Professional Testing

Meeting Summary

Client	U.S. Department of Energy (DoE) National Institute of Building Sciences (NIBS)
Date	August 21 - 22, 2014
Location	Professional Testing Denver Office
Objective	Determine Scheme Committee Requirements for Building Operations Professional
Participants	Terry Bickham Robert Blakey James Coates Rick Dames Paul Ehrlich David Hewett David Redding Teresa Rodgers Rodney Schauf Daniel Sexton (absent) Neil Morgan (stand in for Daniel Sexton)
NIBS Project Manager	Deke Smith, Executive Director, building **SMART** alliance and Program Director, Commercial Workforce Credentialing Council
Professional Testing Facilitator	Dr. Christine Niero, Facilitator Vice President, Professional Testing, Inc.
Observer	Leen Zaballero, Penn State University Rachel Romero, NREL
Purpose	To determine scheme requirements for the Building Operations Professional in conformity with ISO/IEC 17024:2012 Accreditation Requirements

Summary of Discussion

Dr. Niero of Professional Testing, Inc. began the meeting with welcoming address and introductions. Dr. Niero explained the purpose of the meeting and provided an overview of the certification program activities that had occurred thus far in the development of a certification examination for the Building Operations Professional.

Overview of ISO/IEC 17024 and Certification

Dr. Niero then gave a brief overview of scheme requirements of ISO/IEC 17024 *Conformity assessment–general requirements for bodies operating certification of persons* as administered by the American National Standards Institute (ANSI), noting that the certification programs sponsored by DoE and NIBS were to conform to these accreditation standards.

Report of the Building Operations Professional Validation Survey

Dr. Niero provided an overview of the Job Task Analysis process for the Building Operations Professional conducted February 10 – 12, 2014 and reported the demographic findings of the validation survey, including: highest level of education; years of energy experience; years of experience as a Building Operations Professional, state and sector in which respondents work. The demographic data was presented to provide a profile of job incumbents in building operations. Dr. Niero then provided an overview of the Examination Blueprint and the DACUM chart of duties and tasks; knowledge, skills, abilities and attributes; tools, equipment and resources to orient the task force participants about the job building operations professionals perform, and the foundation for the certification examination.

Work of the Scheme Committee

Task force participants were provided a copy of the JTA Report and the DACUM chart for review and reference. As a group of the whole, task force participants began to discuss the requirements for certification, including eligibility to qualify for the exam, at a high level, answering the question "What does the building operations professional" look like in terms of experience, education, and other work-related experiences. The group agreed that the Building Operations Professional is a senior-level position (the role was referenced as the "Chief Engineer"). Once the group identified broad parameters for certification and eligibility, they broke into three work groups to accomplish the following:

1. Draft requirements for certification based on the competencies, identifying tasks that can be assessed on a written exam, and those that can't be tested but candidates need to present with to earn the certification
2. Draft eligibility requirements for their respective work group category
3. Determine equivalencies where possible for degree and work-related experiences, including military experience
4. Provide definitions and parameters for each requirement so the applicant can easily understand the requirement
5. Determine how information can be documented on an application
6. List supporting documentation provided with submission of the application.

Participants were instructed to:

1. Ask "why" have the requirement(s)

2. Ask “what” assurances the requirement(s) provides for establishing eligibility, and to consider aspects of “fairness” to applicants
3. Ask “what” assurances the requirement(s) provides to matters such as safety, ethics, etc.
4. Ask “what” documentation would be required to demonstrate an applicant meets the requirement(s)
5. Ask what level of “trust” and degree of “confidence” the requirement provides that supports the ability of the building operations professional to perform their job
6. Ask “what” the eligibility requirement or certification requirement assures that the exam cannot test.

Once participants completed the group activities, the groups reported their recommendations for eligibility and the rationale to support specific requirements. Once all presentations were made, the full group discussed each requirement and arrived at the final set of eligibility requirements.

The following requirements for certification were agreed upon by the group:

<u>Eligibility Requirements to quality for the Building Operations Professional certification examination</u>

The Scheme Committee reviewed the DACUM charts task by task, and identified the tasks and associated KSAs that could be tested, and those that could be verified through experience or other requirements. The following eligibility requirements were agreed upon.

Participation in facility energy assessment OR 30 contact hours of specific relevant training in energy assessments, system optimization, measurement verification and energy analysis; plus participation in capital planning process, OR 10 contact hours of specific relevant training in capital budget, equipment, lifecycle analysis (LCA).

Participation in a minimum of three projects related to facility operations, improvements, or repairs spanning submittal approval, construction planning, completion verification, and commissioning as appropriate to the project. Over the three projects, the applicant must have performed the following activities at least once: conduct equipment inventories; identify equipment specifications; identify O&M requirements; rank equipment in terms of priority; determine level of service to be performed on equipment based on criticality of system; identify tasks to be outsourced; identify skill level of staff; identify required tools; identify opportunities for predictive maintenance.

Over the course of a minimum of three engagements with third-party or external resources, the applicant must have done each of the following activities at least once: create the RFP and SOW; determine requirements for outside services; determine type of contract; interview service providers; review proposals or RFP responses; develop or use existing contractor/service provider handbook; conduct orientation for service providers; determine criteria for selection of service providers; secure the services of outside service providers.

AND One of the following options:

1. High School Diploma or GED with 10 years' experience in building operations* with a minimum of 3 years in supervisory role**.

2. Associate/Technical/Vocational 2 year degree, or equivalent military training, with 8 years' experience in building operations with a minimum of 3 years in supervisory role.

3. Associate Degree or Vocational degree related to Building Operations with 7 years' experience in building operations with a minimum of 3 years in supervisory role. Building Operations related degrees include courses, for example, but not limited to: HVAC, energy management, mechanical engineering, electrical engineering, boilers, fans and pumps, building automation technology, fire-life safety, lighting, sustainability, green technology, etc.

4. Bachelor's Degree or higher or attainment of E6 in any branch of the military with 6 years' experience in building operations with a minimum of 3 years in supervisory role.

5. Bachelor's Degree or higher related to Building Operations or attainment of E6 in a related specialty in a branch of the military with 5 years' experience in building operations with a minimum of 3 years in supervisory role. Building Operations related degrees include courses, for example, but not limited to: HVAC, energy management, mechanical engineering, electrical engineering, boilers, fans and pumps, building automation technology, fire-life safety, lighting, sustainability, green technology, etc.

*Experience in building operations is defined as performing general maintenance to maintain the building's operability, optimize building performance, and ensure the comfort, productivity and safety of the building occupants.
**Supervisory experience is defined as directing, planning and evaluating individuals responsible for performing general maintenance to maintain the building's operability, optimize building performance, and ensure the comfort, productivity and safety of the building occupants.

Recertification Requirements for the Building Operations Professional

Dr. Niero provided an overview of the purposes of recertification, and a summary of the competency requirements for certified building operations professionals. The Scheme Committee discussed the recertification period and reviewed the considerations as outlined in ISO/IEC 17024 9.6.3. to determine a three year recertification cycle. Factors such as the level of professionalism required of certified persons, the risks associated with incompetent performance, and the maturity of the field support the three year certification cycle.

The Scheme Committee reviewed the options for recertification as listed in ISO/IEC 9.6.5. In selecting the recertification options, the following factors were considered:

- The cost and practicality of setting up onsite assessments and structured interviews, which would require scoring rubrics, examiners, and studies of inter-rater reliability for the examiners
- The vast location and variety of work environments
- The confidential nature of terms of employment preventing the review of work and work experience records

- The logistics associated with surveillance activities (surveillance is not required by the scheme)
- Changes to regulatory requirements and ongoing technology would be captured in the revalidation of the scheme
- Changes to normative documents and relevant scheme requirements would be captured in revisions to the scheme and during the associated revision of recertification requirements.

Fifty (50) points are required for recertification utilizing the formula of 1 point = 1 hour of activity, unless stated otherwise. The following requirements for recertification were determined. Alignment with competency requirements was determined. Individuals applying for recertification must meet the current requirements and agree to abide by all policies.

*Note: Certification bodies per the requirements of ISO/IEC 17024 are required to confirm certified persons maintain any required physical capabilities in relation to the competency requirements.

<u>The following requirements were determined, which must align with the competency requirements of the certification (exam blueprint).</u>

Recertification Options: 50 points must be earned from the following options, or combination of options.

1. Work in the field: 10 points shall be awarded for each year of full-time employment as a Building Operations Professional or as an instructor in an accredited institution and/or program for a maximum of up to 30 points.

2. Continuing Education (CE): CE is a process used by certified persons to maintain and advance their competency. Maximum of 30 points may be earned in this option. CE includes education/training received and education/training given and may be obtained from several sources, including:

   Webinars—1 point per hour of attendance; 2 points per hour as presenter for the first presentation, then 1 point per hour for subsequent equivalent presentation.

   Conference Presentation—1 point per hour of attendance; 2 points per hour as presenter for the first presentation, then 1 point per hour for subsequent equivalent presentations

   Workshops—1 point per hour of attendance; 2 points per hour as presenter for the first presentation, then 1 point per hour for subsequent equivalent presentations

   College Credit (traditional or online)—10 points per college credit

   Training online or in person—1 point per hour of attendance; 2 points per hour as a presenter for the first presentation, then 1 point per hour for subsequent equivalent presentations

3. Regulatory work: Participation in development or maintenance of regulatory standards. Participation includes attending meetings, official review, appointment as a committee member. Includes regulatory compliance analysis and support lent to legislation/regulation for support of building operations professionals (not lobbying)—up to 20 points

4. Retesting: Meet the current qualifications for and pass the certification exam: 50 points

5. Publications: Must be related to the industry, which is defined as building systems technology and operations. Up to 20 points—points are awarded per publication as follows:

    Published conference or technical paper; must be peer reviewed and published—10 points

    Providing a review of conference or technical paper; electronic or written confirmation of completed review—1 point

    Author a book, manual or guideline that is published. Credit is awarded at the time of publication—20 points

    Journal, bulletin, or magazine article—10 points for peer reviewed; 5 points for non-peer reviewed

    Whitepaper or position paper; may be digitally published and distributed. Provide documentation of delivery method—5 points

    Author or co-author for chapter of technical handbook; credit is awarded when published—2 points

    Review of a technical handbook chapter; credit is awarded when review is completed—1 point.

<u>Code of Ethics</u>

Dr. Niero provided an overview of the purposes of the Code of Ethics and the disciplinary program for certified individuals. The Code of Ethics was reviewed. The following types of sanctions were approved.

Cease and Desist
Written reprimand
Written reprimand with remediation
Censure
Suspension
Revocation
Permanent revocation

In addition to imposing sanctions, certification bodies shall have the authority to report sanctions to legal and regulatory authorities, and other credentialing organizations as appropriate.

Alignment of scheme requirements with assessment methodology

Dr. Niero provided an overview of the scheme requirements with the assessment methodology to identify any competency requirements not being assessed, and for determining alternative methods of assessment, if appropriate and necessary. It was determined that the competency requirements are assessed through the eligibility criteria and examination.

Next steps

1. Conduct a review across all schemes to assure consistency in determining requirements for applicants from the military.
2. Review any changes to the Code of Ethics other scheme committees may make, and approve one Code of Ethics for all four certifications.
3. Vote to adopt the scheme.
4. Present scheme to the CWCC Board of Advisors and the Board of Direction.
5. Recommend to the National Institute of Building Sciences (NIBS) that one or more supporting career steps need to be identified through a job-task analysis to support the building operations profession.