

Trailblazer: University of Maryland Medical Center



UMMC focused on lighting conservation and upgrades in 2011. The goals of the project were to turn off lights when not in use and when daylight is sufficient in atriums and hallways, replace inefficient light bulbs with more efficient bulbs, and establish a baseline to monitor changes. By listening and responding to the staff's concerns about excessive lighting, the facilities leadership team gained the support and engagement of the staff to expand efforts. One of the nursing units has appreciated the decreased lighting so much it is now working on a daily "quiet hour," when the lights will automatically be turned down to promote a quieter work environment and promote rest and healing for their patients while saving energy.

UMMC participates in a load response program, also known as a voluntary energy consumption curtailment program. With this program, UMMC is alerted when electricity prices rise, which generally occurs during extremely hot days during the summer months. Typically, UMMC will curtail electricity consumption by running its generators from three to four hours when alerted. By doing so, UMMC is cutting their demand on the grid by approximately 30 percent.

In June 2011, UMMC received a \$250,000 rebate for its participation in the curtailment program. It was decided to allocate the money towards lighting conservation and upgrades.

Lighting was identified as the area to direct the monies from for two reasons. The first reason being that on average, lighting contributes to approximately 16% of a hospital's annual electrical consumption, and secondly, excessive lighting throughout the hospital has been an area of contention among hospital staff for some time.

The goals of the project were to turn off lights when not in use, turn off lights when daylight is sufficient in atriums and hallways, replace in-efficient light bulbs with more efficient bulbs, establish a baseline to monitor changes, and submit work to BGE Smart Energy Savers Program for additional rebate money.

UMMC is fortunate enough to have beautiful, glass roofed atriums, but had lights that were on 24/7, even when the sun was shining bright into the hospital. Three-hundred and fifty-two lights were put on photo cell sensors, which detects the level of natural lighting in the atriums, and turns the lights on or off accordingly. Additionally, 420 occupancy sensors were installed, 288 lights in our mechanical rooms were placed on automated controls, 92 fixtures were replaced with more efficient fixtures, and 52 fixtures were totally removed.



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The project was communicated through a variety of channels. The green team was kept abreast of the project throughout its progress. Green Team members then communicated this information to their colleagues. The information was also presented to the entire Facilities Division. For this audience, the presentation was broader and included information on why it is important to conserve energy, how energy production effects climate change and how climate change is affecting public health. Also included in the presentation is how this project supported our Sustainability Principles and the hospital's goal of decreasing energy consumption put forth by hospital leadership.

The information was also presented to the nursing leadership of UMMC. A more technical educational session was provided to the Operations and Maintenance Department on the exact locations of

all the sensors and how to maintain and repair them if needed.

It would have been easy to spend the entire \$250,000 on HVAC upgrade or by just placing the hundreds of lights in the mechanical plants on sensors. But instead, the facility leadership team chose to identify high visibility areas to channel the money. By doing so, the staff were able to see that their concerns were being addressed and thus, in turn, we were able to create more buy in and engagement throughout the hospital, which is having a positive down stream effect.