



U of M Physicians



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Company Background

University of Minnesota Physicians (M Physicians) is a multi-specialty group practice for the U of M Medical School faculty. M Physicians partnered with Fairview Health Services, creating a shared care delivery system - M Health Fairview. The M Health Fairview Clinics and Surgery Center (CSC) in Minneapolis, Minnesota employs 2,700 people and provides a variety of healthcare services including clinical exams and surgeries.



"This internship gave me the opportunity to have a meaningful summer and make an impact. I got the chance to manage a meaningful project, make recommendations that would be implemented and contribute to the overall sustainability goal of M Physicians. I am incredibly grateful for the support of my company supervisor and my MnTAP advisors, thank you for making this a great experience!" ~ OA

Project Background

Consultants were hired to conduct energy reduction and comfort improvement studies at another M Physicians owned building. The studies involved understanding the existing conditions of the building and making recommendations for improvements. The parameters examined included electricity cost, energy use index (EUI), air quality and comfort, lighting, plug loads, and HVAC.

M Physicians has made great strides in improving the environmental performance of their buildings while maintaining a high quality of care for their patients. The next step in their facility wide evaluation is to study the performance of the CSC and identify opportunities for improvements.

Incentives To Change

M Physicians aims to reduce energy consumption in their use of steam, chilled water, and electricity, and optimize the control of energy consuming equipment like steam boilers, monitors, and desktops. Reducing energy consumption not only reduces operating costs, but also improves the environmental performance of the building. The CSC used 1,500 therms of natural gas and 6 million kilowatt hours (kWh) of electricity in 2019, and this provides a major opportunity for savings and optimization. This will also lead to a reduction in the natural gas used by the University of Minnesota, a vendor of the CSC. It is estimated that if the CSC implemented the top two

recommendations, they would save 460,000 kWh/yr which would lead to a natural gas savings of over 49,000 therms/yr by the University of Minnesota's Main Energy Plant.

SOLUTIONS

Computer Management

The computers in the CSC currently run for 24 hours per day because of the required daily updates carried out by the Office of Information Technology (IT). By changing the settings of the computers to be fully operational for no more than 12 hours per day and on standby or sleep mode for the remaining 12 hours, the PCs will still have the ability to be updated while consuming significantly less power. Based on the specifications of the computers in the CSC, if the recommended schedule change is applied throughout the building, an estimated 280,000 kWh/yr could be saved, translating to a monetary value of \$31,000/yr.

Light Scheduling

Light fixtures in areas of the CSC without control are currently operational 24 hours per day. Implementing a schedule to control when the lights are operational and for how long, not only reduces this by 180,000 kWh/yr, but it also creates an opportunity to save over \$19,000/yr.

Solutions

Advanced Power Strips (APS)

The implementation of APS in the CSC is limited because of hospital regulations and safety concerns, however, they provide a low-cost strategy to save energy from peripheral office loads like computer monitors, task lighting, and other electronics. Based on an estimate of 540 computers in the applicable areas, with one APS for two computers, this recommendation will save 69,000 kWh and \$7,600, annually.

Light Switch Reminders

The use of labels to remind occupants to turn off the lights when they leave a room can conserve energy, and this can be implemented by the CSC in the form of light switch reminder stickers. The 5th floor of the CSC presented an opportunity for the implementation of this idea because of the traditional light switches installed there. This recommendation allows for additional savings opportunities as it motivates staff and patients to turn off the lights when they leave the area. It is estimated that up to \$2,000 /yr and 18,000 kWh/yr could be saved.

Green Team

A green team serves as a task force comprised of hospital staff members who are passionate about the environment. They would be the ambassadors for sustainability, and volunteers responsible for establishing goals, monitoring progress, and overseeing the implementation of new ideas. The formation of this group could help ease the transition of the staff into a new method of operation, which would lead to a reduction of energy use and waste.

“The intern’s initial analysis of our data changed our assumptions about where to focus in subsequent energy savings investigations. Her analysis revealed HVAC equipment that was improperly commissioned when the building was built five years ago. We are extremely pleased with MnTAP and expect to realize continued savings from the recommended projects as well as new energy savings projects which will grow out of this successful internship partnership.”

~ Stephen Bassett LEED AP, Director
Facilities Maintenance



Recommendation	Annual Reduction	Annual Savings	Status
Computer Management	280,000 kWh	\$31,000	Planned
Light Scheduling	180,000 kWh	\$19,000	Planned
Advanced Power Strips	69,000 kWh	\$7,600	Implementing
Light Switch Reminders	18,000 kWh	\$2,000	Planned
Green Team	N/A	N/A	Recommended

MnTAP Advisor: Brent Vizanko, Associate Engineer; Taylor Borgfeldt, Pollution Prevention Specialist