



Safety Measures ELECTRICAL

*"All electrical incidents are preventable!
Keep employees safe with an up to date
Electrical Safety Program and appropriate training."*

CSA Z462: Your Electrical Safety Program And Other Qualified Electrical Workers

By Terry Becker, P.Eng.

CSA Z462 defines a Qualified Person as "one who has demonstrated skills and knowledge related to the construction and operation of electrical equipment and installations and has received training to identify the hazards and reduce

the associated risk."

What other workers besides Journeyman Electricians fall within this definition? Have you identified this and followed up to ensure your Electrical Safety Program addresses their

roles and responsibilities defining their scope of energized electrical work and limits?

Specifically, other “trades” have formal training in energized diagnostics and troubleshooting. These other trades can include: AC & Refrigeration Technicians; Overhead Door & Crane Mechanics; Elevator Mechanics; Cathodic Protection Technicians; Power Engineers; and Fire Alarm Technicians. Are there any I may have missed? What about Instrumentation Technicians?

Where do P.Eng. Electrical Engineers and Certified Engineering Technologists (CETs) fall? Are they directly Qualified Electrical Workers – Low Voltage or High Voltage?

Provincial and Territorial “Trades Regulations” provide overriding regulatory oversight on what energized electrical work tasks specific “trades” can perform. The worker role descriptions I listed above have formal training, most limited to low voltage <750V work tasks and also limited to certain equipment, e.g., Instrumentation Technician can only work on control systems and related equipment or Fire Alarm Technician may only work on the fire alarm system. Most of these workers would perform the energized electrical work downstream of a local disconnect as well, and scope of work can be further limited by the training and equipment they work on, e.g., Fire Alarm Technician.

P.Eng. Electrical Engineers and Certified Engineering Technologists may work for specialized maintenance and testing contractors or be manufacturer’s technical specialists and would perform specialized electrical equipment maintenance and testing work tasks only. They may be authorized to rack in or out power circuit breakers and install temporary protective grounds for isolation purposes related to the low or high voltage (>750V) electrical equipment that they would work on.

All of these roles should be documented in your company’s Electrical Safety Program. The roles and responsibilities descriptions would ensure what the specific energized electrical work the “trade” or “profession” can and cannot do including dealing with electrical equipment when it is in an abnormal condition. This also establishes policy.

A component of the CSA Z462 Risk Assessment Procedure related to Likelihood of Occurrence is ensuring the energized electrical work task is assigned and accepted by a Qualified & Competent worker. With the roles & responsibilities of

workers documented, communicated and understood we ensure appropriate due diligence is in place. Jobs and related energized electrical work tasks for specific electrical and controls equipment shall be assigned to the appropriate worker based on Qualification training and validated competency.

Your company’s Electrical Safety Program is the key to ensuring you have appropriately documented and implemented the requirements of the CSA Z462 Workplace electrical safety Standard used as a basis for due diligence to applicable OH&S Regulations. Compliance with applicable “Trades Regulations” is a mandatory requirement. Where you have the authority to train an employee to perform specific energized electrical work on your company’s property developing, implementing and auditing an Electrical Safety Program ensures you can demonstrate that you have identified, trained and provided the employee with applicable risk control methods to reduce risk, including procedures they would use to execute work.

Ensuring energized electrical work is assigned to qualified and competent workers that understand their role’s scope of work limitations and that this information is documented in your company’s Electrical Safety Program ensures that the likelihood of occurrence of exposure to arc flash and shock hazards for those workers and thus risk related to having the energized electrical work task performed by them is as low as reasonably practicable.

Please submit any questions or comments you may have to Kevin Buhr and myself at kevinb@electricalline.com and tbecker@danatec.com.

Terry Becker, P.Eng., CEMCP, IEEE Senior Member is the first past Vice-Chair of the CSA Z462 Workplace electrical safety Standard and currently a Voting Member and Working Group 8 Leader, Annexes. Terry is also a Voting Member on the IEEE 1584 Technical Committee and an Associate Member of the CSA Z463 Guideline on maintenance of electrical systems. Terry is a Professional Engineer in the Provinces of BC, AB, SK and ON. Terry is Senior Vice President, Electrical Safety, Danatec Educational Services Ltd., providing electrical safety consulting, licensed products and training solutions. www.danatec.com.



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