

# AN ENERGY SAVING PLAN FOR THE NASHVILLE PUBLIC LIBRARY

Prepared by James Rosenthal, ZERO EMISSIONS ROAD TRIP  
Mobile: 757 561 8625      Email: zeroemissions@gmail.com

## *Introduction*

Energy use costs money and impacts the environment. The Nashville Public Library has made visible efforts to save energy and the environment, with compact fluorescent lights and bins for recycling. Further reducing energy use could make the library a model of sustainable practices and save thousands of dollars.

### *1. Lights*

- **Compact fluorescents.** The library makes commendable use of fluorescent lights. There remain, however, hundreds of incandescent lights that could be replaced by compact fluorescents. These include around 200 60-Watt lights in table lamps and 90 lights in the Entry Hall. Where bulbs are visible, such as in the Entry Hall, compact fluorescents in standard bulb shapes (rather than spirals) can be used.
- **Savings.** Compact Fluorescents can be bought for as little as \$2 per bulb.<sup>1</sup> For a \$600 investment (which need not be made all at once), replacing 300 lights would save at least \$2200 per year in energy costs and \$5400 over the life of the bulbs.<sup>2</sup>
- **Turn lights off.** Lights are left on in staff spaces and other unoccupied rooms. Each 60-Watt light left on overnight wastes at least \$16 per year. Instructing staff to turn lights off would prevent this waste.
- **Motion sensors.** Installing motion sensors in locations such as bathrooms can be cost effective if included in any larger renovations.

### *2. Electronics*

- **Computers.** Powering 200 computers for 64 hours per week costs at least \$3300 per year, even with the efficient flat-screen monitors the library uses.<sup>3</sup> On average, laptop computers use 15% as much energy as desktops.<sup>4</sup>
- **Laptop checkout programs.** Some libraries have replaced some public computers with programs that allow patrons to check out laptops for use within the library. This increases convenience for patrons while decreasing energy costs. Some laptops can be found for the same price as some desktop computers. Though these laptops may be slightly less powerful, they should

---

<sup>1</sup> Such as Sylvania 13 W bulbs at Lowe's. Prices for the same bulb can vary widely across vendors.

<sup>2</sup> Assumes \$.05/kWh. If the library pays more for electricity, the savings will be even greater.

<sup>3</sup> Assumes 65 W for each computer and 35 W for each flat-screen monitor.

<sup>4</sup> Assumes 15 W for a laptop computer.

be sufficient for library use.

- **Turn computers off.** Like lights, staff computers are left on while unattended. If a computer won't be used for ten minutes, it should be put to sleep. If it won't be used for an hour, it should be shut down. All library computers could be programmed to shut down after the library closes. Each computer left on overnight wastes at least \$27 per year.
- **Printers.** Inkjet printers and fax machines produce the same quality as laser printers and fax machines but use a third as much energy.<sup>5</sup> If a printer or fax is used for small quantities (10 or fewer pages per day), inkjets will save money. Above that amount, they'll still save the environment.
- **Photocopiers.** A copier in sleep mode can use more energy than a computer in use. Library staff can save energy by copying in batches and turning the copier off in between. Each copier left on overnight can waste \$32 per year.<sup>6</sup>
- **Power strips.** Even when shut down, computers and copiers continue to use energy. Connect computers and copiers to power strips and turn the power strips off to save that energy.

### 3. *Paper*

- **Paper equals energy.** Making paper consumes not only trees but also energy. The library pays for this energy indirectly, in the cost of the paper, and directly, for the energy to print and copy.
- **Print and copy double sided.** Printers and copiers can be chosen for their ability to print double sided. Double-sided can then be set as the default.
- **Post information online.** With the many public computers available in the library, much of the information on paper flyers can be provided online instead. Signs can direct patrons to this online information.

### 4. *Education*

- **Advertise efficiency.** Since the mission of the library is educational, it should make public any efforts to reduce energy use, through its website and publications. Doing so can both inspire patrons and influence other libraries.
- **Provide information.** As a center of information, the library can provide patrons with information on how to reduce energy use at home. An example half-sheet flyer is attached.

### 5. *Future Goals*

- **LEED and clean energy.** When the time comes, the library could become a model for efficiency and environmental responsibility by seeking LEED certification for renovations ([www.usgbc.org](http://www.usgbc.org)) or purchasing energy from clean, renewable sources.

This is a project of the **Zero Emissions Road Trip**.  
For more info, please visit <http://zeroemissionsroadtrip.com>



---

<sup>5</sup> Assumes 10 W for inkjet in low-power mode and 35 W for laser.

<sup>6</sup> Assumes 120 W in sleep mode.