
GOING GREEN: What Your Local Government Can Do

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Overview



- Discuss importance of being a good environmental steward
 - Identify steps for creating a green plan
 - Provide examples of environmental improvement projects
 - Identify where to get more information
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Why green your operations?



- Natural resources of our planet are precious and limited
 - Responsibility to protect environment and conserve resources so that future generations can meet their needs
 - Healthy environment supports healthy economy and healthy community
 - Protecting the environment can be good for the bottom line
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Did you know?

- With less than 5% of the world's population, the U.S. consumes 22% of the world's energy.
- Each day, the U.S. per capita energy consumption includes 3 gallons of oil, 20 pounds of coal and 200 cubic feet of natural gas. Residential daily consumption of electricity is greater than 12 kilowatt hours per person.
- 4% of the nation's electricity use goes towards moving and treating water and wastewater.
- U.S. raw material (non-fossil fuel or food) use rose 5.1 times more than population in the last century.
- Total annual municipal solid waste generation in the U.S. has increased more than 60% since 1980 to the current generation of 246 million tons per year. Per capita waste generation is about 4.5 pounds per person per day.
- In 2005, 54% of MSW generated in the U.S. was disposed of in 1,654 landfills.
- On a daily basis, Americans, directly and indirectly, use more than 380 billion gallons of water, or approximately 1,668 gallons per person.

Sources: University of Michigan, Center for Sustainable Systems and U.S. EPA

Why should government lead?

- Engaged in a number activities that impact the environment (facility operation, fleet maintenance, office operations, grounds, meetings)
 - Spends considerable funds on electricity, water, solid waste and travel
 - Large user of resources through purchase of goods and services
 - Have educational value (“lead by example”)
 - Optimize quality of life for residents
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Steps to greening your facilities



- Obtain management support
 - Create a green team
 - Assess operations and impacts
 - Set long-term goals
 - Identify environmental improvement opportunities
 - Build understanding within your organization
 - Track your progress and celebrate successes
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Step 1: Obtain management support

- Directive or support memo from mayor or board president
 - City Council Resolution
 - Environmental Charter
 - Ordinance creating environmental advisory committee
 - Pasadena City Council Resolution (Feb. 4, 2008)
 - Join California Green Cities Program and commit to:
 - Purchasing 100% post-consumer recycled paper for municipal operations
 - Avoiding the purchase of bottled water for municipal operations and government sponsored events
 - Adopting a carbon offset plan for municipal employee air travel
 - Adopting municipal fleet fuel efficiency standards
 - Promoting the purchase of California foods for municipal events and operations
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Excerpts from City of Eugene (OR)

Environmental Policy

- The City of Eugene exists in a special and unique environment...The City of Eugene recognizes the value of these natural resources and takes responsibility for its environmental impacts...
 - Therefore, the City of Eugene is committed to protecting, preserving and restoring the natural environment. City decision-making will be guided by the goals of increasing environmental benefits and reducing or eliminating negative environmental impacts in all aspects of the City's activities, while maintaining the City's fiscal integrity and the community's economic vitality.
 - To achieve these goals, the City is committed to:
 - Ensure that each employee understands that they are expected to take personal responsibility for the environmental effects of their actions while performing City work.
 - Reduce environmental impacts in all activities including operations, maintenance, construction and waste disposal. Therefore, the City is committed to continually review all activities to identify and carry out cost-effective and achievable strategies to reduce energy consumption, conserve water, reduce consumption and waste, reduce reliance on non-renewable resources...
 - Consider long-term as well as short-term environmental consequences when making planning, design, engineering, purchasing, contracting, and budgeting decisions, including the impacts of producing, using, and disposing of materials.
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Step 2: Convene green team

- Establish a green team
 - Which jobs directly impact operations and services?
 - Who should be included to ensure buy-in and follow-through?
 - Which staff has time, resources and motivation to participate?
 - Potential team members
 - Facilities management
 - Purchasing
 - Fiscal
 - EHS
 - Upper management
 - IT
 - Interested employees
 - Community members
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Step 3: Assess operations and impacts

- What do your departments do?
 - What are key operations and activities?
 - What are your general environmental impacts?
 - Department functions
 - Operational activities:
 - Buy office supplies
 - Heat/cool buildings
 - Treat wastewater
 - Maintain parks
 - Environmental impacts:
 - Water use
 - Air and greenhouse gas emissions
 - Waste disposal
 - Fuel consumption
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Step 4: Set long-term goals

- What would a more sustainable government operation look like?
 - How might your departments:
 - Conserve energy and reduce utility costs
 - Reduce use of resources (e.g., paper, water, motor fuel)
 - Increase purchase of recycled or recyclable products
 - Set Goals:
 - Reduce use of office paper by 5 percent every two years
 - Recycle all cardboard, paper and toner cartridges
 - Increase purchase of recycled paper and other office products
 - Phase out purchase of products that contain toxic materials
 - Reduce electricity use by 5 percent by 2010
 - Buy renewable energy for three buildings
 - Use drought-tolerant plants for landscaping projects
 - Reduce water use by 2 percent annually
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Step 5: Identify improvement opportunities

- Compile and review past environmental projects
 - Conduct research on Internet
 - Have green team members walk-through and assess operations
 - Solicit ideas from employees
 - Review achievements of other local governments
 - Identify resources in community that can help
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Step 6: Build understanding and support from staff and others



- Communicate reasons for taking action
 - Consider kick-off event
 - Keep employees informed
 - Hold brown bag lunches on environmental topics
 - Post updates in newsletter, bulletin boards or intranet.
 - Include environmental practices in new employee orientation
 - Develop checklist on what employees can do at home to green their activities
 - Brief civic groups on efforts
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Step 7: Track and report progress

- Set baseline and track annual progress
- Analyze efforts and identify areas for improvement
- Benchmark against leading peer institutions
- Celebrate accomplishments



What environmental actions are local governments taking?

- Energy Efficiency (lighting retrofits, equipment procurement)
 - Renewable Energy (grid purchases, on-site solar installations)
 - Alternative Fuel Vehicles (biodiesel, hybrid vehicles)
 - Trip Reduction (carpool to meetings, videoconferencing)
 - Waste Reduction (recycling, composting)
 - Land and Water Resources (tree planting, buffers around water bodies, habitat protection)
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Reduce energy use and switch to alternative energy

- Set computers to sleep mode or turn them off when not in use
 - Post reminders to encourage employees to turn off lights in conference rooms
 - Replace incandescent light bulbs with compact fluorescent lamps
 - Perform energy assessment of your facilities
 - Install programmable thermostats
 - Use solar energy sources/equipment, where feasible
 - Upgrade existing fluorescent lighting with energy efficient (T-5 or T-8) lamps with electronic ballasts
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Reduce sources of waste



- Require double-sided printing and copying for multi-page documents
 - Use electronic files instead of paper files
 - In the building kitchen/break room, eliminate disposables by using permanent ware (mugs, dishes, utensils, etc.)
 - Set up bulletin board for memos to minimize individual copies
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Promote use of alternative transportation

- Encourage employees to carpool to meetings
- Provide employees with secure bicycle parking
- Invest in videoconferencing systems to reduce amount of travel
- Provide bus passes for employees



Purchase environmentally preferable or “green” products

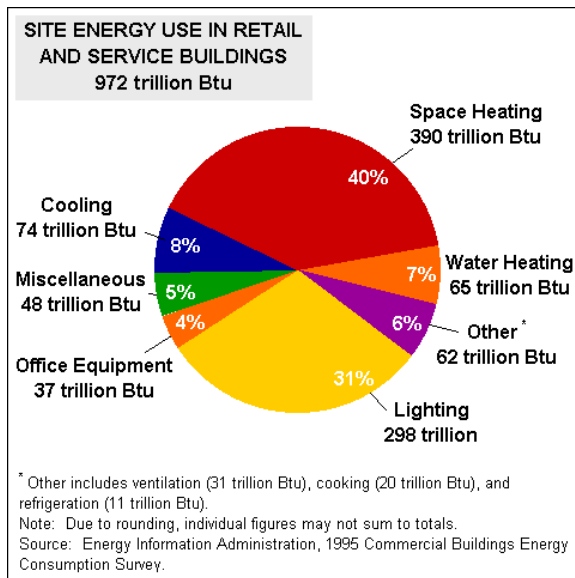


- ❑ Green Products – have lesser or reduced effect on human health and environment when compared with other products that serve same purpose:
 - Require less energy or water to operate
 - Are more easily recycled
 - Made with recycled content
 - Less toxic than conventional products
 - Made from renewable resources
 - Designed to be long lasting
 - Safely managed at the end of their useful life
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Case Study: Ocean City, NJ

- Converted city diesel vehicles to bio-diesel fuel
 - Using 100% recycled plastic products in reconstruction of parks and playgrounds by purchasing recycled plastic trash containers, planters, parking stops and park benches
 - Purchased 100% recycled content copy paper and Energy Star rated office equipment
 - Implemented integrated pest management practices in city parks and gardens
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Incorporating green feature in building construction or remodeling



- In the United States alone, buildings account for:
 - ❑ 39% of total energy use
 - ❑ 12% of total water consumption
 - ❑ 68% of total electricity consumption
 - ❑ 38% of total carbon dioxide emissions

Source: U.S. EPA

Green Buildings



- Design goals:
 - Use renewable energy resources, such as solar and wind
 - Conserve non-renewable energy and scarce resources
 - Reduce human exposure to hazardous materials
 - Support access to alternative transportation modes
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Case Study: West Valley Branch Library (San Jose, CA)

- Completed 2003: 20,000 square feet and \$7.9 million project
 - Building is located with ¼ mile of 2 or more bus lines
 - Landscaping is drought tolerant and features high-efficiency irrigation controls
 - The site's mature, redwood trees were preserved
 - Building constructed to use 30% less energy
 - Photo-cells turn off lights when daylighting is adequate
 - One-half of the wood used for the project came from sustainably-managed forests
 - More than 25% of the construction materials contain recycled content
 - Low-emitting paints and adhesives were used
 - 90% of the construction and demolition waste was recycled
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Grants and Incentives

- **Contact your utility about grants and rebates**

- Commonwealth Edison
 - www.comed.com/

- **Search the web for grants and other incentives**

- Illinois Clean Energy Community Foundation
 - www.illinoiscleanenergy.org
- Illinois Department of Commerce & Economic Opportunity
 - Public Sector Electric Efficiency Programs
 - www.illinoisbiz.biz/dceo/Bureau/Energy_Recycling/Energy/Energy+Efficiency/

- Economic Stimulus (ARRA)

- Energy Efficiency & Conservation Block Grants

- www.usmayors.org/pressreleases/uploads/DOE_032609.PDF

- www.illinoisbiz.biz/dceo/Bureau/Energy_Recycling/Economic+Stimulus/EconomicStimulus.htm

- **Sign up for listservs and email notices**

- UIUC, Smart Energy Design Assistance Center
 - <http://smartenergy.arch.uiuc.edu/>



Where to get more information

- ICLEI Local Governments for Sustainability
www.iclei.org
 - Local Government Environmental Assistance Network
<http://www.lgean.org/html/p2-toc.cfm>
 - CitiesGoGreen
<http://citiesgogreen.com/>
 - UW Extension, *Toward a Sustainable Community: Toolkit for Local Governments*
www4.uwm.edu/shwec/publications/cabinet/reductionreuse/SustainabilityToolkit.pdf
 - Sustainlane Government
www.sustainlane.us/
 - Living Cities
www.livingcities.org/
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More resources

- The Green Office
www.thegreenoffice.com/
 - U.S. EPA, *Energy Star Program*
www.energystar.gov/
 - U.S. DOE, *Green Power Network*
www.eere.energy.gov/greenpower/buying/buying_power.shtml
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 - U.S. Green Building Council, *Resources for Local and State Governments*
www.usgbc.org/Docs/Member_Resource_Docs/toolkit_state_local.pdf
 - Illinois EPA, *Pollution Prevention Internship Program*
www.epa.state.il.us/p2/internships/index.html
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Questions or Comments?

