



Save Energy \$\$ Now!

Offices can employ cost-effective energy efficiency and conservation to reduce energy spending.

This document aims to provide agencies with strategies to start saving energy and dollars immediately, through easy-to-implement behavior changes and low cost measures.

Energy Savings Strategies for Offices

Encouraging Behavior Change

Energy efficiency and conservation in office buildings relies on all the workers to look for ways to save. Something as simple as turning off the light in a bathroom or turning off a computer at the end of day can add up to meaningful savings. Here are a few tips for motivating your staff.

- Focus on positive behavior: what to do, not what to avoid
- Provide information on the cost benefits of efficiency and conservation to the agency and state
- Simplicity is key: Say what to do and where to do it
- Encourage competitive and cooperative efforts
- Recognize achievement, big and small

Big Savings

The EPA estimates that the average office building can reduce energy costs by 10 to 30 % through low-cost energy efficiency measures and operational adjustments. At the state level, the savings can have a considerable impact. With Illinois state agency annual electric consumption estimated at nearly a half a billion kWh, a 10% reduction would result in between \$2.5-\$4 million annually. Reductions in natural gas usage would also result in large savings.

Quick Steps for Energy Savings

- 1) Form an office green team to lead efforts.
- 2) Encourage behavior change through education, outreach, and example.
- 3) Identify and implement no-cost and low-cost measures.
- 4) Identify and plan for capital measures with good paybacks for maximum cost effective savings.
- 5) Apply for SEDAC energy assessment and Illinois Energy Now incentives.

Spotlight on Savings:

Focus on Computer Power Management

Using sleep or power management features can save up to \$30/year for each computer.

- Turn off the monitor if you aren't going to use your PC for more than 20 minutes
- Turn off both the CPU and monitor if you're not going to use your PC for more than 2 hours.

Imagine! An office with 100 computers can save \$3,000 each year without spending a dime!

Simple, Low-Cost Energy Measures for Offices

Free or Low-Cost Measures for Quick Savings

Setpoint setbacks **change the temperature setpoint** at night, weekends, and holidays when the office is unoccupied. In winter, the unoccupied setpoint should be lower than the occupied setpoint, while in summer the unoccupied setpoint should be higher than the occupied setpoint.

Cost

<\$

Action

work with facility manager or controls contractor

Computer Power Management is the capability to configure computers and monitors to automatically go to into sleep mode or turn off when not in use. This capability is a zero-cost energy reduction measure.

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IT to ensure configuration allows updates

Ask workers to **reduce personal plug loads** by unplugging personal refrigerators, appliances, and other personal equipment. Use of space heaters should be discouraged.

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post request and send an email reminder

Boiler Tune-Ups for hot water boilers reduce the use of natural gas in existing boiler systems. An annual steam trap maintenance program should be in place.

\$

hire contractor

More Easy Measures for Great Savings

LED Emergency Exit Signs use 2.5W or less; compare this wattage with the 40W required for incandescent exit signs. These signs operate 24 hours a day, 365 days a year, so savings from LED signs add up. Typical savings are approximately 300 kWh per year, per sign.

\$

in-house installation

Install **T8 Linear Fluorescents** to replace T12s use 32W or 28W (for a 4 ft lamp) T8 lamps, saving 6-12W per lamp, increasing lamp life, and improving lighting quality. Replace magnetic ballasts with electronic to ensure proper function.

\$

in-house installation or lighting contractor

Occupancy Sensors automatically turn lights off when people are not in the area. Install occupancy sensors to control lights in conference rooms, restrooms, and private offices. Set sensors to manual on / auto off.

\$

in-house installation or lighting contractor

Vending Machine Controls use an occupancy sensor to turn off display lights and cycle refrigeration systems on snack and beverage vending machines when the surrounding area is unoccupied.

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easily purchased

Air Sealing is a cost effective technique to reduce a building's heating and cooling load, as well as improve occupant comfort. Penetrations for doors, windows, piping, wiring, lighting, and duct work are good places to consider air sealing.

\$

contractor

Variable Frequency Drives (VFDs) vary pump and fan motor speed to match the load, which reduces energy consumption.

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facility manager or controls contractor

ENERGY STAR® identifies equipment that saves energy without sacrificing performance or comfort. Purchase ENERGY STAR certified computers, monitors, appliances, ice-makers, and other office and kitchen equipment. The **ENERGY STAR Office Equipment** Savings Calculator can help you estimate potential savings.

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in-house installation or equipment supplier

Retro-Commissioning is a service that can improve HVAC functioning through detailed inspection and monitoring of a building's mechanical and control systems.

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Illinois Energy Now Contractor

Illinois Energy Now, housed in DCEO's Energy and Recycling Office, manages the Public Sector and Low Income programs enabled by the Energy Efficiency Portfolio Standard legislation.

DCEO has sponsored **SEDAC** for over ten years to help Illinois businesses and public sector clients save money by identifying energy efficiency measures in their buildings. SEDAC is a public-private partnership managed by the University of Illinois with support from the 360 Energy Group.