

STANDARD OPERATING PROCEDURE

Matching HVAC to Occupancy

How to use this document: Operations and maintenance (O&M) best practices can save money on energy and maintenance costs and improve reliability, safety, and return on investment. These best practices focus on *writing things down, making things routine, and having what you need*. In other words, these practices include documenting energy-efficient methods for equipment and systems operations in standard operating procedures; incorporating these methods into maintenance routines, checklists, and schedules; and having necessary tools, supplies, and replacement parts on hand. These practices can help operations, maintenance, and facilities managers and staff realize and sustain energy savings.

Use or adapt this sample document at your own facility or workplace to build support for, plan, or implement the energy-saving O&M best practice described.

Occupancy Schedule: Completed every six months

1. Poll occupants for occupancy schedules and business operations. Note any changes since the last update.
2. Record occupancy schedules for zones that can be separately controlled and can be set to unoccupied while the air handlers remain in an occupied mode.
3. Record and document the new occupancy schedule.
4. Contact department heads to verify that they are still the appropriate contact and confirm the new schedules. Update if needed.
5. Resolve any discrepancies between actual occupancy and business hours to determine proper operation time for the air handler zones.
6. Verify which areas are served by each air handler.
7. Record and document new occupancy schedule.

HVAC Scheduling: Completed every six months

1. Refer to shared documented occupancy schedule for air handlers.
2. Access current air handling unit (AHU) operating schedules via programmable thermostats, time clock, or building management system (BMS) software.
3. Remove any manual overrides to the schedule.

4. Update operating schedule to match current occupancy OR verify that AHU only runs based on demand from zones, considering morning warm-up and outside air ventilation requirements.
5. Review programming to ensure that optimal start and morning warm-up/cool-down with outside air damper lockout are enabled. If not, enable these features.
6. Review setpoints for unoccupied times (also known as “night low limits” and “night high limits”). Record recommended setpoints:
 - Unoccupied heating setpoint: **60°F OR AHU runs on demand from zones**
 - Unoccupied cooling setpoint: **85°F OR AHU runs on demand from zones**
7. Verify that operations of AHU scheduling, outside air lockout, optimal start, and after-hours operations are correct. Note the methods used for verification.
 - After two weeks of operation under the updated schedule, review trend data to verify changes were implemented correctly.