

OFFICE / BANK / HEALTH CLINIC

Energy Tips

Operations

- Turn things off that are not being used.
- Check occasionally to be sure things you think are off are truly off.
- If you have your own heating, ventilation, and air conditioning (HVAC) thermostat control, shorten the operating schedule to closely match actual building use and add an hour buffer at each end for warm-up. Treat exceptions (late night, weekend) use as the requests come up rather than widening schedules for the worst possible occasional use. Set space temperatures during unoccupied times up to 85°F and set back to 60°F at night.
 - Note: if on non-demand rate, keeping HVAC off as much as possible is perfect for saving money. But if on a demand rate, bring electric cooling and electric heating equipment on gradually to avoid aggravating demand charges that can outweigh the saved energy.
- For cooling units with an air economizer, adjust to lock out cooling compressor below 55°F outside air and use 'free cooling' if internal loads need cooling in cold weather.
- Avoid humidifiers unless there is a medical need.
- Keep window coverings closed during the day to prevent direct solar gain.
- If leasing, monitor energy use and cost in relation to your space to form a metric of \$/SF-year.
 This can be used to make informed choices about efficiency of different locations and overall cost of leasing.
- If you have your own electric account, monitor overnight 'ghost loads' using the utility online data portal, and verify the usage you see with the building closed is a necessary expense.
- Restrict the use of space heaters. Rule out other causes first, (sitting close to cold window, sitting directly under an air vent, impacted by a mis-located thermostat) before resorting to a space heater. Heated floor mats may suffice and use less power.
- If HVAC is a Variable Air Volume (VAV) type, use controls to prevent any zone heating above 70°F.
- If a hot water boiler is used, reset water temperature to a lower value in mild weather.

Maintenance

 Annual heating and cooling unit checkup, including cleaning coils, refrigerant charge, flue temperature, supply air temperature, belt condition and tension, and outside air damper position, and anything needing repair. For cooling units with an air economizer, verify the controls are functional.

- Change furnace and air conditioner filters regularly.
- Clean refrigerator condenser coils (break rooms, mini-coolers, vending machines) to improve the efficiency of the unit. When coils are dirty, the unit will run, and run, and run.
- Keep air conditioner outdoor unit (condensing unit) coils free from dirt, grass, etc. so they can breathe.
- Inspect building entry doors for tight seals and repair as needed; draft or light visible at the opening is an indicator.

If There is a Kitchen or Cafeteria

- Turn hoods and cooking equipment on only when needed instead of on all the time.
- Clean refrigerator/freezer/ice machine condenser coils to improve the efficiency of the unit.
 When coils are dirty, the unit will run, and run. This also applies to any mini-fridge units located in the building.
- Maintain tight seals on coolers, freezers, and oven doors.
- Unplug food warming/holding carts when not in use.

If There are Long Term Vacant Areas

- Turn off plug loads and equipment dedicated only to the affected area.
- If possible, consolidate the vacancy to match distinct HVAC zones so that HVAC energy, as
 well as lighting, can be minimized in the empty area. Protect from freeze damage by not letting
 the area get too cold; usually 50°F is effective.
- If HVAC type is Variable Air Volume (VAV) and cannot be turned full off, temporarily adjust the 'VAV box minimum' flow values to zero to prevent overcooling and reheating. Carefully note the VAV box original settings and reinstate them when the area is activated again.

Office Equipment, if replaced

- Choose copiers that have a sleep mode this also turns off a heater inside the unit to avoid it running at night and weekends for nothing.
- Choose copier type appropriately. Laser copiers use considerably more power than other printers.

Heating and Cooling Equipment, if replaced

- Higher efficiency cooling equipment, with 'free cooling' economizer.
- Replace any electric heating with natural gas heat, if natural gas is available.
- Replace any legacy HVAC systems like multi zone and constant volume reheat, with systems that do not suffer efficiency losses from heat/cool overlap.

Lighting Equipment, if replaced

- Higher efficiency lighting. LEDs specified with a manual dimming option allow light level adjustment without removing tubes.
- Add occupancy sensors for lighting in break rooms, storerooms, and restrooms.