

# EC&M

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## FRIENDLY COMPETITION



**NICET prepares to revive the exam and technical content of its medium- and high-voltage electrical testing certification as an alternative to NETA's accreditation and certification**

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# FRIENDLY COMPETITION

NICET prepares to revive the exam and technical content of its medium- and high-voltage electrical testing certification as an alternative to NETA's accreditation and certification

**O**n March 22, 2010, the International Electrical Testing Association (NETA), Portage, Mich., an accredited standards developer for the American National Standards Institute (ANSI), Washington, D.C., and nationally recognized certification agency, released the latest version of its standard for certification of electrical testing technicians (ETTs), ANSI/NETA ETT-2010, "Standard for Certification of Electrical Testing Technicians." Originally published in 2000, this standard was created to establish minimum requirements for qualification and certification and minimum training and experience requirements, as well as provide criteria for documenting qualifications and certification. It also establishes minimum qualifications for an independent and impartial certifying body to certify ETTs.

Although ANSI/NETA ETT-2010 is non-restrictive, meaning that, in order to promote fairness, the standard allows other accrediting agencies to evaluate

and confirm expertise of persons in accordance with standard certification criteria, NETA, which restricts certification to only employees of its member companies, has been the only certifying organization offering new certification for ETTs since Jan. 1, 2006. That was when the most common alternate ETT certification body, the National Institute for Certification in Engineering Technologies (NICET), Alexandria, Va., a not-for-profit organization created by the National Society of Professional Engineers (NSPE) to serve the certification needs of the engineering technology community and provide nationally recognized certification programs, discontinued its test for ETTs seeking new certification. (Individuals who had valid certifications at that time have the opportunity to maintain them. Currently, there are 41 NICET-certified ETTs.)

However, with industry support, especially from NETA and its member companies, the organization will soon again begin offering its ETT certification, now tentatively called Electrical Power Testing, although the official

designation won't be decided until March 2011. "We're about 50% of the way through the test development process," says Brian Gifford, director, quality management, NICET.

**Volunteer work.** NICET began offering certification for technicians in electrical testing of medium- and high-voltage equipment in 1984. Around 2000, it was decided that the test was in need of a major updating of both its exam structure and technical content. "We got to the point where we just needed a lot of people to help build this program and write the exam questions, but we didn't have the contacts," says Gifford. "It takes a lot of highly qualified people to build a program like this."

For that reason, NICET suspended new certification for certification for ETTs on Jan. 1, 2006, until the new exam could be completed. Eventually, with major input from NETA and some of its member companies, NICET updated its practice analysis, which is the outline for the program, by its February 2010 deadline, and then started identifying industry experts who would be

qualified to write the 1,200 test questions for the updated four-level technician certification exam. “Most of the early work was done by NETA members,” Gifford says. “Now the volunteers tend to be shifting more toward the people who are outside of NETA, because they’re the ones who are really looking for a way to become certified.”

According to Gifford, there’s a predominance of volunteers from the industry who are in some way affiliated with a manufacturer, individuals working for engineering firms, or electrical contractors, as well as a few people from independent testing firms.

Through the diligence of these industry volunteers, questions for the Level I exam were written in June 2010. In October 2010, participants completed the questions for Level II. Recently, the group wrote the questions for the Level III exam. “It’s a little bit overwhelming at first when you realize it’s going to take thousands of volunteer hours,” says Doug Powell, president, National Switchgear, Lewisville, Texas, who has been giving his time to revitalizing the NICET exam since 2008. “But it’s really been a learning experience and an exciting thing to be a part of. I’m going to definitely finish the process.”

In the next few months, NICET hopes to roll out the Level I and II exams. However, with Level IV questions still to be written and subject matter reviews for all but Level I to be completed, as well as setting the passing scores for the exams, there is approximately a year’s worth of work still to be done, most of which will fall on volunteers’ shoulders. “A lot of what’s left will involve bringing in a different group of subject matter experts — people who didn’t write the test,” Gifford says. “So we still need more volunteers” (**Call for Volunteers** on last page).

**Two on a standard.** The initial two-part exam was developed to parallel the kinds of topics that would be covered in an associate’s degree education, according to Gifford. One part covered the electrical testing component, whereas the other included more general components, such as English, drafting, math, and science. “It was much more abstract and curriculum-oriented,” Gifford says.

As a result, the questions weren’t relevant anymore, says Powell. “That was really the whole reason why they started reviewing the test in 2000,” he explains. “By contrast, the new NICET exam will be current, with questions about what technicians have to be able to do in today’s environment.”

Overall, the new four-level program will be more focused on job skills. Each of the four levels — from entry level to Level IV — will be defined by a specific scope. In addition, the practice analysis defines what tasks that technicians need to have experience in at each of the levels, and then that serves

as the outline for the tests. “It is significantly different,” says Gifford. “We don’t have questions on English or math, for instance, except as they apply to doing technical reports. That’s the major difference in the structure of the program.”

There are also changes in store for currently certified technicians seeking to maintain their certification. “They have to show they’re keeping up with the industry and doing training,” says Gifford. “We will be looking at a work history requirement and also a personal recommendation, which are similar to what we have now, but we will also have what we’re calling performance measures, which are characteristics of good job performance that need to be verified by a supervisor.”

In addition, at Level IV, there will be a requirement for a write-up of a major project in which the candidate has been involved. “In general, recertification is also more oriented toward real job skills,” Gifford explains.

The new NICET certification will resemble the NETA individual certification. They will both have four levels and cover roughly the same content. “The two certifications are going to be pretty similar,” Gifford says. “The intent is that we’d end up with something that was fairly similar.”

So you may be thinking, why the need for another certification? According to a statement from NETA, the organization welcomes the fact that NICET has decided to re-establish the ETT category of its certification program around the model that NETA created in the ANSI/NETA ETT-2010 standard. “NETA and its accredited companies and certified technicians have contributed many hours of extensive input into NICET’s certification development process, and is gratified that NICET’s development path for certification is such that, when the program is completed, it will conform with the ANSI/NETA ETT-2010 standard,” continues the statement. “NETA is pleased to continue participating with NICET in its efforts to rework their certification, bringing surety to the quality of the program so that it aptly reflects the expertise established and required by the ANSI/NETA ETT-2010 standard.”

**Same difference.** In fact, the criteria for certifying individual technicians from both organizations will resemble each other enough that if NETA were to remove its company accreditation requirement, there may be no need for the NICET certification. “It’s not like a state agency where there’s only one licensing board, and there’s no competition for it,” says Jerry Gentle, location service manager, Schneider Electric, Raleigh, N.C., who, although he has worked with NETA on its standards and attended its conference, does not meet the criteria to take the NETA exam because of the status of his employer. “In this case, people are driven by having

an alternative. If they see a specification that requires certification, until this exam gets reopened, their only choice was to say they're not certified, even if they've done this work for X amount of years. NETA won't let them take its test."

Notwithstanding its affiliate classification for individuals unable to sit for NETA's exam who wish to participate in developing ANSI standards for electrical testing, for individuals to qualify for NETA certification, they must first be an employee of a NETA-accredited company. There is a distinct difference between 'certification' and 'accreditation,' according to NETA, with certification seeking to qualify an individual's knowledge of a certain subject, and accreditation seeking to qualify that an organization's practices are acceptable, typically meaning that they conform to established standards, behave ethically, and employ suitable quality assurance. NETA currently maintains more than 65 NETA-accredited companies who, in turn, employ more than 1,500 NETA-certified test technicians, ranging from Level I to Level IV.

While some people view the organization's certification process as restrictive, according to a statement from NETA, the intent is to best support the interest of the end-user, as the objectivity and competency of the testing firm is as important as that of the individual technician.

"NETA's unique accreditation process examines each company for fiscal soundness, freedom from undue influence of materially affected individuals, assures quality through examination of test reports, safety and calibration programs, and the certification of individual technician," reads the statement. NETA holds that, in order for an ETT to perform to the best of his or her ability, he or she should be supported by a company that provides a strong platform for successful execution of the job to be performed. That

is why NETA established the stringent requirements for becoming a NETA-accredited company, or NETA member, as they are sometimes called. This is the foundation for NETA's belief that the best way to assure safety and reliability is through third-party, independent testing.

At the time National Switchgear became involved in the NICET question-writing process, it was not a NETA-accredited company because it was considered a manufacturer, and Powell was searching for an alternate certification for his technicians. Since that time, the company underwent a reorganization, separating its manufacturing company from its field services testing company. "That was what was needed to meet NETA's bylaws," says Powell.

For the new company, National Field Services, NETA accreditation means additional job opportunities to bid on. "There are a lot of projects that write into the spec that the start-up, commissioning, and final acceptance testing has to be done by a NETA-accredited company," Powell explains. "When that's written into the specifications, it's a real roadblock to those companies that cannot meet that requirement."

As a result, although the company contained the same technicians and was led by the same management team, it wasn't able to even bid on those projects. "We knew we were qualified and had the right people, but it was just too difficult for us to overcome that requirement, so we decided to do what's necessary to get into NETA," says Powell.

Since receiving NETA accreditation, eight field service technicians have sat for the NETA certification exam and passed. But the technicians who work for National Switchgear are not allowed to sit for it. When the NICET exam is available, Powell expects the National Switchgear employees will take it. "We're looking to NICET to be able to offer that certification to those employees," says Powell, who will also encourage the NETA-certified technicians to sit for the NICET exam. "Really, the reason for that is it gives them just one more accreditation in the industry. It will be another credible source. You're going to have people that will pass both."

**The best of both.** Gentle, who has been certified through NICET since 1993, doesn't argue that NETA should



Photo courtesy of National Field Services

A NETA-certified ETT performs a power factor test on a de-energized 3,750kVA transformer.

dismantle its accredited-company by-laws. "NETA's idea of making sure it's a quality company is not a bad thing," he says. "Nobody would make a sound argument and say that's a bad practice." However, he believes there is an advantage to the individual certification alternative offered by NICET. "An advantage of NICET certification is that it stays with the individual," Gentle continues. "So if I'm working for an organization, and, for one reason or another, I decide to seek employment elsewhere, I am still a certified technician."

With the relaunch of its ETT program, NICET is taking a different approach to certification than NETA and will continue its tradition of certifying individuals, regardless of employer. "The essence of it is the qualification of the individual regardless of the workplace," says Gifford.

In fact, many companies may choose to maintain NETA accreditation while encouraging its employees to achieve both NETA and NICET certification. "I've had people in the workshops who are certified by NETA who say they would also like to get the NICET certification," says Gifford.

The cost for double certification would be a minor expense to most companies, compared to the benefits, according to Powell, even with the more portable NICET certification. "You wouldn't have to provide customers with the records of work experience of your employees to prove to them that your people are qualified to be on the job," he explains. "When you're a small, independent company, they scrutinize you very closely, especially if they haven't done business with you before, so you have to gather references and provide all your documents, including insurance forms and safety record. They'll even go through all your OSHA logs for accidents. They look at the work history of every one of your people. They really perform their due diligence.

So these certifications take a lot of work off the hands of the employer."

The certifications are a form of shorthand, in other words. "If we can provide certified employees for a company that accepts those credentials, then it's simplified," says Powell. "We just send them the certification, and we're done. For that reason, I think manufacturers and independent companies out there will quickly want to get their people certified, any way they can. It just prevents a lot of headaches when they're trying to market themselves and get new business."

Despite an absence of certifications, Mike Lawson, president, Independent Testing Agency, Glen Burnie, Md., has leveraged a 30-year career in electrical testing into a successful company with 10 employees. Yet, he has recently applied for NETA accreditation, as well as become involved in the NICET revitalization process because he believes certification will become more important to his business in the next few years. "It's something that is eventually going to become more prevalent as time goes on," Lawson says. "In other words, we've been very successful and very busy without it; however, once I looked into what NETA requires and I started volunteering my time for NICET, I realized that our technicians have a lot more to learn that I wasn't really aware of until I looked at these certification programs. It's going to be a benefit for us in the long run."

The biggest issue Lawson mentions is safety. In order to be certified in either organization, candidates must pass the exam, a large part of which covers safety training. Before anyone can even sit for the NETA Level III exam, he or she must have accrued five years of actual field experience in electrical testing as well as a minimum of 64 hours of safety training and 400 hours of technical education. A Level IV technician must have 10 years of field experience

and have accumulated more than 100 hours of safety training and 600 hours of technical education. "That prompts me to get more safety training for my employees," says Lawson.

As an independent electrical testing firm, as the company name implies, Lawson's firm fits the criteria for NETA accreditation. Still, he will encourage his technicians to pursue NICET certification once it's up and running. "We probably will go through the NICET certification process also, once it's complete," says Lawson, explaining that having both certifications will help his firm's prospects with projects funded with public money. "There are a lot of government contracts out there that are looking for individual certifications, but they're also looking for the company to be accredited. That would be an advantage."

Overall, this compatibility between the certifying bodies, which is sometimes thought of as friendly competition, may lead to easier bidding between clients and electrical testing companies, as well as higher standards for the electrical testing market. "We hope this will be a good thing for technicians out there on both sides," says Powell. "It'll float the boat a little higher for the whole industry."

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## Call for Volunteers

NICET acknowledges the need for a nationally recognized, third-party certification program available to all electrical testers, and hopes that support will be forthcoming from the industry to complete that program. If any readers might be willing to help with this project, they are asked to contact Brian Gifford, director, quality management, NICET, at [bgifford@nicet.org](mailto:bgifford@nicet.org).

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