

DEMAND CONTROLLED VENTILATION

Low Cost Opportunity



OVERVIEW

Excess energy is often spent ventilating indoor air with an unnecessary amount of outside air during periods of low occupancy. Demand controlled ventilation (DCV) relies on CO₂ sensors to determine the amount of ventilation air required throughout the occupied periods of the day.

CONSIDERATIONS

- To save energy, the baseline occupied airflow setpoints must be able to be lowered.
- Systems designed for ventilation of chemicals, combustion, etc., have different design constraints and may not be feasible for DCV.
- Typically, the threshold for CO₂ will be 800-1,000 ppm before additional outside air must be introduced. Above 2,000 ppm can be associated with stuffy, stale air and lethargy.

KEY PERFORMANCE INDICATORS (KPIs)

- ▶ **1-3 point energy use intensity (EUI) reduction potential**
- ▶ **1-2% sitewide electric and natural gas savings**
- ▶ **1-2 year simple payback** *assuming CO₂ sensors need to be installed in addition to programming*