

## Key Focus Area

## Minimum Recommended Action

## Some Best-Value Enhancements

## Energy Tips

### Benchmarking

You can't manage what you don't measure. Performance benchmarking nearly always leads to savings.

- Know your total annual energy use and cost, and how that compares to similar buildings and/or applications.
- Understand how much of every \$1 in energy saved comes back to your business.

- Set preliminary energy-reduction goals.
- Update energy use and cost data on a monthly basis (based on utility bills).
- At least once per year, answer the following questions:
  - What's the historical trend (am I increasing or decreasing)?
  - How do I compare to the "average" (similar building/application)?
  - How much would I save if I met my goal?

While you don't need to be an expert to maintain benchmarking data, you may want to consider working with a professional to initially compile your data, train your team, and verify accuracy.

### Lighting

Typically accounts for 20%-30% of energy use.

- Verify that INTERIOR lighting isn't on at night/when space is unoccupied.
- Verify that EXTERIOR lighting isn't on during the day (when not required).

- Verify operating schedules on holidays and day/night transition periods.
- Obtain a proposal for a lighting retrofit (evaluate interior and exterior lighting retrofit proposals both together and separately). NOTE: If you haven't had a retrofit in three or more years, it's likely time.

There are two quick ways to get the information you're looking for.

Consider:

- A walk-through at night. For lighting, take pictures (inside and outside) when things should be (mostly) off.

### HVAC

Typically accounts for 35%-45% of energy use.

- Ensure a quality planned maintenance program (typically four quarterly visits).
- For "major" HVAC equipment, verify that units have the proper controls (and are properly configured) to operate in different modes during occupied and unoccupied periods.

- Ensure that your maintenance includes:
  - Annual cleaning of the condenser coil.
  - Verification that the economizer ("free-cooling" mode) is properly operating.
- Catalog the age of major equipment and estimate remaining useful life (using published estimated useful-life data).

- Work with your HVAC provider to record space temperature, lighting levels, and CO2 levels (for ventilation) at multiple locations in the building over a seven-day period. The results often identify additional areas for improvements.

### "Plug" Loads

Varies, but typically accounts for ~20% of energy use.

- Walk-through the space and count the number of:
  - Major appliances/office equipment.
  - Space heaters.
  - Task lights in use.

- Utilize "timer" power strips and configure for occupied/unoccupied schedules consistent with business requirements.
- Work with your IT group (or users directly) to help ensure that power-management features in computers, monitors, printers, and copiers are properly configured.

There are even more advanced power strips that enable remote monitoring and control. Consider a small-scale "pilot" to determine if this makes sense elsewhere.