

Minor Hall Addition

School of Optometry



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Building Contact:

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Energy Dashboard Link: <http://bit.ly/minorhall>

Background

Tucked away behind Wurster and Hertz Music Hall is the School of Optometry's Minor Hall and Minor Addition. The School has pioneered research in many areas of optometry including cornea physiology and contact lens development since its establishment in 1923. Although it is highly recognized as one of the top optometry schools in the country, it should also be recognized for its efforts in sustainability and energy efficiency. The student organization Green Eyes promotes sustainability throughout the school by encouraging environmentally friendly policies, teaching educational seminars, providing a composting service for the facility's clinics, and hosting a competition for creating energy-saving ideas.

During the school year, Minor Addition houses three or four hundred people and operates every day of the week, from 8 a.m. until after 5 p.m.

Building Manager and Power Agent Cliff Lobberegt has done a fantastic job of being proactive in implementing energy-saving practices. His biggest concerns relate to energy intensive (300W) lightbulbs in Minor Addition exam rooms.

Lighting

Inefficient and outmoded lighting in Minor Addition is of deep concern. Specifically, Minor Addition exam rooms currently use incandescent 300 watt bulbs. These bulbs have recently become obsolete and are no longer being manufactured. Many of the rooms have four to five bulbs. These bulbs cannot be replaced with just any type of CFL or LED because the exam room lights need to be dimmable, and need to have a proper light quality for examinations. Fortunately, Cliff has found a viable alternative. The 300 watt bulbs can be replaced with clusters of four warm tinted LED lights. Each of these LED lightbulbs only uses 9 watts, which is clearly a huge savings from the 300 watt bulbs.

Cliff is also in the process of switching the incandescent lights in the upstairs eyeglasses area to LED lights. The 50 watt BR20s will become 8 or 9 watt LEDs; the 50 watt MR16s will be switched to 8 watt LEDs.

Parts of Minor Addition have access to natural light. During the day when rooms are unoccupied, lights are not turned off. Sometimes lights will be left on for a few hours when occupants leave during the day (i.e. for lunch or a break). While in some areas task lighting is used, for the most part, overhead lights prevail.



While Minor Addition does have some occupancy sensor light switches, these are only in the back stairwells. Minor Addition could cut back on its energy use by installing occupancy sensor switches in other low traffic areas. Furthermore, while Minor Addition does have some timers in stairwells and hallways, the timer management system is limited.

Recommendations

- Contact [David Stone](mailto:david.j.stone@berkeley.edu), LEED-AP about SEP lighting retrofit funding: david.j.stone@berkeley.edu
- Remind occupants to turn off lights when not in the room; put up reminder stickers
- Consider installing more occupancy sensors in low traffic areas and expanding the light timer system

- Consider purchasing task lamps as a substitute to overhead lighting; ensure that task lamps are equipped with LED or compact fluorescent bulbs.

Thermal Comfort

Minor Addition occupants reported that generally, the temperature of the building is comfortable. However, nearly all the offices upstairs have personal fans in them. A few occupants have space heaters. Occupants do not have control over the thermostats. In the basement, there are some problems with overheating and airflow. This is because Minor Addition used to be one single unit but the HVAC system doesn't work as well now that the building is divided up. Occupants upstairs do open windows when it gets hot, and tend to shut them when HVAC is running. Occupants also do try to dress for the weather.

Recommendations

- Dress for appropriate temperature.
- Try to minimize use of fans and space heaters

Computers/Printers

Minor Addition's server is almost entirely virtual, meaning computers are connected to fewer, more efficient servers that provide high level security and less maintenance at an offsite location. The primary program will become virtual soon as well. Building occupants do use screen savers for security purposes. Also, there is no central energy management for computers. However, many computers already have stickers reminding the user to turn them off, and Cliff will distribute more. The stickers are an easy way to remind occupants to turn devices off! For the most part, occupants remember to turn off their computers or put them into sleep mode at the end of the day. Occupants primarily use shared network printers. There is generally only one printer per hallway, although there are a couple of highly specialized individual printers. Many of the printers are energy star.

Recommendations

- Avoid screensavers where possible – they don't help to save energy on LCD monitors.
- Clean vents & fans regularly
- Use power strips and turn them off when items are not in use.

Other Appliances

Overall, there does not seem to be an excess of any sort of appliance. With the exception of a speaker set in the student lounge area and a shredder in the converted kitchenette room, all observed devices and appliances in general areas were off or on standby. However, some appliances, such as the microwaves and toaster, could be unplugged when not in use. These devices could all be put on a power strip to make reducing energy from phantom loads simple. The student lounge area had four microwaves, but they are all highly used during the school year, so there is no need to consolidate them, so long as they are put on a power strip or unplugged. The fridges in the student lounge area had only a few items in them, so one of these fridges could be unplugged during summer months. Neither of the fridges had anything on top of them, which prevents heat from escaping and uses more energy. Both the fridge and freezer were free of frost and residue. The large vending machines in the student lounge area were both energy star.



Recommendations

- Consolidate refrigerators if possible.
- Clean coils & fans regularly
- Unplug appliances after use, or put them on a power strip and turn off the entire strip when done.
- Continue defrosting freezer regularly.
- Place reminder stickers conspicuously to remind occupants to unplug appliances when not in use.
- Look into freezer in the lab room that was running at -86 degrees; see if it could be run at a warmer temperature.