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A BOMA Toronto Initiative



COVID-19: Special Edition

Operational Energy Conservation Measures in Buildings

As a result of many people teleworking due to COVID-19, buildings have been experiencing declining occupancy. Low occupancy offers good opportunity to re-examine the energy use in the building. Enormous cost savings can be realized, and the time to act is now! Below is a list of energy conservation measures that can be implemented in a short period of time through operational changes and no capital expenditure.

HVAC

Consider reducing the chilled water setpoints near the end of the day or reducing load. If your facility has a Building Automation System (BAS) and zone control, determine which tenants are no longer in the office and reduce ventilation in those zones. Doing so can save on the following:

- Chiller Load: Reduced occupancy and HVAC requirement for specific tenants and zones will result in the chiller not calling for increased load. The chilled water setpoints can be reduced to save energy.
- The AHU loads can also be reduced as well as they work in tandem with the heating and cooling systems. Reducing the static pressure setpoints to unoccupied zones will result in lower load on the fans.
- Along with the chiller, the same can be said about cooling towers in facilities equipped with them. The fan load will decrease due to the lower load requirements.
- Consider turning off or reducing the load of compartment units as less flow or no flow will be required in certain zones.
- Thermostats in unoccupied areas can be adjusted to reduce space heating/cooling.
- Savings from above measures could be significantly increased by adding Variable Frequency Drives (VFD) to equipment. If VFDs are already present make sure that they are being operated properly.
- As tenants may still be entering the building, make sure regular maintenance of Air Handling Units and Make-up Air Units is still being done. Ensure that filters are being changed regularly.

Lighting

Lighting is one of the largest uses of energy in any facilities. As buildings are seeing reduced occupancy, the easiest energy saving measure to implement is to turn off lighting in certain zones.

- If it is known that a tenant will not be entering certain floors or zones, turn off the lights in those respective zones. For facilities that have a lighting management system or BAS control, this should be a pretty easy exercise. In facilities with no control, this can be done via light switches or even at a breaker panel level.
- Emergency lighting can be used in these zones for the time being. Working with the tenant/ landlord is critical in these times.

Please be sure to follow Ontario Building Code, ASHRAE Standards and/or all applicable provincial and municipal codes when implementing these measures.

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