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CELEBRATING 55 YEARS

With the breakthrough of solar-powered outdoor light, poles are now a practicality

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Swan Lake Park in Liberty, N.Y. is among the first to take advantage of technological breakthrough in outdoor area lighting by SolarOne Solutions: a solar-powered LED light fixture, powerful enough for commercial outdoor-area applications. For the first time, outdoor light poles can be placed anywhere on the grounds without running long-distance, high-voltage underground lines because the lights are powered by the sun, instead of being plugged into the electrical grid. Swan Lake is one of four hamlets in Liberty, N.Y. Years ago, the town was a tourist spot and home to Grossinger's, the famous resort hotel. While those days are now part of its rich history, Liberty still boasts several town parks and golf courses, including Swan Lake Park.

The LED lights that brighten the park are part of a solar street-light demonstration project co-funded by the NYS Energy Research and Development Authority. The supervising agency of the project is Sullivan Renaissance, principally funded by the Gerry Foundation.Â

The Future of Lighting

Traditional outdoor lighting commonly employs high-intensity discharge bulbs, such as metal halide, which are bright, but require substantial energy, more energy than small solar panels can generate. The new lighting system, manufactured by SolarOne Solutions of Framingham, Mass., uses solar-powered panels, which are made up of photovoltaic cells that produce electricity from sunlight. New advances in LED, a semiconductor that converts electricity into light, have only recently made the lights viable for many outdoor, general illumination applications. The lights are a bright white.

Winter in the northern latitudes is the greatest challenge for solar powered lighting. The SO-Bright technology ensures the lights are always on, regardless of cloudy, sunless days or long winter nights. "This advancement in solar powered lighting control addresses charging efficiency when and where our customers need it most." says Moneer Azzam, president of SolarOne.

The Perks

The most obvious design features is its adaptability, the lighting systems can be place along pathways, sidewalks, parking lots and bus shelters. And they are ideally suited for college campuses, in government laboratories and in municipalities.

LED lamps contain no mercury, glass or filaments, and produce no infrared or ultraviolet radiation. They have low-energy consumption and a long service life. LEDs are fully dimmable and have no ballast, requiring maintenance. The economic benefits of installing an outdoor solar-powered lighting system are remarkable. Solar-powered lights eliminate electricity bills, are durable, and are virtually maintenance-free.Â The costs of underground wiring are eliminated and the energy from the sun is free. Tax credits are available from local, state and federal government agencies. That might be why in 2006, the U.S. solar energy industry saw record growth as a result of rising energy prices as wellÂ as increased federal funding for local, safe and clean alternatives.

Light Where Most Needed

Swan Lake Park wanted fixtures that would enhance the beauty of the park, provide safety, and be dark-sky compliant. The fixtures solve all three requirements. The fixtures employ round strings of small LEDs, providing an attractive, uniform light. The LEDs are housed inside a Hadco Lighting fixture that recalls the classic beauty of street lighting from the early 20th century. The fixtures are capable of handling extreme weather conditions.

Beyond the environmental advantages of the solar-powered lighting system, the community is enjoying the obvious benefits. The illuminated pathways attract pedestrians to designated walkways, which make it easier to patrol areas at night and reduce accidents. And without underground cabling restraints, lamps can be positioned almost anywhere, creating more usable outdoor space. Now, light placement is limited only by a one's imagination.Â

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