

## Frequently Asked Questions

### **Who is Integrated Energy Solutions (IES)?**

MSU Facilities Services has contracted with Integrated Energy Solutions of Fort Collins, Colo., to implement a comprehensive energy conservation program that puts a full-time contract employee on campus to search for, implement and maintain energy savings. The focus of the program is on behavioral and low-cost, practical ways to reduce energy use, improve comfort, and encourage a culture of energy conservation among the campus community. This is one of the steps MSU is taking toward meeting the governor's 20x10 Initiative. For more information about the program:

<http://www.montana.edu/cpa/news/nwview.php?article=6564>

### **What is the 20x10 Initiative?**

Governor Schweitzer's 20x10 Initiative calls on all state agencies to reduce energy consumption in state facilities 20 percent by 2010.

### **How are you going to save energy costs?**

We approach saving energy on campus by implementing behavioral and operational changes. Operationally, we are in the process of evaluating how each building operates and trying to implement procedures for minimizing the amount of energy consumed when spaces are not in use. Behaviorally, our goal is to help make people aware of how their actions and habits can have a major impact. It will take the cooperation of everyone to conserve energy and reach the governors 20x10 initiative.

### **Doesn't it use less energy to leave the lights on instead of turning them off and on?**

No. The fact is the power surge when turning lights on is so brief that its energy draw doesn't amount to much: the equivalent of a few seconds or so of normal operation, according to U.S. Department of Energy estimates. In other words, from a strict energy-conservation standpoint, it's almost always beneficial to shut off fluorescents when leaving the room—the start-up energy is offset by the power saved in even the briefest outages.

### **How much does it really save to turn off the lights?**

We have estimated that if every light on campus was off for an additional hour per day the result would be nearly \$75,000 in annual savings to the University. So making a conscientious effort on the part of everyone to turn off lights when a classroom or office is unoccupied will make a significant difference.

### **Isn't it better to leave computers on all the time?**

While it wouldn't probably pay to turn the computer off while you go to lunch, to turn it off for the night would definitely save energy. One solution is to set the computer to go to "sleep" after 15 minutes of inactivity. This is a very good way to conserve energy while still having your computer ready to use quickly. The IT department can help if you have questions about how to set your computer to go to sleep.

### **Is it better to put computers into sleep mode instead of turning them off?**

Using the “sleep” feature on your computer at night is an effective way to conserve energy. Whether you turn the computer off or use the sleep mode, there is a substantial difference in cost between leaving the computer on with a screen saver running.

### **Does it really save anything to turn off my computer?**

Every computer’s power consumption is different. Our initial calculations indicate that (on average) a computer costs \$45 per year to operate. If computers can go to sleep for 8 hours per day we could save roughly \$15 per computer per year. Of course not all the computers can be turned off, but considering that Montana State University has approximately 4000 computers on campus (not including students personal computers), just doing this could save nearly \$60,000 per year in energy costs.

### **Are you aware that changing the temperature in labs can be problematic for plants, animals, experiments or equipment?**

We are. We are working with building managers to identify areas and equipment that are temperature sensitive so that we can keep those areas at the temperature they need to be. Our desire is to maintain proper temperatures where we need to, as well as keep everyone comfortable. What we do not want to do is spend money controlling a climate when we don’t need to.

### **It’s always too cold/hot in my room, what should I do?**

You can either notify me ([dklem@montana.edu](mailto:dklem@montana.edu)) or your building manager and we will get someone to try to address the problem. You can also contact work control at facilities services directly at x2107. If your room is too hot (in the winter) please don’t just open the window. Not only does this waste energy, it is potentially very costly if a pipe should freeze due to cold air coming in. We would like to take care of the problem.

### **Do the thermostats actually do anything when you adjust them? (Mine never works!)**

Nope. They are a placebo. Some of you have figured that out, so they no longer work as a placebo.

Actually, they do control the temperature to some degree as allowed by the building management system. Some have a limit to how much they can be adjusted; say +/- 5 degrees from the building temperature setpoint. So if the building is set at 72 degrees you could adjust your thermostat between 68-77. In response to the governors 20x10 initiative, the Montana DEQ has directed that all state agencies should set space temperatures between 68-71 in the winter and 76-78 in the summer.

There are several factors which may affect the proper operation of the thermostat. One is a temperature source near the thermostat, such as a light, computer, or refrigerator near the sensor. This will make the thermostat think the room is warmer than it really is. Another factor could be large (or drafty) windows in the room. Some rooms are very difficult to heat just because of the amount of window space in the room. Another factor can be the size of the room. Classrooms take more time to heat up, so we often find that someone will adjust the thermostat, and because it doesn’t heat up right

away, will go adjust it more. By the time the next class comes in it is way too hot so the next person adjusts it way to far the opposite direction. Try minor adjustments and wait for the room to adjust. In the event that none of these issues are a factor in your case, your thermostat may actually not be working properly, in which case notify either myself ([dklem@montana.edu](mailto:dklem@montana.edu)), work control (x2107), or your building manager.

### **What can I do if I notice an energy wasting issue?**

Let me know! There are so many things throughout campus that need action or attention it is impossible for one person to be aware of everything. This is a team effort and will require participation by everyone. If you notice something please let me know and I will either find out why it is the way it is, or I will get it fixed. The biggest problem is often that the right people do not know about it. Please contact me at [dklem@montana.edu](mailto:dklem@montana.edu).

### **What can I do to save energy?**

- In the winter, turn down thermostats in the evening and on weekends. Do not turn the thermostat off, as this could present a problem with freezing, but turning it down to 55-60 will save a significant amount of energy.
- Normal winter thermostat setting should be 68-70; summer should be 76-78
- Turn lights off in unoccupied offices and classrooms
- Use partial, task, or natural lighting when possible
- Turn off or put to “sleep” computers when not in use
- Turn off printers and copiers when appropriate
- Turn off Audio/visual equipment when appropriate
- Turn off coffee machines and hot plates off after hours
- Keep outside doors and windows closed when appropriate
- Advise building manager or David Klem [dklem@montana.edu](mailto:dklem@montana.edu) of operational problems

### **Have you considered completely shutting down the university over Christmas break?**

This question is usually accompanied by other suggestions such as: The University would probably save a lot of money even if they gave everyone the week (or two) off with pay.

While this sounds great, it is not as simple or straightforward as it seems. To this point there have been some informal discussions among some, but it has never been formally considered by the University. Since the campus here in Bozeman is heavily research oriented, there would be many things to consider when making a change of this nature. It would take extensive study to determine the feasibility of such a course, and whether it would really be beneficial to the University.