Retro-Commissioning Services

Systematic Identification of Building Deficiencies

Advances in HVAC and Building Automation Systems have improved building comfort while decreasing energy consumption. However, systems may move away from their original design, thereby deteriorating comfort levels and increasing energy consumption.

With 40 years' industry experience, CM3 provides economical, systematic retro-commissioning services that are industry-recognized and provide proven results.

Our multi-faceted retro-commissioning services achieve the same result as a "rip and replace", but with lower costs and reduced downtime.

- A systematic process to quickly identify deficiencies and prioritize repairs based on severity and impact
- Performed by a standardized review and test of each mechanical system
- Comprehensive report with repair recommendations
- Optional MBCx (Monitor-Based Commissioning) provides continuous site and application testing which ensures ongoing performance and identifies corrective measures.

TYPES OF COMMISSIONING

Commissioning (Cx)

Designed for a newly constructed building or major building addition. Applied from project inception to initial occupancy.

Retro-commissioning (RCx)

Applied to buildings that have not been commissioned or have been modified without additional commissioning. A starting point for the building improvement process. All building systems are baselined for their performance.

Re-commissioning

Applied to buildings that have already been commissioned. A process that typically involves both testing and repairs.

Monitor-Based Commissioning (MBCx)

Advanced testing that uses AI-based technology to focus on building operations, energy performance, and end-user comfort. This approach can immediately alert to deficiencies and/or proactively prevent them.

Once a building is analyzed and the appropriate commissioning services are provided, any energy conservation measures implemented will help improve peak efficiency.

RETRO-COMMISSIONING

Testing

Pre-functional Testing

- Verification of original installation
- Documentation of mechanical faults

Functional Testing

- Test and verify DDC or Pneumatic outputs
- Verification of DDC analog inputs using calibrated testing equipment
- Verification of digital inputs and safeties where applicable

Report

Equipment Overview Report

Includes pre-functional and functional testing documents along with photographs and notes from field personnel.

Corrective Action Report

Corrective Actions are itemized by building then by unit. Each issue regardless of size or impact will have a single line entry and photograph (where applicable).

REPAIRS

Repairs are designated by trade and severity to allow for optimal ROI. Once repair estimates are approved, the repairs can be completed, and the system commissioned to ensure that optimum performance has been achieved.

MONITOR-BASED COMMISSIONING

Optional MBCx (aka Continuous Commissioning) enables continuous monitoring of the system and ongoing enhanced performance to increase efficiency, extend equipment life, and prevent problems

Retro-Commissioning Benefits

- Decreased downtime of mechanical equipment (versus replacement)
- Increased building comfort
- Provides a detailed analysis of tested equipment
- Provides actionable data with detailed corrective actions
- Returns building to its optimized commissioned state
- Allows for more effective implementation of energy conservation measures and strategies
- Provides a dashboard for verification and tracking of your investment (when MBCx is requested)

Diagnostics Examples

- Outside air dampers and adjustable speed drives not adjusting
- Unconnected flexible ductwork
- Belts and valves malfunctioning
- Control systems components not following prescribed control sequences
- Incorrect sequences of operation
- Energy management systems not updated to reflect system modifications
- Changed facility uses and partition configurations causing suboptimal air flow
- Thermostats and controls sensors improperly placed, out of calibration, or permanently overridden
- Equipment problems: breakdown of dielectrics, degraded fluids, failed batteries, leaking seals, and flattened bearings

ENERGY PROGRAMS

Philadelphia Building Energy Performance
Building Tune-Up Specialist

Philadelphia Electric Company (PECO)
Trade Ally

New Jersey Clean Energy
Trade Ally

Municipal & Utility Programs
CM3 incentive specialists uncover the maximum rebates available.