

Dwinelle Annex Energy Assessment



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Introduction

Dwinelle Annex is a relatively small campus building constructed in 1920 that houses 20 occupants in the Theater, Dance and Performance Studies, Arts Research Center. After speaking with occupants in Dwinelle Annex, we found that the main issue with this building is the steam heating system. Although it is not in our purview to alter the heating system of this building, we have notified the Energy Office of this issue who will investigate the occupants' concerns. We also observed an abundance of potentially redundant appliances that could be assessed for recycling or consolidation.

General Appliances

In many offices, we observed potentially redundant printers, VCRs, TVs, and older appliances that were not frequently used. Additionally, few appliances were attached to power strips. The few power strips in use were rarely turned off by building occupants at the end of the work day. This is partly due to the computer updating and back-up system that occurs overnight.

Recommendations:

- Consolidate workspaces with multiple appliances of the same kind (i.e. printers in front office).
- Recycle unused appliances (i.e. VCRs, TVs).
- Turn off power strips at end of work day.
 - Look into partial-shut-off powerstrip devices
 - <http://tinyurl.com/ye5lm12>
- Use proper energy saving modes (i.e. sleep) when equipment is temporarily not in use.
- Reduce brightness and increase contrast on computer screens.
- Avoid using screen savers.
- Keep vents on computers clean and unblocked.
- Consider Energy Star and other energy saving technology when purchasing new appliances.



Heating & Ventilation

Several rooms can be extremely hot during the summer and occupants had to open windows or utilize fans in order to feel comfortable in their work environment. Specifically, the Graduate Lounge was recorded at 88 degrees, and over 100 degrees immediately adjacent to the Sturtevant Speed Heater. After talking with building occupants, we learned that they cannot control heating directly and must contact PP-CS to make changes, which can take up to one week to come into effect. When temperature changes are made, the building is significantly more habitable. The steam heating system provides heat at the end of November until the beginning of June. Due to the Berkeley climate, this timing can render occupants too cold in the early winter and too hot in the late spring.

Recommendations:

- Contact PP-CS to alter heating schedule allowing for one week to take effect.
- Open windows instead of using fans.
- Speak to landscape architect about planting trees (i.e. Redwoods) near building for cooling purposes.



Lighting

The annex can receive a vast amount of natural light throughout the workday. The lighting measurements (lux) were on par with the corresponding workspace and kitchenette lighting standard. Many occupants currently use this natural light and are interested in switching from overhead to task lighting when necessary. However, we observed many unoccupied rooms with overhead lighting turned on.

Recommendations:

- Use natural light as much as possible.
- Consider purchasing task lamps as a substitute to overhead lighting; ensure that task lamps are equipped with compact fluorescent bulbs.
- Assign an occupant on each floor to turn off lights at the end of the day.
- Turn off lights when leaving a room.

Amenities

The last major observation involves drinking water. Although there are cooled drinking fountains within the building, there was a cold water dispenser that requires electricity to function. Thus, we recommend that occupants utilize tap water for its economical and sustainable benefits. If occupants prefer filtered water, consider purchasing a small water filter to be used in kitchenettes.

Further Resources

- Stickers to prompt energy conservation.
- Power Agents
http://mypower.berkeley.edu/about/power_agents.html
- Physical Plant Campus Services (PPCS): (510) 642-1032
- myPower office tips available at: mypower.berkeley.edu
- Berkeley Overstock and Surplus
<http://businessservices.berkeley.edu/overstock>