



## Climate change is real ... ...turn off your computer!

- Turn off your computer at night and when you are not using it for several hours.
- Enable the Power Management feature for your monitor (see below).
- Turn off your monitor when you are not using your computer for 15 minutes or longer.
- If you buy a new computer, consider a laptop. Laptops use only 1/4 the energy.
- If you buy a new monitor, consider a flat screen. They use only 1/3 the energy.

### COMPUTER MYTHS AND FACTS

#### **Myth #1: Turning off my computer is bad for my computer - Wrong!**

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##### **Fact**

The Lawrence Berkeley National Laboratory states that modern hard disks are not affected by frequent shut-downs and that equipment may actually last longer because mechanical wear and heat stress are reduced.

##### **Action**

Turn off your computer during the night!

##### **Savings**

If all students at Tufts University turned off their computers at night for 6 hours, it would prevent 572 tons of CO<sub>2</sub> from heating the atmosphere each year and save over \$87,000 in electricity costs!

##### **Security Benefit**

When you turn your computer off you decrease the risk of someone accessing your files or e-mail.

#### **Myth #2: Computers don't really need a lot of power if they are on but not used - Wrong!**

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##### **Fact**

During heavy usage (e.g., when you open a new application) your computer draws only slightly more power. The average computer uses about 120 Watts (75 Watts for the screen and 45 Watts for the CPU) whether you're using it or not.

##### **Action**

Turn off your computer if you are not using it for 1 hour or more!

##### **Savings**

If each household in the metro Boston area turned off their computer just one additional hour per day, we could save \$3.2 million in electricity costs and prevent 19,000 tons of CO<sub>2</sub> from heating the atmosphere. If businesses and universities were included, the savings could be much greater.

### **Myth #3: Screen savers save -Wrong!**

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#### **Fact**

Despite the name, screen savers don't save anything, especially not power!

#### **Action**

Turn off your monitor if you are not using your computer for more than 15 minutes!

#### **Savings**

If Tufts students and staff turned off their computer monitors 1-5 hours a day, it would prevent 118 - 590 tons of CO<sub>2</sub> from heating the atmosphere each year and save Tufts \$18,000 - \$90,000 in electricity costs!

*One computer left on 24 hours a day will cost you \$115 - 160 in electricity costs a year and dump 1,500 pounds of CO<sub>2</sub> into the atmosphere.*

*A tree absorbs between 3-15 lbs of CO<sub>2</sub> each year. That means that 100-500 trees would be needed to offset the yearly emissions of one computer left on all the time!*

## **Enable The Power Management Feature On Your Computer**

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The instructions differ slightly from system to system. For more information go to: [www.tufts.edu/tci/powermanagement.html](http://www.tufts.edu/tci/powermanagement.html)

### **On PCs (running Windows)**

1. Right-click on your desktop. A dialog box appears.
2. Select Properties.
3. Select Screen Saver tab.
4. Select Energy Saving Features.
5. Select Settings.
6. Select the number of minutes after which you want your screen (and your CPU) to power down. We recommend something between 5-15 minutes. Not all computers let you install Power Management features (e.g. Windows NT).

**If you have trouble on older machines, disable this feature.**

### **On Macs**

1. Go to the Apple Icon.
2. Select Control Panels.
3. Select Energy Saver.
4. Select Show Details.
5. Check Separate Timing for Display Sleep.
6. Select the number of minutes after which you want your screen (and your CPU) to power down. We recommend something between 5-15 minutes.

### **Plug-in Energy Savers**

An alternative to the Energy Star feature is plug-in devices with motion sensors that will turn off your monitor (and desk lamp), when you are not at your desk. Learn more about those at: [www.tufts.edu/tci/ComputerTools.html](http://www.tufts.edu/tci/ComputerTools.html)

# CLIMATE CHANGE FACTS

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Climate change, or global warming, is caused mainly by burning fossil fuels (coal, oil, gasoline, and natural gas). This creates carbon dioxide (CO<sub>2</sub>), a gas that stores heat. CO<sub>2</sub> and other gases that store heat are called "greenhouse gases."

Natural greenhouse gases are necessary for life on earth. Without them, we could not live because the earth would be too cold. Too much of them, however, and global temperatures rise, the climate is destabilized, and our health and the health of the global ecosystem is in danger.

We have been putting more and more heat-trapping gases into the atmosphere, raising the average global temperature, and creating climate change.

The overwhelming majority of scientists agree that climate change is real and poses a very serious global threat.

Climate change is happening today:

- Global temperatures are rising
- Sea levels are rising
- Severe weather events are increasing

Analysis of Antarctic ice sheets shows present-day atmospheric levels of heat-trapping CO<sub>2</sub> are 30% higher than at any other time in the last 420,000 years and are growing.

We can expect to see:

- Further rise in severe storms, down-pours, and droughts;
- Great regional differences: Some areas will flood more, and other areas will suffer from increased droughts;
- Spread and increase of agricultural pests and tropical diseases such as hantavirus, malaria, and dengue fever;
- Severe damage to fragile ecosystems.
- The United States has only 5% of the world's population yet contributes 25% of all greenhouse gases.

Each American is responsible for about 22 tons of CO<sub>2</sub> per year. If we want to stabilize the climate, each person on the planet should only produce about 2 tons of CO<sub>2</sub> per year.

Electricity production is the largest source of greenhouse gas emissions in the U.S. (29% in 1996, just ahead of transportation's 26%).

1998 was the hottest year on record since reliable measurements began in 1880. It surpassed the prior record from 1997, which in turn had broken a record set in 1995. The 1990's are the hottest decade on record, breaking the previous high mark.... held by the 1980's.

# BE A CLIMATE HERO!

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## **Drive less!**

A third of U.S. greenhouse gas emissions come from transportation!

## **Buy a fuel efficient car!**

You will cause much less pollution and save a lot of money!

## **Bicycle!**

Biking creates zero emissions, and it's fun!

## **Use your thermostat!**

In the summer, set the thermostat for your air-conditioning higher: between 78-83 degrees. In the winter, set the thermostat for your heat lower: between 65-68 degrees during the day between 50-60 degrees at night.

## **Insulate your house!**

New England homes are notorious for being poorly insulated: close storm windows, caulk-up cracks, and put plastic on your windows.

You'll be a climate hero, and you'll save money!

## **Switch from oil to gas!**

If you have an oil furnace, consider switching to gas. Oil produces much more CO<sub>2</sub> per unit of heat produced.

## **Turn off your lights!**

Electricity comes mostly from coal power plants (and nuclear power plants) and is the largest source of CO<sub>2</sub> emissions in the U.S.

## **Buy Energy Star appliances!**

These are especially energy efficient. Learn more about the Energy Star program at: [www.energystar.gov](http://www.energystar.gov)

## **Recycle!**

Recycling saves resources, reduces waste, and conserves energy!

## **Fly less!**

Flying somewhere produces as much CO<sub>2</sub> as if you would drive there in your car!

## **Eat less meat!**

Meat production is very energy intensive. If you eat less meat, you also prevent much water pollution; it's healthier too!

## **Buy less stuff!**

You'll save resources, energy, and money!

**Learn more by visiting us at: [www.tufts.edu/tci](http://www.tufts.edu/tci)**