IAQ Acronyms

AC – air conditioner: a system for controlling the humidity, ventilation, and temperature in a building or vehicle, typically to maintain a cool atmosphere in warm conditions.

ACH – air changes per hour: a measure of the air volume added to or removed from a space (normally a room or house) divided by the volume of the space.

AEE – Association of Energy Engineers: non-profit professional society, whose mission is "to promote the scientific and educational interests of those engaged in the energy industry and to foster action for Sustainable Development."

AHU – Air Handling Unit: a piece of equipment that is used to condition and circulate air as a component of a heating, ventilating and air conditioning system.

ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers: "a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry."

BAS – Building automation system: an intelligent system of both hardware and software, connecting heating, venting and air conditioning system (HVAC), lighting, security, and other systems to communicate on a single platform.

BMS – Building management system: a control system that can be used to monitor and manage the mechanical, electrical, and electromechanical services in a facility. Such services can include power, heating, ventilation, air-conditioning, physical access control, pumping stations, elevators, and lights.

BTU – British thermal unit: the amount of heat required to raise the temperature of one pound of water by one-degree Fahrenheit / one gram of water by one-degree Celsius

CFR – Current facility requirements: Defines the Owner's current operational needs and requirements for a building. It typically includes items addressing temperature and humidity set points, operating hours, filtration, vibration, sound and/or specialty needs.

CHW – Chilled water: systems that provide cooling to a building by using chilled water to absorb heat from the building's spaces.

COP – Coefficient of performance: a constant that denotes the efficiency of a refrigerator, expressed as the amount of heat removed from a substance being refrigerated divided by the amount of work necessary to remove the heat.

DAT – Discharge air temperature: the temperature of the air that is emitted from the air ducts of a heating/cooling system

DCV – Demand controlled ventilation: a ventilation system that adjusts outside ventilation air based on the number of occupants and the ventilation demands that those occupants create.

DHW – Domestic hot water: Water used for domestic purposes, principally drinking, food preparation, sanitation and personal hygiene (but not including space heating, swimming pool heating, or use for processes such as commercial food preparation or clothes washing).

DOAS – Dedicated outdoor air system: HVAC unit that is installed outside and is often used with other HVAC equipment. DOAS units bring fresh outside air into interior spaces independently from heating or cooling systems.

DX – Direct expansion: an air conditioning unit that directly cools indoor air using a condensed refrigerant liquid.

EC – Electronically commutated: direct-current motors with permanent magnets on their rotor, designed to run with an AC power supply.

ECM – Energy conservation measure: a building material or component whose use will affect the energy consumed for space heating, space cooling, domestic hot water, or refrigeration.

ERU – Energy recovery unit: HVAC system that exchanges the energy contained in normally exhausted air of a building or conditioned space, using it to treat (precondition) the incoming outdoor ventilation air.

EUI – Energy usage intensity: Value which expresses a building's energy use as a function of its size or other characteristics. Calculated by dividing the total energy consumed by the building in one year by the total gross floor area of the building (ex: kBtu/sq ft/yr).

FCU – Fan coil unit: a standalone HVAC system that treats and/or circulates the existing air in an area.

FPB – Fan-powered boxes: In an air-conditioning system, a variable air volume box with an auxiliary fan to mix induced air from a ceiling plenum with the primary air.

GPM – Gallons per minute: a measurement of how many gallons a pump can move per minute.

HEPA – High Efficiency Particulate Air: a filter usually designed to remove 99.97 percent of airborne particles measuring 0.3 micrometers or greater in diameter passing through it.

HP – Heat pump: a device that transfers heat from a colder area to a hotter area by using mechanical energy, as in a refrigerator.

HVAC – Heating, ventilation, and air conditioning: the different systems used for moving air between indoor and outdoor areas, along with heating and cooling both residential and commercial buildings.

HW – Hot water: systems using hot water as a means of energy transfer

HWR – Hot water return: system installed in order to keep hot water readily available in all hot water faucets.

HWS – Hot water supply: a source of hot water to satisfy domestic and production needs; also, the complex of equipment and structures that provide it.

IAQ – Indoor Air Quality: the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants.

kBtu – Thousand British thermal units: one thousand BTUs; units generally used in building energy use tracking and heating system sizing (i.e., calculating EUI)

kW – Kilowatt – 1000 Watts: a unit typically used to express the output power of engines and the power of electric motors, tools, machines, and heaters.

kWh – Kilowatt-hour: a composite unit of energy equal to one kilowatt (kW) of power sustained for one hour.

LED – Light-emitting diode: an electronic device that emits light when an electrical current is passed through it.

Lbs – Pounds: a unit of mass used in the imperial, United States customary and other systems of measurement, typically for steam or propane fuel sources

MA / MAU – Make-up air / Make-up air unit: type of HVAC solution that pulls in fresh, tempered air from outside the building to replace existing air that cannot be recirculated.

MAT – Mixed air temperature: temperature of the mixture of outdoor air and return air in an HVAC system.

MBH – Thousand British thermal units per hour: one thousand BTUs/hr.; a measure of the capacity of a mechanical HVAC system

MBtu – Thousand British thermal units: one thousand BTUs; units generally used in building energy use tracking and heating system sizing (i.e., calculating EUI)

MER – Mechanical equipment room: a room or space within a building for the storage or installation of mechanical or electrical/electronic devices.

MERV – Minimum Efficiency Reporting Values: report a filter's ability to capture larger particles between 0.3 and 10 microns.

MMBtu – Million British thermal units: one million BTUs; used as a standard unit of measurement for energy and provides a convenient basis for comparing the energy content of various fuels.

NIST – National Institute of Standards and Technology: one of the US's oldest physical science laboratories, which provides a measurement infrastructure for technological development.

NPBI – Needlepoint Bipolar Ionization: a process that is used in heating and cooling systems to provide cleaner breathing air in facilities by generating energy to absorb and neutralize pollutants (i.e., volatile organic compounds, viruses, bacteria, and mold).

NYSDOH – New York State Dept. of Health: New York department whose mission is "protect, improve and promote the health, productivity and well being of all New Yorkers."

NYSED – New York State Education Department: New York State organization responsible for education, including providing information, resources, and technical assistance on educational matters to schools and residents.

O&M – Operations and maintenance: the day-to-day activities necessary for a building and its systems and equipment to perform their intended function

OA – Outdoor air: "fresh air" that pressurizes a building and increases indoor air quality by diluting polluted or stale indoor air.

OAT – Outdoor air temperature: temperature of the air surrounding a building

PTAC – Packaged terminal air conditioner: a self-contained HVAC system installed through-the-wall of rooms with an outside wall.

RAT – Return air temperature: temperature of the air brought out of a room or building and back into the heating/cooling system

RCx – Retro-commissioning: a process to improve the efficiency of an existing building's equipment and systems. It can often resolve problems that occurred during design or construction, or address problems that have developed throughout the building's life as equipment has aged, or as building usage has changed.

RH – Relative humidity: the amount of water vapor present in air expressed as a percentage of the amount needed for saturation at the same temperature.

RTU – Rooftop unit: a packaged heating/cooling unit installed on the roof

SF – Supply fan: fans that are designed to provide outside air to buildings.

TOD – Time of Day: type of scheduling to start an HVAC system before the building will be occupied and to shut it off when the building is unoccupied.

UVGI – Ultraviolet Germicidal Irradiation: a disinfection method that uses short-wavelength ultraviolet (ultraviolet C or UV-C) light to kill or inactivate microorganisms by destroying nucleic acids and disrupting their DNA, leaving them unable to perform vital cellular functions.

VAV – Variable air volume: a type of HVAC system that varies the airflow at a constant temperature.

VRF – Variable refrigerant flow: an HVAC technology which uses refrigerant as the heating/cooling medium, conditioned by condensing units and circulated within a building.