

UNIVERSITY of ALASKA ANCHORAGE



UAA ENERGY POLICY

Dear UAA Community:

I am delighted to present UAA's new energy policy. UAA is committed to responsible energy and resource management as part of an overall environmental strategy. This policy will help us take steps to minimize energy use, minimize energy costs, reduce the environmental impact of harmful emissions and limit the depletion of non renewable resources.

This new energy policy is just one part of a comprehensive sustainability program, including new building designs and retrofits, designed to reduce UAA's carbon footprint.

Take a look inside this plan and see how we're going to make UAA a "greener" place to learn, work and live. Look inside and see how you can contribute to reducing energy consumption at UAA.

To learn more about what you can do to make UAA a more sustainable University, visit the Office of Sustainability's Web site at www.uaa.alaska.edu/sustainability.

Wishing you the best,



Fran Ulmer

Chancellor





UAA POLICY STATEMENT

UAA is committed to responsible energy and resource management as part of an overall environmental strategy.

By efficient management of energy, the University aims to minimize

- energy use
- energy costs
- environmental impact of harmful emissions
- depletion of non renewable resources

The University is committed to achieving best practice standards in energy management and sustainability for higher education establishments, while maintaining operational goals and an acceptable learning/working/living environment for staff and students.

The University will provide senior level commitment, an appropriate management structure and cost effective resources to achieve these standards which will contribute to our environmental conscience and long term sustainability.

STRATEGIC OBJECTIVES

1] To utilize energy as efficiently as possible through conservation, best-practice operational procedures, and prudent monitoring and purchasing.

2] To invest in energy efficient plants and projects with paybacks of less than eight years.

3] To design energy efficiency in all new buildings, renewals and equipment upgrades.

4] To minimize emissions and waste products which are likely to cause damage to the environment, reduce our solid waste stream

5] To increase the energy awareness of students, faculty and staff.

6] To reduce dependence on fossil fuels by using alternative and renewable forms of energy where it is practical and economic to do so.

7] To procure goods and services from organizations who demonstrate a positive commitment to energy efficiency and sustainability.

8] To develop an operating procedure to support this policy including periodic review.

Introduction

The University of Alaska spends \$4-5 million dollars annually on energy (electricity and natural gas). As a result, it is imperative that the campus adopts policies to promote the conservation of energy. This will result in a more sustainable campus and savings that can be invested in University infrastructure. Although energy conservation is the focus of this policy, comfortable study, work, research and living conditions must also be achieved. These policies are only a part of a comprehensive sustainability program including new building designs and retrofits. Facilities and Campus Services will periodically update these policies.

UAA ENERGY POLICY

Building Management

Think Globally, Act Locally. Every member of the University community should assume the responsibility of closing windows, turning off personal computers and other office equipment when they are not in use, and turning off the lights when leaving a room. Energy management devices and strategies will continue to be added to the campus. Classes, meetings and other campus activities should be scheduled to minimize energy use. Weekend activities should be concentrated in as few buildings as possible.

Building Automation – The Anchorage campus is set-up on a Siemens Building Automation System (BAS) Apogee that monitors and controls building environments and much of the campus lighting. BAS allows building energy use to be set back on nights, weekends and holidays for improved energy performance. If temperatures are way out of tolerance that means equipment is broken and needs to be brought to the attention of

Facilities Maintenance to investigate and repair.

Setback Schedule – UAA follows ASHRAE Standard 90.1 comfort standard guidance that has a range of 68 to 81° F. Generally speaking classroom and office buildings “hibernate” after 11 p.m., when heating and ventilation equipment is set lower. Buildings start to come back online around 6:30 a.m. so that they are at their preferred temperature by 8 a.m. Building starts are staggered based on the type and time of building occupancy and nature of equipment. Most buildings are set to hibernation mode during the weekends. If we anticipate a prolonged period of sustained cold (below 10° F), the buildings will be maintained at normal day time temperature ranges 24/7 until the weather improves.

Holiday Periods – Buildings will be only minimally heated or cooled during holiday periods. An exception to this policy applies to buildings that contain special collections or sensitive equipment, or buildings that are officially open during the holidays. However, a building will

not be officially open because a few people may want to work during the holidays. Requests for exceptions to this policy, with specific justification, should be sent through the College Dean to the Associate Vice Chancellor for Facilities and Campus Services prior to the start of the holiday period.

Staff Tips: Expect buildings to be cool in the winter and warm in the summer on Monday mornings. If you feel your building needs to be outside of these comfort parameters, have your Department Head send a request in writing with justification to the AVC for Facilities and Campus Services. Periodically if building equipment is not operating properly or special activities require occupation of the facility during off hours, the building will be programmed to stay on or come on for the event. Please give plenty of notice for special activities.

Lighting

Whenever possible, low-mercury fluorescent lights will be used to light the interior of campus buildings. New energy-saving fixtures, lamps and electronic ballasts will replace

existing less efficient lighting whenever economically feasible and appropriate. Exterior lighting will be high-pressure sodium or metal halide (preferred) whenever possible, and will meet current minimum safety requirements. Departments or individuals desiring to deviate from these standards must submit a written request to the AVC for Facilities and Campus Services for consideration.

Building signage will be LED lighting. Lighting levels recommended by the most recent edition of the IES (Illuminating Engineering Society) Lighting Handbook shall be used as guidelines. Where it makes economic sense, occupancy/motion sensors (ultrasonic or infrared) will be installed to area lighting in an effort to reduce and/or turn off lights in vacated areas. Controls will be installed to automatically adjust lighting levels as appropriate in areas where daylight harvesting is possible (Atriums, Library Grand Room, AHS, UC). Full spectrum lighting or equivalent is a department billable for the lamps and labor.

Task lighting, such as desk lamps, is recommended to reduce overall ambient lighting levels. Decorative lighting will be kept to a minimum. Desk lights should be fluorescent type. The use of halide floor and desk lamps is prohibited as there are both serious safety and energy inefficiency concerns. Halide lamps of this nature generate enough heat to ignite nearby combustible material and the unnecessary heat that they generate must be removed from office using costly air conditioning systems.

The use of SAD (seasonal affective disorder) lamps is prohibited on campus without a doctor's note prescribing the specific need of an individual requiring continuous exposure. Current medical literature recommends that SAD lamps only be used at home for relatively short periods and not continuously throughout the day. Some co-workers can be adversely affected by SAD lamps.

Building cleaning will be scheduled to occur when occupants are dispersing, thus reducing the number of hours unoccupied buildings are lit.

Temperature Control

University Temperature Guidelines – To maintain reasonable comfort and lower energy expenditures, summer building temperature comfort ranges (cooling) are to be between 70 and 78° F, and winter settings (heating) are to be between 68 and 74° F. Exceptions to these guidelines must be approved by the Associate Vice Chancellor for Facilities and Campus Services.

The University follows ASHRAE Standard 90.1, which states that heating and cooling are not allowed simultaneously in the same space for the sole purpose of achieving comfort. Excessive cooling of a space on campus below the summertime University Temperature Guidelines should be reported to University Facilities so that air conditioning levels can be adjusted. There may be exceptions for areas and operations that require lower or warmer temperatures (electrical equipment rooms, green houses, research facilities).

Space Heaters – Whether they are purchased by the University or are

personal property, two issues affect the use of space heaters in campus buildings — fire safety and energy efficiency. Housing Administration or the Facilities Maintenance Director must approve in writing any use of space heaters. All space heaters used on campus must meet fire and safety standards as classified by the National Fire Protection Association. No liquid fueled space heaters (e.g., kerosene heaters) shall be used in any residential, office, classroom or research buildings.

Electrical space heaters must meet the following seven specifications: (1) be UL approved, (2) have elements that are protected from contact, (3) be tilt-proof (when tipped over, heater goes off), and (4) be thermostat-controlled (5) have overheat protection (6) have fuse protected cords (7) and be GFI protected. Energy efficiency is also important. Electric space heaters are a very costly means of heating. If a member of the campus community feels that a space heater is necessary for adequate warmth, this may indicate that the central heating system needs repair. University Facilities

Maintenance must be consulted through the Building Manager or Department Head if the central heating system is incapable of meeting comfort requirements (see comfort ranges above). If approved to use a space heater, it must be shut off when not physically present in the office space. Director of Facilities Maintenance should also be contacted through the Building Manager or Department Head if a space heater is to be used to offset excessive air conditioning.

Staff Tips: If you are too hot or too cold and your temperatures are within the appropriate range don't call Maintenance; you are in the "sweet zone". Your department will be charged for the service call. To stay warm wear a hat, sweater, something you can put over your shoulders, warm socks, sturdy footwear and have a warm drink. Use stairs rather than elevators, get up and walk around periodically, and do some light exercise during your breaks.

Switchover from Heating to Cooling — Facilities personnel perform required changeover from heating to air conditioning in the spring on the basis of priorities established to (1)

maintain required temperatures to protect equipment and research in progress, and (2) serve the greatest number of individuals and activities. Air conditioning may not begin until outside temperature has reached 60° F for three consecutive days and nighttime temperatures have not fallen below 45° F for a week. Temperature projections are also considered.

Switchover from Cooling to Heating — Facilities personnel perform required changeover from air-conditioning to heating in the fall on the basis of priorities established to (1) provide comfort to students living in University Housing, (2) maintain required temperatures to protect equipment and research in progress, and (3) serve the greatest number of individuals and activities. Heating may not begin until the high outside air temperature has dropped below at least 55° F for three consecutive days. Temperature projections are also considered.

Additional Energy Usage

Circuit Breakers – Breakers tripping off on a recurring basis generally

means that more items are plugged in and running than the area was designed for. Continued operation in this manner, or using extension cords to provide access to another circuit, will result in fire and safety troubles. Remedy the problem by unplugging non-essential equipment such as personal heaters, coffee makers, microwaves and refrigerators. If the problem is not resolved, plan on adding circuits. Departments should consult with Facilities if they are planning to re-configure the use of a room or if they are experiencing problems of this nature. New circuits may need to be added at department expense.

Food and Beverage Appliances – All appliances for food and beverage preparation must be UL listed and be in good repair. Electric cup holders must be UL listed, have weight or cup placement activation, and have automatic regulation of temperature at less than 120° F. Attempts should be made to share the use of personal appliances such as coffee makers, microwave ovens, refrigerators, etc. in a central office area.

Computer Displays – The purchase of CRT (cathode ray tube) computer displays is prohibited. Exceptions to this policy must be present to Environmental Health and Safety for consideration.

Vehicles – Whenever possible, vehicles and heavy equipment used during the winter will be equipped with engine block heaters set to activate two hours before use when the outside temperature drops below 20° F. Vehicles are not to be left unattended and idling for the sole purpose of heating or maintaining the temperature of the cab, but only to achieve optimal engine operating temperatures. Some exceptions to this policy are granted for emergency response vehicles. Idling should never occur near air intakes and doors.

Vending Machines – UAA requires our vending contractor to put “vend miser” devices on all vending machines.

New Construction and Renovations – The University will seek to reduce future energy costs in new facility construction

and renovation whenever feasible. Current standards outlined in ASHRAE Standard 90.1 Energy Efficient Design of New Buildings Except Low Rise Residential Buildings will be followed as closely as possible. Additionally, all city and state regulations will be followed. All planning for major construction and equipment purchases and installation must include energy life cycle costing. UAA will design in the spirit of LEED standards and with operational sustainability in mind.

Conclusion

We hope this policy has been helpful in providing guidelines about energy use to the University community. Keeping an energy efficient and safe campus is a concern to us all. We need your support and action.

Please contact the Associate Director of Facilities and Campus Services at 786-1110 for questions or more information pertaining to the energy operating procedures outlined in this document.

ENERGY CONSERVATION

- 1]** Switch off lights when they are not needed.
- 2]** Call Maintenance to remove excess light tubes and ballasts.
- 3]** Switch off computers when they are not being used within two hours.
- 4]** Upgrade computer displays with LCD flat screens instead of old-style CRTs.
- 5]** Use electronic equipment that goes into an energy saving mode when not being used.
- 6]** Don't use electric space heaters... call Maintenance to fix heat problems.
- 7]** Centralize and share beverage and food machines (microwave ovens, coffee makers, blenders, etc.) rather than having duplicate equipment in each office.
- 8]** If chilly and the current office temperature is between 68° F and 75° F, consider wearing more or heavier clothing rather than turning up the heat.

MATERIAL CONSERVATION

- 1]** Make double-sided copies whenever possible or practical.
- 2]** Use the backs of single-sided copies for scratch paper prior to recycling.
- 3]** Avoid making copies by using electronic distributions.
- 4]** Make good use of scanning technology and e-mail attachments instead of faxing.
- 5]** Use paper with high post-consumer content.
- 6]** Avoid using Styrofoam and plastic products... substitute with green paper or reusable products whenever possible.
- 7]** Don't print draft materials... proofread off of your computer monitor.
- 8]** Encourage the use of online forms rather than paper forms.
- 9]** Don't stockpile online forms in hard copy format... only print them as needed.
- 10]** Recycle office paper, cardboard and newsprint.

- 11]** Use re-usable containers and utensils rather than single-use items.
- 12]** Don't discard paperclips and rubber bands... reuse them or give them to others who might need them.
- 13]** Recycle toner cartridges by returning them to the purchase point or to General Support Services.

- 3]** Consolidate and coordinate supply trips.
- 4]** Commit to one or two days per week of not using your car.
- 5]** Don't leave vehicles idling for excessive periods.
- 6]** Walk, bike, skate or ski if practical rather than drive.

WATER CONSERVATION

- 1]** Don't run water to get a cooler drink... use ice cubes or refrigerated water.
- 2]** Don't run water continuously when brushing teeth or washing. Only run the water when actually using it.
- 3]** Use cold water instead of hot water whenever possible.

TRANSPORTATION CONSERVATION

- 1]** Ride U-Pass, Seawolf Shuttle or carpool.
- 2]** Use engine block heaters when the temperature drops below 20° F.

References

Here are some helpful websites that will lead you to others for energy and sustainable related information.

EPA Energy Star
www.energystar.gov/

U S Green Building Council
www.usgbc.org/

BOMA International
www.boma.org/AboutBOMA/TheGREEN/

Municipal Light and Power
www.mlandp.com/

Greenstar Inc
www.greenstarinc.org/



