

Policy Number: 2014-01
Effective Date: 02/01/2014
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Applicability: Faculty, Staff, Students and Departments

Purpose

Lehigh University is committed to improving energy and water efficiency, and mitigating energy and water impacts on the environment including climate change. This policy identifies energy and water conservation as significant issues for Lehigh University and outlines steps to reduce energy and water consumption and greenhouse gas emissions in a manner that is consistent with the university's mission of education, research and service (see Lehigh University Strategic Plan, Campus Master Plan, Sustainability Plan, and President's Climate Commitment).

Every member of the university community has the responsibility to actively participate in conserving energy and water. With 9 to 28 percent of building electricity being consumed by plug loads (things plugged in), individual occupants have significant power to reduce consumption¹. Additionally, occupant control of light switches, thermostats, doors, and windows can conserve significant amounts of energy. Supervisors should communicate this policy, monitor their work and living spaces, and discuss conservation opportunities with their respective teams. Gryphons, fraternity/sorority leaders, and eco-reps should make energy and water conservation topics of discussion with students living in university housing. Faculty members should include energy and water conservation in their curricula.

Policy

Lehigh University's policy is to reduce energy and water consumption and greenhouse gas emissions through infrastructure and technical strategies, and the everyday efforts of students, faculty, staff, and university visitors (the "university community"). At Lehigh, energy includes electricity, chilled water, steam, natural gas, propane, and fuel oil. While maintaining the university's mission, the following energy and water conservation measures will be pursued:

- Education and outreach that encourage energy and water conservation and environmental stewardship on campus and beyond;
- Individual actions such as closing doors and windows, and turning off lights, window air conditioning units and computers when not in use and at the end of each day;
- Technical strategies including energy and water savings in equipment operations and maintenance, as well as in building renovation and new construction; and
- Exploration and application of renewable energy sources to support Lehigh's operations.

All energy and water conservation measures, whether undertaken by the Facilities organization or by individual members of the university community, will be consistent with the university's mission.

¹ Plug Load Behavioral Change Demonstration Project, National Renewable Energy Laboratory (NREL), NREL/TP7A40-52248, August 2011.

Energy Guidelines

The following guidelines for energy conservation are applicable in all Lehigh facilities:

Lighting

1. Lights should be turned off when not in use, when leaving a room unoccupied, and at the end of the day, including lights in common spaces.
2. Energy-saving fixtures, lamps, ballasts, and lighting control systems (e.g., day light sensors, occupancy sensors, and vacancy sensors) should be used to the fullest extent possible, in routine maintenance and repair jobs, as well as in major renovation and new construction projects. LED fixtures and bulbs should always be utilized.
3. Lighting levels recommended by the most recent edition of the Illuminating Engineering Society (IES) Lighting Handbook will be used as guidelines.
4. Day lighting should be used to the fullest extent possible in major renovation and new construction projects.
5. Artificial lighting is to be used only when daylight is insufficient to perform the task at hand, or where campus safety would be compromised without artificial lighting.

Computers

1. Faculty and staff can help maximize power savings by following these simple guidelines for using computers and electronic devices:
 - Turn off monitors and displays when not in use and at the end of each day
 - Turn off computers and devices when not in use and at the end of the day unless needed for remote access or research/instructional requirements
2. Computers set up by Library and Technology Services (LTS) will be configured to maximize energy savings when possible. For questions on power settings, please contact LTS: helpdesk@lehigh.edu / 610-758-4357.

Plugs Loads

1. All plugs loads should be unplugged, turned off, or entered into a powered-down mode when not in use and at the end of each day.
2. Small transformers, such as those associated with charging cords for mobile phones, tablets, and computers should be unplugged when not actively charging a device. These devices can use power even when they are not charging a device.

Space Heating and Cooling

1. Some campus buildings are heated with steam (e.g., Drinker, Dravo, Richards, Drown, Packard, and Alumni Memorial), and these buildings generally have control knobs on radiators with a scale from 0 to 5 instead of a wall-mounted thermostat. The relationship between these settings and temperature may not be consistent from one building to another.
2. Most other campus buildings have wall-mounted thermostats that shall be managed to provide the following temperature ranges:

Season	Typical Timeframe	When Occupied (*)	When Unoccupied
Cooling	April 15 to Oct. 15	72 – 76°F	80°F maximum
Heating	Oct. 15 to April 15	68 – 74°F	60°F minimum

(*) The following occupancy schedules will be used:

Room Type	Occupied Time
Administrative	7 a.m. to 6 p.m., Monday through Friday
Academic	7 a.m. to 10 p.m., Monday through Friday
Athletic Facilities	In accordance with use or hours of operation
Dining (UC, Rathbone, & Brodhead)	5 a.m. to 10 p.m. daily
Residence Halls and Greek Houses	24 hours per day daily, except extended breaks
Libraries	7 a.m. to 10 p.m. daily, except during exam periods when hours become 24 hours per day
Research Labs (e.g., Mudd, Iacocca, STEPS)	24 hours per day, daily
Other	As appropriate

3. Energy conservation should be a consideration when scheduling classes and events. Activities requiring extended hours of operation should be consolidated into fewer buildings as much as possible.
4. Building occupants should not adjust thermostats to settings outside of above ranges. Occupants are encouraged to dress appropriately for the season to minimize the need for excessive heating and cooling.
5. Facilities may for short durations of time, particularly on hot and humid summer afternoons, allow room temperatures to increase in certain buildings to reduce energy consumption. Such demand response program activities are used periodically to reduce peak-demand period consumption to prevent power grid blackouts and brownouts.
6. Temperature exceptions may be granted when required to support the missions of the university (see Exceptions).

7. While buildings are being heated or cooled, outside doors and windows should remain closed and as secure as possible to prevent loss of conditioned air.
8. Window air conditioning units (where applicable) must be turned off when not in use and at the end of each day. New installations in academic buildings require timers to control their operating period.
9. Due to the energy they consume, and for safety reasons, use of portable space heaters, electric blankets, and heat lamps is highly discouraged.
10. Where chemical fume hoods are installed, their sashes should be closed when not needed to prevent loss of conditioned air and for researcher or student safety.
11. Where chemical fume hoods are installed and their exhaust fans can be controlled manually, the fans should be turned off when the fume hoods are not in use and no chemicals are being stored within them.

Purchasing

1. ENERGY STAR qualified equipment, systems and appliances (see www.energystar.gov) or EPEAT registered equipment (www.epeat.net) should be purchased whenever such products are available and the following two conditions are satisfied:
 - a. The quality and function of the ENERGY STAR/EPEAT product is equal or superior to that of non-ENERGY STAR/EPEAT products; and,
 - b. The additional upfront cost of the ENERGY STAR/EPEAT product is less than its resulting lifecycle energy savings. If it is not possible to satisfy both of these conditions, then the most energy efficient equipment, systems and appliances possible should be purchased.
2. When comparing non-ENERGY STAR/EPEAT to ENERGY STAR/EPEAT products, consider operating efficiencies in purchasing decisions.

Miscellaneous

1. Minimize use of elevators by taking the stairs whenever possible.
2. Shared use of office refrigerators, microwaves and coffee makers is highly encouraged.
3. Additional energy conservation strategies aimed at students are available at
<https://sustainability.lehigh.edu/environmental-living-tips>

Water Guidelines

1. Water is to be used sparingly. Showers and faucets should be turned off when not being actively used, for example while brushing your teeth.
2. Domestic cold water should be used whenever possible, unless sanitary or other requirements necessitate use of hot water.

3. Dual-flush toilets and low-flow toilets, showers and faucets will be installed whenever possible.
4. Anyone discovering a water leak should report it immediately.
5. Domestic hot water temperatures will be controlled to 120°F unless dining, medical, instructional, research or other special requirements necessitate use of other temperatures. Dining facilities typically receive water controlled to 140°F. Departments requiring alternative temperatures should review their requirements with Facilities prior to installation.
6. Laboratory/process equipment should not be cooled with domestic cold water. Facilities will work with researchers using such process cooling systems to eliminate them over time. Departments requiring process cooling systems should review their requirements with Facilities prior to installation.

Expectations

Exceptions from this policy can be granted when necessary to accommodate instructional, research, medical, or other special requirements. Exceptions can be requested by contacting the Facilities Work Order Control Center at 610-758-3940. Exception requests shall be evaluated on a case-by-case basis by the Facilities management team with the requestor.

Reporting Building Problems

Faculty, staff, and students are encouraged to report building conditions that are inconsistent with the guidelines outlined in this policy by placing a work request with Facilities online at <http://www.facilities.lehigh.edu> or by phone at 610-758- 3940.

Changes and Updates

The university community is encouraged to make suggestions for additions or modifications to this policy, as well as other energy and water conservation suggestions, by emailing sustainability@lehigh.edu or calling 610-758-3976. This policy will be revised as needed to meet changing conditions and expectations.

Policy Approval

This policy was prepared by Facilities and the Office of Sustainability. It was most recently revised and approved on August 26, 2019 by the Associate Vice President and University Architect of Facilities.

Keywords: Conservation, Energy, Sustainability