

## Solar Learning Lab™ Case Study



“Cape Cod Community College is a caring, comprehensive institution that belongs to the people it serves and responds to their individual and community needs. Students attending Cape Cod Community College (CCCC) are striving for personal excellence, and are finding it, day after day.” **From CCCC web site.**

As a monument to this spirit and their son who embodied it, Paul and Lila Lorusso offered a \$1 million dollar challenge grant to help fund the building.



*Touchscreen kiosk in lobby*

The Lyndon P. Lorusso Applied Technology building was named in honor of the Lorusso's deceased son Lyndon. Prior to his death in a tragic accident, their son was told that he would inherit 10% of the family fortune with the rest to be given to charity. His response was to ask if part of his share could also be given to charity. **Cont. sidebar on back.**

## Cape Cod Community College Lyndon P. Lorusso Applied Technology Building

West Barnstable, Massachusetts

The Lyndon P. Lorusso Applied Technology Building was the first new building added to the campus since it was completed in 1974. Coordinated by the state Division of Capital Asset Management, it is the first Massachusetts state owned building to receive Leadership in Environmental Engineering and Design (LEEDS) certification.



*Photo credit: Solar Design Associates*

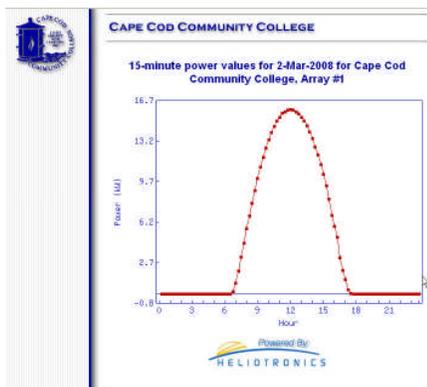
*Photo of Solar Awnings from the ground with inset showing a top view. The awnings shade in the summer and let light in in the winter. Their integrated solar modules produce electricity year round.*

Among the design elements that were instrumental in receiving LEEDS certification were the inclusion of solar photovoltaic power generation and teaching displays that enable visitors to the building to learn about the renewable energy components. To that end, it was decided to utilize Heliotronics data displays.

Heliotronics provided a wall integrated touch screen kiosk which utilizes data from a Heliotronics monitoring system to display information on the building's electricity use, power production from the solar awning and avoided emissions as a result. In addition to the real time data displayed in the lobby, Heliotronics created a web site that allows access to historical data on the Internet.

In the spirit of giving back to the community, it was decided to make this building “green” and to assure that by getting LEED Certification.

The success of these efforts were recognized in 2002 when CCCC became the first community college to win the U.S. EPA’s Environmental Merit award



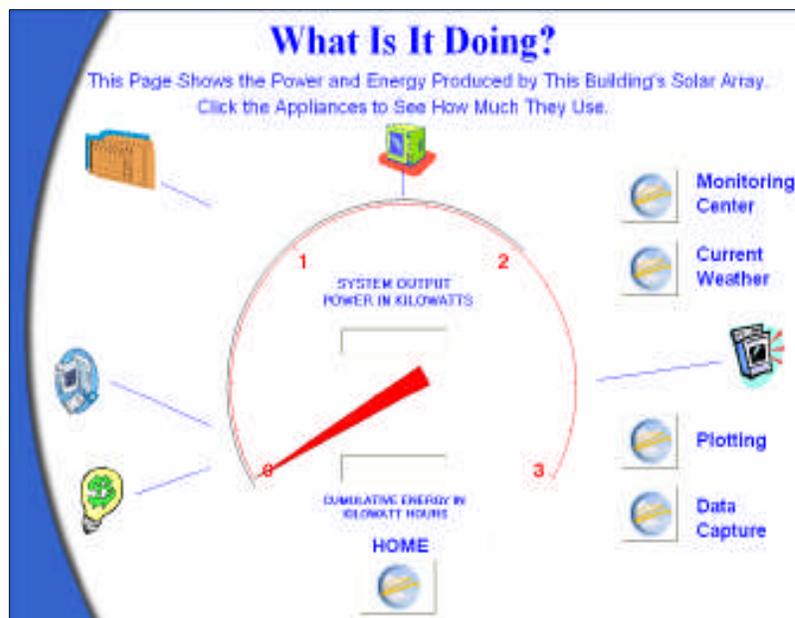
Screen shot from the web site which can be viewed at:  
<http://www.sunviewer.net/portals/CCCC/>

To learn more about the Lyndon P. Lorusso Applied Technology Building, visit:

<http://www.capecod.mass.edu/web/occ/green/lorusso>



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*SunViewer™ K kiosk Display Software. Screenshot from one of roughly 50 screens of data text and graphics.*

## Project Snapshot

Installation team: **Solar Design Associates**, Design and Project Management, **KW Management**, Installation Contractor

[www.solardesign.com/index.html](http://www.solardesign.com/index.html)

<http://www.kwmanagement.com/>

*Data Monitoring System:* **Heliotronics** Becquerel 3P™ Package with wall integrated touch screen monitor.

[www.heliotronics.com](http://www.heliotronics.com)

*Monitoring System Specs:* Monitors and displays real-time PV power and energy output, building power and energy usage, system efficiency, avoided emissions, irradiance, PV module temperature, ambient temperature and wind speed

*User Interface:* Heliotronics’ SunViewer™ educational display software running on a touch screen kiosk and a SunViewer.net™ Internet data portal.

*PV Installation:* Roof array 23.2kw, 122 Sanyo HIT 190, SunShade array, 2.75kw, Evergreen 24 EC 110 and 2 EC 55

*Inverter:* 9 SMA 2500, 1 SMA 1800

*PV Mounting:* Window Awning and Flat Roof