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SMART CITIES



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WELCOME TO BEYOND SMART BUILDING COMMISSIONING - SBCX

ONLINE TRAINING

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4. Investigation Phase SBCx



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COMMISSIONING SPECIALIST CURRICULUM

NEXT



While many tasks and steps in the investigation phase appear to repeat steps from the initial assessment phase, these tasks are done in a more thorough manner during the investigation phase.





Preparing Countries & Tomorrow's Commissioning Specialists



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Learning Objectives

- Brief Introduction
- Investigation phase SBCx

Introduction

Field observation and testing of system and equipment operation, interviewing facility staff, reviewing equipment and building documentation, review and confirmation of preventive maintenance plans, evaluating sequences of operation, evaluating building automation system (BAS) performance and trend or logging data of equipment operation, documenting findings and identifying energy conservation measures (ECMs) and facility improvement measures (FIMs), estimating energy impacts and implementation costs, evaluating the source of performance problems (e.g., water leakage) and investigating any applicable rebates or incentives.



Investigation Phase SBCX

This step allows us to establish a baseline of performance and uncover precise issues your building systems face.

The analysis phase of the project including:

- Analyses of vetted CCMs
- Identification of Facility Improvement Measures (FIMs) that may require future CAPEX funding for implementation

Analyze Facility Performance and Establish Performance Baseline

- Establish an energy baseline early in the SBCx project and track that progress as items are identified and implemented. The more the baseline identified extends from the building level down into the individual equipment level energy use (i.e., chiller or pump power), the more accurate the baseline comparison and future savings calculations will be.
- Building-level energy baselines should include kWh and therms per day, per month and eventually per year, all correlated to outside air temperature and converted to EUI per square foot and compared to peer buildings. Equipment baselines should be established for large energy using equipment like chillers, cooling towers, larger pumps and large air handlers and also correlated to outside air temperature.

Analyze Facility Performance and Establish Performance Baseline

- Analyzing trend data occurs through spreadsheet or cloud-based software analysis. The goal of trend monitoring is to allow for identification of improper operation, lack of schedule control, or other operational issues inconsistent with meeting the CFR or the system/equipment operating at optimal efficiency. Analyzing the trend monitoring data can assist in determining if the system is meeting the CFR.
- Energy, non-energy and other system performance data establishes baseline benchmarks for facility performance. Available facility performance baseline data may include utility billing data, sub-metering data, work orders, comfort complaint logs, indoor air quality parameters, occupant satisfaction survey results, BAS trend data and/or standalone data logger data.
- Performance measurements and tracking can be further expanded and enhanced as part of an ongoing commissioning program



Thanks

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