

POWER SOURCE

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Electrical Safety: We Can Do Better

By Bart Curtin, General Manager, High Voltage Electric, St Charles, IL



emergence of new technology, and it's time to get serious about safety.

“As contractors, providing our electricians with more safety education opportunities can only increase their value and efficiency in the workplace.”

Here's a disturbing fact to keep you reading: Labor statistics report that 140 construction workers are killed each year by electrocution. And if that doesn't do it for you, electricians and their apprentices account for 25% of those deaths. It's time to act.

If you've been in the business as long as I have, you've seen some of these fatal occurrences first-hand. While I'm proud to report that we haven't had an accident at High Voltage Electric in 30 years, my concern lies within the industry as a whole, and now is not the time to be complacent. The electrical field is constantly changing with the

As contractors, providing our electricians with more safety education opportunities can only increase their value and efficiency in the workplace. And workers who are valuable to their company are also valuable to themselves. A valued and appreciated employee is a motivated employee who creates a safe and positive work environment. That's why it's essential that all IBEW electricians be trained in the latest techniques of flash protection, fall protection, confined-space safety, and first-aid, as well as the OSHA 10-hour minimum safety requirement.

Our industry is unlike any other. On any given day, the moment an electrical worker becomes complacent on the job, lives are at risk. There have been numerous accounts of electricians suffering fatal electrical shocks by simply not following the proper lockout/tagout procedure or beginning service or maintenance without grounding the energy source. While this may seem like common knowledge, electricians should never grow tired of being reminded by an employer or co-worker of the vital importance of practicing the utmost safety awareness at all times.

According to government data, over half of all electricians killed by electrocution were working on "live" electrical circuits without the proper protection. This disturbing statistic is proof that accidents can happen at any time. And therefore, a responsible employee, regardless of rank or title, should never be immune to the good opinion of others.

Northeastern Illinois NECA and IBEW contractors and electricians should be proud of our excellent safety record, and motivated to maintain

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these high safety standards. On behalf of our labor-management partnership, I'd like to congratulate our members on their continued

commitment to safety. But as industry-wide accidents continue to occur, we must understand that more can be done. I hope you'll join me

in realizing the importance of taking additional steps to ensure the life-safety of all electricians. ■

A Change In Attitude

By Jerry Branson, Business Manager, IBEW Local 461



Thomas Jefferson once said, "Nothing can stop the man with the right mental attitude from achieving his goal; nothing on earth can help the man with the wrong mental attitude."

While I risk sounding old-fashioned in quoting our nation's third president, I think we can learn a lot by examining these words in the context of our industry. For over a century, the International Brotherhood of Electrical Workers has been regarded as the greatest labor union on Earth, and it's important that we return to the values of strength and professionalism which brought about this honorable reputation. Non-coincidentally, these cornerstone values result from bringing a positive attitude to the job every day – something our beloved union has been sorely lacking in recent times.

Last summer, all of the North American Business Managers met with IBEW International President Ed Hill, to discuss the future of our organization. President Hill explained how we are currently faced with a stagnant economy and hostile business climate, and that we need to react with a positive attitude during these difficult times. We can survive a cyclical economy, but what we can't tolerate is the corrosion from within our organization, the weakening of our greatest strengths – attitude, professionalism, and a sound work ethic. We can recover from losing market share because of a down economy, but it's unacceptable to lose it because of our own actions. This is what we must change.

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Bringing a positive attitude to the job every day is as simple as showing up

on time, protecting the customer, and working as a true craftsman. As IBEW members, if we carry ourselves with pride and execute the best labor practices money can buy, everything else will fall into place. The important factor is putting forth our best effort on a consistent basis. If we can work together as a team and enter every job with a positive mindset, morale will build and success will follow.

A common cause of poor attitudes is bringing personal problems to the job site. We've all had bad days, but we must guard against allowing these bad days to become bad habits. IBEW has always been a family-oriented organization, and it's important that we operate as such. This means lending a hand to a co-worker in need, which can be as simple as holding a ladder or helping to move a heavy piece of equipment. If we are all willing to help each other on both good and bad days, we create a positive work atmosphere, which can improve all of our moods at home. It's time to stop asking what the union can do for an individual, and instead, work for the common good of the union. A selfless work ethic, as opposed to any other approach, will garner more personal success in the long run.

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As I near the end of my career, I reflect more and more on my wonderful experiences as a union electrician. And I'm happy to know that my son

will enjoy the same good fortunes, just as my father before me. My goal is to leave just as I entered, with the hope that the IBEW will flourish because of

the positive atmosphere created by the optimism of its members. ■

The Solar Revolution: Are We There Yet?



When was the last time you changed the batteries in your calculator?

Probably never.

Most calculators don't run on batteries. They run on solar cells, and in some cases don't even have an off button. As long as there is light, there's power. And the best part is, it's free. Which poses a valid question: If it works so efficiently for your calculator, why can't everything run on solar energy? Unfortunately, it's not that simple, and the answer lies in the functionality of the solar cell.

Those solar cells you see most commonly on calculators are called photovoltaic cells, which simply stated, convert sunlight directly into electricity. In essence, PV cells are made of special materials called semiconductors, such as silicon. When light strikes the cell, the semiconductor

absorbs it, releasing a flow of electrons. The electron flow provides a current, and the cell's built-in electric field causes a voltage. The combination of the current and voltage produces power for external use. The result is a clean, non-polluting, renewable energy.

Once exclusively used for space satellites, PV cells have slowly made their way into other everyday uses. If you look closely, you'll notice PV cells are used to power emergency road signs, water buoys, and the lights in many parking lots. The greatest benefit of photovoltaics is that it is highly reliable and requires little maintenance, making it an ideal power source in remote locations.

With the emergence of this fascinating technology over 20 years ago, industry experts predicted a "solar revolution" or the idea that one day we will

all use free electricity from the sun. When shining brightly, the sun emits 1,000 watts of energy per square meter of the planet's surface. The challenge facing researchers is how to collect all of that energy so our homes and offices could be powered as easily and reliably as your solar cell calculator. For consumer product applications that require small amounts of energy (like calculators), the shift to solar power dependency has been easy. And as researchers figure out ways to make the technology more cost effective, larger applications will become more prevalent.

As with most alternative energy technologies, photovoltaics has its fair share of obstacles to overcome before its use becomes more widespread – the most obvious being what to do when the sun isn't shining. Batteries can provide the needed backup power, but they add significant cost

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and maintenance to the PV system. The other option is to connect to a utility grid, where excess energy gathered from the sun is exported to the grid, stored, and then sold back to the utility company. Given the special equipment and maintenance required by batteries and utility grids, neither option is a very cost-effective solution.

While we may never see a society completely dependent on solar power, it is important for Northeastern Illinois NECA and IBEW to understand its current uses, and remain up-to-date with future developments that could result in an increase of PV systems in residential and commercial buildings.

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In fact, recent years have seen rapid growth in the number of PV installations in the buildings and homes of environmentally conscious companies and individuals, despite its high cost.

So sit tight. A broader use of solar power is still on the horizon. The contractors and electricians of Northeastern Illinois NECA and IBEW have already begun responding to an increased demand for the installation and maintenance of these alternative energy systems.

In the meantime, enjoy your calculator. It may be the most reliable and energy-efficient product you own. ■

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