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## **Lighthouse Electrical Contracting powers a bright future with major solar projects**

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With the growing trend toward renewable energy projects in New England, Lighthouse Electrical Contracting, Inc. continues to build on its well established position as a leader in both solar and wind energy projects in eastern Massachusetts. Recent and current projects include:

**MWRA Deer Island 180kW solar project** - Lighthouse, a NECA Boston Chapter firm, completed the design/build \$1.1 million 180kW photovoltaic solar project at Deer Island's water treatment facility for the MWRA in January 2010. The company specified and installed a modular SunPower PowerGuard photovoltaic system comprised of 592 305W solar panels on the 75,000 s/f roof of the warehouse/maintenance building. The array covers 13,000 s/f. The energy efficient SunPower system is designed to lay flat on the roof, maximizing the system size. A foam blocking feature will protect the roof and help insulate the building. The system's R-10 insulation rating will save up to 30% additional energy by reducing the building's heating and cooling loads. The SunPower system is able to withstand winds to 140 mph.

Project managers Scott Sullivan, Newell Thomas, and foreman Justin Aikens supervised the field crew of 6 electricians from IBEW Local 103 in the fast-track project. Lighthouse handled design/build project services with Stephen Kelleher Architects of Fairhaven and Art Engineering of Worcester. Both firms served as subcontractors to Lighthouse Electrical.

**Boston public schools 134.5kW solar installations** - Murphy School, Boston Latin Academy, FDR School, Madison Park School and Boston Latin School.

In a major renewable energy project for the city of Boston, Lighthouse Electrical is on schedule with the 134.5kW (in total) turnkey solar installation project for five Boston Public Schools - Murphy School (53.5kW), Boston Latin Academy (35.7kW), FDR School (32kW), Madison Park School (7.8kW) and Boston Latin School (5.5kW). The total electrical project value is \$900,000.

The project scope entails Lighthouse's design, engineering and installation of ballasted, roof-mounted photovoltaic solar systems at each school. Ballasted systems have been specified to avoid roof penetration. Solar panels manufactured by Evergreen Solar of Marlborough and inverters by Solectria Renewables of Lawrence are being utilized.

The installations are projected to realize a total energy savings of approximately 175,000 kwh per year for Boston public schools, amounting to an estimated \$35,000 annually. The systems will be used as a teaching tool for students, enabling them to learn about solar energy and also track power output of the systems. The project is funded, in part, by grants through Mass. Technology Collaborative's Commonwealth Solar rebate program.

Structural engineering services are being provided by Stephen Kelleher Architects, Inc. of Fairhaven and electrical engineering by Art Engineering Corp. of Worcester both under subcontract to Lighthouse Electrical.

Lighthouse is supervising a field crew of 5 electricians from IBEW Local 103. The project commenced in August 2009 and will be complete by the end of April. All work has been conducted when school is not in session.

Recently Awarded Projects at Bay State School of Technology in Canton; Sylvan Nursery in Westport; Western Ave. Studios in Lowell. The projects, pending grant approvals, will be completed in 2010. The contractor will also provide a large solar installation at Carlson Orchards in Harvard.

Bay State School of Technology- 87.78kW PV system. Lighthouse has designed and specified a flat roof 87.78kW PV system to be comprised of 418 Evergreen Solar 210W solar panels which will mount to a SunLink racking system. Installation will be provided by a field crew of 4 - 5 IBEW electricians on a 2 - 3 month installation schedule.

Sylvan Nursery-98.82kW PV ground-mount system. This large ground-mount solar system will be comprised of 324 SunPower 305W Solar Panels. Installation will be conducted over a 3-month time frame by IBEW electricians. In recent years, Lighthouse has installed two (2) 10kW Wind Turbines for Sylvan Nursery.

Western Ave. Studios- 200kW and 124kW rooftop PV systems. Lighthouse will provide complete design/build services for two large rooftop solar systems. The 3-month project will be manned by a field crew of 8 - 12 IBEW electricians.

Carlson Orchards-220kW P/V ground mount system. Lighthouse will install 1,050 Evergreen 210W solar panels with a field crew of 8 - 10 electricians on a 3-month project schedule.

With compliance to the American Reinvestment and Recovery Act, Lighthouse is currently exclusively specifying American-made solar products, tested and approved with wind ratings that meet the specific site requirements. The trend toward utilizing American products in the solar industry is increasing nationwide, holding great promise for solar manufacturers.

Herb Aikens is president, Lighthouse Electrical Contracting, Inc.. Rockland, Mass.

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540