

HVAC

- During the shutdown, maintenance employees should check for and repair duct leaks. Leaks can occur at transitions from hard ductwork to flexible ductwork as well as at the connection to the air device (diffuser, grille, etc.). If it is colder above the ceiling than in the space during cooling mode, there might be a leak in the ductwork.
- Check air filters and replace if dirty. If your facility does not have an air filter replacement protocol, create one to check and change the filters every 3-6 months. For constant-volume systems, dirty air filters will reduce the total air being supplied, which means the cooling/heating mechanism in the unit will have to run longer to cool/heat the space or will not be able to keep up the cooling/heating load on the hottest/coldest days. For VAV systems, the VFDs will increase the fan speed to overcome the additional pressure drop in the dirty filter.
- Reset all thermostats in unoccupied areas to an unoccupied setback. This could be set to a recommended maximum of 85 F for cooling and a minimum of 55 F for heating.
- Shut off general exhaust fans serving all unoccupied spaces.
- If your facility has a kitchen that is not being used, shut off all kitchen hoods and makeup air units serving them.
- Allow all units serving the unoccupied spaces to cycle on and off with the internal load. The fan should be running only when there is a need for heating and cooling during unoccupied periods.

LIGHTING

- Turn off the lights in all unoccupied areas, leaving on only security lighting (e.g., the lights in corridors that are not on a light switch).
- Consider replacing the security lights with LEDs. For example, there are LED replacement tubes that fit into existing T8 light fixtures. Confirm the type of fixture and availability of LED replacements compatible with that fixture. LEDs' superior lamp life, operational savings and dimmability can offset their higher initial cost.
- If your facility has automatic lighting controls that turn lights on in the morning, set them to unoccupied mode.

CONTROLS

- If your facility is using chilled water (water typically in the range of 44-56 F), reset the leaving water temperatures from the chillers. Each day, consider increasing the leaving water temperature by 1 degree to the lower of a maximum of 55 F or the manufacturer's recommendation. If the air handling units are unable to keep up with the load in the space or the energy required for pumping starts to creep up, stop and reduce the leaving water temperature on the chillers.
- Your facility may not need heating during this time, but if your boilers are on, there are ways to save energy. If your facility has a condensing boiler for heating hot water, reduce loop temperatures. The boiler leaving water temperatures can be reduced to 120 F. Only do this if

you are sure you have a condensing boiler. Non-condensing boilers must stay above an entering water temperature of 140 F.

- If the facility has a building management system, set the facility to unoccupied mode.

VENTILATION

- Shut off ventilation air being supplied to all unoccupied spaces. There are many ways ventilation can be supplied in your facility.
 - Dedicated outside air system (DOAS)
 - Modulating outside air damper
 - Fixed position outside air damper

WATER

- During this long-term unoccupied period, check water meters for usage. If there is usage unaccounted for, check for leaks and repair any that are found.
- Check the GPM on the faucets and replace the aerators on the faucets with low-flow aerators. Use a maximum of 0.5 GPM for bathroom faucets and 1.5 GPM for all other faucets, except those in any kitchens.

MISCELLANEOUS

- Many schools have window blinds in the classrooms and library. If there are blinds, close them to limit radiant heat gain from the sun into the space.
- Unplug electronics not being used (e.g., TVs, classroom/lecture hall projectors). While these electronics might be turned off, they can still use energy if plugged in.
- Unplug vending machines.
- If your facility has a kitchen, the freezers may have an option to reduce the frequency of the defrost cycles. Use this while the freezers are not being opened or closed often. This function is sometimes called energy saver mode.
- If your facility has a kitchen and there is no perishable food in the refrigerators, increase their temperature. If there is perishable food, do not increase the temperature above the maximum allowed for food safety. If the refrigerators are completely empty, you could turn them off, but be sure to turn them back on with sufficient time to cool down. A minimum of 24 hours is recommended before placing them back in service.
- Kitchens with their own dedicated domestic hot water heater that is heating the water to 140 F can have this temperature reduced to 120 F while the facility is unoccupied.
- If your facility has a lab with fume hoods, close the fume hood sash.