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5 simple places to begin to improve the energy efficiency of your buildings

Are you worried about escalating energy costs and your bottom line?

Frequently a simple straightforward approach is the best. That's certainly true about taking action to improve energy efficiency of your existing buildings. Your bottom line and the value of your property will both benefit.

First, begin with a professional and thorough evaluation of your heating, ventilation and air conditioning system. This is especially important if it is near or past the 10-year mark. You want to know what the system performance trends are and how these compare to the original manufacturing standards. Your best step here is to hire a qualified mechanical contractor, with the proper diagnostic instruments and trained staff to use them. Your historical energy usage records; tenant or occupant complaint records; and your maintenance and repair records are critical to this evaluation. Expect a comprehensive, easy-to-understand report. The most important decision here is to hire a contractor who will back up each recommendation with facts and give you op-



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tions and trade-offs.

Second, check to see if your system is using fresh, outside air. Many systems waste energy by cooling or heating indoor space even when ambient temperatures could help achieve the ideal indoor conditions, including air quality. For example you could save on mild fall, spring and even winter and summer days. A properly designed and equipped system will deliver these savings, and your system may only need some relatively inexpensive enhancements or tune-up to make this possible.

Third, if you don't have a state-of-the-art, computer-based building automation system (BAS) to monitor and control your building's HVAC and

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lighting, put adding one on top of your list. It'll pay for itself by giving you data and flexibility to improve efficiency; make better decisions; even improve how the building meets the needs of occupants, and spot emerging issues. Some fixes can be performed remotely and you may save needless service calls.

Fourth, you should perform recommended routine maintenance on schedule and to specifications. Simple things like keeping coils clean and changing filters on time will add to both efficiency and comfort. Keeping up with manufacturer recommended maintenance is intended to help with efficiency and comfort, and also help prevent expensive emergency and off-hour service calls. Proactive maintenance can prevent leaks and mold from getting out of hand,

leading to major health and structural issues. A computer-based BAS will help you stay on top of your schedule.

And fifth, audit the building envelope and lighting to make sure you're taking advantage of opportunities for efficiency. For example, consider adding insulation to the roof and lightening the color to better reflect heat generating light. Check window and door seals. And, again, use your BAS to improve control over use of electricity. Of course by now you've probably already taken other easy steps -- for example, replacing incandescent bulbs with more efficient fluorescent ones; only buying Energy Star; and requiring turn off of unused equipment -- by supplying simple on-off power strips. Use the recently published LEED for Existing Buildings as a compre-

hensive checklist for improving energy efficiency. A professional general contractor with a track record of value engineering may be your best ally for this audit as well.

As usual, keeping it simple is the best way to go. A comprehensive, professional assessment of the systems and structure will develop the opportunities and business case for action. Pinching pennies on the evaluation risks big dollars down the road. And, if you select the right general contractor with mechanical contractor expertise, they can do a full evaluation and carry out the improvements you think make sense in all these areas and more. It's a lot more convenient than coordinating multiple contractors.

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