

Energy Conservation

ALERT!

The purpose of this guide is to help organizations identify and implement low-cost energy savings, whether in a manufacturing, business or office setting. Economic forecasts for rising energy costs are estimated to be between 30-50 percent for the 2005 fall and winter seasons. Review the following opportunities to evaluate your organization's current

energy use and identify practical, low-cost options without compromising manufacturing quality, business operations or employee comfort. Note that these are "quick fixes" to the problem of rising energy costs. Comprehensive upgrades and thorough energy evaluations will bring quality-enhancing savings opportunities over the life of your business.

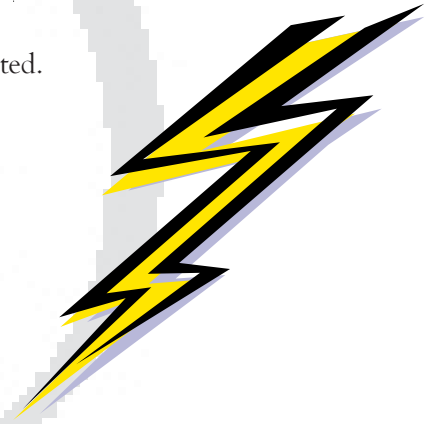
Top 10 Easiest Ways to Save on Energy Costs

10. Make sure all automatic controls are in good working condition and are set properly.
9. Turn off machines and equipment when not needed.
8. Have heating, ventilation and air conditioning systems serviced and adjusted.
7. Turn off heating and air conditioning before the end of operating hours.
6. Reduce heating and air conditioning during unoccupied hours.
5. Raise air conditioning settings.
4. Lower heating settings.
3. When replacing bulbs, use lower wattage or more efficient ones.
2. Remove unneeded light bulbs.

And easiest way to save on energy costs . . .




1. Turn off lights when not needed.

[Click here for the for the "Self-Assessment Guide for Energy Saving Opportunities."](#)



Improving Lighting Efficiency





Lighting is the largest cost component of a commercial building's electricity bill and a significant portion of its total energy bill. A comprehensive lighting upgrade achieves your qualitative lighting objectives while maximizing efficiency and profitability. Some ideas to begin saving on lighting costs include:

-  Install motion sensors or turn off lights when not needed
-  Install timers, time clocks or photocells to ensure that interior and exterior lights are turned off at the appropriate time
-  Buy efficient replacement lamps

For information on how to conduct a lighting audit, visit www.p2pays.org/ref/26/25979.pdf, and for information about energy efficiency in industrial lighting, go to www.p2pays.org/ref/26/25978.pdf.





Space Conditioning – HVAC

Heating and cooling systems are the largest single consumers of energy in buildings. Typical energy savings generated by a regular tune-up of HVAC systems is 10 percent.

-  Give your HVAC system a pre-season tune-up
-  Set thermostats lower in winter, higher in summer
-  Weatherize window air conditioners
-  Treat water in evaporative condensers regularly

For ways to improve energy efficiency in industrial HVAC systems check out www.p2pays.org/ref/26/25985.pdf.




All Combustion Systems

-  Operate furnaces and boilers at or close to design capacity
-  Reduce excess air used for combustion
-  Clean heat transfer surfaces
-  Adequately insulate air or water-cooled surfaces exposed to the furnace environment and steam lines leaving the boiler

For additional information about short- and long-term opportunities for combustion systems energy and cost reductions, visit the U.S. DOE's site at www.eere.energy.gov/consumer/industry/combustion.html.





Curtailing Compressed Air Use

Compressed air is one of the most important utility requirements of the typical industrial manufacturer. Without a consistent supply of quality compressed air, a manufacturing process can stop functioning. Ways to cut compressed air costs include:

-  Establish a routine maintenance program in accordance with manufacturer specifications
-  Incorporate a leak prevention program that includes identifying, tagging, tracking, repairing, verifying and involving employees
-  Once leaks are repaired, work with a compressed air systems specialist to reevaluate the compressed air system supply and adjust compressor controls

For ideas on how to improve air compressor energy efficiency, go to www.p2pays.org/ref/32/31312.pdf.




Steam Generation Systems

-  Improve water treatment to minimize boiler blowdown
-  Repair steam leaks
-  Implement effective steam trap maintenance program
-  Use backpressure turbine instead of pressure-reducing or release valves

To read more about how to reduce costs through steam system adjustments, go to the DOE's Steam Boilers site at www.eere.energy.gov/consumer/industry/steam.html.

Utility Accounting

Many companies accept energy bills as just another cost of doing business without reviewing accuracy or any potential for electrical usage reduction. Failing to analyze energy usage can cost large amounts of money in missed energy savings.

-  Understand your electrical rate structure and review rates with supplier to ensure you are on the most favorable rate structure
-  Electric bills and data can identify where electricity is being wasted or used at inappropriate times
-  Track energy use and cost data monthly and distribute to all major users

For more information about utility accounting, see the fall 2000 issue of "Focus," at www.p2pays.org/ref/11/10989.pdf.



Energy Savings Resources



www.aceee.org - The American Council for an Energy-Efficient Economy is dedicated to advancing energy efficiency to promote economic prosperity and environmental protection.

www.energystar.gov/index.cfm?c=industry.bus_industry - Energy Star for Industry can help you develop and refine your corporate energy management program.

www.eere.energy.gov - The Energy Efficiency and Renewable Energy Network is an enormous database and search engine on all aspects of energy efficiency, renewable energy and energy efficient technologies.

www.cee1.org - The Consortium for Energy Efficiency encourages utilities and other partners across the country to voluntarily adopt efficiency programs and specifications.

www.aeecenter.org - The Association of Energy Engineers' site includes information on courses, conferences, publications, certification and local chapters.