solar Pole generate?

Each Hapco solar module is rated at 110 Watts Peak (Wp) for energy generation. We can place up to 4 modules on a pole depending on its height. Each of these modules creates approximately 210 Watt-Hours (Wh) per day on average, giving us the flexibility required to meet the demands of myriad applications. Our solar controller LED Driver can support fixture power requirements up to 80W.

11. Will my solar system work with cloud cover or general inclement weather?

Yes. Cloud cover diffuses the strength of the sun but still allows daylight transmission from solar irradiance. This certainly affects the amount of power generated by a solar system, but Hapco's smart controller is constantly monitoring this data and adjusting power output accordingly with autonomy up to 30 days or more dependent upon your light power configuration and system load.

12. How does a solar pole installation compare to a traditionally powered one?

When compared to a traditionally powered pole, the Hapco Solar Pole provides the easiest, fastest, and most cost-effective installation. The cost for trenching, conduit, wiring, grounds, and metering necessary to install a traditionally powered pole can be \$60 - \$90 per linear foot. A solar pole can be direct buried into the soil or anchor bolted to a concrete foundation. Additionally, the Hapco Solar Pole does not have to rely on the grid for power, resulting in continued energy savings. There is no extra training needed for installing a Hapco Solar Pole, and it also takes fewer people to perform an installation. Your local Hapco Representative can help you with a cost comparison of traditional versus solar power. Visit our online ZIP code driven HAPCO REP LOCATOR for contact information.

13. Will my solar lighting system work during wintertime?

Yes, the solar system is designed to work year-round. The state-of-the-art technology gets the absolute maximum energy out of the available sunlight. The modular design of our cylindrical panels ensures the best performance and reliability of solar light poles in the shorter days of winter by providing flexibility and scalability in the design of the system. Furthermore, smart algorithms secure optimal performance of the system, in any conditions.

14. How much does the Hapco Solar Pole cost?

Hapco wants to ensure you have a solar powered project that you are happy with. Cost can vary depending on geography, power requirements, luminaire choice, pole aesthetics, among other factors. Hapco can custom design a system perfectly matched to your project requirements, as overperformance is costly and wasteful in a solar system. Reach out to your local Hapco Rep for specific project design and pricing.

Visit our online ZIP code driven HAPCO REP LOCATOR for contact information or just scan the QR code below.



HAPCO REP LOCATOR

15. What is the typical luminaire power output for the Hapco Solar Pole?

Hapco will help you with your system design. Our solar pole can operate a fixture up to 80 watts. Our modular solar units allow efficient scaling for the power requirements you need.

16. What happens to solar panels during a power outage?

Hapco Solar Poles are completely independent of the power grid. Their power is derived from the sun and stored in lithium batteries, having no requirement of an existing grid for operation. A Hapco Solar Pole is a great option for natural disaster areas (e.g. hurricanes or tropical storms) with high likelihood of infrastructure damage, delivering guaranteed power for lighting, cameras, and many other smart city accessories.

17. Can the Hapco Solar Pole be connected to existing power grids?

The Hapco Solar Pole offers a hybrid battery option for those applications with critical light requirements. It will battery charge at 115-277 VAC and only requires a minor change to our Hand Hole Power Pack to allow for grid-tied charging. It does not back feed the grid, but works with the power of the sun to ensure a consistent level of energy.

18. Does the Solar Pole have wireless connectivity and monitoring?

Yes. Our solar pole system comes with truly built-in remote wireless connectivity through a cellular connection (4G LTE, GSM, etc.). It self-provisions as soon as the solar module cable is plugged into the Hand Hole Power Pack. Our system will also integrate with configurable platforms designed for smart city asset management.

19. Can Hapco Solar Poles be used to power other accessories such as cameras, sensors and Wi-Fi hotspots?

The Hapco Solar Pole can be designed to work with many low-powered DC accessories utilized by today's Smart Cities. PoE+ devices can also be supported. Examples include running a camera 24/7, powering a call button for quick security notification, or providing a wi-fi hotspot.

20. What is the system warranty?

The entire system has a 5-year bumper-to-bumper warranty on all components. The Hapco Aluminum pole has a lifetime warranty!

21. Is there a photocell requirement for fixture operation?

No. Our solar system utilizes Global Positioning Satellites (GPS) to determine exact pole location and calculates the daily sunrise and sunset data. With the Hapco Solar Pole there is no need to worry about various light fixtures coming on at different times or a photocell getting dirty or blocked.

22. How do I maintain my solar pole?

Frequent maintenance is not necessary. In contrast to flat solar panels from other suppliers, it is not necessary to clean the vertical cylindrical solar modules. No dirt, dust, or snow sticks to the solar panels, since they are made from extremely smooth borosilicate glass and are vertically oriented. The durable aluminum poles also do not require any maintenance or cleaning. All components have 10+ years expected life, but if an issue arises, the Hand Hole Power Pack is installed at ground level, making replacement a simple 5-minute job.



23. How does the Solar Pole's Smart Technology adjust power output based on weather conditions?

Hapco's Solar Pole is designed with the understanding that light output is critical. To optimize performance, it uses an on-board algorithm that is smart and self-learning. The smart system uses parameters such as past weather days, sunrise/sunset times, and battery charge status. This results in an unmatched autonomy of up to 30+ days depending on the configuration.

24. Are there government incentives or utility rebates available for solar power?

The Inflation Reduction Act has \$394 Billion in energy and climate funding in the form of tax credits. Hapco is continually monitoring for progress to the local levels. We will also work with your utility provider to exhaust all possibilities for solar assistance.





25. Can I use your Hapco solar system with an existing pole?

Every pole is designed for a specific wind rating and application requirement. Changing an existing pole to a solar installation is not something we recommend without re-engineering the pole and fully understanding its existing condition. Hapco has chosen to not offer a retrofit option for this exact reason. Solar systems are too important to be improperly placed on existing poles and fail when you need them most. Therefore, Hapco will offer you a complete solar system which includes a properly designed aluminum pole with a lifetime warranty.

26. What is the serviceable life of the components?

The expected serviceable life of the solar modules is 25+ years. All other components, including the DC-DC driver, solar controller and battery can expect 10+ years. Our superior technology and efficiency provide expected fixture LED life of 12+ years.

*Do you have more questions? Don't hesitate to contact us!
We are happy to assist in your project.*

What makes Hapco Solar Poles different from other solar lighting poles on the market?

Everything! Superior Aesthetics, Advanced Solar Technology, the highest-quality Lithium Batteries, built-in remote wireless connectivity via cellular connection (LTE, GSM, etc) proprietary SMART Solar Control Systems and levels of customization to provide a wide range of power options matching your project requirements. Our system provides unmatched Total Cost of Ownership savings, with our all-in-one Hand Hole Power Pack. The performance of our Lithium Nickel Manganese Cobalt battery leads the industry in energy density, number of charge cycles and depth of discharge capabilities. A truly engineered system!

SOLAR TODAY. BRIGHTER TOMORROW.



HAPCO
www.hapcosolar.com
email: sales@hapcosolar.com

26252 Hillman Highway
Abingdon, VA 24210
800.368.7171

SLR-FAQ (08-24) © HAPCO 2024