Professional Testing

Meeting Summary

Client	U.S. Department of Energy (DoE) National Institute of Building Sciences (NIBS)
Date	September 18 - 19, 2014
Location	Professional Testing Denver Office
Objective	Determine Scheme Committee Requirements for Energy Manager
Participants	Phil Coleman Roshini Das Jeffrey Engelstad Rina Fa'amoe Andrew Heitman (absent) Cecil Jones Ken Mahadeo Sonya Pouncy Premnath Sundharam Wayne Turner
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
Purpose	To determine scheme requirements for the Energy Manager 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 Energy Manager.

Overview of ISO/IEC 17024 and Certification

Dr. Niero then gave a brief overview of scheme requirements of ISO/IEC 17024:2012 *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 Energy Manager Validation Survey

Dr. Niero provided an overview of the Job Task Analysis process for the Energy Manager conducted January 22 - 24, 2014 and reported the demographic findings of the validation survey, including: states in which energy managers work; sector (public/private); highest level of education; years of experience in energy; and years of experience as an energy manager. The demographic data was presented to provide a profile of job incumbents in energy management. 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 energy managers 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 energy manager" look like in terms of experience, education, and other work-related experiences. 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 in order 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 energy manager 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 were agreed upon by the group:

Eligibility Requirements to quality for the Energy Manager certification examination

1. Candidates must meet one of the following technical options:

Option 1: Currently hold a certification in energy focused science or technology that is accredited under ISO/IEC 17024.

Option 2: Currently hold a Professional Engineer (PE) or Registered Architect (RA) license plus two years of energy-related project experience.*

Option 3: Degree from an accredited institution** and work experience in energy management*** as follows:

4 year degree in engineering, architecture or facility management plus 3 years energy management experience

4 year degree in environmental science, physics or earth science management degree plus 4 years energy management experience

4 year degree in business or related field such as accounting or finance plus 5 years energy management experience

2 year energy management associates’ degree plus 4 years energy management experience

2 year technical degree in building systems or valid mechanical/electrical contracting license; or equivalent military job experience/training plus 5 years energy management experience

High school diploma or equivalent plus 10 years energy management experience.

2. In addition to the technical requirements, the following management experience is required:

Three years of management experience defined as oversight/supervision of a team of personnel with responsibility for training, team outcomes, outcome communications.

OR

One of the following options:

1. Master's degree in management/business administration
2. Bachelor degree in management/business administration with 1 year management experience*
3. Associates degree in management/business administration with 2 years management experience
4. Current certification from an ANSI accredited management certification.

*Energy-related project experience is a project implemented to optimize energy use or cost.

**Degrees must be accredited by an organization recognized by the US Department of Education, the Council on Higher Education Accreditation (CHEA), or specialized accreditation bodies in engineering such as Accreditation Board in Engineering Technology (ABET) or architecture such as the National Architectural Accrediting Board (NAAB). *Energy management experience is defined as participating in energy-related projects implemented to optimize energy use or cost.

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Recertification Requirements for Energy Manager

Dr. Niero provided an overview of the purposes of recertification, and a summary of the competency requirements for certified energy managers. 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, the maturity of the field, and the emphasis on management 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>

Mandatory Requirement: 10 points of continuing education and/or training delivered. See options below.

1. Continuing Education (CE): CE is a process used by certified persons to maintain and advance their competency. Maximum of 25 points.

   CE includes education/training received and may be obtained from several sources, including:

   In-service training—up to 6 points

   Webinars—1 point per hour of attendance

   Educational Session—1 point per hour hours of attendance

   Workshops—1 point per hour of attendance

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

2. Training Provided: Developing and delivering energy management education; Maximum 10 points. Training provided may include:
   - Instruction via webinar, computer-based training or classroom instruction or specialized energy management training. 1 contact hour = 1 CE; up to 8 points
   - Certificate/Curriculum training development for users, syllabus or specialized energy management training: 1 CE = 8 hours of activity; up to 5 points.

3. Regulatory Work: Participation in development, maintenance or monitoring compliance of energy standards, codes, regulation, and guidelines and rating systems (federal, state, and local); 1 point = 8 hours of activity – up to 20 points awarded. Participation includes:

   - Monitoring compliance with energy codes and policies – up to 10 points
   - Participation in regulatory work (attending meetings; reviewing and commenting on code and policy changes; appointment as a committee member) – up to 10 points
   - Developing and updating design standards and specifications to meet codes and legislation – up to 10 points

4. Documented Work Hours: 10 points per year of work in the energy management – up to 30 points. Energy management is defined as participating in an energy-related project.

5. Retesting: Meet the current eligibility requirements and pass the certification exam: 25 points

6. Contributing to the Energy Manager Certification: Includes participation in Job Task Analysis (JTA) study, item writing, item review, and passing score study)—up to 10 points

    Participation in JTA—5 points

    Item Writing—5 points

    Item Review—5 points

    Passing Score Study—5 points

7. Publications: Must be related to the industry, which is defined as MEP systems, and other building services and systems as they pertain to efficient use of energy and water: Up to 20 points—points are awarded per publication as follows:

    Published conference or technical paper – peer reviewed —10 points; 5 points for non-peer reviewed

    Energy-related Blogs – 300+ words – 1 point per blog article; maximum 5 points

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

    Author a published book, manual or guideline, or subsequent edition that applies to energy management. Credit is awarded at the time of publication—20 points for first edition; 10 points for subsequent editions

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

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

    User's Manual for industry standards; contributing to User's Manual as author or peer reviewer—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.

Code of Ethics

Dr. Niero provided an overview of the purposes of the Code of Ethics and the disciplinary program for certified individuals. The following Code of Ethics was reviewed and approved (see attached) and will be adopted pending revisions provided by other scheme committees. It was recommended that one Code of Ethics be adopted and used by all four scheme committees. The following types of sanctions were approved. Sanctions shall be based on the severity of the violation, and shall include, but not be limited to:

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 reviewing 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. The Scheme Committee determined that all competency requirements could be assessed in the multiple-choice exam.

Next Steps:

1. Agree that educational institutions are accredited by an accreditation agency recognized by the U.S. Department of Education or Council on Higher Education Accreditation (CHEA), and transcripts from applicants of schools outside of the U.S. be reviewed for equivalency by a third-party agency.
2. Supporting documentation for experience requirements should include: job title or position(s) held; number of years position held; verification from place of employment that position was held.
3. Review any changes to the Code of Ethics other scheme committees may make, and approve one Code of Ethics for all four schemes.
4. Request the Board of Direction and the Board of Advisors include in guidance to certification bodies the fact that several existing certifications are registered and protected with regard to titles (for example, Certified Energy Manager) and the certification titles associated with the NIBS schemes should have different titles.
5. Vote to adopt the scheme.

6. Present scheme to the CWCC Board of Advisors and the Board of Direction.