

FACILITY DUDE.

A Little Change Can Add Up to A Lot of Cash

You know how the little things can add up to make a big difference? Right now—right this second—in your public buildings there could be a multitude of little problems that are adding up to cost you big. Leaky faucets, dirty filters, faulty ductwork, equipment running when not in use; the list could be long of what's costing you. According to the U.S. EPA, an average of thirty percent of energy used in commercial buildings is wasted. Ok, there's certainly room for improvement there, so what do you do? With today's tight budgets, making a large financial investment in building upgrades may not be an option.

Start by understanding some of the top potential energy wasters in your buildings and the low cost, no cost measures you can take:



HVAC: With so many components spread over such a large area, the HVAC system can be a major culprit for waste. A study found that 40% of buildings examined had problems with their HVAC. Having an effective preventive maintenance program in place to clean and inspect the various parts can save 50% or more in energy costs. Technicians should clean and inspect roof top units, ensure there's no leaky ductwork, and make sure all components are properly balanced and that fluid levels are right. Repairing air leaks in air handlers, replacing damaged pipes and insulation are all things that should be done as well.



Lighting: Lighting accounts for a large portion of energy used in most buildings, so it's an obvious area to examine if you're looking to save money on energy. The Department of Energy says that energy used for lighting can be cut in half while maintaining or even improving lighting quality in most buildings. Steps to achieve this include using more efficient light bulbs, installing automatic controls to dim or turn off lights when areas are not in use, and making sure lighting systems are properly maintained. Maintenance staff should keep fixtures free of dirt and understand when a bulb has begun to decrease light output—this is a sign its useful life is coming to an end and the staff can replace this before a full burnout.



Water Use: Water costs are on the rise and it's all too easy for water waste to go unnoticed. There are some things you can do to save your facilities from using excess water: The facilities team should ensure faucet and pipe leaks are promptly repaired. The use of lawn sprinklers should be evaluated and monitored to make sure they're not watering more than needed and that watering is taking place in the early morning or evening so it's not lost to evaporation in the heat of the day. Don't use hoses or pressure washers to clean sidewalks or paved areas, which can be done with blowers or by sweeping. The water used by the air conditioner can be reduced by shutting off the A/C when and where it's not needed. Faucet aerators can be used where possible—they increase the perceived water pressure plus reduce water lost to splashing. As you replace equipment, see if there's a water-saving model; the cost avoidance going forward could be substantial.

Occupant Behavior: The easiest energy reduction opportunities are usually right in front of us-the lights that are left on when no one's in the room or the computer left running overnight. But, changing occupant behavior can be one of the biggest challenges. It's up to managers to create a culture of efficiency by building employee awareness, fostering enthusiasm and educating occupants on their role in energy saving. Motivate your employees towards a shared goal of reduction so they feel a sense of responsibility for their energy use. Sharing data on the success of projects validates the efforts people are putting in and keeps the momentum going. Post signs reminding people to turn off the lights when they leave a room, ask that everyone shut down their computers at night, and try to reduce the number of space heaters in use.

The Role of Facilities Staff: When it comes to energy savings, the biggest challenges are not technical and do not require significant capital investment. A lot can be achieved by improving operations and maintenance practices. A good

Did you know?

- » On average, 30% of the energy used in commercial buildings is wasted
- » HVAC accounts for about 35% of energy use in buildings
- » Energy wasters within your HVAC:
 - Dirty filters: 5%
 - Dirty evaporator coils: up to 35%
 - Dirty condenser coils: 37%
 - Incorrect refrigerant charge: up to 10%
- » Lighting accounts for 25-35% of energy use in buildings
- » Improving maintenance and operations practices can save 5-20% on energy costs
- » Having occupants turn off appliances that are not in use can save 38% on energy costs

facilities team plays such a vital role in energy waste reduction in your buildings because it's up to them to take the appropriate steps to keep equipment in peak operating condition. They need to be performing proper preventive maintenance work and if they are, they will catch many of the above issues quickly.

Energy saving improvements can lead to intangible benefits such as increased occupant comfort and productivity, optimum equipment performance reducing down-time, and improved indoor environmental quality (due to proper air filtration, improved lighting and temperature control, and proper building pressure). There's also the added benefit of improved asset value: properly functioning buildings with reliable equipment kept in good condition are worth more and last longer.

The right practices can make or break your buildings, no matter if they're a hundred years old or newly built. Local governments have to make tough decisions about how to allocate their tight budgets and ensure they are being good stewards of taxpayer dollars. Stop the little issues in your buildings from whittling away your budget—there are other, more pressing expenditures that would do more to improve the community and the services you offer citizens.



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