

## **Use technology tools to cut phone, travel, copying and printing costs**

Use email and instant messaging instead of long-distance phone calls, travel and paper documents. Consider teleconferencing or web conferencing instead of traveling to off-campus meetings. Skype and Google Talk are free solutions for desktop voice and video teleconferencing that work with both Windows and the Mac. Calls using Skype or Google Talk to connect with others using the same software are free.

NC State's DELTA offers a free Web conferencing service that can be used for university business as well as course-related work. Visit [http://delta.ncsu.edu/lms\\_services/synchronous\\_learning/](http://delta.ncsu.edu/lms_services/synchronous_learning/) for more information. Visit <http://oit.ncsu.edu/campus-directory/operator-services> for some conference calling options provided by the Office of Information Technology. Consult with your local IT support person to find out what additional options are available to you.

## **Turn on your computer and monitor power-saving features; turn off un-needed devices at the end of your workday**

To save energy costs, set your desktop computer and monitor or laptop computer to go to sleep when not in use. Using a screen saver does not put the computer into power saving mode.

When in use (including in screen-saver mode)

A typical desktop computer uses 60-250 watts of electricity

A typical laptop uses 15-45 watts

A 17" CRT monitor uses about 80 watts

A 17" LCD uses about 35 watts

When in sleep or stand-by mode

A computer uses 1-6 watts of electricity

A monitor uses 1-15 watts

In hibernate mode, a computer does not use any electricity..

NC State has an estimated 30,000 devices attached to the campus network and most of them are computers. The campus utility rate for electricity is \$.076 /kilowatt hour. The cost-savings could be significant if everyone used the power saving features on their computer equipment. Not only is the power consumption of the equipment reduced, but so is the need for air conditioning due to the heat generated by the equipment when it is operating.

If you are NC State faculty or staff, check with your IT support person about changing the configuration of your campus computer. It is important to check with your IT support person before changing your power setting options since there are some computers set to receive patches or updates during off hours, and others may have difficulty re-connecting to the network when coming out of sleep/stand-by mode. If possible, turn off your computer, printers, monitors, speakers, and other accessories at the end of your work day.

Increase the use of free open-source software and Web-based applications

**Instead of purchasing costly commercial software licenses, check to see if there are free open-source software or web-based applications available to serve your software needs.**

Open-source software licenses are often free or low cost to use. There are open source equivalents for many everyday tools, such as word processing, spreadsheets and even specialized tools like audio editing and image manipulation, and these tools all use standard file formats that commercial tools understand.

Web-based applications (also called Cloud Computing or Web 2.0) like those offered by Google, Yahoo, Flickr, Adobe and Remember the Milk, are also often free or low-cost. Consult your local IT support person about the options available to you.

**Print less; avoid burning CDs and DVDs**

The university spends an enormous amount on printing formal printed documents like newsletters and brochures as well as ephemeral items like agendas, draft documents, emails, etc. You can save printing and paper costs by converting newsletters, reports, and brochures to web-based publications. Meeting agendas can be posted online and projected during meetings. Faculty can post homework and directions for assignments online as well as class notes, syllabi and other course materials. NC State's Learning Management Systems such as BlackBoard Vista and WolfWare make this simple to do.

Before hitting the Print command on your computer, take a minute to think whether you really need to print that document. Making a conscious effort to print less will save paper and toner costs as well as being more sustainable.

Instead of burning CDs and DVDs to distribute content, consider using Web-based solutions instead. It can cost less, reduce waste and allow the content creators to update materials without needing to distribute a new set of media.