

APPENDIX A to Brief on Exceptions of IBEW Local 51, AFL-CIO

III. SECTION 468.20 DEFINITIONS

B. Install

11. Commission Conclusion

Those concerned by the first notice rule's definition of "install" seek to either narrow its meaning or expand its meaning. In determining the appropriate course, consideration of the Commission's traditional role in the regulation of the energy industry is helpful. Among the Act's primary overall objectives for the Commission is to ensure reliable and safe electrical service. An obligation to ensure the safe and competent installation of DG facilities is certainly consistent with that objective. Staff is correct that electric utilities employ numerous individuals who are not trained as electricians and thus not competent to complete the installation of equipment and facilities related to the provision of safe and reliable electrical service and the Commission has not traditionally regulated those employees' qualifications. However, the Commission has regulated the work of the utility and ARES employees, contractors and subcontractors who perform the physical work related to the provision of safe and reliable electrical service. The Commission is persuaded that, consistent with the Commission's traditional scope of regulation, it may and, in this instance, should, regulate the physical work of DG facility installation. Just as the physical work of utility and ARES employees, contractors and subcontractors consists of more than just wiring and connections, so does the physical work of DG facility installation consist of more than just the wiring and connections necessary to interconnect the DG facility with the utility's distribution system. But in ensuring that the public receives reliable and safe electrical service, the Commission has not previously examined the ability of a utility to complete each and every step of a substation or other facility construction project. More to the point, the Commission has not inquired about the training credentials of those a utility employs to, for example, pour footings, erect framework, or string wire. Ensuring that the entities and individuals who perform this work are qualified to do is consistent with the ~~Rather, the Commission's traditionalis~~ concerned with ~~at~~ the utility's ability to provide its customers with reliable power and energy in a manner that is safe to both utility employees and the public at large.

~~IBEW, however, interprets Section 16-128A as requiring the Commission to oversee all installation work on a DG facility, even beyond the electrical work. For the first time, under IBEW's interpretation, the Commission would consider whether an entity is qualified to excavate dirt, tighten screws and wire nuts, bend conduit, weld, erect scaffolding, and successfully engage in a variety of other activities that may be necessary to place a DG facility into operation. The Commission has difficulty accepting that the legislature intended for the Commission to have such broad authority over the literal nuts and bolts of DG facility installation when it directed the Commission to ensure "that entities installing distributed generation facilities are in compliance with the requirements of subsection (a) of Section 16-128." Such an interpretation is even~~

~~more difficult to accept in light of the Commission's understanding that there is no history of problems with DG installations. Accordingly, the Commission does not accept IBEW's broad interpretation the Section 16-128A.~~

The scope of authority that the Commission believes the legislature intended in Section 16-128A is more consistent with the Commission's existing role in regulating the electric industry. ~~Today~~ the Commission's ~~is~~ over-arching concern ~~is~~ with the delivery of electricity. So as not to hamper the utility's efforts to deliver electricity any DG facility tied to the grid must be not only properly connected, but its physical installation must be completed in a way that ensures its integration into the distribution system will not disrupt the provision of safe and reliable electrical service. For these reasons and the reasons in the foregoing paragraph, the Commission is concerned that the first notice rule's definition of "install" is ~~also~~ too narrow~~broad~~. ~~In order to avoid confusion,~~ ~~the~~ definition of "install" must be revised to clarify that the activity covered by Part 468 is the physical work associated with placing the DG facility into service as well as the actual connection between the DG facility and the electric distribution system. The Commission therefore adopts, with a slight modification to emphasize the physical nature of the work, the majority of IBEW's recommended definition of "install". With the additional adoption of Staff's correction of the aforementioned typographical error, the revised definition of "install" reads as:

"Install" means to complete the physical tasks associated with placement of the DG facility and its connection to the electric utility's distribution system, in accordance with applicable building and electrical codes. ~~on-premise electrical wiring and connections necessary to interconnect the distributed generation facility with the electric utility's distribution system at the point of interconnection between the facility and the utility.~~ The meaning of "install" in this Part specifically does not include:

Electrical wiring and connections to interconnect the distributed generation facility performed by utility workers on the electric utility's distribution system;

Electrical wiring and connections internal to the distributed generation ~~distribution~~ facility performed by the manufacturer as part of the manufacturing process; or

Tasks not associated with the physical placement and electrical interconnection of the distributed generation facility, including those relating to planning and project management performed by individuals such as an inspector, management planner, consultant, project designer, contractor or supervisor for the project.

The Commission will retain the three exclusions from the first notice rule to add clarity to the Commission's intent, although it finds it necessary to modify them slightly to provide additional clarity concerning the scope of work regulated.

~~Narrowing the definition of install in theis mannerway proposed by commenters including ISEA and Vester and Riegel would frustrate the intent of Section 16-128A by diminishing the regulated work practically to the point of non-existence. Given the fact that actual interconnection is already regulated pursuant to the Commission's interconnection standards in Parts 466 and 467 and that work is performed by utility employees, those parties' proposed revisions to the definition of "install" would not appear to leave any work within the coverage of Part 468, rendering it largely moot. The Commission does not believe that by regulating the physical work of DG facility installation it will be imposing an undue regulatory burden on this burgeoning industry; any burden that does result is consistent with the Commission's authority and duty to ensure the safety and reliability of electrical service in this state and is consistent with the Act and Illinois DG policy. To begin with, Section 16-128A(b)(1) expressly grants the Commission authority to determine which entities are subject to certification under Section 16-128A. Defining "install" so that Part 468 applies to those entities making the interconnection between the DG facility and grid is consistent with this provision. Additionally, such a revision preserves the State policy to facilitate DG installation, particularly renewable DG installations, whereas the first notice rule's definition frustrates this policy by adding a regulatory burden to the installation of DG facilities that may very well result in fewer DG facilities being installed. A narrower definition also avoids any potential for conflict with the Commission's interconnection standards in Parts 466 and 467. Defining "install" in this way facilitates the implementation of the remainder of Part 468 as well. As discussed further below, limiting the definition of "install" to an area of traditional Commission authority will assist the Commission in establishing qualifications for those engaging in the installation work.~~

C. Qualified Person

21. Commission Conclusion

The determination of which entities are qualified to install DG facilities is made somewhat easier by the adoption of the above definition of "install." The Commission must still examine, however, the language of the statute, parse through the positions of multiple commenters, and identify the qualifying parameters for DG facility installers. Because of competing interpretations of the statute, ambiguities in some statutory language, and various practical matters, this task will not be simple.

As discussed earlier, DG facilities covered by Section 16-128A are not limited to renewable energy DG facilities. DG installations to which Part 468 applies include, but are not limited to, wind turbines, PV, fuel cells, hydro turbines, combined heat and power systems, hydrogen energy systems, and diesel and natural gas generators. The technology representing DG facilities clearly varies. Under Section 16-128(a), entities with the responsibility to "install" a DG facility must, among other requirements, possess the knowledge, skill, training, experience, and competence for the "particular craft, trade, or skill." The only way to make sense of this requirement in the broad scope of

constantly evolving DG technology and avoid regulatory micromanagement is to recognize that regardless of the particular DG technology involved, all of the physical installation work that bears on the safety and reliability of electrical service can be characterized as electrical work. Because any certification or training course targeted to a specific DG technology would not appear to qualify an individual to install the full panoply of available DG technology, the Commission must look to the only available comprehensive training in electrical work: the DOL-registered electrical apprenticeship program. This language indicates that an installer must have training and experience with the particular type of DG facility being installed. Such a requirement is logical given the various types of DG facilities. Based on the comments received, the Commission considers it unlikely that any one training program or certification could qualify an entity to install any kind of DG facility.

The first notice rule's requirements of completion of a DOL-registered electrical apprenticeship and training program is consistent with the requirements of Section 16-128(a). The statute requires the knowledge, skill, training, experience, and competence levels of DG installers to be "consistent" with the knowledge, skill, training, experience, and competence levels of utility employees as of January 1, 2007. It is possible to be consistent with the standards to which utility employees were held as of January 1, 2007 without being identical. However, the statute also provides that such knowledge, skill, training, experience, and competence levels "shall include, at a minimum, completion or current participation and ultimate completion by the employee of an accredited or otherwise recognized apprenticeship program for the particular craft, trade or skill." The statute's alternate "years of employment" qualification will be discussed below. No party disputes that the vast majority of utility employees in 2007 were participants in or had completed DOL-registered apprenticeship programs. Thus, in order to be consistent with the standards for utility employees in 2007, it is appropriate and necessary to look to the same DOL-registered apprenticeship as the gold standard for electrical training. The Commission finds that this position is further supported by the fact, reflected in provisions cited by IBEW, that both legislative and administrative branches of Illinois government, when called upon to flesh out training requirements, have drawn on federal standards. The Commission finds reliance on the federal standard particularly appropriate in light of the fact that Illinois, unlike many of its sister states, maintains no state apprenticeship agency to establish such standards.

Although the Commission is free to adopt alternate means by which an individual may become a "qualified person" it must ensure that any such alternate means truly provide for knowledge, skill, training, experience, and competence levels of DG installers "consistent" with the knowledge, skill, training, experience, and competence levels of utility employees as of January 1, 2007. In attempting to make this determination, the Commission has examined, among other things, the federal standards for apprenticeship provided at 29 CFR 29 and compared those with available information concerning proposed alternate paths to certification. The Commission is not persuaded that any of the alternative certifications satisfy the statutory requirement. The certification testing provided by NABCEP, UL and ETAI is technology-specific and does not necessarily provide an installer with the broad electrical training the Commission

believes is necessary to safely and reliably install the full range of DG technology. The only one of these three entities that actually provides training is UL and that 5-day course is clearly not commensurate with federal apprenticeship training standards. The training provided by community colleges certified by the Illinois Community College Board appears to be somewhat more comprehensive, but it lacks the rigor and the on-the-job training components that are an essential part of DOL-registered apprenticeship. Although these certification and degree programs appear to require completion of certain pre-requisites that ensure at least some training and/or on-the-job experience, those requirements vary and there is no assurance they will remain the same in the future. While the proposed alternate certifications and degrees may signify that the certificate- or degree-holder possesses certain valuable specialized knowledge, the Commission is not persuaded such credentials are either necessary or sufficient to qualify their holders as "qualified persons" within the meaning of Part 468.

~~, but it is not clear, however, whether this lengthy program includes training with the many types of DG facilities. A PV component of this program appears to be optional for enrollees. Whether a wind turbine component is available appears to depend on which area of the state an enrollee works. To consider someone who has completed this training to be qualified to install DG facilities generally is not prudent when it is not clear if their training covered each type of DG facility. Such a rule is particularly troubling since it would exclude from the installation an entity that received training directly from the manufacturer of the DG equipment.~~

~~—— IBEW's insistence on the presence of an apprenticeship program among the qualifications causes the Commission to pause. Generally, IBEW members participate in an apprenticeship program as part of their job training. "Apprenticeship" clearly has a particular meaning to IBEW and IBEW insists that the same meaning is what is intended by the statutory language of Section 16-128(a). IBEW cites three examples of apprenticeship programs being referenced in Illinois statutes or agency rules having the same meaning IBEW advocates now. The Commission has reviewed Section 30-22 of the Illinois Procurement Code, 30 ILCS 500/30-5 et seq., Section 45 of the Elevator Safety and Regulation Act, 225 ILCS 312/1 et seq., and Section 254.990 of 23 Ill. Adm. Code 254, "Vocational Education." Unlike Section 16-128(a), however, in each of these three instances, the reference to apprenticeship is accompanied by a reference in the same section to the DOL's Bureau of Apprenticeship and Training. This suggests to the Commission that the provisions cited by IBEW reflect the DOL training program because that is what the statutes and rule specifically call for. While the Commission is free to adopt the same DOL-registered electrical apprenticeship and training program that IBEW points to in the statutes and rule it cites, the Commission is not required to do so since Section 16-128(a) does not specifically call for such. As is apparent from the statutes IBEW cites, had the legislature intended for the Commission to rely on the DOL-registered program and no other, the legislature is capable of saying so. Nor is the Commission persuaded that the reference in Section 16-128(a) to the training standards of utility employees as of January 1, 2007 requires the adoption of the DOL-registered~~

~~apprenticeship program. The statute requires the training of DG installers to be "consistent" with the training of utility employees as of January 1, 2007. It is possible to be consistent with the standards to which utility employees were held as of January 1, 2007 without being identical.~~

~~— In the absence of express statutory direction as to what meaning to assign to "apprenticeship program," the Commission must ascertain a reasonable meaning which will aid in identifying qualified installers. Fortunately, the offered comments can assist in this endeavor. Generally, an apprentice is a beginner in a particular field or trade who learns the trade through academic instruction and on-the-job training; such learning can be considered an apprenticeship program. Several training programs applicable to various types of DG are identifiable among the comments. To begin with, none of those participating in this rulemaking entirely discredit the referenced DOL-registered electrical apprenticeship and training program. From the information provided, the Commission finds that it can provide training for at least certain types of DG installations. But the uncertain scope of its training efforts as it relates to DG installations and the fact that it takes five years to complete dissuades the Commission from adopting it as the sole means of becoming qualified to install DG facilities. The comments indicate that other referenced training programs, such as those offered by NABCEP, ETAI, and UL, are broadly recognized. ICCB-approved community college training programs also represent good training opportunities for installers. If these training programs include a lab or field component where students can obtain hands-on experience with DG technology, this would arguably be consistent with on-the-job training. The Commission finds such programs to be sufficient apprenticeship programs consistent with Section 16-128(a).~~

An additional area of concern for determining who should be considered qualified to install DG facilities relates to the second path to qualification in the first notice rule. The definition of "qualified person" includes those who have "satisfactorily completed at least 20 installations of distributed generation technologies." IBEW argues that to the extent the Commission wishes to establish an alternate standard based on "specified and several years of employment performing a particular work function that is utilized by an electric utility" the Commission must do two things: tie that standard to an actual number of years and ensure that the standard ensures knowledge, skill, training, experience, and competence levels consistent with those of utility employees as of January 1, 2007. ~~has no authority to include such a provision in the rule.~~ Requiring a minimum number of DG installations, IBEW argues, has no bearing on the training one has received or one's ability to generally perform electrical work of the type needed to safely and reliably complete installations of DG facilities. If the Commission does favor an alternative to a ~~training- DOL-registered apprenticeship~~ program, any such second path, IBEW argues, must be based on a specified number of years of employment during which the person gained not only DG installation experience but also experience safely and reliably performing electrical work. Staff and others argue that requiring a certain number of installations goes beyond the vague "specified and several years of employment" requirement by imposing a more stringent and meaningful requirement. For example, SoCore points out that a person who has completed 20 installations in two

years is going to be more qualified than a person who has completed two installations in 20 years.

The Commission finds itself in uncharted territory. The statute clearly allows the establishment of a path to qualification based on employment experience. However, no such standard has ever previously been established by the Commission. Although authorized by statute, the Commission believes it is not enough to mechanically set a "years of employment" threshold without also ensuring that such years of employment have actually provided the employee with the opportunity to gain work experience or obtain training that prepares him or her to safely and reliably perform the electrical work associated with installation of DG facilities. Nor is it appropriate, as Staff and others have urged, to set a number of installations of DG facilities without linking that to years of experience safely and reliably performing electrical work. Fortunately, the Commission has certain guideposts to help it chart this path. One such guidepost is the five-year length of the DOL-registered electrical apprenticeship completed by the state's electric utility employees. Other guideposts are the various certification and degree programs put forward by various commenters, many of whose comments suggest that installer working in the state have already obtained one or more such credentials. Based on the information before it, the Commission finds that an individual may be qualified to perform installation of DG facilities if he or she has been verifiably employed performing hands-on electrical work for a period of at least five years and has obtained one of the following certifications or degrees: NABCEP Solar PV Installer, NABCEP Small Wind Installer, UL PV Systems Installer, ETAI Level 3 PV Installer, ETAI Level 3 Small Wind Installer, or an AAS degree in Renewable Energy. The Commission believes that this combination of years of experience plus demonstrated knowledge best satisfies the statutory mandate and will allow individuals already working in the industry to continue doing so with minimal, if any, disruption. disagrees with IBEW's position and concludes that it is within its authority to provide for an alternative path to qualification. As the comments in this rulemaking suggest, the legislature arguably recognized through the "specified and several" provision in Section 16-128(a) two concepts: first, already experienced DG installers should not be restricted from the marketplace simply because they learned their trade and gained their experience outside of an accredited or recognized program prior to Part 468 taking affect; and second, a DG installer can learn the trade and gain experience outside of an accredited or recognized program even after Part 468 takes affect. Ignoring either of these concepts would render the statutory language meaningless, which is contrary to the principles of statutory interpretation and construction. The Commission also generally agrees that specifying a number of installations creates a more meaningful rule than specifying a number years of employment. As the commenters in this rulemaking indicate, some installers may practice their trade for many years and have few DG installations to rely on for experience. Therefore, specifying a minimum number of years of employment bears little relationship to the amount of experience one may have installing DG facilities. This is a concern that IBEW should appreciate. Because specifying a minimum number of installations is more definitive and provides more assurance of competency by an installer, the Commission finds that an alternative path to qualification based on a

~~minimum number of installations is permissible as a higher standard than what the Act requires.~~

~~As for the specific number of installations necessary to be considered qualified, several commenters have offered competing views. A few have suggested retaining the requirement of 20 installations. In light of the nature of the Illinois DG installation market, Staff now recommends 10 installations. Other commenters have recommended five, while some even suggest three. The Commission agrees that some reduction from 20 is necessary to avoid thwarting the intent of the statutory language and unnecessarily hampering the DG installation market in Illinois. Because commenters indicate that some areas of the State have seen very few installations of particular types of DG, the Commission is concerned that requiring a minimum of 10 may have undesired impacts on the market, particularly given that there is no indication in this proceeding of actual problems with DG installations. But at the same time, the Commission questions whether three installations is sufficient. Accordingly, at this time, the Commission concludes that five installations will be sufficient in order to be considered a "qualified person" under Part 468. The Commission may revisit this conclusion if future evidence suggests that this number of installations is not appropriate.~~

~~In order to reflect the statute's emphasis on the substance of the training over the form of the training, t~~The Commission finds that the following definition of "qualified person" will be adopted for purposes of Part 468:

~~"Qualified person" means a person who performs installations on behalf of the certificate holder and who has either satisfactorily completed at least five 20 installations of distributed generation technologies prior to effective date of this Part, or has completed at least one of the following training programs incorporating lab or field work and received a certification of satisfactory completion: (1) an apprenticeship as a journeyman electrician from a DOL registered electrical apprenticeship and training program; (2) a North American Board of Certified Energy Practitioners (NABCEP) distributed generation technology certification program; (3) an Underwriters Laboratories (UL) distributed generation technology certification program; (4) an Electronics Technicians Association (ETA) distributed generation technology certification program; or (5) an Associate in Applied Science degree from an Illinois Community College Board approved community college program in the appropriate distributed generation technology. To be considered a "qualified person," the experience and/or training relied upon must be with the same type of distributed generation technology for which the qualification status is sought, and received a certification of satisfactory completion. Alternatively, a "qualified person" may be a person who performs installations on behalf of the certificate holder and who has obtained one of the following credentials: (1) a North American Board of Certified Energy Practitioners (NABCEP) Installer Certificate for Solar PV or Small Wind Installation; (2) an Underwriters Laboratories (UL) PV Systems Installer Certificate; (3) an Electronics Technicians Association, International (ETAI) Level 3 Small Wind Installer or Level 3 PV Installer Certificate; or (4) an Associate in Applied Science~~

degree from an Illinois Community College Board approved community college program in Renewable Energy or other Distributed Generation Technology.

The Commission appreciates the suggestion that it be given discretion to add training programs as they become available, but codifying such discretion is not appropriate for a rulemaking. The Commission also recognizes that some commenters have suggested including electricians licensed by AHJs as qualified persons. Due to the lack of uniformity to how AHJs license electricians throughout Illinois, the Commission is not comfortable extending the status of "qualified person" to all such electricians.

In addition, the Commission finds that this definition of "qualified person" and the previously adopted definition of "install" will not detrimentally impact Illinois meeting its RPS obligation. Another benefit of these definitions is that they will foster work force development of a well-qualified, highly trained work force in Illinois as well.

D. Directly Supervised

4. Commission Conclusion

~~The Commission has considered the comments concerning this definition and, based upon its revisions to the definition of "qualified person" above, finds that the IBEW's proposed revision is appropriate. but is not convinced that any revision is warranted. Consistent with the previously discussed definition of "qualified person," the first notice rule definition of "directly supervised" recognizes that the statute allows one to become qualified through completing installations outside of formal training. Absent such a provision, a person seeking qualification would not be able to do so through the alternative path of completing five installations.~~

The definition of "directly supervised" will now read as follows:

"Directly supervised" means that there is a person on-site who meets the qualifications to perform distributed generation (DG) installations who is available for consultation and review of work performed by apprentices who may be performing installations.

VI. SECTION 468.50 REQUIRED APPLICATION INFORMATION

I. Commission Conclusion

With regard to the information sought through subsections (a) through (e) of Section 468.50 in the first notice rule, the Commission easily finds that this information is necessary and relevant to administration of certification under Part 468. As for subsections (f) and (g), the Commission agrees with those who question the need for this information. No commenter has offered support for the retention of these subsections. Because the usefulness of this information is questionable, the Commission will delete the requirement to provide the information in subsections (f) and (g) of the first notice rule.

The Commission disagrees, however, with those seeking the complete elimination of subsection (h). Some level of information pertaining to the installers of the DG facilities is necessary to ensure that the entity seeking certification will be using qualified persons. Due to revisions elsewhere in Part 468, the contents of subsection (h) must be revised to conform with those revisions. Accordingly, subsections (f), (g), and (h) of Section 468.50 are revised as follows:

- f) ~~An organizational chart demonstrating the applicant's corporate structure, including all affiliated companies, if applicable;~~
- g) ~~An exhibit containing an internal corporate organizational chart indicating the position and name of the qualified persons who will perform or supervise installations to satisfy the requirements of this Part; and~~
- h) ~~An exhibit (with any confidential personal information such as a Social Security number redacted) containing the following information for each qualified person who will perform or directly supervise installations to satisfy the requirements of this Part:
 - 1) ~~A copy of the DOL certification of satisfactory completion of the relevant training program(s) a DOL-registered electrician apprenticeship program; and/or~~
 - 2) ~~An affidavit by each qualifying person attesting to having satisfactorily completed at least five years of hands-on employment as an electrician together with, for each such person so attesting, a copy of the certification or degree required pursuant to this part's definition of "qualified person." Proof of the satisfactorily completion, prior to the effective date of this Part, of at least five twenty installations of distributed generation facilities, said affidavit to specify the type of each distributed generation facility (wind turbine, fuel cell, natural gas generator, etc.).~~~~

VII. SECTION 468.60 CERTIFICATION REQUIREMENTS

I. Commission Conclusion

Consistent with its findings concerning "qualified persons" above, the Commission ~~concurs with~~ rejects the view of Staff and others who believe that Part 468 should permit non qualified persons to install DG facilities under the direct supervision of a qualified person. An exception to this general rule is that an individual enrolled in a DOL-registered apprenticeship program may be allowed to perform work associated

~~with installation so long as he or she is under the direct supervision of a journeyman electrician. Such on-the-job experience is and has historically been an essential building block of a DOL-registered apprenticeship and direct supervision of the apprentice ensures the work will be performed safely and competently. Doing so is consistent with the language in Section 16-128(a) that allows one to gain qualified installer status through "specified and several years of employment." If an installer is not allowed to work under the direct supervision of a qualified person and themselves become a "qualified person" in that manner, the referenced statutory language would have no meaning. Furthermore, permitting DG installation work to occur this way promotes work force development in Illinois. Revisions to subsection (d) are necessary, however, to preserve consistency with Section 468.20. Accordingly, Section 468.60(d) will be amended to read as:~~

- d) The Applicant certifies that every installation of a distributed generation facility will be performed only by:
 - 1) a qualified persons; or;
 - ~~2) an electrical contractor who is not a qualified person, provided he/she is directly supervised by a qualified person; or;~~
 - 23) a person who is not a qualified person but is enrolled in a DOL-registered electrical apprenticeship program training program that upon satisfactory completion will meet the requirement to become a qualified person, DOL registered electrician apprenticeship program who provided he/she is directly supervised by a qualified person.