

ESOURCE NEWSLETTER

Personal Protective Grounding for Electrical Safety

In an industrial setting, personal protective grounding is something that can be easily overlooked. It is also something that is widely misunderstood.

In fact, in most places temporary protective ground cables are not even thought of as PPE, but that is exactly what they are! Notice the title refers to personal protective grounding, well you are the person and it's for that very reason you need to understand these next few concepts.

Why is Personal Protective Grounding needed?

If you are attempting to establish an electrically safe work condition you need to apply personal protective grounds to each phase of the system, as close to where the work is being performed but what for?

Well, with systems rated 750 volts and above there are actually a number of reasons you are going to want to do this, all of which can lead to a deadly shock or Arc Flash.

1. Accidentally Re-energized Circuits

The first and most obvious reason being that the circuit could be accidentally re-energized. Maybe there are remote operators that close the circuit after you have already completed your voltage tests. Or possibly the bus you are working on is connected to a diesel generator.



2. Chance of a Lethal Shock

Secondly, induced voltages and currents are a very real possibility in an industrial facility. With plenty of cables running alongside one another as well as other high-voltage equipment in close proximity, there is potential to receive a lethal shock even after the equipment is disconnected from the system.

3. Equipment Insulation can fail

Over time the equipment starts to break down and current will start to flow where it is not supposed to.

How does personal protective grounding work?

The basic concept is that once you have de-energized a circuit, opened the disconnect, visually verified, applied locks and tags and tested for absence of voltage you still need to apply personal protective grounds before you can really say (for reasons listed above) the circuit is de-energized. (Continued, Page 2).

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The sequence of applying the grounds is very important!

Always start with the grounded end first, then connect the phase conductors starting with the phase closest to your body and working away. When you go to remove the ground cables make sure you do so in the reverse order of what I just described.

So now that I've briefly described how to get the grounds on...

- How do they work?
- What if someone accidentally turned the power on?
- What is going to happen?

Well... this might sound crazy, but you just installed those ground cables in order to ensure that if the system was re-energized you would get the absolute most short circuit current to flow through the system as possible!

What? The most current possible?

Yes. There are a couple reasons for this.

If you have properly installed the personal protective grounds and they are sized correctly for the system, then they are going to create "the path of least resistance" for the fault current. This is good. The first thing is that you will not be the path of least resistance!

Secondly, it maintains the voltage at a safe level until the upstream protective devices can trip the system. Ground cables are very durable but there is a limited amount of time that they can withstand extreme amounts of current. The faster the current is interrupted the more likely the ground cables themselves do not become the hazard... remember you are probably standing very near when this happens.



Any other considerations?

As with any other personal protective equipment, personal protective grounds require periodic inspections and do need a certification to prove that they can do the job. If a set of ground cables was exposed to a short circuit - they do need to be tested and re-certified, before you can rely on them again.

And do not forget that the ground cables need to be sized appropriately to the system that you are working with. For example, a maximum fault current level will be much different between a 13.8kV and a 600V piece of equipment and those two systems would call for different specifications for your personal protective grounds. _____



Indiana Municipal Electric Association

MUTUAL AID *Workshop*

Be ready when it matters most.

Join IMEA for an interactive Mutual Aid Workshop designed to strengthen your team's preparedness, coordination, and leadership during emergency response situations. This hands-on, five-step program gives utility professionals the tools and confidence to effectively request and deliver mutual aid across Indiana and neighboring regions.



Wednesday, 6 May
10:00 AM–2:00 PM



Our Location

**ST. JOSEPH COLLEGE
1027 S. COLLEGE AVE,
RENSELAER, IN. 47978**



Why attend?

Because when the lights go out, preparation makes all the difference. You'll gain a clear understanding of:

- How mutual aid networks are structured and coordinated
- What to expect during real-world response scenarios
- The financial and legal frameworks that protect your utility
- How mutual aid improves restoration speed, reduces costs, and supports your crews

Beyond the training, connect with peers and industry partners at our Mutual Aid Open House. Enjoy lunch, build relationships, and explore solutions during an informal vendor session focused on mutual aid support.



Register online:
**[www.imea.com/
workshops](http://www.imea.com/workshops)**





2026 IMEA Annual Business Meeting & Vendor Expo

REGISTRATION IS AVAILABLE IN MAY!

IMEA Annual Business Meeting & Vendor Expo provides an opportunity to learn from industry experts and network with peers. It attracts all levels of the Indiana utility professionals and staff from member communities, as well as IMEA staff.

The conference features educational sessions on technical programs focused on the utility industry. It also provides an opportunity to collaborate with other utilities one on one during the IMEA business meeting.

In order to make sure that all guest are provided hotel room availability we ask that you reserve your room ahead of time. This way we are able to keep track of quantity and increase the group block if needed.

We need your voice to be heard & your experience of the Public Power Industry to share with others during the IMEA Annual Business meeting.

We Look Forward to Your Participation!



13 - 15 October, 2026



**Belterra Casino Hotel & Resort
777 Belterra Dr, Florence, IN 47020**

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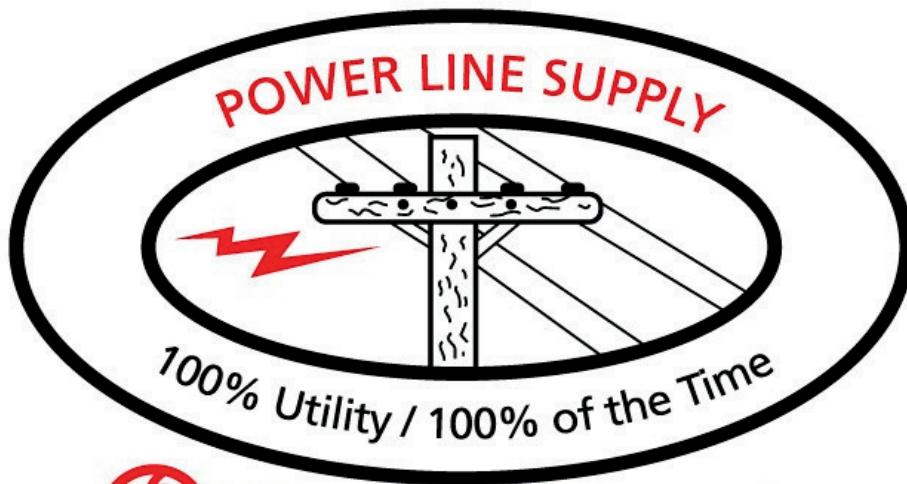
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WHY YOU SHOULD CHOOSE IMEA LINEMAN TRAINING INSTITUTE

- Better Student-to-Instructor Ratio at 10:1 versus larger schools
- Each lineman instructor has at least 20+ years of experience
- Diverse instructor staff. Many of our linemen have not only over 30 years' experience but are well versed in substation, overhead distribution, underground utility construction, and transmission.
- Our instructors are patient, knowledgeable, constructive, and collaborative with students-not adversarial.
- In-house FULL CDL training and testing facilities. This cannot be emphasized enough as obtaining a CDL is critical to job placement, and IMEA makes obtaining a CDL very easy and affordable versus other programs. MOST schools will help you only obtain the permit versus earning the entire CDL. We do ALL of the training and TESTING in-house, on-site.
- Job placement services and career planning services.
- IMEA is a Non-Profit Organization, unlike other schools so we can provide the same training at a significantly lower cost.
- On-site lodging.



INDIANA MUNICIPAL
ELECTRIC ASSOCIATION

LINEMAN TRAINING INSTITUTE

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*Enrollment packages
available. Please visit:
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OUR PROFESSIONAL SERVICES



Personal Protection Equipment and Procedures

Students will learn about safety working procedures and personal protection equipment.



Electrical Systems

Students will learn the basics of the entire electrical system from generation through transmission, distribution, and conversion.



Basic Electricity

The students will be taught the fundamentals of practical and mathematical application of Direct Current and Alternating Current.



Transformers

Students will learn how and why transformers are used, banked, energized and the various configurations of both Delta and Wye.



Personal Protective Grounding

Students will learn how and why companies work on transmission and distribution lines as well as all equipment and methods used when working.



Rigging And Knot Tying

Students will learn how to tie specific knots, splice rope and learn the proper use of various ropes, slings, block and tackle.

Why Us?

Are You Ready To Begin Your Career Ahead Of Your Competitors?

Our lineman school program will allow you to begin your career ahead of all the rest. Our students have experience performing the jobs of a lineworker, as well as obtaining professional knowledge of the industry while they proceed through our program. Our students are well equipped to stand out from the interview to the actual job. Our program will provide an outlet for electric companies to search for new qualified applicants.

Our students will be able to enter the industry with the technical skills that their employers can't pass up!

Do you want to learn from Experienced and Knowledgeable Linemen?

The lineman school instructors at IMEA Lineman Training Institute have extensive real-world experience in power generation, transmission and distribution. Their exceptional understanding of the industry and what companies are looking for makes our program a cut above other school. Our students will have hands-on experience in the trade and be coached in problem-solving skills in order to help them excel in their work.

Do you want to be able to graduate and have the opportunities for immediate positions anywhere? Then this trade is the right career for you. IMEA Lineman Training Institute provides its lineman school graduates with a listing of municipalities that will be useful in your search. Our instructor's connections with the leaders of the trade will also give the students of IMEA Lineman Training Institute the upper hand at finding a career. Our students will be trained, not only to look for the job, but to find jobs. A career planning class is required to help our students create a resume and learn to find their own jobs.

So is it what you're looking for?



Indiana Municipal Electric Association

IMEA Lineman Training Institute

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Noblesville, IN. 46060

Our Location

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