

Thomas Jefferson University and Hospital Boosts Lighting Efficiency



Thomas Jefferson University and Hospital, one of the largest healthcare groups in the Philadelphia region, set the goal of reducing its lighting energy consumption by at least 30 percent without sacrificing illumination quality. It found what it needed to do that and more in a partnership with Encelium Technologies. Encelium customized its innovative lighting control and energy management solution for Jefferson, which has more than 4 million square feet of clinical, research, teaching and housing property.

“The results far-exceeded our expectations,” said Randy Haines, energy manager for Jefferson’s complex. “By giving us the optimal control we wanted, ECS cut our lighting energy consumption by 51 percent, delivering a payback from energy savings in just four years. We also reduced our carbon footprint significantly with a CO₂ reduction of 278 metric tons per year.”

ECS uses the addressable networking technology in conjunction with advanced control hardware and software to integrate personal controls, task tuning, daylight harvesting, smart-time scheduling, occupancy sensors and load shedding in six energy-management strategies.

At Jefferson, Haines estimates that lighting represents approximately 15 percent of the healthcare facility’s electricity costs — nearly \$1.7 million per year. Over the course of several years, he developed an advanced metering system for the facility, allowing him to compare energy information on an interval basis and make decisions based on the most current data. With this information, Haines determined just how effective an advanced lighting control system would be at Jefferson in reducing lighting energy and delivering a quick payback on investment.

