CASE STUDY

Chesapeake Bay Foundation, Annapolis, Maryland

Lighting Controls from The Watt Stopper Contribute to "Greenest" Building

The Chesapeake Bay Foundation's (CBF) new headquarters in Annapolis, Maryland, may claim the distinction of the "greenest" building in the nation. The facility, known as the Philip Merrill Environmental Center, features numerous energy efficient building systems as well as sustainable building techniques. Among these are a combination of lighting control products from The Watt Stopper: daylighting controls, digital time switches, and occupancy sensors.

While the CBF facility utilizes an energy management system to control its HVAC and lighting, additional lighting controls were selected for specific parts of the building. For instance, on the south side of the building, the project team wanted to take advantage of daylighting. They incorporated a passive solar design in open office areas, which allows for natural daylighting. To control lighting in these open office areas, they installed eight Watt Stopper LS-30 dimming light level sensors and TS-200 Digital Time Switches. The LS-30s read daylight levels and adjust lighting according to preset data. For evenings and weekends, the TS-200 allows users to override commands of the energy management system to turn lighting on in specific areas.

"One of our goals…is to promote environmentally sound building design…. [S]ustainable building methods work."

- CBF President Will Baker

Occupancy sensors were used to turn lighting off during times of vacancy throughout the building. These included nine DT-200 Dual Technology Sensors, which combine PIR and ultrasonic technologies, for use in large conference rooms, and 15 Ultrasonic Sensors installed in the dining area, mud room, corridors, and composting toilet rooms. Also, numerous WS Automatic Wall Switch sensors were selected for utility rooms, storage rooms, individual offices, and small meeting rooms. Nine WD Dimmable PIR Wall Switches are located at the reception desk and in small meeting rooms. Each sensor type was chosen to meet the needs of the specific space.

Finally, approximately 90 of The Watt Stopper's Isolé plug load controllers were installed in individual workstations to control task lights and computer monitors.

As an advocate for protecting the Chesapeake Bay, CBF conducts programs on environmental education as well as resource protection and restoration. The organization employs 100 people at the Merrill Center, a 32,000 square-foot building situated on 31 acres of shoreline.

The Merrill Center was completed in late 2000 and formally dedicated in November 2000. At that time, it also was awarded the first ever Platinum Rating from the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED), the organization's highest rating for sustainable building design. Some of the other innovative features used in the building include rainwater cisterns, composting toilets, geothermal heat pumps, and natural ventilation to complement the HVAC system.

The building requires 50% less energy than a typical office building of the same size. The controls of lighting and workstation receptacles directly contribute to this reduction in energy.

The SmithGroup Mid Atlantic Office provided architectural design, mechanical, electrical, and plumbing engineering.

**The Chesapeake Bay Foundation is a non-profit organization and therefore does not endorse products*