Western Kentucky University
Energy Policy

Overall Policy and Purpose: Western Kentucky University is committed to promoting energy efficiency and conservation on campus for the benefit of our students, faculty, staff and community. By using energy wisely, we will continue to improve the energy efficiency of our buildings, campus equipment, and vehicles. We will implement strategies that will reduce the consumption of energy. The health and safety of faculty, staff, students and guests remain a high priority. We will continue to provide comfortable buildings while practicing energy conservation.
The benefits of energy management extend beyond reducing the utility bills. Careful management of energy use can also benefit the environment and extend the life of equipment. Responsible energy management encourages a culture of conservation in the campus and greater community. Engaging students by promoting research opportunities, such as exploring and implementing new sources of energy, ensures options for a clean energy future as graduates prepare to meet present world challenges.

The following energy sub-policies and guidelines will promote the goals of WKU's overall energy policy:

Consumer Energy Use Policy/Guidelines
The University shall provide energy resources adequate to maintain normal campus activities. Through demand-side energy policy, the University shall encourage the university community to use energy more efficiently. To achieve these goals, the University shall devise and implement the Consumer Energy Use Policy/Guidelines.

Building Energy Policy/Guidelines
The University shall maintain a comfortable environment for working and learning. Through building management, the university shall also seek to increase energy efficiency, control utility expenditures, reduce wear on equipment, and minimize the impact of energy use on the environment. To achieve these goals, the University shall devise and implement the Building Energy Policy/Guidelines.

New Construction, Renovation and Building Improvement Energy Policy/Guidelines
WKU will seek to further reduce future energy costs and increase energy efficiency in new construction and renovation whenever feasible and when required by statute. To achieve this goal, the University shall devise and implement the New Construction, Renovation and Building Improvement Energy Policy/Guidelines.

Transportation Energy Policy/Guidelines
The University shall maintain transportation services that are adequate and convenient and that fulfill the transportation needs of the WKU community. Whenever possible, the University shall attempt to increase the energy efficiency of the University's vehicles and transportation infrastructure and promote energy-efficient practices. To achieve these goals, the University shall devise and implement the Transportation Energy Policy/Guidelines.

Equipment, Materials and Supplies Purchasing for Energy Efficiency Policy/Guidelines

The University will purchase equipment that will ensure normal and efficient campus operation. Through sustainable purchasing, the University shall seek to improve energy efficiency and decrease energy use by purchasing energy efficient equipment, materials and supplies. To achieve these goals, the University shall devise and implement Policy/Guidelines for equipment, materials and supplies replacement, and purchasing with consideration of energy efficiency, life-cycle cost, and sustainability.

Implementation and Administration of Energy Policy

The University will establish an administrative structure responsible for compliance with and implementation of the Energy Policy. Sub-policies and guidelines will be administered by appropriate departments or individuals. The success of the Energy Policy, procedures, and guidelines rests largely on participation of all members of the campus community. University leaders should lead by example, stressing the importance of energy conservation measures to students, faculty and staff.

Individual building representatives, department heads and/or business managers, as appropriate, are expected to become responsible for the energy program specific to their respective areas. The Department of Facilities Management, Energy Management Team, and Sustainability Coordinator will provide support as needed.

The Department of Facilities Management, the Energy Management Team, and Sustainability Coordinator will cooperate to continue to enhance the communication channels for energy issues to and from the Energy Management Team. Education and Outreach will be expanded and improved to provide opportunities for students, faculty and staff to partner with campus operations on energy conservation and efficiency projects.

Consumer Energy Use Policy/Guidelines

Policy Statement: The University shall provide energy resources adequate to maintain normal campus activities. Through demand-side energy policy, the University shall encourage the university community to use energy more efficiently. To achieve these goals, the University shall devise and implement the Consumer Energy Use Policy/Guidelines.

Purpose: These Guidelines will help each member of the University community play a role in promoting efficient, reduced energy use.

Offices, Classrooms, and Common Space Energy Efficiency: The Individual's Role

Each member of the WKU community should strive to make his or her office space, classrooms or shared spaces more energy efficient. The following is a non-exhaustive list of steps to take to use less energy:

- Employ common-sense energy saving measures, such as turning off lights and equipment when leaving a room;
- Incandescent light bulbs must be replaced with compact fluorescent light bulbs;
- Lighting devices that produce excessive heat (such as halogen lamps) are highly inefficient and are fire hazards, and are prohibited;
- Computers and other equipment should be set on energy saving settings, such as "sleep mode;"
- When possible, purchase Energy Star-rated equipment, including refrigerators, for your professional or personal use;
- All plug-in devices, including cell-phone chargers and other charging devices, should be unplugged when not in use;
- The use of space heaters is prohibited.
- Close windows and exterior doors to prevent loss of conditioned air;
- Use energy-saving technologies ("smart" energy strips, timers, sensors) whenever possible;
- When possible, set thermostats at the highest bearable temperature in warm weather and the lowest bearable temperature in cool weather;
- Report equipment failures to Facilities Management;
- Be proactive. When you see energy inefficiencies around you, contact the Energy Management Team to see how the problem can best be addressed;
- Help others you know and work with to be energy efficient. If you don't know how to be energy efficient, ask for advice. Visit the Energy Management website at: http://www.wku.edu/Dept/Support/FacMgt/Energyhome.htm or contact Energy Manager Dale Dyer at: 745-6179, or visit the Sustainability website at: http://www.wku.edu/sustainability or contact Sustainability Coordinator Christian Ryan-Downing at: 745-2508

Building Resource Management: The Individual's Role

Every member of the university community should assume responsibility for increasing energy efficiency in the buildings we use. Each member of the WKU community should:

- Close windows and doors during the heating season and when air conditioning is on during the summer;
- During the heating season, open blinds, drapes, and curtains to allow in heat from the sun. At night, or on cloudy days, close them to keep the heat in;
- During the cooling season, close blinds, drapes, and curtains to block direct sunlight;
- Shut off unneeded equipment;
- Turn off unnecessary lights when leaving a room;
- Turn off personal computers and unneeded technology when leaving for the day;
- Be proactive. When you see energy inefficiencies around you, take personal responsibility and contact the Energy Management Team to see how the problem can best be addressed;
- Never assume that others will take these steps for you.

Transportation Energy Efficiency: The Individual's Role

Each member of the WKU community should strive to use less energy for transportation. The following is a non-exhaustive list of steps to take to use less energy:

- Use "active commuting" techniques whenever possible. Walk or bike to work and when traveling around campus and take the stairs instead of the elevator;
- Consolidate official trips to save energy;
- Carpool with colleagues; see Parking and Transportation's rideshare site at: http://www.wku.edu/transportation
- Use public transportation whenever feasible;
- Encourage others you know and work with to practice transportation energy efficiency.

Space Heaters

The use of space heaters is not permitted in university buildings because they are grossly inefficient and may pose a significant fire hazard. WKU faculty and staff members who feel that their work environment is too cold should contact Facilities Management. Fans, heaters, air cleaners, purposely blocked vents are signs of occupant discomfort, signaling something is wrong that needs to be addressed. Facilities Management will evaluate the space conditions to determine the appropriate solution.

The University shall make a policy exception to allow the use of personal Radiant electric heaters only if the University temperature guidelines can not be met with the building heating system or a medical condition requires accommodation. A written diagnosis and treatment plan must be provided from a healthcare provider. An "Exemption Request" form must be submitted to Facilities Management (located under "on-line forms" on the DFM website: http://www.wku.edu/Dept/Support/FacMgt/home.html). Facilities Management will evaluate the space conditions and approve or disapprove the use of a radiant heater. When necessary, Facilities Management will consult with the Department of Environment, Health and Safety to evaluate health related concerns. Heaters purchased for use must be of the type and wattage approved by DFM or purchased through DFM by the requesting department.

The heater must be turned off when leaving for the evening, weekends, and holidays. Heaters shall only be used when truly necessary.

Excessive heating of a space on campus above the University Temperature Guidelines shall be reported to Facilities Services so that heating levels can be adjusted.

The use of any electric heater to offset cooling system operation in the summer shall not be permitted.

Building Energy Policy/Guidelines

Policy Statement: The University shall maintain a comfortable environment for working and learning. Through building management, the university shall also seek to increase energy efficiency, control utility expenditures, reduce wear on equipment, and minimize the impact of energy use on the environment. To achieve these goals, the University shall devise and implement the Building Energy Policy/Guidelines.

University Temperature Guidelines

To maintain reasonable comfort and lower energy expenditures, the University has adopted the following temperature standards.

A. Heating

Winter heating temperatures will be set at 68-70 degrees during the occupied periods. Temperatures will set at 60 degrees during the nights, weekends, and holidays (unoccupied periods). Consideration will be made for sensitive research laboratories and other areas with environmentally or temperature sensitive equipment or objects such as computer labs.

B. Cooling

Summer thermostat settings (air conditioning) will be set at 74-76 degrees during the occupied periods. Indoor relative humidity should be maintained to 65% or less, or values calculated using ANSI/ASHRAE Standard 55-2004, section 5.2, Figure 5.2.1.1. The Department of Environment, Health and Safety can assist with evaluating indoor air quality conditions. Temperatures will be set at 80-85 degrees during nights, weekends, and holidays (unoccupied periods). Any exceptions to these guidelines must be approved. Students, Faculty, and Staff are strongly encouraged to dress appropriately for the season.

C. Building Usage and Scheduling

The Energy Management Department schedules many buildings for night and weekend temperature setbacks during unoccupied periods in order to increase building efficiency during low-demand periods. Every attempt will be made to accommodate special events, class schedule changes, and other changes to these occupancy schedules when requested. Department and Event Schedules should be emailed to Plant Operations or Energy Management for implementation prior to the expected date requiring an alternate schedule.

When feasible, the University should take energy efficiency and energy cost savings into consideration when scheduling classes and other activities. For example, evening, weekend, summer and winter-session classes shall be scheduled to meet in the smallest number of buildings necessary to accommodate academic function and achieve highest possible energy efficiency.

Lighting

Interior lighting will be T-8 fluorescent or approved equal, whenever possible. New energy saving lamps and ballasts will be used to replace existing less efficient lighting whenever economically feasible and appropriate. Incandescent lamps will be replaced with high efficiency fluorescent lamps when re-lamping is required. Exterior lighting will be high efficiency metal halide whenever possible, and will meet minimum current safety requirements. Lighting levels recommended by the most recent edition of the IES (Illuminating Engineering Society) Lighting Handbook shall be used as guidelines. Accommodations can be made for individuals that need full spectrum lamps as advised by their physician. Where feasible and cost-effective, occupancy/motion sensors (ultrasonic or infrared) will be installed to reduce or turn off lights in unoccupied areas. Day lighting controls will be installed to automatically adjust lighting levels in parking structures and other areas where appropriate. Task lighting, such as a fluorescent desk lamp, should be considered to allow a reduction in area light levels.

Computing

The University should promote the establishment of energy-efficient standards on all IT equipment connected to the University IT network and energy distribution systems.

Seasonal Switchover Heating/Cooling

Facilities personnel perform the required switchover from heating to cooling in the spring and cooling to heating in the fall. Because of the varying equipment installed across the campus, buildings must, in most cases, be changed over individually. Facilities performs the changeover on the basis of priorities established to (1) provide comfort to WKU Students living in university housing (2) first come first serve for all other buildings based on when the request from the Building Coordinator was received. Generally, switchovers will take place in April and October. The exact date of switchovers will be determined by weather conditions and forecasts.

University Closure Periods

During periods of closure, such as nights, weekends and holidays, buildings will be heated and cooled at "unoccupied" temperatures outlined in the University Temperature Guidelines. The University's Operations Manager will be responsible for working with Building Coordinators to process requests for exceptions to this policy.

Additionally, during longer closures, such as the winter holiday, the university will follow hard shutdown procedures: lights will be turned off to egress levels, staff and faculty shall unplug electronics and appliances (defrost and empty refrigerators) including computers in labs and offices, and all copiers and other office equipment.

DFM staff will unplug water fountains, and turn off hot water heaters. Restrooms should be cleaned, toilets flushed and trash removed prior to shutdown to maintain minimum sanitary conditions. Other university departments will follow additional guidelines developed for shut down periods.

Plans for temperature setbacks and shut down of other electronics, appliances, lighting, and other energy draws over breaks will be communicated to the campus community by email and on the Department of Facilities Management website.

New Construction, Renovation, and Building Improvement Energy Policy/Guidelines

Policy Statement: WKU will seek to further reduce future energy costs and increase energy efficiency and sustainability in all new construction, renovation and building improvement. To achieve this goal, the University shall devise and implement the New Construction and Renovation Energy Policy/Guidelines.

Purpose: These Guidelines will help promote efficient energy use in buildings in the future at WKU.

New Construction Standards

The University requires that energy efficiency be a top priority in the design of all new buildings to be built on University property. Western Kentucky University will at minimum adhere to the Commonwealth of Kentucky's House Bill 2. The University will adhere to current ASHRAE Standards for Energy Efficient Design of New Buildings except Low Rise Residential Buildings. The University will require from all design agents a Leadership in Energy and Environmental Design (LEED) design plan to be developed and submitted for review and approval in the initial stages of the project design. The University will promote LEED design standards for all WKU facilities and require life-cycle cost analysis of each new facility development. The University will invite involvement of the WKU Sustainability Committee and associated university consultants for advice and counsel in new buildings and building renovation planning and design processes.

"High-performance building" refers to a public building that is designed, constructed, and capable of being operated in a manner that:

(a) Has high environmental performance that increased economic value over time;
(b) Safeguards the health of occupants;
(c) Enhances satisfaction and productivity of workers through energy-efficient systems;
(d) Incorporates environmentally friendly materials and products; and
(e) Reduces waste.

"LEED" refers to the building rating systems developed on or after January 1, 2005, by the United States Green Building Council. The rating systems allow designers, property owners, and managers to evaluate and rate buildings against best sustainable building design and practices, and to integrate principles of sustainable architecture at every stage of project delivery in order to design and construct buildings that will be energy-efficient and resource-efficient using a whole-building approach in five (5) key areas of human and environmental health:

(a) Sustainable site development;
(b) Energy efficiency;
(c) Environmental quality;
(d) Water savings;
(e) Material selection.

Renovation and Building Improvement Standards

When renovating existing structures, the University will make energy efficiency a top priority. The University will replace existing building elements (windows, doors, HVAC systems, insulation, roofing, electrical systems, ductwork, etc.) with more energy-efficient ones, as budgets allow. The indoor environmental controls of the building will be evaluated and systems balanced when renovation requires the change or reconfiguration of occupied areas.

The University will promote involvement of the WKU Sustainability Committee and associated university consultants for advice and counsel in renovation planning and design processes.

Transportation Energy Policy/Guidelines

Policy Statement: The University shall maintain transportation services that are adequate and convenient and that fulfill the transportation needs of the WKU community. Whenever possible, the University shall attempt to increase the energy efficiency of the University's vehicles and transportation infrastructure and promote energy-efficient practices. To achieve these goals, the University shall devise and implement the Transportation Energy Policy/Guidelines.

Purpose: These Guidelines will help promote reduced and efficient transportation energy use at WKU.

Transportation Energy Efficiency – Purchasing

When possible, the University shall factor energy efficiency into purchasing decisions for University vehicles. When feasible, the University shall purchase the most energy-efficient vehicles, whether they be traditional combustion, hybrid, electric, or alternative-fuel vehicles.

Transportation Energy Efficiency Policies

The University shall promote reduced transportation energy use by implementing the following common-sense policies

- Idling Time Policy: University vehicles shall be turned off when not being actively used for transportation. Idle times for university vehicles are limited to five minutes;
- Parking and Transportation Services shall implement independent energy-saving measures for the campus shuttle bus fleet;
- University employees are encouraged to consolidate business trips and carpool whenever possible;
- Employees should consider the use public transportation for off-campus travel whenever possible.

Transportation Energy Efficiency – Planning

Promoting transportation energy efficiency should be an important part of short- and long-term campus planning. The University should promote carpooling, "active commuting," the use of public transportation and greenways, and reduced use of personal vehicles on campus.

Parking Lot and Exterior Lighting Policy

During extended low parking demand periods, Parking and Transportation Services will work with Department of Facilities Management to close parking lots and reduce lighting levels. Selection of which parking lots to close will be dependent upon anticipated needs, ability to independently control the lighting circuit, and proximity to alternative parking areas. Some parking lots may be open to daytime use only during the shut downs. Other lots, such as Parking Structures 1 and 2, will be closed completely as ambient daylight is insufficient inside the structures. Appropriate barricades and signs will inform potential parkers the lots are closed.

All exterior lighting will be evaluated for possible reduction during university closures or campus low occupancy periods. Lighting levels for safety will not be compromised.

Equipment, Materials and Supplies Purchasing for Energy Efficiency Policy/Guidelines

Policy Statement: The University will purchase equipment that will ensure normal and efficient campus operation. Through intelligent purchasing, the University shall seek to improve energy efficiency and decrease energy use by purchasing energy efficient equipment, materials and supplies. To achieve these goals, the University shall devise and implement the Equipment, Materials and Supplies Purchasing for Energy Efficiency Policy/Guidelines.

Purpose: Through sustainable equipment replacement and materials purchasing, WKU will promote reduced, efficient energy use on campus. Energy efficient appliances, computers, IT equipment and other electronics should be purchased whenever possible. Everyone should ensure that energy efficiency settings are activated. Energy efficiency should be standard criteria in all RFPs and contracts. For examples of approved equipment, see the US EPA Energy Star products list (http://www.energystar.gov/).

This should be criteria considered for all products purchased through University Purchasing, Auxiliary Services (vending machines), Housing and Residence Life (washing machines and dryers, refrigerators, and electronics), and the University Bookstore. Energy efficiency should be standard criteria in all RFPs and contracts for products and services.

University Purchasing, departments, colleges and individual purchasers will reference and utilize sustainable purchasing guidelines as they are developed through the creation of a comprehensive sustainable purchasing policy.

Administration and Implementation of Energy Policies

Department of Facilities Management, the Energy Management Team, the Campus Sustainability Committee, the Campus Master Planning Committee, and other relevant departments shall determine the goals and objectives of the Energy Policy. They shall also devise indicators to measure the progress of energy efficiency, conservation, and sustainability measures. Progress will be communicated to the campus community through the Energy Management website and through additional education and outreach efforts.

The success of the Energy Policy, procedures, and guidelines rests largely on participation of all members of the campus community. University leaders should lead by example, stressing the importance of energy conservation measures to students, faculty and staff.

Individual building representatives and/or department heads and/or business managers, as appropriate, are encouraged to become responsible for the energy program specific to their respective areas.

All University departments should be encouraged to collaborate with Energy Management in scheduling operations with consideration to the energy needs and comfort of the facility occupants.

Document created through collaboration among the following University units: Facilities Management; Energy Management Team; Sustainability Coordinator; Planning, Design & Construction; Parking & Transportation Services; Environment, Health and Safety; and the Energy Conservation Task Force. Endorsed and supported by the WKU Sustainability Committee.