Energy

NYC DCAS
Citywide Administrative Services

Operation Guidelines for Facilities Experiencing Decreased Occupancy

Background

Hello! This guidance is being provided by the Division of Energy Management (DEM) to assist building operators and facilities management staff who may be working at facilities that are experiencing decreased occupancy due to COVID-19. It is intended to help staff pursue energy savings opportunities **WHERE FEASIBLE**. We fully appreciate that staff at many agencies and organizations are responding to new and pressing priorities created by COVID-19, and thus may not be able to act on these recommendations.

In exploring their capacity to implement this guidance, staff **absolutely should focus on staying safe, including practicing appropriate social distance protocols, and following the direction given by their agencies.** The guidance is based on best practices gathered from building operators across the City, as well as research performed by DEM. **Please stay safe and be well!**

Step 1. *[As possible]* Create a shutdown plan.

1a. Review all equipment present at the site to identify opportunities for set-back or shut-down.

- Identify critical equipment and associated dependencies.
- Identify non-critical equipment and consider if it is possible to shut it down during this time.

1b. Document current building settings to enable your team to return to normal operations later.

- Review your sequences of operations to see how the equipment will respond to your shutdown plan.
- Record current schedules and current setpoints.
- As necessary, document equipment shut-down and restart processes.

1c. Confirm the shutdown plan with the rest of your team. Once finalized, share your plan by posting it visibly for others to see.

Step 2. *[As possible]* Implement the shutdown plan.

2a. Shut down identified non-critical equipment manually or via BAS.

- Depending on your facility, consider shutting down the following, ensuring that there is no associated occupancy:
  - ✓ Exhaust fans that usually run continuously (e.g., bathroom fans).
  - ✓ Window air conditioning units and split/packaged units.
  - ✓ Air handler fans in unoccupied zones.
  - ✓ Chiller/boiler plants, if weather conditions do not represent an equipment safety risk and critical systems do not depend on them.
  - ✓ Lighting in unoccupied areas, potentially including outdoor lighting.

2b. Set back identified non-critical equipment that cannot be shut down.

- Set back equipment by creating (1) a global unoccupied schedule and (2) global setpoints on your BAS. If a global schedule is not available, change the units' individual schedules.
- Increase setpoint deadband in partially occupied spaces and common areas.
- Increase (decrease) occupied space temperature setpoints during cooling (heating) mode.
- Increase (decrease) unoccupied space temperature setpoints during cooling (heating) mode to 85 degrees F (55 degrees F) for single-zone and terminal units to avoid extreme temperatures and humidity.

2c. Maintain ventilation

- Close outside air dampers if spaces are unoccupied, air handlers are running, and conditions are not proper for economizing.
- For occupied spaces, identify if there is a need to increase ventilation following the ASHRAE guideline (Schoen, 2020).

2d. Ensure equipment safety

- Maintain your equipment freeze protection safety protocols.

Step 3. *[As possible]* Verify the shutdown plan.

3. Perform daytime and nighttime site walks to verify that equipment is operating as planned.

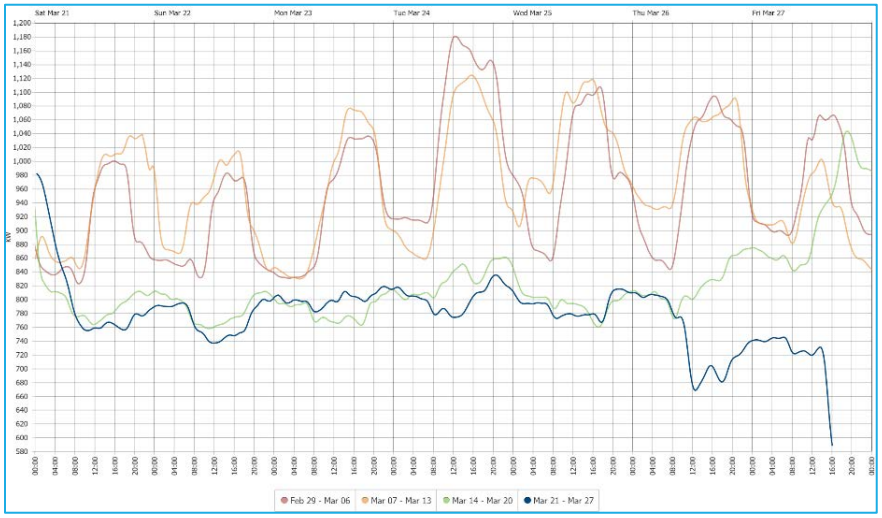
- Check for equipment that may still be on even after being commanded to shut down.

Returning to Normal Operations

- Reinstitute setpoints and schedules when the facility returns to normal operations.
- Consider incorporating some shutdown plan actions into the permanent operation plan, if feasible, to maintain energy savings.

Shutdown Plan in Practice

The graph shows the load profile for a City facility both before (in orange) and after (in blue) the implementation of a shutdown plan.



Schoen, L. J. (March 2020) "Guidance for Building Operations During the COVID-19 Pandemic." *ASHRAE Journal Newsletter,* < *https://www.ashrae.org/news/ashraejournal/guidance-for-building-operations-during-the-covid-19-pandemic*>