

GREENING IN THE COURTS

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Courts can use improved technology to reduce their impact on the environment. But going “green” can also cut costs and improve service, as well.

Kermit the Frog once lamented that “it’s not easy ‘being green.’” But that is exactly the direction that many courts and organizations are taking. The “green” revolution is a combination of many ideas to reduce energy consumption, along with more ecologically responsible acquisition, recycling, and operational policies. This article highlights ideas and trends that have come to light in recent years, many that are court-specific, and concludes with an action list courts can consider in their plans for a greener future. Going green can be very budget friendly.

Electronic Storage

There is a significant effort underway in courts around the world to convert from paper to electronic storage of documents. Better known as e-Courts, electronic storage of documents encompasses electronic filing and public access to these documents via the Internet. The elimination of paper has significant environmental and budgetary benefits, as does the elimination of the need to travel to the courthouse to view court documents. Before its “eCourt” project, the Oregon Judicial Department estimated it consumed over 50,000,000 pieces of paper per year (see Borja, 2009).

The reduction or elimination of paper documents and files:

- a. Reduces or eliminates the entire cycle of tree cutting/recycling and the carbon emissions needed to produce and transport the paper.
- b. Eliminates the need to provide a secure, environmentally controlled file room or archival storage. This lessens the introduction for mold and related environmental contaminants into the courthouse HVAC (heating, ventilating, and air-conditioning) system.

- c. Reduces or eliminates the need to physically transport documents using land and air vehicles.
- d. Reduces or eliminates the need to build parking spaces and structures.
- e. Reduces the amount of physical security scanning of deliveries for dangerous contents. In an ideal courthouse-security situation, all physical items delivered by mail, courier, or express delivery should be x-rayed. By moving to e-filing the court avoids some of this work and, again, the carbon fuel used to deliver the items.

Computer Equipment Acquisition

There are many green issues to consider when it becomes necessary to purchase new or replace existing computer equipment, such as power use, power supplies, and environmental ratings.

- a. Consider converting from computer CRT (tube) displays to LCD flat panels, which reduces power use by 50 to 70 percent (plus the additional advantage that the images are generally easier on the eyes). By way of comparison, a large 23” flat-panel LCD monitor uses 44 watts of power versus 115 watts for a slightly smaller 21” CRT monitor.
- b. Look for low-wattage power supplies. For example, laptops use 20 to 80 watts of electricity versus desktop computers that use 100 to 400 watts.
- c. Consider thin client computers as another option for a workstation using the laptop design that lessens the power load (see “Thin Client,” 2009). Some of the thin client machines do not even include a cooling fan. And since all of the data is stored on the servers, there is no need for an uninterrupted power supply, or UPS.
- d. Consider computer workstations that are Energy Star 4.0 and EPEAT rated. Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping to “save money and protect the environment through energy efficient products and practices” (see www.energystar.gov). The Electronic Product Environmental Assessment Tool (see <http://epeat.net>) “is a system to help purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes.”

Data Center Considerations

Many courts operate their own data centers, where the server computers are housed. It was reported in the July 7, 2008, edition of *eWeek Magazine* (p. 44) that data centers consume 1.5 percent of electrical power in the U.S.A. These servers are vastly underused, spending 70 percent of their time idle. This is not surprising since the normal workplace is used only 50 to 60 hours per week.

Server consolidation and virtualization technologies are being applied to better use these resources. Virtualization is software that emulates multiple computer systems on one physical computer server (see “Platform Virtualization,” 2009). Consolidating multiple systems to one physical computer obviously saves the electrical power that is consumed by the multiple systems. One recent court project consolidated three court systems to one computer server, with a second complete system for backup redundancy. The backup server is turned on only for system updates, thus saving power, but is available in case the first server fails.

Estimated Weekly Power Consumption for an Intel Server

Single Intel E5345 2.33 GHz Quad-Core Xeon, 4GB memory

<u>% of Time Server In Use</u>	<u>Hours/Week</u>	<u>Power (watts)</u>	<u>Watt Hours/Week</u>
Idle to 1% busy	118	172.6	20,367
2 to 20%	50	179.4	8,970
21 to 40%	0	186.0	0
41 to 60%	0	198.0	0
61 to 80%	0	199.2	0
81 to 100%	0	202.2	0
Total	168		29,337

Source: Neal Nelson, Neal Nelson & Associates

Server computers are being designed to use power more efficiently. One should look for the following capabilities in new computer-server hardware:

- Power management capabilities
- Variable-speed fans
- High-efficiency power supplies
- Dynamic cooling

- e. Consider an electrical audit of your courthouse or other facilities. Courthouses over 15 years old were likely not designed for computer use and consummate power draw. Therefore, your courthouse might be overloading the electrical circuits resulting in a potential fire hazard. The wiring also may not be properly grounded for computer use, making it a possible hazard for the users and for the computer itself. Dedicated electrical circuits with built-in or supplemental power-surge protection for computers are the ideal for new or renovation installations.
- f. Recycle obsolete equipment.

Court Operations Energy Savings

Court operations and procedures have an impact upon energy consumption and court budgets.

Videoconferencing / Teleconferencing

The transport of accused or convicted persons from jails or prisons consumes large amounts of fuel each year. (Each gallon of gas emits approximately 20 to 28 pounds of CO₂ into the air.) Transport also requires a large number of persons to escort and otherwise secure detainees. These persons must travel to the detention facility to begin work and, again, use fuel to do so. Similarly, calling jurors to appear requires fuel to create and transport the notifications, and then for the jurors to physically move to the courthouse. And if the court calls many jurors at one time, large parking lots or structures are needed.

In response, courts are increasing their use of teleconferences and videoconferences to conduct proceedings. Videoconferencing between courtrooms and detention facilities is found in all states, primarily for initial-appearance or release hearings. The courts in British Columbia have allowed police officers to “appear and prosecute over the phone for Traffic Court hearings” (Allen, 2007:4). The report noted that this was to “reduce time that police officers spent travelling to, and waiting in, Traffic Court.”

Courts are finding many additional uses for video equipment. Correctional institutions in Georgia and Arizona draw on their equipment for telemedicine and telepsychiatry (Gramlich, 2009). Parole boards conduct remote parole hearings, while witness may testify remotely during a trial.

Web Applications

Web applications are cost-effective and offer many greening opportunities. Applications such as public access to court records and online payment of traffic and parking violations help to keep traffic away from the courthouse.

At the E-Courts 2008 Conference, Amalia Rodriguez-Mendoza, clerk of the Travis County District Court, Texas, reported that their I-Jury project allows jurors to reschedule themselves for jury duty via the Internet (see http://www.co.travis.tx.us/district_clerk/). This system has resulted in an 85 percent plus yield rate of jurors called to jurors serving and was recognized locally as reducing vehicle emissions in Austin by eliminating unnecessary travel to the courthouse.

Green Awareness

To improve energy efficiency, it is necessary to enlist the help of judges and court staff. Several tips and tools are available. One software program, “GreenPrint,” is designed to reduce the number of pages printed by “looking for typical waster characteristics (like that last page with just a URL, banner ad, logo, or legal jargon).” The product also provides additional control over printing by previewing and allowing easy selection of the pages that one needs to print (see <http://www.printgreener.com>).

Finally, many specialists recommend that the court or agency include goals and measures of “green efficiency” in their annual budgets and reports. This shows that the court is sensitive to both the environment and to efficient operations.

Action List for Improving Energy Efficiency

Courts should develop their own action plans for their greening programs.

Action-plan recommendations include:

- Convert physical file rooms to electronic storage to eliminate the need to cool, heat, and control humidity in these spaces.
- Implement e-filing as quickly as possible to reduce use of paper and eliminate fuel consumption to transport it.
- Buy green computer products that are Energy Star and EPEAT certified.
- Turn off computers and lights at night at the power switch to reduce electrical use.
- Implement new operational procedures that reduce the use of energy, such as video- and teleconferencing.
- Draw on the court’s Web site for cost-saving/greening opportunities.
- Build awareness for energy saving in the organization.
- Recycle. It is important that while we may never eliminate paper in the court and legal system, much of it can be recycled, along with equipment and other materials that we use to provide justice to citizens.

RESOURCES

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