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SolarOne, IBEW and MRET provides solar power for monuments/flags in Mass.

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With volunteers from the Mass. International Brotherhood of Electrical Workers (IBEW) and funding from the Mass. Renewable Energy Trust, SolarOne Solutions has been providing solar powered/LED lighting systems across 38 Massachusetts municipalities. These systems illuminate signs, flags, and monuments, where accessing conventional power lines are prohibitive.

Each SolarOne lighting system is powered by a photovoltaic panel and battery pack that powers two landscape light fixtures. The system is controlled by SolarOne's proprietary SO-Bright Technology, which controls the solar panel and LED lamp operation with maximum efficiency, intelligently adapting to the changing seasons and weather patterns, to ensure that the flags and monuments will never be left in the dark, even in the darkest days of winter storms and during extended cloudy periods.

The systems are primarily lighting flags and monuments, paying tribute to war veterans' service across the state from Barnstable on the Cape to West Stockbridge on the New York border.

The Mass. Renewable Energy Trust (MRET) awarded the grants to showcase and promote clean renewable solar energy while assisting municipal beautification efforts. The trust seeks to maximize environmental and economic benefits for the commonwealth's citizens. This can be achieved by pioneering and promoting clean energy technologies, and fostering the emergence of sustainable markets for electricity generated from renewable sources.

"I commend the IBEW Local 223 and SolarOne Solutions for partnering to bring this innovative solar lighting program to cities and towns around the commonwealth," energy and environmental affairs secretary Ian Bowles said. "By building local awareness about the importance of solar energy, this program is one more way we are expanding the reach of renewable power in Mass."

"This project has been transformative in that it moved us to a new platform from which to continue building the business in the commonwealth and helping other businesses we work with grow as well. In fact, it has played an important role in growing our production capacity" says Moneer Azzam, president of SolarOne Solutions. "It was the impetus for our aggressive expansion activities in 2008," says Azzam. "The program is really a model for how clean technology can integrate rapidly into the nation's infrastructure."

The trust has sponsored the program because it offers significant benefits to help foster Mass. into the new green economy. While giving professional electricians with the IBEW experience in new technologies, such as LED lighting and solar electric power, the program also builds awareness at the municipal level about energy efficiency measures and alternative power sources.

The fixtures employ round strings of small LEDs, providing an attractive, uniform light. The LEDs themselves are housed inside a high quality commercial-grade Bronzelite Landscape Lighting fixture. One of two types of lamps is used in each system. Wide beam flood lamps are used to

illuminate signs and monuments at close distances, while spot lamps are used to illuminate flags 20 to 40 feet tall. The long-lasting LED lights significantly reduce maintenance, and perform well in cold temperatures.

The International Brotherhood of Electrical Workers, Locals 7, 96, 103 and 223 provided not only their labor, at no charge, but also their considerable expertise in "best practices" for commercial-grade installations.

According to Marty Aikens, Business Agent for IBEW Local 103, the process allowed the IBEW workers to gain an understanding of the attributes of solar powered lighting, increasing their portfolio of capabilities, enabling them to serve a broader range of applications.

"Because solar power light fixtures require no trenching to connect to the electric power grid, siteing systems was easier and we were able to install more fixtures in the same period of time," said Aikens.

Aikens went on to explain that the experience gained by those involved in this project will play an important role in establishing consistency across commercial lighting installations whether they are connected to the electrical grid or independently powered by solar energy; an important step in bringing solar energy into the mainstream.

"And, when the American flag is illuminated," Aikens explained, "O' Glory doesn't need to be taken down in the evening anymore; American flags and veterans memorials will be seen at night across the Commonwealth."