



Bryant University’s Energy Guidelines for Sustainability

Rising carbon emissions have a disruptive impact on global climate patterns and pose a risk to the security of communities around the world. The higher education community is responding by taking responsibility for campus carbon emissions and making an effort to curb greenhouse gases that in turn lower operating costs. Bryant is committed to reducing campus-wide energy consumption by 10% by 2020. In alignment with Bryant University’s Sustainability Plan, these guidelines identify energy conservation as a significant commitment on behalf of the University community and outline expectations for community members and departments.

- a. Reduce electricity use by 10% from FY 2010 baseline on a square footage basis per full-time equivalent (FTE).
- b. Reduce natural gas use by 10% from a trailing five-year average baseline (2009-2013) calculated based on heating degree day data on a square footage basis per full-time equivalent (FTE).

Bryant University Normalized Natural Gas Use						
Year	BTU (Billions)	SQFT	HDD	FTE	Efficiency Coefficient	% of 2010 Baseline
FY 2010	76.1	1,353,888	5,464	3,000	0.00342902	–
FY 2013	69.5	1,353,888	5,505	3,000	0.003108304	90.65%
FY 2014	77.7	1,353,888	6,099	3,000	0.003136595	91.47%

*Baseline year HDD value calculated using trailing 2009-2013 data
 *HDD: Heating Degree Day based on data from Providence Green State Airport Station, Rhode Island. FTE: Full-time Equivalent

Bryant plans to achieve the goals through active and collaborative efforts between students, faculty, staff, and administrators. Bryant has focused on energy management by sourcing efficient equipment, taking advantage of energy efficiency upgrades, and has been able to keep overall consumption flat despite increased demand. In the years to come, Bryant seeks to align its operational practices with a commitment to sustainability.

Guidelines for Institutional Responsibilities

Buildings

Facilities Staff

- Adhere to the heating and cooling set points when feasible.
 - Cooling Season occupied set point range: 70°F to 75°F
 - Cooling Season unoccupied set point: 78°F
 - Heating Season occupied set point range: 68°F to 72°F (however, under certain circumstances determined by Bryant's Facilities Engineer, this guideline range can be altered at times)
 - Heating season unoccupied set point: 62°F (however certain buildings may be different depending on building infrastructure)
 - All domestic hot water systems will be set no higher than 120°F, or 140°F for cafeteria service (with dishwasher booster)
 - Heat pumps will maintain a 6 degree differential between heating and cooling set points.
- Use environmental control systems to control temperatures at night or other extended periods when facilities are unoccupied.
- Keep doors between air-conditioned and non-air-conditioned spaces closed when possible as long as fire code is not broken.
- Exhaust fans will be regulated and turned off when possible.
- Preventive maintenance and monitoring for facilities and systems will include but are not limited to, HVAC, building envelope, and moisture management when possible.
- During unoccupied times (defined based on use patterns for each building), the air conditioning equipment will be off when appropriate. Exceptions will be made for areas with instruments, artwork, or other areas requiring special conditions.
- Air conditioning start times may be adjusted (depending on weather) to ensure a comfortable environment when space is reoccupied.
- Outside air dampers will be closed during unoccupied times.
- Due to the energy intensive requirements of relative humidity control, it will only be provided where necessary: e.g. labs that require it; spaces where mold is an issue; electronics that require it.
- All domestic hot water re-circulating pumps will be switched off during unoccupied hours when possible.
- Request approval to change temperature settings on heating and cooling equipment from Bryant's Facilities Engineer.

Energy

Facilities Staff

- Consider and seek approval for alternative energy sources that have less than a 5 year payback such as passive solar heating and heat recovery, as well as day lighting and other strategies for decreasing building energy consumption in accordance with green building concepts. Primary consideration should be given to connecting and/or extending central systems for heating, cooling, and other electrical and lighting systems.
- Consider utilizing energy efficient systems with less than a 5 year payback in all new construction, and including utility metering for electricity, natural gas, steam, and water.

Equipment

Community Members

- Turn off computers, including the monitor and speakers, before leaving for the day (Network equipment will remain on).
- Turn off any office equipment, including copy machines, scanners and local printers, etc. before leaving for the day. When appropriate, Office Managers and Department Heads should assign responsibility for turning off computers, printers and other equipment in shared spaces (Fax machines may remain on).
- Unplug personal appliances and other devices (coffee makers, radios, chargers etc.) when not in use.

IT and Facilities Staff

- All Bryant computers – assigned to faculty, staff and students – will be set to the Balanced Power profile plan, as recommended by the manufacturer. This setting automatically controls system operation to balance performance with energy consumption.
 - Desktop computers will be set to dim video displays after 15 minutes of inactivity and turn off those displays after 30 minutes.
 - Laptop computers will be set to turn off internal disk, screen and set the system into sleep mode, while on battery, after 10, 15 and 20 minutes of inactivity respectively. While plugged in, these options will be set to 20, 60 and 120 minutes respectively.
- Program existing electronic equipment for shut down when not in use when possible.
- Ease of periodic shut down will be a consideration when acquiring new equipment.

Lighting

Community Members

- Leave lights off when possible, and turn off lights if ample natural daylight is available.

- When working in a building outside of normal work hours, turn on lights in necessary work spaces (e.g., faculty use office lights only; when possible, custodial staff turn on lights in rooms only as you use them, etc.) keeping unnecessary space lighting off, except egress lighting.

Facilities Staff

- Use high efficiency lighting; prioritize the use of LED and minimize incandescent lighting in new construction.
- Implement motion and timing sensor activated lighting controls when possible with new construction and remodels.
- When possible, turn off outside lighting during daylight hours and turn off unnecessary indoor lighting when spaces are not in use.
- Reduce unnecessary nighttime outside lighting, understanding that safety and security are priority considerations.
- Pre-program schedules that will be regularly monitored for seasonal adjustments (e.g., daylight savings beginning and end).
- Turn off unnecessary indoor lighting when spaces are not in use.

Purchasing

Facilities Staff

- Bryant will purchase energy-efficient appliances and equipment when possible. This includes Energy Star purchases including, but not limited to, laundry equipment, vending machines, computers, refrigerators, and a variety of office equipment.
- Campus personnel will communicate Bryant's Energy Guidelines to appropriate, on campus vendors.

Water

Facilities Staff

- Grounds watering will typically be done between 2am and 7am. Every effort will be made not to water during the heat of the day, typically between 10am and 5pm, with the exception of the Athletics fields.
- When possible, water from spray irrigation will not directly hit facilities.
- Water sub-metering will be introduced on irrigation and cooling tower supply lines to eliminate sewer charges when feasible.
- All plumbing and/or intrusion leaks will be repaired when possible.
- Encourage more efficient storm water retention and management.

Community Members

- Conserve water when possible in residence halls and on main campus.
- Consider using and refilling a reusable water bottle at hydro stations.
- When appropriate, report leaks to Facilities.

Ventilation

Facilities Staff

- Space will be provided the minimum amount of outdoor air as specified by ASHRAE for the type of space concerned: e.g. classrooms, labs, conference rooms, etc.
- Where feasible, CO2 sensors will be provided to further limit the intake of outdoor air.
- Unoccupied

Implementation and Measuring Impact

- The Facilities team will perform periodic audits of all facilities and communicate the audit results to the appropriate personnel.
- The Facilities team will leave reminders if they observe on their rounds opportunities for energy savings when appropriate.
- The Facilities team will employ both the University's Building Automation System (BAS), and the external energy usage dashboard service (EFT) to extensively monitor relative humidity, temperature, and electric and gas usage throughout the campus. Resulting data will be used to inform decisions about possible and necessary adjustments to building settings.
- The Facilities Team will provide monthly energy savings reports to key personnel detailing performance results.
- The Facilities Team will keep the campus community informed of the program's progress through various communications avenues.

Please contact Assistant Director of Facilities (x6912) with any questions, concerns, and suggestions