

You build it. We help PROTECT it!



Recognizing the importance of disaster mitigation for the architect and engineering communities, *Build & Protect*, is a newsletter written specifically for A&Es to provide unique content related to lightning protection system (LPS) design, specification, quality assurance, inspection and maintenance.

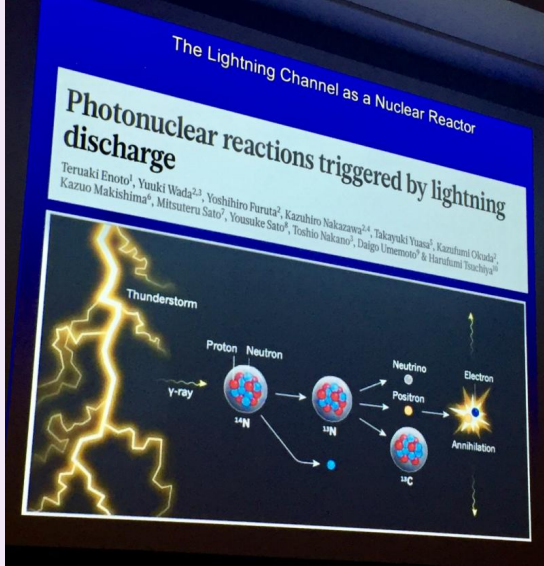
Find out how the inclusion of safety standard-compliant lightning protection systems in your state-of-the-art designs can benefit the building environment.

#### Featured in this issue:

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- [LPI-IP Inspection Program Expands Services](#)
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## Takeaways from the 2018 Lightning Protection Conference

Early last month, the United Lightning Protection Association (ULPA) and the Lightning Protection Institute (LPI) hosted the industry's 86th Annual Lightning Protection Conference in Singer Island, FL. Lightning protection professionals from various states across the country came together for three days of professional development, workshops, continuing education and networking.



The gathering of industry members and experts, which included lightning protection product manufacturers, system installers, scientists and code authorities, explored a wide range of speaker sessions and topics.

If you missed the conference, or attended but want to revisit the program highlights, be sure to read LPI's March blog to catch the [top 5 takeaways](#) from this important industry event!

## LPI-IP Expands Services to Meet Industry Needs

Knowing where to turn for up-to-date and accurate information about lightning protection can be difficult, which is why the LPI-IP Certification Program incorporates checkpoints and reviews to ensure that lightning protection systems (LPS) comply with national safety standards.



***As the industry leader in quality assurance and safety-standard compliance, LPI-IP is the only third-party LPS inspection program that does not certify nonstandard lightning protection systems or products.***

As a result, the construction market is increasingly relying on LPI-IP for its lightning protection inspection services. In fact, the LPI-IP has seen a 300% growth rate since its beginnings in 2011 and a 44% increase in users in 2017.

To accommodate market and consumer needs, the program now offers [four service options](#): Master Installation Certificate Inspection, Extended Master Installation Certificate Inspection, Reconditioned Master Installation Certificate Inspection and

Limited Scope Inspection. All options provide cost-effective inspection services to ensure LPS compliance with national safety standards. Visit this [link](#) for resources, specifications and standards information.



**Is your lightning protection system missing a key component?**

**Are you confident your lightning protection complies with industry requirements and national safety standards?**

The Lightning Protection Institute Inspection Program (LPI-IP) provides the most thorough and complete lightning protection review and certification service on the market.



Inspection by a Nationally Recognized Testing Laboratory (NRTL)  
Learn more at [lpiip.com](http://lpiip.com)

For more information about the Program read our recent [news release](#) or visit the [LPI-IP website](#).

Interested in sharing information about the LPI-IP with your customers? Be sure to invite your colleagues and clients to view our [infographic](#) for highlights of the various LPI-IP services.

## Building Lightning Safe News & Notes from the Community

### Coming to a City Near You...Continuing Education Enlightenment!

Looking to learn more about Lightning Protection Continuing Education in a Lunch & Learn setting? The LPI is partnering with the Lightning Safety Alliance (LSA) and the CE Academy to bring the Lightning Protection 101 (LSA 101) course to your doorstep!

In each one-day event, the CE Academy provides 4-8 hours of AIA-registered CE courses, including breakfast and lunch! Certificates of completion and AIA credit reporting are also provided for every event.

The LSA 101 Lightning Protection session is a one-hour course which includes a review of proper lightning protection system design and application as conforming with NFPA and UL lightning protection requirements. LSA 101 participants receive (1) AIA HSW/LU credit.



*LPI member, Adam Smith of Base Lightning Protection in Atlanta, facilitated the CE Academy's first LSA 101 session for 2018.*

Visit the LPI website for a list of [2018 CE Academy sessions](#).

### Concerns about CSST Gas Piping Continue

Litigation and unknowns about CSST (a flexible gas piping found in millions of U.S. homes and commercial structures), continue to cause a concern for the lightning protection industry and the public at large.



*Last spring, LPI advised its members to disclaim CSST in very clear terms in work proposals and documents, due to its lightning susceptibility problems and lack of verification data.*

Concerned by refusals of CSST manufacturers to conduct or release findings of testing, the National Association of State Fire Marshals (NASFM) recently commissioned its own testing to investigate potential safety impacts of typical household electrical current (120 volts) on CSST.

"We are praising NASFM for looking beyond the risk of CSST when lightning is present," said Becky Teel, spokesperson for the Brennen Teel Foundation, and a presenter

at the 2018 ULPA/LPI Lightning Protection Conference.

Teel and her husband Ken, created a Foundation in the name of their son, Brennen Chase Teel, who was just 31 years old when he was killed on August 24, 2012 in a Lubbock, Texas home, where the installation, bonding and grounding of CSST was deemed "proper" according to the product manufacturer. Mrs. Teel has explained that Brennen died in an explosive fire as a result of the puncture of CSST-a failure that was lightning-induced. Since Brennen's death, news outlets have continued to share incidents of similar failures that are occurring all over the country; threatening lives and property.

Now, data collected in the NASFM lab testing has found serious deficiencies with the so-called "new lightning-resistant" CSST, revealing it is actually more susceptible to failure when it comes into direct contact with the electrical system or some other metallic object that has become energized.

Test results commissioned by NASFM of 120 volt household current testing on CSST and Black Iron Gas Piping can be viewed [here](#).

For more information about CSST and its impact on communities, visit the [Brennen Teel Foundation website](#).

### **ACLENet Seeking Your Help to Build Lightning Safe Communities in Africa**

The African Centres for Lightning and Electromagnetics Network (ACLENet) is a not-for-profit organization dedicated to reducing deaths, injuries and property damage from lightning across Africa. After a single lightning strike killed 18 children in 2011 and sent another 38 to the hospital, enrollment at an African school fell from 600 to under 400. After ACLENet installed lightning protection for the school in 2016, enrollment soared to over 800.

"When parents feel safe

**African Centres for Lightning and Electromagnetics Network (ACLENet)**  
Progress Report

Mary Ann Cooper, MD  
Managing Director, ACLENet  
MACooper@uic.edu

Richard Tushemereirwa  
Relationships Manager, ACLENet  
Richard2002@yahoo.com

Ronald L. Holle  
Executive Committee, ACLENet  
RHolle@earthlink.net

**INTRODUCTION**

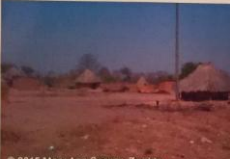
African families, workers, students are at risk of lightning injury 24/7

**FACTS:**

- Lightning density higher in tropics and subtropics
- 90% of Sub-Saharan dwellings and workplaces are NOT lightning safe
- Lightning incidents in developing countries more frequently involve MULTIPLE casualties than incidents in developed countries

**MISSION:**

ACLENet is a pan-African network of centers dedicated to reducing deaths, injuries and property damage from lightning.



© 2015 Mary Ann Cooper, Zambia

Typical African dwellings and work areas are mudbrick with generations old thatch roofs or sheet metal held down by rocks. In some areas, chickens may be cack over the thatch to prevent mosquitoes and badgers from disrupting the roof. In others, chickens are on the roof because it is thought that their "rubber" will protect the building from lightning strikes.

**HISTORY OF ACLENet**

ACLENet began in Uganda in 2014 and the incorporated parent organization is still based there.

**National Centres**

- ACLE Zambia founded in 2015 and hosted the 2<sup>nd</sup> Scientific Symposium.
- ACLE Malawi has committed to hosting the 3<sup>rd</sup> Scientific Symposium in 2018.
- Kenya and South Africa are in the beginning stages of centre development.

Makerere University Business School (MUBS) is the official academic host of ACLENet.

ACLENet is incorporated in the United States as a non-profit company (501c3) as required by many granting agencies.


**ACLENet Objectives**

- To assess the impact of lightning on each nation's citizens and economy
- To work with governments to assure that code-compliant lightning protection systems are designed for new schools and other important buildings
- To improve the availability of accurate and timely lightning data, weather forecasting, and warnings
- To educate teachers, parents, people and the general public on lightning safety
- To improve engineering training and professional qualifications in lightning protection
- To advise on code-compliant lightning protection of utilities and other economically important industries
- To work with universities to train Africa's own lightning experts for the future.

<https://ACLENet.org>

**ACTIVE PROGRAMS**

- School protection program with DEHN-Africa
- MoU with Uganda National Council on Science and Technology
- Public education
- Research into best practices to decrease deaths and injuries
- National centre development
- Development of graduate education in lightning and electromagnetics
- Monitoring young faculty, publications and research in national centres



*ACLENet has already provided lightning protection systems for 3 schools in Africa and is working to protect more students. Surveys and LPS Cad drawings are in place for additional schools. ACLENet needs public support to complete 8-12 more life-saving LPS installations.*

vulnerable." explained Dr. Cooper.

Visit [ACLENet](https://ACLENet.org) to learn more about its lightning protection mission, and please consider a [donation](#) today to help build lightning safe and save lives in Africa!

*Do you have Building Lightning Safe story to share?  
[Send us your news for inclusion in an upcoming issue of Build & Protect.](#)*

sending their children to school and the children feel secure in their classrooms, they are more able to concentrate and learn their lessons," said Dr. Mary Ann Cooper, Founding Director for ACLENet.

"We are asking LPI to please help us reduce these unnecessary lightning deaths and injuries. With your help, we can provide life-saving lightning protection systems for Africa's most



## WHY PUT UP WITH LIGHTNING PROTECTION LIKE THIS?

Don't get burned! Prevent tomorrow's headaches by hiring a pro today.



Visit [lightning.org](http://lightning.org) to locate a certified lightning protection professional in your area.

## NFPA Codes & Standards: "Safety is Everybody's Business!"



Looking to be part of the standard development process? NFPA welcomes your public input and comment. New information and sections are added to NFPA documents in conjunction with an open and consensus-based process, which means **you** can participate in the development of these important documents.

Four core steps in the NFPA standards development process are:

1. Public Input
2. Public Comment
3. NFPA Technical Meeting (Tech Session)
4. Standards Council Action (Appeals & Issuance of Standard)



For those interested, the First Draft Reports for the 2019 revision cycle for [NFPA 780](#), *Standard for the Installation of Lightning Protection Systems* are now being accepted. (Note public comment submission closing date is May 9, 2018.)

Additionally, [NFPA 54](#), *ANSI Z223.1-2018 National Fuel Gas Code, 2018 Edition* is open for review and public comment. (Note public input submission closing date: June 27, 2018.)

## Support Lightning Safety Awareness Week 2018!

A graphic for Lightning Safety Awareness Week 2018. On the left is a photograph of a lightning bolt striking a tree against a dark, stormy sky. On the right is a grey text box with white and yellow text. The text reads: "WHEN THUNDER ROARS, GO INDOORS!" followed by "HELP BUILD LIGHTNING SAFE COMMUNITIES!" and "SUPPORT LIGHTNING SAFETY AWARENESS WEEK JUNE 24-30, 2018!". At the bottom of the text box, it says "Visit lightning.org or lightningsafetycouncil.org for details & information". To the right of the text box is a yellow circular icon containing a lightning bolt and a cloud.

WHEN THUNDER ROARS,  
GO INDOORS!

HELP BUILD LIGHTNING SAFE  
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Visit [lightning.org](http://lightning.org) or  
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for details & information

Visit [lightning.org](http://lightning.org) or [lightningsafetycouncil.org](http://lightningsafetycouncil.org) for campaign details and information!

### Subscribe to *Build & Protect*!

There's a saying that goes, "An architect's dream is an engineer's nightmare." A&E's seeking to keep pace with lightning protection trends to help fortify their building dreams and nightmares, won't want to miss an issue of *Build & Protect*!

[Subscribe Now](#)

A large graphic of a lightning bolt striking down from the top left towards the bottom right, set against a dark, stormy background with faint lightning patterns.

Lightning Protection Institute | Toll Free 800-488-6864 | Fax 660-582-0430 |  
[kiml@lightning.org](mailto:kiml@lightning.org) | Website