



Energy efficiency: It's no longer simply turning up the thermostat

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Do you remember when "energy efficiency" meant "freezing in the dark?" For many years, the mere phrase "energy efficiency" conjured up images of Jimmy Carter in a sweater reading by firelight and generally making do with less. Is that really what energy efficiency is all about? The answer is emphatically no. Today, energy efficiency is perfectly in line with our current recession-era mandates: "make the most of what we currently have," "keep your budget under control," and "make sure we can measure what we're managing." Before you reach for the thermostat consider the rest of this article.

For decades, energy managers have relied on utility bills and their intuition to manage the multi-million dollar energy spends of New York's largest buildings. Well that's all about to change. Investments in energy monitoring technology are revolutionizing the way large commercial buildings are managed. As a point of reference, the U.S. Department of Energy estimates that the average building in America uses 26% more energy than it needs - that means there is a lot of room to cut energy usage without impacting occupant comfort. In fact, today's flavor of energy efficiency actually reduces comfort complaints. All this begs the question: why do building owners waste so much money, especially in these lean times? Maybe some of these reasons sound familiar:

- * "This is how it's always been done" Many facilities teams manage their sites the same way today as they did 5, 10, or 15 years ago. If it worked in the past then there's no need to change it now.
- * "Energy costs are invisible" For many organizations, the costs and benefits of energy efficiency are opaque. The tenant doesn't pay their fair share, nor do they capture the benefits of their efficient ways which makes energy feel akin to a public good.
- * "You can't manage what you can't measure" Utility bills have surprisingly little information on them. Have you ever compared your utility bill to your phone bill? Every teenager with a cell phone can surgically curtail their usage more effectively than the most savvy energy managers simply because they have access to information.
- * "Change is risky!" A facility manager's worst nightmare is a slew of comfort complaints. When energy efficiency was simply dialing the thermostat up or down then it usually meant a lot of unhappy building occupants for an already overworked facilities team. The hassle was hardly worth the effort.

But these things are all changing. The status quo is no longer safe territory. Tenants are demanding lower energy costs. Technology is rapidly advancing to allow energy and facility managers to get a better view of their building's energy usage patterns - while at the same time improving occupant comfort. And they're using these new technologies to great effect - to the tune of 10%+ in annual energy savings. Here is a rundown of some of the latest technologies that are tested and proven.

- * Energy dashboards. Simply showing building occupants how their actions impact energy

consumption can induce them to reduce consumption. Savings here can be on the order of 2-3% per year.

* **Monitoring Based Commissioning.** Building management systems have become so advanced that the data being generated by these systems can be analyzed automatically to detect subtle anomalies in system performance. This allows facilities teams to tweak systems over time and avoid the inevitable drift that has become commonplace in today's buildings. Savings here can be 8%+ per year.

* **Building portfolio management.** Which of your buildings is the least efficient? How does it compare to its neighbors? How does it compare to a year ago? How much should you budget for energy for next year? With energy benchmarking software, you can track all these items with ease, and use that information to target your efficiency activities where they are needed most.

So before you open up that checkbook to make a major capital investment in new equipment or renewable energy consider optimizing your systems by investing in ways to measure and manage energy efficiency first. The savings you generate will payback faster, lower your operating expenses, and keep your building occupants happy.

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