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## By Curtis Snyder: Controlling Energy Costs

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As with almost everything, there is no silver bullet for controlling energy costs.

Make sure building occupants are more informed through energy-saving tips. Educate and engage building occupants to promote energy conservation and reward wise energy decisions and behavior. Use more energy-efficient equipment. Install new energy-efficient appliances and equipment and replace or eliminate outdated, inefficient equipment.

Match HVAC and lighting output to occupancy. Install programmable building controls that enable systems to provide light, heat and cooling to building spaces only when they are occupied.

Maximize lighting efficiency. Energy-efficient lighting uses less energy and generates less heat, reducing your costs and easing the strain on your HVAC systems. Leverage the square law of dimming. In areas where an apparent dimming of ten percent is acceptable, you can see energy savings of nearly 20%

Conduct regular energy audits to determine what condition your equipment is in and how it is performing. Don't know where to start? Begin with "Guidelines for Energy Management" available with other energy-saving tips at [www.energystar.gov](http://www.energystar.gov).

Use energy management practices that go beyond matching occupancy times with equipment operation. Intelligent systems factor demand charges into the equation to complete the other half of the energy cost picture.

Use daylight to help light your interior spaces. Daylight can supplement artificial light. Smart lighting systems use occupancy, time of day and light sensors to control dimmable fixtures and coordinate with automated shade systems. Continue to reduce lighting loads with advanced fluorescent and LED technology.

Learn where the energy you pay for is going. Put energy management software to work identifying trends in usage. Expand metering wherever possible to include separate plug load and lighting circuits.

Take advantage of energy modeling software to help understand the interdependence of multiple energy conservation measures in your facility. Basic modeling is easy and inexpensive when taking advantage of the wizards and dynamic defaults available in eQUEST, a free design tool available from the Department of Energy: <http://www.doe2.com/equest/>.

Once energy conservation measures have been implemented, building owners should consider further savings by installing solar power. A Photovoltaic solar system can significantly reduce or eliminate your monthly electric bill. These systems will provide you with 25 plus years of reliable generation and isolate you from future utility rate increases.

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