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Speaking of certification

Many engineers believe certification educates and bolsters careers; others think that there are too many available certifications, diluting any potential benefit.

BY JENNI SPINNER, *Contributing Editor*

CSE: For mechanical, electrical, plumbing, and fire protection engineers, what is the most important certification or licensure, and why?

Lew Brode: I believe it is very important to go through the process to get your PE; it shows you have gone through the proper training and have a solid fundamental understanding of engineering. It also allows your resume to be used for marketing and proposals. However, having a PE alone does not make you a great engineer. I work with a lot of great team members that do not have their licenses and rely on them tremendously for the knowledge they have gained through the years working on projects. An ideal engineer has gone through the licensing process but also has hands-on knowledge and experience to know what will actually work.

Keith Lane: The PE license is the foundation of our industry. This is also the license that is recognized by all jurisdictions across the country.

Bill Neudorfer: The most important certification is one that is recognized by federal, state, and local governments and by the code writing entities. These are ones that clearly have stringent requirements, a testing of knowledge component, an opportunity to prove demonstrated knowledge, and that require continuing education.

CSE: Which certification or licensure do you believe holds the most weight?

Brode: I believe a PE holds the most weight, but having LEED accreditation is also very important. Sustainable design is very prevalent in the Washington, D.C., metro area and continues to

gain momentum. I also believe commissioning certification is important since commissioning is required by the LEED program and is important to ensure designed systems are operating properly after they are installed.

Neudorfer: The ones that will hold the most weight are the ones that the federal, state, and local governments include in their code requirements. These are the ones that are similar to the NEBB certifications, which are the most stringent certifications available within the industry. Our certified professionals are required to verify their knowledge, demonstrate their skill set, provide documentation of ethical business behavior, and participate in continued education to maintain the certification. These the types of certification programs are what the various government and code officials have been including in their requirements.

CSE: Do you think certifications or accreditations ensure proper engineering or professional work? Why or why not?

Zach Gallagher: While certifications/ accreditations do not ensure proper work, they are necessary as they set standards and evaluate professionals against those standards including minimum requirements for education, training, and experience.

Lane: Receiving the PE license or RCDD requires continued education. Receiving the PE and/or the RCDD is just the start of your professional career.

Neudorfer: Unfortunately there is no certi-

fication, accreditation, or license that will ensure that proper engineering or workmanship always will be performed. What licensing and certifications do provide is a reasonable assurance to the owner, engineer, or industry that the work being performed and the people performing the work have had their knowledge, skills, and ethics verified by an independent third party.

Brode: Licenses and certifications alone do not guarantee that proper work will be performed; often the product produced depends more on the ability and desire of the individual than the certification or accreditation he or she holds. I have met plenty of people over the years that have a great-looking resume because of the acronyms after their names, but they can't produce a good set of construction documents or be a good colleague to others in the office. Having the right attitude and work ethic is something I consider equally as important as licenses and certifications when hiring new staff.

CSE: Are there too many or not enough options for accreditation beyond the professional engineer stamp? Do you think this helps or hurts the engineering community?

Lane: I believe there are plenty of avenues to get additional credentials. It is important to determine the best options, as there are many that are not recognized or are just not valued.

Gallagher: There are too many options for certification/accreditation. This ultimately hurts the engineering community as it is difficult for engineers and employers to determine which certifications to focus on.

Brode: A good option would be to have some sort of certification that non-PE-eligible engineers could obtain to quantify their years of experience and knowledge

of engineering even if they don't have the formal education. There are many excellent engineers who often aren't presented in proposals or for projects simply because they do not have their PE; however, their years of experience and knowledge make them equally, and occasionally more, qualified to design and manage a project.

Neudorfer: First, I believe that all of us can obtain additional accreditations in our professional fields that are of value that are beyond the professional engineer

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stamp. The exams that the engineer takes to obtain a license are a test of overall engineering knowledge, whereas certifications are in very specific fields of expertise, both of which I feel are very important. These additional certifications help the overall quality of the engineering/construction industry, and there are plenty of accreditation programs in almost every field of expertise that are similar in nature to NEBBs, which provide verification of skills, knowledge, ethics, and continuing education. An example of this is the LEED certification process. Overall, I believe that the collaboration and idea-sharing between the owner/architect/engineer/contractor on ways to improve building systems have improved the overall construction industry as well as the environment.

CSE: What advice would you give a young or less-experienced engineer regarding certification?

Gallagher: Focus on what is required for the most important licenses/certifications first or those that will give you an edge at your current position or with

a potential future employer. For young engineers, getting the necessary experience in order to qualify to take the PE exam should be the highest priority.

Brode: Take the EIT Exam as soon as you finish school, and sit for the PE exam as soon as you are eligible. The older you get, the harder it becomes to get back into study mode and take a test. You should also align yourself with a great mentor when you start working in the field. I was very fortunate to learn a lot from senior

engineers at my first job who took the time to teach me what they had learned over their careers. If you show interest and partner with an experienced designer/engineer, you can learn more than by reading a text book and will probably have more fun.

Neudorfer: The advice I give to our younger employees is to become certified in the field where we perform most of our work and which is interesting to them. If the area of certification is not of interest to the person, I have found over the years that he will not continue to keep up the accreditation. Also, they should focus on a certification program that will provide continuing education in order to further their skill set and industry knowledge—all of which will benefit our customers.

Lane: Find what you like to do, then the rest is easy. Continue to learn or you will be left behind.

CSE: Does your firm or organization offer tuition assistance, or does it pay for any kind of accreditation? How many people take advantage of this?

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MEP Roundtable

Brode: GPI pays for training classes to prepare for the EIT/PE exams and also offers tuition reimbursement if the engineering class is approved by management. The company really tries to promote inter-

recognized green building certification. Also, I am a BPI Certified Professional. Alliance Environmental provides water/energy audit services. The Building Performance Institute (BPI) certification program

One example is the commissioning field. Currently it's the Wild West when it comes to certification; some programs such as NEBB's are very stringent and rigorous, while others are pretty much milquetoast. I am not sure that some of our clients know the difference when it comes to the two." *—Neudorfer*

nal growth and encourages young engineers to get on the right track to start their professional careers. This is "win-win" for the company as well as the employee.

Gallagher: Yes, employees may obtain up to \$6,000 per year.

Lane: We do, and our employees are taking advantage of it.

CSE: Which certifications, if any, do you hold? Why did you obtain them? How have they served you?

Brode: I have my PE and LEED AP. I am proud of both and believe these credentials certainly have helped me in the industry and professional community. I do a fair amount of teaching, so having these credentials after my name helps to make people feel they are at least being taught by someone who has paid his dues and gone through the educational process. I believe having these credentials can only be seen as a positive attribute of an employee.

Gallagher: I hold several. The Professional Engineer (NJ) license is required in order to design systems. I have a LEED Accredited Professional Operations and Maintenance (LEED AP O&M); I am a legacy LEED AP with current O&M specialty designation. This is the most widely

is widely recognized and is required for many incentive programs.

Lane: PE, RCDD/NTS, TPM, LEED, LC. The PE and the RCDD/NTS probably hold the most weight. These credentials provide numerous advantages. I really had to learn the material when preparing for the exams. I then am forced to stay abreast of all the latest technologies and trends with the significant amount of continued education required. These credentials also help our firm get in the door with new clients, as it is an indication of industry leadership.

CSE: For the accreditations you hold, how do you stay up to date? What kind of continuing education do you participate in?

Gallagher: All of the above certifications/licenses require or will require continuing education credits. Credits are obtained through conferences, presentations, and approved courses.

Lane: I have PE licenses in 13 states, and many of them require continued education. For the RCDD/NTS and LC, I am required to take 36 hours every three years for each. The LEED certification will also require continued education in the future.

Brode: I take the continuing education classes as required to keep my PE and

LEED accreditation up to date. I think it is good to have this requirement as it forces you to continually find ways to learn and keep up with new technologies.

CSE: Do you feel the additional accreditations you hold earn you more clients, money, projects, etc.?

Brode: Yes, I believe senior leaders in the firm need to have these credentials. However, I don't think having these necessarily earn you more... I think they are really a prerequisite or a baseline requirement that allows you to work in this industry.

Gallagher: Yes, the BPI certification is more recent, but we believe this will benefit the company in the future.

Neudorfer: Certification brings many benefits. These include showing your peers, your supervisors, and clients your commitment to the industry and that you are investing in your professional development. Generally speaking, the more accreditations that you have earned, the higher your pay scale becomes due to the additional knowledge that you have gained.

CSE: In the next five to 10 years, what new certifications will be important?

Neudorfer: I believe that in the next five years, certifications will be required for commissioning, retrocommissioning, energy audits, and air barrier/thermography/building envelope testing. These are all certifications that benefit the building owner and engineer industries by reducing a building's energy usage. To a large degree, the projects that will drive these certification requirements will be funded by the federal government or by energy utility companies; these organizations want to see that there is a core competence level of understanding by the people performing the work.

One example is the commissioning field. Currently it's the Wild West when it comes to certification; some programs such as NEBB's are very stringent and rigorous, while others are pretty much milquetoast. I am not sure that some of our clients know the difference when it comes to the two. If history repeats itself, as the governing bodies become more aware of the differences, I believe that our clients and the industry as a whole will also become aware of these differences and will pick the more stringent certifications to specify.

Certifications will decline if they do not prove a skill set and knowledge that is achieved through testing and continuing education requirements. I think that certifications that do not lead to improved building performance will also decline in importance.

CSE: What methods will associations and licensing agencies use to offer continuing education? For example, in-person seminars, webcasts or webinars, new technology, etc.

Neudorfer: Providing continuing education is one of the most important functions of an association. In the coming decade, continuing education opportunities will be provided on a variety of platforms. Currently NEBB offers hands-on lab teaching seminars, classroom/lecture types of seminars, and we are focusing our efforts on the webinars and online classes. At NEBB we have come to the conclusion that we are going to have to provide educational learning opportunities through all of these methods. We have found that due to our diverse international membership, people learn in different ways and we will need to provide them with the environment that suits their needs. We therefore cannot abandon the traditional way for the online way of learning. **|cse|**

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