

COMMISSIONING PROVIDERS



- ☑ Cx Providers may be
- ☑ Building Owners
 - ☑ Nestle
 - ☑ TLM International
- ☑ Design Professionals
- ☑ Construction Managers
- ☑ Third-Party Independent Commissioning Providers
- ☑ Certified Commissioning Professional (CCP / BCXP/CBCP) from Building Commissioning Association (www.bcxa.org) OR ASHRAE



CX PROVIDER & ADD'L LEED CX

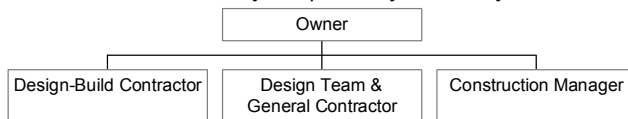
- ☑ Tasks 1-3: Reviewer is independent of design team

- ☑ Cx review prior to beginning Construction Documents
- ☑ Cx review prior to completing Construction Documents
- ☑ Cx review of contractor submittals



CX PROVIDERS

- ☑ Avoid Conflict of Interest
- ☑ Provide objective and unbiased point of view
 - ☑ Cx Provider shouldn't have ultimate authority & responsibility to **design** or **install** any Cx'd systems
 - ☑ Cx Provider shouldn't be contracted by someone with ultimate authority & responsibility over Cx'd systems



CX PROVIDER QUALIFICATIONS

- ✓ Knowledge of the common installation, maintenance, & operational pitfalls
- ✓ Experience troubleshooting the Cx'd systems
- ✓ Prior Cx experience for at least 2-5 similar Cx'd projects (depends on size & complexity)
- ✓ Can be composed of a team of experts to handle particularly complicated buildings
- ✓ Doesn't hold other responsibilities related to the project



AEE'S CBCP CERTIFICATION PROGRAM

Since 1981, AEE has certified thousands of professionals within the energy industry.

The U.S. Department of Energy, Agency for International Development, utilities, end users, and energy service firms recognise AEE's certifications. When you obtain the right to use "CBCP" after your name, you demonstrate that you have the expertise needed to commission new and existing buildings. You have extensive field experience, competency,

- The Certified Building Commissioning Professional (CBCP) course reviews all phases of commissioning projects and teaches current best practises.



BCXA'S ACP/CCP CERTIFICATION PROGRAM

As an international nonprofit organization, the BCxA is a strong and dedicated advocate for more than 1,200 members of the commercial building industry, helping them ensure that our new and existing buildings have the best possible risk management, quality assurance, and resiliency.

- Certified Commissioning Professional (CCP)
- This ANSI accredited certification is for commissioning providers who lead, plan, coordinate, and manage commissioning teams to implement commissioning processes in new and existing buildings.
- Associate Commissioning Professional
- For those who are starting their journey in the commissioning profession or those who wish to demonstrate their knowledge of the commissioning process as they interface with commissioning providers or project teams.



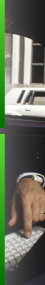
ASHRAE'S BCXP CERTIFICATION PROGRAM



With more than 50,000 members from over 130+ nations, ASHRAE is a diverse organization dedicated to advancing the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world.

■ BCXP – BUILDING COMMISSIONING PROFESSIONAL CERTIFICATION

■ ASHRAE's BCxP certification program validates competency to lead, plan, coordinate and manage a commissioning team to implement commissioning processes in new and existing buildings.



ASHRAE'S BCXP CERTIFICATION PROGRAM

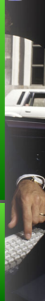


IIBEC Building Enclosure Commissioning Certification Council (BECxCC)

The International Institute of Building Enclosure Consultants (IIBEC) represents roofing, waterproofing, and exterior wall specification and design experts worldwide. From sprayed polyurethane foam to cedar shakes, parking garages to air barriers, IIBEC has a member expert for every roof, exterior wall, and waterproofing issue in the world.

■ Certified Building Enclosure Commissioning Provider- CBECxP®

■ IIBEC Building Enclosure Commissioning Certification Council (BECxCC)



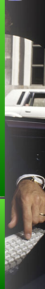
BSC'S CCXS/CCM CERTIFICATION PROGRAM



Certified Commissioning Manager /Certified Commissioning Specialist Certification

For those who are starting their journey in the commissioning profession or those who wish to demonstrate their knowledge of the commissioning process as they interface with commissioning providers or project teams. Our mission is to imagine a sustainable future that works for populations and social progress and expertise.

■ Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists and Commissioning Specialists with independent talent around the globe.



EXAMPLE CX SCOPE FOR A LEED PLATINUM PROJECT

- ☒ 98,868 sq. ft. Office/Warehouse
- ☒ Design Goal: 40% Energy Saving from base case Energy model.
- ☒ Use solar power for
 - ☒ Electricity (lights, computers, fans)
 - ☒ Use solar power for Electricity (lights, computers, fans) Solar Water Heating System
- ☒ Stormwater retention system
- ☒ Automated load shedding

