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Existing Building Commissioning (EBCx) Project Considerations

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Mapping Out Your Commissioning Strategy

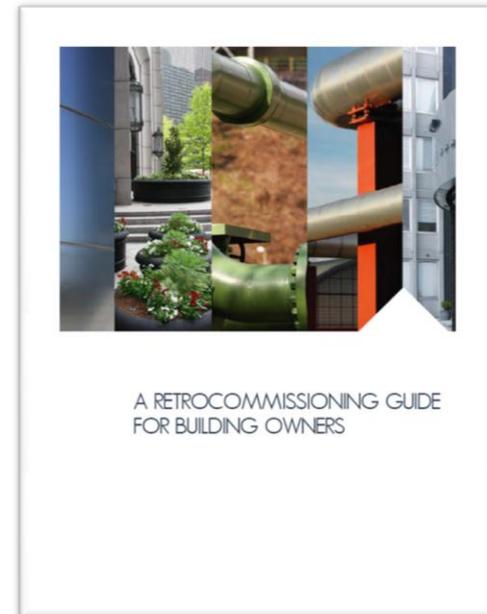
Three big questions:

1. Which buildings are commissioning candidates?
2. What commissioning approach(es) should I employ?
3. What expertise do I need to get it done?

Which buildings?

Many factors come in to play:

- Building sizes
- Project budgets
- Current energy performance
- Building control systems
- Occupancy rates
- Operator/ engineering resources
- Long term investment strategy
- Sustainability plans or mandates
- Equipment Replacements



See the EPA's "A Retrocommissioning Guide for Building Owners"
<http://www.peci.org/documents/EPAguide.pdf>

Selecting the right buildings is critical to achieve the maximum benefit in a cost-efficient manner.

What approach(es)?

Targeted Tune-Ups

- Tune ups of specific systems or sub-systems
- E.g., focus on economizers or equipment scheduling

Comprehensive EBCx

- In-depth commissioning of the whole building as an integrated system
- Scope includes all energy and water consuming systems

Monitoring-based /Ongoing commissioning (MBCx)

- Adds permanent energy system monitoring to Comprehensive EBCx
- Can be leveraged to address federally mandated advanced metering requirements (EPAAct 2005)

Applying the right approach to fit your goals, budget,
and building types is essential.

What expertise?

Commissioning Project Manager

Key Attributes:

- Understands the EBCx process
- Familiar with EBCx tools and calculation methods
- Experience managing the risks and issues encountered during the EBCx project lifecycle
- Has or can build relationships with service providers, contractors, building staff

Key Contributions:

- Leverages utility programs
- Prioritizes and selects projects
- Defines scope and approach
- Provides quality assurance
- Coordinates site activity
- Facilitates decision making
- Manages subcontractors, timelines, and budgets
- Collects, consolidates, and manages data

A skilled commissioning project manager is a must for EBCx initiatives addressing medium to large-scale portfolios.

What outside expertise?

EBCx Service Providers

Key Attributes:

- Strong engineering knowledge and extensive hands-on field experience
- Understanding of physical principles of building systems performance
- Experience with systems testing, diagnostics, and energy calculations
- Experience in operations and maintenance procedures
- Understanding of building design and construction process.

Key Contributions:

- Investigates EE opportunities
- Prescribes measures
- Calculate savings and costs
- Leads or supports the implementation of measures
- Verifies systems work optimally
- Provides ongoing technical support
- Provides training or other persistence management support

There is no substitute for a high-quality Service Provider in the EBCx process.

Provider Qualification Considerations

1. Technical knowledge
2. Relevant experience
3. Communication and organizational skills
4. Reference and sample work products
5. Conflict of interest concerns

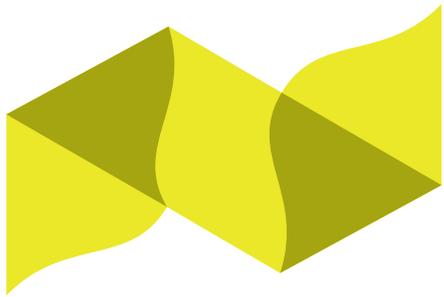
Available Provider Certifications

- AABC Commissioning Group (ACG) - Certified Commissioning Authority (CxA)
- Association of Energy Engineers (AEE) - Certified Building Cx Professional (CBCP)
- Building Commissioning Certification Board - Certified Cx Professional (CCP)
- National Environmental Balancing Bureau (NEBB) - Systems Cx Administrator (BSC)
- Testing Adjusting and Balancing Bureau - Certified Commissioning Contractor (CCC)
- Wisconsin University at Madison – Accredited Cx Process Authority Professional (CxAP)

Additional Resources

The California Commissioning Collaborative's website (www.cacx.org) contains information on:

- Guides on new and existing building commissioning
- Advice on how to select a provider
- Detailed breakdown of certifications
- An (unendorsed) provider listing
- Various tools and templates for owners and providers



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