

Energy Management Tips to Improve Efficiency and Cut Costs

Energy use is an increasingly critical consideration for commercial businesses as they work to establish and maintain fiscal responsibility. Approximately one-third of a building's energy consumption is related to its heating, ventilation and air conditioning (HVAC) system. Building owners, operators and facility managers need to explore and identify areas where they can reduce energy use, lower production cost, and increase environmental responsibility in order to remain competitive. The average commercial office building can reduce its energy consumption by 30 percent using new energy efficient technology, and best-in-class management practices.

It is generally recommended assessing the efficiency performance of the entire building system rather than looking at individual components while putting advanced HVAC technologies into place to reduce energy consumption and operating costs. Following are a few suggestions on how building owners, operators and facility managers can begin to save energy and costs:

Benchmark your building using the EPA's Energy Star Program. The U.S. Environmental Protection Agency (EPA) recognizes the top 25 percent of energy efficient commercial office buildings with the Energy Star label. The EPA's Portfolio Manager will work with a building's facilities manager to evaluate the building's energy performance, thermal comfort, indoor air quality, and illuminance levels. This tool will establish a baseline energy performance rating, help prioritize financial investments, then measure and verify various energy improvements.

Conduct a detailed energy audit on existing systems. To help achieve energy savings conduct a building and energy audit to evaluate the building's HVAC load, lighting and water usage, and entire baseline utility consumption, to identify opportunities to reduce consumption and save money.

Perform routine and predictive maintenance. To avoid a potential problem have predictive or scheduled maintenance for all HVAC systems. Predictive maintenance ensures that all parts of a system are working properly and identifies areas where parts may need to be replaced. Predictive maintenance also improves system reliability and reduces owner cost by adding life to the equipment, offers the convenience of planning when the work should be done, reduces the amount of downtime and lost productivity due to component or equipment failure, and reduces possible direct impact to the environment.

Install a higher efficiency HVAC system and ENERGY STAR qualified appliances. High efficiency HVAC systems, especially those that are ENERGY STAR qualified, use significantly less energy than standard appliances and can prove to be a worthwhile investment. Higher upfront costs can be offset through energy cost savings over the life of the equipment.

Adjust building control settings for maximum energy savings. Facility managers can maintain safety and comfort when a building is open, and minimize energy consumption when it is not, by coordinating lighting and HVAC system use to align with facility operating hours. Integrated control systems reduce maintenance time and lower energy costs by enabling comprehensive monitoring and diagnostics. Building owners, operators and facility managers should evaluate the capabilities of existing unit controllers and building management system – very often, a few simple upgrades can have a significant impact on overall energy use.

Consult with an HVAC system expert. Building owners, operators and facility managers should seek the advice of HVAC experts to determine the most energy efficient systems available today to help manage costs without negatively impacting occupant comfort or worker productivity.

About the author

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