Simple Ways To Green Your Organization

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What is sustainability?
Three-Legged Stool

SUSTAINABILITY

Economy

Social Equity

Environment
Why is it important?
So I can have clean air and water.
“Pollution is nothing but the resources we are not harvesting. We allow them to disperse because we've been ignorant of their value.” – R. Buckminster Fuller

“I long to accomplish a great and noble task, but it is my chief duty to accomplish small tasks as if they are great and noble.” – Helen Keller
Growing a Green Organization
Getting Started

- Gain company/management support
  - Get it in writing if you can

- Form your team
  - Group of employees dedicated to promoting waste reduction, recycling, and responsible purchasing in the workplace
  - Size of the team should relate to the size of the organization and be representative of as many departments or operations as possible

- Choose a coordinator
  - Leader(s) should oversee the program, and act as the liaison between the maintenance staff, management, employees and the recycling vendor

- Set preliminary goals
  - Begin with simple projects that have a relatively high likelihood of success

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Get to Know Your Waste

❖ Obtain your waste disposal records
  ❖ Contact trash collector to obtain your monthly disposal services invoices

❖ Walk through your organization
  ❖ Learn where trash is coming from and where it ends up
  ❖ Plan the walkthrough for a time when garbage bins and dumpsters are full

❖ Consider conducting a waste characterization audit
  ❖ Two options
    ❖ Estimate waste types and amounts by conducting a visual survey of individual waste receptacles
    ❖ Sample and weigh the building’s wastes (AKA dumpster diving)
Consider the Waste Hierarchy

The Waste Hierarchy

1. Reduce
2. Re-use
3. Recycle
4. Energy Recovery
5. Disposal

Best environmental option

Worst environmental option

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Establish a Recycling Program

- Decide what materials to recycle
- Find recycling centers/service providers
- Purchase and place your receptacles
- Coordinate collection/transportation
- Take a second look at purchasing
  - Implement a green purchasing program
- Kick off the program
- Educate employees
Keep It Going

- Track and record progress
- Keep employees informed and involved
- Market your success
- Go above and beyond
Lighting accounts for 40% of building energy use.
Switch to more energy efficient lights and ballasts
Do you really think we'll save any money with those new EFFICIENT lightbulbs?

I dunno. Did we turn off the lights?
Replace exit signs
Office equipment accounts for 5% of energy use in office buildings. Computers account for 10%.
69%-97% of total computer energy use occurs during idle time – Natural Resources Defense Council
Did You Know?

- Cost of running a desktop computer 24/7/365 = $236.56/year (per computer system)
- Cost of running a desktop computer 8 hours/day, 5 days/week = $56.16/year (per computer system)
- You save $180.40 per computer/year when you shut it down at the end of each day.
- Replacing CRT monitors with LCDs saves an additional $17.27/year (per monitor), assuming you shut your computer down when you leave at the end of the day.
**ENERGY STAR Computer Power Management Savings Calculator**

**Instructions:** Use this simple calculator to estimate typical savings from ENERGY STAR qualified computers and/or power management features. *(required fields in red)*

### ENERGY STAR Qualified Computers and Monitors

<table>
<thead>
<tr>
<th></th>
<th>Desktop</th>
<th>Notebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Computers used and/or to be used in place of standard computers</td>
<td></td>
<td></td>
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<tr>
<td>b) LCD monitors used and/or to be used in place of CRT monitors</td>
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</tbody>
</table>

### Power Management Features

<table>
<thead>
<tr>
<th></th>
<th>Desktop</th>
<th>Notebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) &quot;Standby&quot; or &quot;hibernate&quot; mode when inactive (i.e., CPU, hard drive, etc. go to sleep)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) &quot;Monitor shut down&quot; mode when inactive (i.e., monitor/display goes to sleep)</td>
<td></td>
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### Assumptions

- **e) Enter cost of electricity OR select the state in which the computers are operated, and choose commercial or residential service**

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Commercial</th>
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<tbody>
<tr>
<td>$0.088</td>
<td></td>
<td></td>
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</table>

- **f) Roughly what percentage of your computers are currently turned off each night and during weekends, holidays and vacations by users?** *

<table>
<thead>
<tr>
<th>Use Other Turn Off Rate?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>36 percent of the time turned off</strong></td>
<td>[ ]</td>
<td>[ ]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Turn Off %</th>
<th>100%</th>
<th>0%</th>
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</thead>
</table>

After completing this page, click the **green "Results" tab** below to view your estimated savings OR click the **red "Adjust" tabs** below to perform customized calculations of energy savings specific to your environment.

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*Includes both ENERGY STAR and non-ENERGY STAR

**Default of 36% as the percentage of computers turned off each night is based upon 2004 Lawrence Berkeley National Lab Report entitled "After-hours Power Status of Office Equipment and Inventory of Miscellaneous Plug-Load Equipment"**

***"If your organization always shuts off their monitors at night the turn off rate should be set to 100%, otherwise if your organization never shuts off their monitors at night, the turn off rate should be set to 0%."***

**Notes about defaults and assumptions in the Quick Calculator:**

1) Assumes standard monitor is a CRT monitor and an ENERGY STAR qualified monitor is an LCD monitor.

2) All other assumptions can be seen by clicking the red "Adjust" tabs below.
Always use power saver features
Occupancy sensors aren't just for turning off the lights.
Program your thermostats
Don't break the bank
DCEO Bureau of Energy and Recycling, Ameren Illinois and ComEd are offering a portfolio of electric efficiency programs to achieve targeted annual energy savings goals. For further information on the legislation, background and history, go to www.leans.org and refer to the DCEO Electric Efficiency Portfolio Fact Sheet. Incentives are available to customers in Ameren Illinois and ComEd's electric service areas.

- DCEO provides incentives for the Public Sector, Affordable House New Construction and Gut Rehab, as well as Training and Education.
- ComEd (www.comed.com) and Ameren Illinois (www.actonenergy.net) provide incentives for businesses and residential customers.

The Programs offered by DCEO’s Bureau of Energy and Recycling are as follows:

**Public Sector Electric Efficiency**

These programs include the Standard and Custom Incentive Programs and New Construction Program. These are offered to the Public Sector:

- Federal, state and local government (county, township, municipal),
- Public schools, community colleges, public universities and colleges,
- Public safety, water and park districts

in ComEd and Ameren Illinois electric service territories.

**Standard and Custom Incentive Programs**

Provides grants and rebates to public sector entities for electric system efficiency improvements including lighting, motors, variable frequency drive controls; HVAC equipment, traffic signals, among others. Guidelines, Application, Worksheets

**Standard Incentive Program**

Provides set incentive levels for common retrofits for lighting, HVAC, motors and refrigeration. Application and Standard Incentive Forms in Excel format. (Use these spreadsheets to fill in the application from Appendix A and Standard Incentive Worksheets from Appendix B: Lighting, HVAC, Motors, Refrigeration)

**Custom Incentive Program**

Provides incentives for electric efficiency improvements not listed in the Standard Incentive Program. Custom Incentive Forms and Worksheets. Use these Worksheets for additional documentation along with the Custom Incentive Program Application in Appendix C.

**New Construction Program**

Provides grants to public sector entities to encourage applicants to design new or rehabbed buildings to achieve the highest level of energy efficiency. Guidelines and Application
Welcome to Illinois Clean Energy Community Foundation

The Illinois Clean Energy Community Foundation invests in clean energy development and land preservation efforts, working with communities and citizens to improve environmental quality in Illinois. The Foundation supports programs and projects that will improve energy efficiency, develop renewable energy resources and preserve and enhance natural areas and wildlife habitats throughout the state.
DSIRE is a comprehensive source of information on state, local, utility, and federal incentives that promote renewable energy and energy efficiency. Choose one or both databases to search:

- Renewable Energy
- Energy Efficiency

Federal Incentives

US Territory Incentives

Last Updated: 05/15/08
Water costs more than you think
What is the real cost of driving to work?
Buy Green
Why Buy Green?

- Reduces your costs
- Develops the market for green products
- Easy to do
Five Guiding Principles for Green Purchasing

- Consider environmental factors as well as price and performance when making purchasing decisions
- Emphasize pollution prevention early in the purchasing process
  - Choose cleaning products, paints, and other chemicals that are less toxic and biodegradable
- Examine multiple environmental attributes throughout a product's or service's life cycle
- Compare relative environmental impacts when selecting products and services
- Collect and base purchasing decisions on accurate and meaningful information about environmental performance
The Green Purchasing Top 10

1) Review purchase specifications and contracts to see if they contain environmental performance standards or requirements.

2) Ask your existing suppliers about green alternatives. Give them a try.

3) Consider how to make your product or service green and what you'll need to purchase differently to make it happen.

4) Choose a suitable green products listing and use it when making purchases.

5) Purchase and install energy efficient lighting for your buildings.
6) Determine who supplies your energy and consider changing to renewable energy sources.

7) Request vendors to provide supplies in reusable packaging that can be used for your products or returned to the supplier.

8) Purchase appropriately sized lots to minimize waste. Purchase bulk where feasible but in small quantities for shelf life/dated materials.

9) Change your office purchasing policies: buy recycled office consumable products, Energy Star certified office equipment, and reusable utensils, plates and cups for meetings.

10) Buy and use less toxic cleaners or hire those who do.
Developing a Green Purchasing Plan

- Make a statement of intent.
- Put someone in charge.
- Work with departments (and suppliers) one-on-one. Set reasonable expectations and reward small accomplishments.
- Start where you are. Ask existing suppliers for environmentally preferable products.
- Look for products that save money and meet other performance needs.
- Test the new products over a few months to assess efficiency, quality, and user friendliness.
- Network and share information.
- Collect data and publicize.
Next Steps

- Perform a product life cycle cost analysis
- Green your service contracts
- Lease equipment
- Buy green office supplies
- Develop a coordinated purchasing system
- Buy renewable energy
- Rethink demos
- Get to know your suppliers
- Learn from government programs
- Consider products certified by third parties
Office furniture systems, components, and seating, building materials, carpet, flooring, paint

Cleaners, electric chillers, paint, floor care, paper, hand soaps, windows, doors

Toilets, showerheads, faucets, landscape irrigation services

Wood and paper products

Electronics, lighting

Cleaners, electric chillers, paint, floor care, paper, hand soaps, windows, doors

Toilets, showerheads, faucets, landscape irrigation services

Wood and paper products

Electronics, lighting

Office furniture systems, components, and seating, building materials, carpet, flooring, paint
Beware of greenwashing
What Is Greenwashing?

- Whitewashing with a green brush
- Bad for the environment
- Bad for consumers
- Bad for businesses
How Do I Spot It?

❖ Truth
  ▪ Look at the company as a whole. Is sustainability a prominent part of their web site?

❖ The whole truth
  ▪ Google the company name + environment to see what results you get

❖ Nothing but the truth
  ▪ “I know it when I see it” applies to greenwashing as well as obscenity. Does the claim sound right to you?
Label Reading Guidelines

- Environmental claims should be specific
  - Look for specific amounts (recycled content, a certain percentage less packaging, etc.)

- Some claims are too vague to be meaningful
  - “eco-friendly”, “environmentally friendly”

- Degradable products don't save landfill space
  - Anything degradable put into a landfill degrades very slowly
  - Composting turns degradable material into usable compost

- All ozone is not alike → Ground-level ozone=smog

- Symbols can be useful → look for the recycling symbol
Products With Significant Impact

- Paper products
- Electronics
- Janitorial supplies
According to a survey of Los Angeles offices, their workers use 1.5 pounds of paper per person per day.
Rethink Your Paper Use

❖ Reduce your paper use.
  ▪ Print only when necessary
  ▪ Review and edit electronic documents on screen
  ▪ Use fax post-its rather than a cover sheet
  ▪ Duplex instead of printing on one side

❖ Purchase paper with post-consumer recycled content of 30% or higher.

❖ Buy unbleached and uncolored paper whenever possible.

❖ Start an office paper recycling program if you don't already have one.

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Earth friendly electronics isn't an oxymoron.
Buy Greener Electronics

- Buy with energy in mind → Energy Star
- Buy used
  - Fifty percent of computers being recycled are in good working order. They are discarded to make way for the latest technology (Silicon Valley Toxics Coalition, 2001).
  - Look on Freecyle, Ebay, Craigslist, or at your local computer dealer
- Look for EPEAT
  - Sets environmental criteria for computers
- Buy less toxic
  - Greenpeace *Guide to Greener Electronics*
Of the 2.25 million tons of TVs, cell phones and computer products disposed of in the United States in 2007, 18% (414,000 tons) was collected for recycling and 82% (1.84 million tons) was thrown away, primarily in landfills. (U.S. EPA, 2007)
Think Before You Trash

Electronic devices are a complex mixture of several hundred materials.

Many of these contain toxic heavy metals such as lead, mercury, cadmium and beryllium and hazardous chemicals, such as brominated flame retardants.

Don't throw your electronics away

- Manufacturer and retailer take back programs
- Donate to schools, community organizations, or vocational programs
- TechSoup Refurbished Computer Initiative Program

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Each year, 6 billion pounds of chemicals and 4.5 billion pounds of paper products (representing about 25 to 50 million trees) are used to clean commercial buildings – Ashkin Group
Why Convert to Green Cleaners

- Helps you meet green purchasing goals
- Promotes a healthier working environment
- Improves safety for janitorial workers
- Reduces your organization's environmental footprint
- Green purchasing is an important element of an Environmental Management System (EMS)
- Helps create a more sizable market for cost effective high performance green products
- Helps position your organization as a leader in the use of sustainable business practices
How to Choose Green Cleaners

- Green Seal Standard for Industrial and Institutional Cleaners (GS-37)
  - Standard covers all purpose, bathroom, and glass cleaners.
  - Establishes criteria for 13 factors, such as toxic compounds, carcinogens, skin and eye irritants, and combustibility.
  - More than 5 dozen products certified to standard

- EPA Database of Environmental Information for Products and Services

- *Greening Your Purchase of Cleaning Products: A Guide For Federal Purchasers*
Purchasing is only part of the green cleaning picture.
Green Cleaning Practices

- Keep dirt out of the building
  - Durable welcome mat encourages visitors to wipe their feet
- Minimize product use
- Match the product with the need
  - Don't use a strong cleaner on a mild stain
- Choose cleaning equipment that is durable, energy efficient, and quiet
- Train your staff to use products properly
Setting an example is not the main means of influencing others; it is the only means. -- Albert Einstein