



Laying a Pathway for the Next-Generation Building Commissioning Provider

By Liz Fischer and Bill McMullen

In fall 2013, the National Institute of Building Sciences established the Commercial Workforce Credentialing Council (CWCC) in partnership with the U.S. Department of Energy (DOE). Comprised of experts representing all stakeholders in the built environment, as well as those directly involved in training and credentialing programs, the CWCC supports “the development of a skilled and qualified workforce to evaluate, commission, operate and manage high-performing commercial buildings.” The CWCC is developing national guidelines that will support the creation of qualified training and certification programs for each of five building-related occupations—including building commissioning—to help reduce energy use in commercial facilities. The result will provide a foundation for process- and outcome-focused training, and consistent professional expectations for commissioning providers (CxPs) across the building community.^[1]

Since the CWCC’s beginning, the Building Commissioning Association (BCA) and Building Commissioning Certification Board (BCCB) have been involved in both establishing the program and

developing its commissioning approach. Several commissioning industry leaders have provided subject matter expertise to develop the job task analysis (JTA) and the credentialing scheme for commissioning certification programs to deliver “high-quality, nationally recognized credentials.” As enthusiastic participants in this project, the BCA and BCCB are able to ensure that the voices of the commissioning profession and BCA membership are heard.

Lessons from the Past

The BCA’s earlier experience preparing for commissioning certification provided valuable insight for the CWCC’s evaluation and development process. In 2002, with funding provided by the Northwest Energy Efficiency Alliance (NEEA), the BCA formed a Certification Committee to evaluate options for creating a quality commissioning certification program. BCA management selected the International Organization for Standardization/International Electrotechnical Commission ISO/IEC Standard 17024: 2003, *Conformity assessment—General requirements for bodies operating certification of persons* to guide the development and imple-

mentation process. The recognition of this standard as a quality process matched the BCA's goals. At that time, the BCA concluded, and continues to believe, that quality certification, as part of the qualifications-based selection (QBS) process, (see "Qualifications-Based Selection Process" sidebar, right) is the best way to evaluate and hire a CxP.

Requirements for achieving accreditation through the ISO/IEC 17024 included:

- Establishing separate, non-profit entities for the administration of the program and the education of the prospective credentialed professionals; and
- Conducting a comprehensive survey of commissioning professionals to define the knowledge areas and specific skills required to conduct a successful building commissioning project.

The BCCB development team determined how a rigorous certification examination should be structured after a comprehensive body of knowledge was created, using a weighted technique. In May 2004, BCCB gave the first exam and now, a decade later, the BCCB certification remains focused on providing a high standard of qualification.

Meeting the Needs of Today

A revision to ISO/IEC 17024 came out in 2012. This new version of the standard contains most of the same fundamental aspects, but now includes clearer language and guidance on measures to:

- Ensure rigor of the exam and scheme;
- Define how certifying bodies can demonstrate impartiality; and
- Provide secure management and auditing of the certification program.

ISO/IEC 17024, combined with the process and outcomes of the CWCC, are an ideal way to determine the quality of any certification program and ascertain the quality of its results—through the certificants. This combination supports the achievement of high-performance buildings through the following key areas:

Higher-quality practices

The CWCC is ultimately creating a clear path for organizations wishing to build quality certification programs, through accreditation to the international standard ISO/IEC 17024: 2012 by such organizations as the American National Standards Institute (ANSI). Although quality certifications and training in the commissioning

Qualifications-Based Selection Process

Qualifications-based selection (QBS) is an evaluation, scoring and selection process for owners to use when hiring building project professionals. It encourages owners to solicit, and project consultants to submit, proposals for specific scopes of work that are evaluated based on qualifications. Consultants are short-listed and selected for budget negotiations after preliminary selection and before contracts are signed.

QBS for architectural and engineering design services on U.S. federal construction projects was formalized by Congress in 1972 through the Brooks Act for public owners "to negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualification for the type of professional services required and at fair and reasonable prices."

The global drive toward continuous improvement of building materials, systems and practices demands a quality approach—not only in the context of architecture and engineering, but in terms of all services that contribute to better building performance. Commissioning is high on that list of services.

Under the Brooks Act, QBS is required only in the federally funded public project sector; it is not universally applied, nor always recognized, as a tool for private-sector projects. The policy was not, and is not, a mandate for the private sector, but it is slowly gaining ground among building-related professionals (e.g., commissioning professionals, among others), well beyond architectural and engineering designers.

When properly performed, commissioning is the continuous quality assurance link across disciplines and schedule in a building project. It should be regarded by owners as one of the most important services to be hired based on qualifications. The BCA strongly advocates that owners and CxPs use QBS and certification as significant tools that will continue to elevate the role of commissioning and the delivery of high-performance projects in the built environment.

QBS steps for owners broadly include:

- Establishing evaluation criteria
- Soliciting qualifications (public announcement required in the public sector)
- Developing a short list
- Interviewing and ranking three providers
- Jointly, as owner/provider, refining the scope and contract terms
- Negotiating the contract (or moving on to the second-ranked provider)

profession are only part of the selection process, owners will have more confidence in assessing candidates' fundamental knowledge and professional commitment when hiring a certified CxP.

Qualifications-based selection process (QBS)

QBS is the primary way to hire the right CxP. Certification is one component of that process. Commissioning is a professional service hired (ideally, as a third party) by the owner. Building professional training and accredited certifications into the QBS process will mean owners can more confidently hire the right CxP for their projects.

Clear definition of the role and abilities of the CxP

The building commissioning profession can clearly articulate to owners and other stakeholders its role and process in new construction and in existing buildings. The

definition helps to frame the project roles of each stakeholder and their role(s) in the commissioning process. This also will benefit owners and end-users in decisions for hiring a CxP.

Better direction to the new workforce

The ISO/IEC 17024-CWCC format allows new entrants to the commissioning field to understand what they need to learn to become qualified by defining the necessary knowledge, skills and education. They will be able to focus their experience to help them become qualified CxPs in the workforce.

Training the Next Generation

Training the next generation of CxPs is very important for the building industry. The next steps will be to educate them, along with building community stakeholders, using tools developed by the program, including the identified JTAs.

Continued on page 34

An Owner's Perspective on the Value of Commissioning Certification

"When a CxP has a certification, like the CCP [certified commissioning professional], that tells me the candidate went out of [his/her] way to develop the qualifications for the job. In addition to our selection process, one-third of my pre-qualification is his hospital experience. Candidates also need to prove that Cx [commissioning] is the majority of their business."

—Joseph Lorino, PE, LEED AP, Facilities Corporate Director, New York Presbyterian Hospital, during the 2014 National Conference on Building Commissioning

Working more closely with universities and community colleges to help them incorporate commissioning education into their curriculum will result in a stronger workforce and better-performing buildings in the future.

Building professional training and accredited certifications into the QBS process will mean owners can more confidently hire the right CxP for their projects.^[2] As such, when hiring a professional, BCA recommends following a QBS process.^[3]

Increasingly, commissioning is being included in building codes, from the international level to the local jurisdiction level. In addition to training CxPs, a focus on educating code officials and other authorities on the work of the CWCC and

qualified commissioning certifications will be key.

The CWCC is progressing toward final rollout of its program, which will be completed and ready for implementation in 2015. Upon publication, BCA will work with owners and the building community to promote the program and train com-

missioning providers to use the program's professional tools and practices. 

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References:

^[1]Information on the design of the CWCC can be found at www.nibs.org/cwcc.

^[2]The "BCA Position on Certification" and the "BCA Commissioning Authority Qualification Statement," www.bcxa.org/knowledge-center/qualification-and-certification-statement/.

^[3]"QBS for the Commissioning Profession," www.bcxa.org/wp-content/uploads/2014/12/QBS-Position-Paper.pdf.

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