

ENERGY TIPS FOR BUSINESSES



Weatherization

- Install weather-stripping around exterior doors and operable windows, and around doors between heated and unheated or cooled and uncooled spaces.
- Install door bottoms, thresholds, or door “shoes” to seal gaps beneath exterior doors and doors to unheated or uncooled spaces.
- Insulate exterior walls and floors, and insulate roof or ceiling spaces to R-19 standards or above wherever possible.
- Install window treatments where feasible, such as shade screens, shades, awnings, or overhangs. If exterior treatments are not feasible, consider interior window film, insulated drapes, valances and/or blinds, or removable insulation material.
- Caulk cracks and gaps around windows and doors, in the building foundation, and between different building materials.
- Repair roof leaks. Insulation will lose effectiveness when wet.
- Repair and maintain door and window weather-stripping to prevent water and moisture entry, causing doors and windows to warp and deteriorate.
- Consider permanently closing and sealing doors and windows **NOT** needed for building access or ventilation and that are **NOT** used as safety or fire exits.
- Keep doors between heated and unheated spaces and cooled and uncooled spaces closed, and install automatic door closers if needed.

Save Today. Save Tomorrow.

As your customer-owned electric service we can help you save money on your bill, help the community and protect the environment. The reduction of unnecessary energy consumption results in multiple benefits to SMUD customers:

- delays the need for building additional power plants;
- helps minimize the summer peak demand for high-priced power;
- helps reduce carbon emissions; and
- continues delivery of reliable electric service at low prices.

SMUD services and products include: Energy Efficiency Incentives and Financing • Energy Audits • Equipment Calibration • Energy Tracking Services • Greenergy® • Savings by Design • Solar Incentives • Demand Bid Programs • Voluntary Emergency Curtailment Program (VECP) • Seminars and Workshops

SMUD Energy Specialists are available now to assist you in these and other energy service areas. For more information, or to schedule an appointment, call SMUD at 1-877-622-SMUD (7683), or fax (916) 732-5229, or email commercial@smud.org

SMUD can also recommend energy-saving improvements to your lighting, HVAC systems, business processes and building envelope.

Call SMUD for more information about scheduling a comprehensive audit of your facility.

SMUD Commercial Services
1-877-622-SMUD (7683)

www.smud.org

ENERGY TIPS SAVE TODAY & TOMORROW



Commercial Services

Your business can instantly reduce its energy consumption by incorporating the simple behavior modifications listed below into your daily business routine. Or, for more substantial energy reductions, you can implement some of the other low cost improvements listed. This summer, we can all start by reducing our energy use during the peak hours of 4:00 p.m. to 7:00 p.m. Saving today will keep costs low and help build a cleaner, healthier environment for tomorrow.

Lighting

- Turn off non-essential and decorative lighting, especially in unoccupied areas.
- Replace flickering, dim and burned-out lamps.
- Clean fixtures and diffusers (at least annually).
- Color-code or mark light switches and circuit breakers that can be turned off when not needed.
- Use task lighting to directly illuminate work areas.
- Lower the height of light fixtures if possible to increase usable light.
- Replace burned out lamps with lower wattage lamps or energy-saving lamps wherever possible.
- Replacing incandescent lighting systems with compact fluorescent and/or high-pressure fixtures.
- Replace existing T12 lighting systems with energy-efficient T8 lighting and electronic ballasts.
- Install more efficient security and parking lot lighting. High-pressure sodium fixtures are more efficient than metal halide, mercury vapor, fluorescent or incandescent fixtures.
- Install time clocks or photoelectric cells to control exterior lighting, advertising sign lighting and some interior lighting.
- Paint dark walls and ceilings with lighter colors to maximize the effect of existing light sources.
- Maximize natural lighting by installing skylights or windows.
- Install dimmer or occupancy switches where appropriate to lower energy use such as in stairwells, copy rooms, restrooms.
- Schedule janitorial services during the day, or use a minimum number of lights when cleaning. Color-code switches that should remain off when crews are cleaning.
- Implement a group re-lamping schedule, and re-lamp at 70% of rated lamp life. Lamps that run longer than 70% of their rated life actually cost more in terms of energy use.
- Trim bushes and trees away from outdoor lighting to maximize illumination and prevent shadows.

SMUD offers commercial and industrial customers a variety of no-cost and low-cost tips for cutting energy costs. Employees can perform many of these no-cost measures themselves.

Simple **No-Cost** and **Low-Cost** Measures to Save Energy



Office Equipment

- Turn off PCs, monitors, printers, and copiers nightly and on weekends. If unable to switch off the entire computer, turn off the monitor and printer.
- When purchasing PCs, monitors, printers, fax machines and copiers, consider buying Energy Star models that can switch to a power-saving mode when not in use.
- If feasible, use laptop computers where possible, as they consume 90 percent less energy than desktop computers.
- Ink-jet printers also consume 90 percent less energy than laser printers - consider using them wherever possible.
- Paper-reducing strategies, such as double-sided printing, re-using paper, and using e-mail instead of sending memos or faxing documents not only save energy, but conserve other resources, such as staff time.

Heating/Ventilation/Air Conditioning Systems

- Set thermostats at 68 or lower for heating in the winter, and 55 when buildings are unoccupied. If heating is required in warehouses, set thermostats to 50.
- Set thermostats at 78 or higher for cooling during the summer.
- During the winter, open shades and blinds on sunny days to warm buildings naturally, and close them at night to prevent heat loss.

- During the summer, open windows and use only the fan portion of cooling systems when outdoor air is cooler than indoor temperatures. Keep doors and windows closed when air conditioning systems are operating.
- Keep vents closed in unoccupied areas to prevent heating or cooling of storage areas and closets.
- Reduce fresh air intake to the minimum necessary.
- Check air filters monthly, and clean or change as needed.
- Check air intake screens monthly, and clean as required.
- Inspect air dampers monthly, and keep them as airtight as possible.
- Check V-belts (fan belts) monthly for frays, cracks, and nicks, and replace as necessary.
- Check heat recovery devices monthly for proper operation.
- Brush off air conditioner condenser coils monthly.
- Check motors, bearings, and blower fans every 3 months, and lubricate as required.
- Check heating and cooling coils every 3 months, and clean as needed.
- Vacuum blower compartments every 3 months.
- Check ducts, vents, and pipes every 3 months, and repair any damaged insulation.
- Check pulleys and sheaves in the spring and fall for alignment and proper belt tension.
- Check cabinets and brackets once a year, and tighten all bolts and screws as necessary.
- Check housings yearly, and remove rust and re-paint as required.
- Check heating systems yearly in the fall before the heating season begins, and check cooling systems yearly in the spring before the cooling season begins.
- Treat water in evaporative condensers regularly.
- Replace resistance electric heating systems with heat pumps.
- Replace old HVAC systems with new energy-efficient systems.
- Install paddle fans, stratotherm fans, or other re-circulating systems to create air movement. Ceiling temperatures can often be 10 to 20 degrees higher than floor temperatures, and air movement from fans can enhance the cooling ability of air conditioning systems.
- Install air conditioner economizers to use outside air to cool buildings when outdoor air is lower than indoor temperatures.
- Install time clocks, set-back thermostats, and microprocessor thermostats to monitor HVAC systems when buildings are unoccupied.
- Install intermittent ignition devices on gas furnaces to save gas.
- Modify flue dampers on gas furnaces to increase burner efficiency.

Motors

- Turn off motors used in perimeter fan coil units on mild winter nights to permit the system to operate by natural convection.
- Tighten belts and pulleys at regular intervals to prevent slippage.
- Lubricate motors and drive regularly to reduce friction.
- Replace bearings when worn.
- Check and adjust alignment between motor and drive equipment to reduce wear and excessive torque.
- Keep motors clean to facilitate cooling.
- Purchase motors with the highest energy efficiency available.
- Replace worn or defective motors with motors sized as close to load as possible.



Refrigeration

- Remove internal shelf lights to reduce refrigeration and lighting energy use.
- Remove all, or at least every other incandescent bulb over refrigerated meat displays.
- Maintain display fixtures and freezers at the following temperatures for maximum energy savings:

Frozen food cases	-8° F
Ice cream cases/chests	-14° F
Deli cases	35° F
Beer cases	40° F
Soda/dairy cases	40° F
- Keep products below market load lines in freezers and coolers. Overloaded displays decrease product quality and increase energy use by as much as 10 to 20% per unit.
- Follow the manufacturer's recommendations for shelf positions and sizes to prevent increased refrigeration loads.
- Keep doors on refrigerated units open as little as necessary when unloading or re-stocking.
- Use recommended night covers on low-temperature fixtures, and keep covers below load lines to reduce compressor run time and save energy.
- Brush condenser coils weekly with a non-metallic brush, and clean coils monthly if dust build-up is extensive.



- Clean condensing fins and plates monthly, and inspect for ice build-up and bent fins.
- Check refrigerant monthly for correct charge.
- Clean meat and dairy cases monthly.
- Clean produce and freezer cases every three months.
- Check refrigerator and freezer gaskets annually for leaks and wear, and replace as needed.
- Perform annual checks on refrigeration and freezer units to determine whether units are level; upright doors should close automatically from an open position.
- Have automatic defrost cycles checked annually and adjusted if necessary by a trained service technician.
- Check door latches and gaskets on refrigeration and freezer units regularly; adjust latches and replace worn door gaskets as needed.
- When purchasing new refrigeration systems select the higher energy efficiency rating (EER) — the greater the cooling capacity for each kWh of energy input, the greater the efficiency of the system.

Food Service Equipment

- Preheat cooking equipment according to the manufacturer's recommendations. Exceeding manufacturer's specifications can increase energy use.
- Use cooking equipment to full capacity. Fully-loaded equipment utilizes energy more efficiently.
- Turn off back-up fryers, and turn ovens down or off during low production periods.
- Do not overload fryer baskets beyond the manufacturer's recommended capacity. Overloading baskets can increase cooking time, and energy use.
- Check oven doors for a tight fit, and to ensure gaskets are in good condition. Adjust and/or replace door seals and gaskets as necessary.
- Clean equipment regularly as specified by the manufacturer.
- Purchase insulated cooking equipment whenever possible, such as fryers, ovens, coffee machines.

