"Wireless" Traffic Control Solutions

APPLICATION: ***Solar Lighting for Municipal Landscape Enhancement***
LOCATION: Tempe, Arizona, U.S.A.

Description

The City of Tempe, Arizona has installed solar-powered landscape lighting to enhance the appearance of a traffic circle in the evening hours. Six landscape architectural fixtures were positioned to heighten the nighttime appearance of foliage.

STC furnished a dusk-to-dawn power system which included a 130W solar array and two sealed batteries. The lamp fixtures were outfitted with high efficiency MR16 inserts rated at a nominal 5W electrical draw. The lamps included three high efficiency Nichia sources and appropriate thermal management to ensure long and reliable operation. All lamps produced a color output in the range of 5000K which is considered a "daylight" color spectrum. (For comparison, lamps in the 3500-4000K range produce warm white which has a yellow appearance.)

The project represents a slight modification in the application of the monument sign lighting packages STC produces. These lighting packages are targeted to municipalities and commercial users which need monument signs lit for all or portions of the night and cannot find an affordable AC power source or would simply like to go green. Using LED lamps for the projects assures operation at sub-zero temperatures where other options such as Compact Fluorescent Lamps (CFLs) cannot operate reliably due to the cold temperatures.

STC was not the lowest bidder on this project but the most responsive and technically competent bidder as it was the only respondent to consider shading effects of a nearby building in calculating its solar array size.

The building presented a shading hazard to the system in the month of December due to the height and distance relative to the solar system location. STC furnished a system that compensated for the shading thus assuring its success. Failing to address this type of issue prior to fielding the equipment generally voids the system warranty and leaves customers with bad feelings regarding the viability of solar for future projects.

continued on next page

Take these steps to insure the success of your solar-powered project:

1. Location - identify the site of the application; for example, the nearest town, village or city and state.
2. Load - specify the number and size of lamps, timers or other controls (anything which draws power).
3. Duty Cycle - determine how many hours per day and which days per week the load will be drawing power.

Go to "Send us your requirements" at www.SolarTrafficControls.com/support/requirements.php for more details.

Solar Power: a free source of energy

STC's solar-powered systems are designed for quick and easy installation in the field. Our careful front-end engineering minimizes your installation costs and provides years of trouble-free operation. The standard solar power system includes the solar array, system enclosure with all the necessary electronics, color-coded wiring harnesses, sealed batteries and full documentation. DC LED lamp kits can also be purchased. These include the LED beacon, lamp housing and mounting hardware.

STC Systems are Cost Effective

Our solar flasher systems allow you to stretch your budget to obtain the traffic safety devices you need at affordable prices. Most systems are equivalent to the cost of obtaining an AC power drop. Battery life is typically three to six years; less expensive than grid electricity for the same period of time.

Solar Traffic Controls (STC) provides solar-powered traffic control systems for city, state and federal DOTs; police, firefighting and public works departments; facility maintenance and plant safety industries. Our primary products are solar-powered flashing beacon systems used for school zones and 24-hour applications. We also supply specialized flasher systems using environmental sensors and custom communications packages to control the flashing beacon systems. Our product spectrum also includes wireless power systems for ITS, EMS and HAR. STC's products and services are sold through a network of regional distributors who offer technical support for your project.

For more information: Solar Traffic Controls, LLC • 1930 East Third Street, Suite 21 • Tempe, AZ 85281-2929 USA
Tel: 480.449.0222 • Fax: 480.449.9367 • info@solar-traffic-controls.com • www.solar-traffic-controls.com