



Energy:

# The Biggest Savings Come from the Basics

By Darren Kimura

Last year was an extremely volatile year with energy costs nearly doubling in just a few months. During this period, building owners and operators struggled to keep energy budgets in check. This led many to seek "outside of the box" alternatives to energy.

While there are many great claims behind energy technologies, the real wins come from those users who remember there is no silver bullet. These facility operators manage their buildings like a financial manager handles a well-balanced portfolio. The best way to truly save energy is to apply the basic rules of energy efficiency.

These five concepts will help you maximize your dollars and achieve a superior return on investment. Starting from the bottom, the No. 5 concept is:

⑤ "BEAM." Applying the BEAM principals will ensure you achieve energy savings. B – Baseline, E – Establish, A – Apply, M – Measure. In every energy project you must start with a "Baseline" of energy use. This can be derived from a reliable utility meter or by installing a portable data logger. You must next "Establish" your action plan. This can be installing a new technology or a more systematic approach to using your energy system. The next step is to "Apply" your plan and give yourself an opportunity to achieve realistic yet challenging goals. "Measure" your

progress by checking your energy use today versus your baseline.

④ Install Variable Frequency Drives (VFD). Today's VFDs are very reliable and allow motors to speed up or slow down based on your need. The modern day facility has many motors operating at any time and the real opportunity is only limited by the imagination of your facility engineer. VFD installations have the potential to become the next lighting retrofit with its low first cost and quick paybacks. (BMH covered the topic in the February-March 2006 issue, so be sure to check your magazine archive or visit us online at [www.buildingmanagementhawaii.com](http://www.buildingmanagementhawaii.com).)

③ Combine Photovoltaic (PV) panels with energy conservation measures. The market is showing a major interest in this technology. PV systems convert sunlight to produce electricity and can be installed directly on building rooftops. Unfortunately, system costs, even after available tax credits, have paybacks over 10 years. By the energy industry standard, this is a no-go decision. By combining PV with other energy conservation measures such as lighting retrofits and HVAC upgrades you can reduce paybacks significantly and save energy in the process.

② The "30/2 Rule." The real return in energy efficiency comes from the big two energy technologies, efficient

lighting and efficient AC. While there are exceptions to the rule, most of the time, chasing energy savings outside of the big two is simply chasing an incremental savings. Facilities today require your laser focus to truly reach savings and by focusing on your lighting and AC, you should be able to achieve a 30 percent savings.

① 100 percent law. And the No. 1 concept is shut the lights when you leave the room. In the end, 100 percent of the energy you don't use is 100 percent energy saved. Turn things off, leave them off. Make sure you train your staff to turn things off. The old myth of leaving things on because they use more energy upon start up is mostly gone now with electronic technologies common to today's equipment.

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