



# Safety Measures <sup>ELECTRICAL</sup>

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

## CSA Z462-2015, Clause 4.1.5 Electrical Safety Program

**By Terry Becker, P.Eng.**

Do you have an Electrical Safety Program? What is an Electrical Safety Program? Why do I need an Electrical Safety Program? Who manages the Electrical Safety Program? When should I develop and implement an Electrical Safety Program? What does the CSA Z462, 2015 Edition advise with respect to development and implementation of an Electrical Safety Program?

Widely misunderstood in industry is what an Electrical Safety Program is. When we review Clause 4.1.5 in CSA

Z462, 2015 Edition, CSA Z462 Annex A Aligning implementation of this Standard with occupational health and safety management Standards and CSA Z462 Annex E Electrical safety program we are provided high level information on structurally what information the Electrical Safety Program may contain as content. CSA Z462 as a document is not an Electrical Safety Program, it is a Standard! The content provided in CSA Z462 can be referenced by the Electrical Safety Program and utilized in safety management system approach.

The information provided in CSA Z462 with respect to an Electrical Safety Program doesn't constitute the "framework" of a complete and comprehensive Occupational Health & Safety Management System which is actually what an Electrical Safety Program is specific to the electrical hazards of arc flash and shock. We need to look to Occupational Health & Safety Management System Standards such as CSA Z1000 for Canada and ANSI Z10 for the United States. In Canada we can also consider the recommendations made by Provincial or Territorial Governments on the Certification of Recognition (COR) "framework" they may recommend. CSA Z462, Annex A provides a high level correlation between content in CSA Z462 and Occupational Health & Safety Management System Standards.

Wow yes this sounds wordy and complicated, but in reality it isn't. Ultimately an Electrical Safety Program needs to be a full or comprehensive "toolbox" for Management, Supervision, Qualified Electrical Workers and Non-Electrical Workers when they need to know how arc flash and shock hazards will be identified and managed at the employer's workplace related to assigned work tasks. The Electrical Safety Program is a work task based safety management system. The Electrical Safety Program also provides additional documentation tools to ensure the new required Risk Assessment Procedure is documented and that assumptions made in determining the Work Task's Risk Level are field verified by the Qualified Electrical Worker.

The Electrical Safety Program's "Table of Contents" should flow the information presented in a logical manner

and ultimately be a resource for the identification and implementation of preventive and protective control measures applied to the CSA Z462 Risk Assessment Procedure (RAP).

How do you develop an Electrical Safety Program? Assign an Electrical Safety Program Manager and constitute an Electrical Safety Steering Committee (ESSC) at your worksite, the ESSC may be two people or twenty. Get organized and identify the Electrical Safety Program development and implementation as a "project." Schedule meetings and establish a project schedule, six to nine months for development. Plan for Management approval and Electrical Safety Program Roll Out training and transitioning the application of the policies, practices, procedures and field based documentation (e.g. Energized Electrical Job Risk Assessment (EEJRA) and Energized Electrical Work Permit (EEWP)) the Electrical Safety Program will require. Ensure workers are advised that all electric shocks and arcing faults and arc flashes are recordable electrical incidents! Be prepared to enforce the requirements outlined in the Electrical Safety Program with progressive discipline. Ensure that the Electrical Safety Program includes an entire section on Electrical Specific PPE, Tools & Equipment including specification, procurement, inventory management, assignment, storage, pre-use inspection & checks, and frequency of testing. Ensure you provide direction on Electrical Incident Reporting & Management and Electrical Emergency Response requirements.

Why do you need an Electrical Safety Program? It provides the best due diligence to OH&S Regulations, it ensures the employer has in place required policies and practices that can be enforced, it provides specific direction to your workers and requires a consistent approach for implementation, it provides documented proof in the field that your company is applying CSA Z462, and that your workers are applying the training they received. It will help you control the related costs of preventive and protective controls implemented. When an Internal Electrical Safety Audit requirement is included it will lead to sustainable and measurable performance! Ultimately the Electrical Safety Program is used to save lives and reduce risk of exposure to electrical hazards to as low as reasonably practicable!

Get started or update or replace what you have developed to date! An Electrical Safety Program is actually the first thing you should do with respect to arc flash and shock hazards for your workplace!!

Please submit any questions or comments you may have to Kevin Buhr and myself at [kevinb@electricalline.com](mailto:kevinb@electricalline.com) and [terry.becker@esps.ca](mailto:terry.becker@esps.ca).

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