



## COMMISSIONING - WHO NEEDS IT?

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Do your building occupants wear sweaters inside? In the summer? In the winter? Do they use space heaters or fans? Does paper jam regularly in your copy machine or printer? Do your building occupants yawn excessively indoors? Do they have “pep in their step” or are they tired or lethargic? If you notice some of these things to be true – maybe you need building commissioning.

More and more building owners are looking toward existing building commissioning as a solution to environmental air quality issues resulting from occupant comfort and efficiency issues cited above. Existing building commissioning is performed on occupied and in-service buildings which have systems that either never performed as intended or have suffered degradation over years of service and require a tune-up.

Below are three case summaries illustrating the application of and benefits resulting from existing building commissioning. As you read through each case summary as a building owner, you may relate to relevant circumstances experienced by occupants of your own facility.

### Case 1:

A local hospital has two operating rooms serviced by a standalone HVAC unit for fresh air, heating and cooling located in a penthouse. Both operating rooms regularly suffer from inside air that is too cold and too humid affecting the occupants’ comfort and at times making the surgical instruments difficult to handle. During the investigation phase, the commissioning team determined that the cooling and heating coils were in the wrong relative sequence and the outside air damper was stuck in the open position due to a faulty linkage. During the implementation phase of the process, the outside air damper linkage was repaired and the coils were retrofitted in the correct sequence – first cold, then hot, creating the required dehumidification. Controls were then adjusted to accommodate this new configuration.

### Case 2:

During a retro-commissioning exercise in a facility that recently received HVAC upgrades throughout, the facilities manager pointed out an unrelated issue. One particular

science laboratory was constantly cold especially in the winter months and the lab occupants were continuously wearing extra clothes and complaining. While interviewing the facilities manager, it was determined that this issue had been ongoing for years since a building improvement project. An investigation ensued and it was soon determined that the fume hood was running in reverse when the control switch was in the “off” position. The commissioning team quickly implemented a fix by reversing the polarity and an “age old” comfort problem had been solved.

### Case 3:

An HVAC upgrade project was being performed at a local high school. The project called for new unit ventilators in every classroom. The design documents required that the unit ventilators be set for a minimum 25% outside air intake causing inefficiency in the winter by heating this volume of outside air. Since each unit contained an integrated CO2 sensor, the commissioning team was able to reduce the minimum outside air intake to 10% increasing the comfort of the inside space and the efficiency of the facility power consumption.

All three cases share two common benefits, increased occupant comfort and improved building efficiency. So, ask yourself this simple question – Can I benefit from this process?

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