

AEIC[®] UPDATE

News from the Association of Edison Illuminating Companies

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Additional Information:

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The Association of Edison Illuminating Companies (AEIC[®]) Honors Four Electric Utility Companies with the Distinguished AEIC Achievement Award

Birmingham, AL - The Association of Edison Illuminating Companies (AEIC[®]) has announced recipients of the prestigious AEIC Achievement Award for 2020. The AEIC Achievement Awards are presented annually to individuals or groups of individuals from AEIC member companies or committees who have provided significant contributions to advancing the operations of the electric energy industry.

Alabama Power Company, CenterPoint Energy, Florida Power & Light Company, and Southern California Edison received the Awards during AEIC's virtual Annual Meeting on November 11, 2020.

AEIC President Terry Donnelly, President and COO of ComEd, and Jim Greer, Executive Vice President and COO of Oncor, presented the Awards to the four companies.

Alabama Power Company received an award for its ***Cellular Router with Power Backup and Per-Phase Outage Notification***.

Alabama Power serves a relatively large number of industrial customers. Outage costs for some of these customers can be enormous due to lost production, penalties for just-in-time manufacturing delays, product quality issues, or overtime labor costs, and in those very rare events when outages occur, it is essential to restore power as soon as possible.

Alabama Power has developed and deployed a communication system to transmit meter data over a cellular connection to facilitate real-time, per-phase outage detection and notification from industrial revenue meters when the meter loses

power. The system employs a capacitor-based power supply providing three to five minutes of backup power, which allows the onboard electronics and a cellular router to communicate with Alabama Power's Outage Management System.

Florida Power & Light Company (FPL) received an award for its *Load Monitoring System for Aerial Buckets*.

Historically, the bucket truck operator has been solely responsible for performing accurate boom loading calculations based on the manufacturer's rated load requirements for the specific boom model.

However, the calculation involves multiple factors that can get detailed and complicated.

Working with bucket truck manufacturers, FPL developed a system to accurately calculate loading conditions on buckets and to audibly and visually alert operators and ground crews about approaching or exceeded loading conditions in real-time. This is a first for the industry. The system also provides overload alerts to FPL's Fleet Services to facilitate operator coaching as needed.

FPL also worked with manufacturers to increase bucket capacities and to galvanize the booms and exposed metal components to help withstand the harsh salt spray environments that exist along the coast.

CenterPoint Energy, Inc. was awarded for its *Resiliency Model for EMP Mitigation*.

Grid security is an area of increasing focus from government, regulators, and utilities.

In addition to cybersecurity threats, Electromagnetic Pulse (EMP) mitigation has been identified as a critical concern. Challenges to addressing the EMP issue include costs, operational risk, construction timelines, and operational uncertainty related to protective relaying.

According to a 2019 study by the Electric Power Research Institute (EPRI), EMP can potentially result in regional blackouts and damage to microprocessor-based relay and control equipment.

CenterPoint Energy has developed and proven a cost-effective solution to mitigate the impact of EMP, as well as other types of hazards. CenterPoint's solution is cost-effective, meets military specifications, is easily deployable, and applicable to both new and existing substations.

The system employs high-frequency grounding and fiber optics communication and does not compromise the reliability of the existing protection systems. CenterPoint is pursuing intellectual property protections for this concept, which is currently in patent-pending status.

Florida Power & Light Company (FPL) was awarded for its *Power Delivery Resource Optimization Center (PDROC)*.

FPL's Power Delivery Resource Optimization Center project began in 2016 to

address an emerging industry-wide resource gap of journeymen line workers.

FPL projected a 20% gap in line worker resources for 2016, versus their capital work plan requirements, and the gap was projected to grow to 48% by 2020. These facts required FPL to innovate to improve the productivity of their existing resources.

The team established to look into these issues uncovered hidden line crew productivity drivers that needed to be tracked and measured, which resulted in the development of their Map Enabled Tool for Resource Optimization, or METRO.

METRO is an advanced, FPL-developed, nearly real-time mapping technology that displays daily construction work and resources using automated geofencing for construction work orders, combined with vehicle GPS tracking. METRO displays daily construction work and resources and notifies field supervision when an exception to the work plan occurs.

In the Power Delivery Resource Optimization Center, FPL has developed the first-in-the-industry center using advanced technologies to manage Power Delivery construction risk, and drive productivity efficiencies, focusing on construction, but quickly adaptive to restoration efforts. Productivity efficiency for FPL improved by 38% as a result of activating the center, and contractor productivity has also improved significantly.

Southern California Edison Company (SCE) received an award for its *Spare Tire App*.

According to federal regulators and reliability oversight agencies across the country, an inaccessible or incapacitated Energy Management System (EMS) poses significant regionwide risks to the continuity of a reliable system and public safety.

During a partial or complete loss of a utility's EMS, operators will not have enough visibility to respond to situations such as system overloads, outage contingencies, and power system instability.

In these cases, SCE formerly deployed a mix of technologies including spreadsheets, analytics tools, document management repositories for record-keeping, voice-only communication systems, and manual data-gathering techniques for upward of 50,000 discreet values.

This disparate approach resulted in time-consuming and inefficient processes, and the inability to provide a comprehensive interpretation of electric system conditions.

The Spare Tire App is SCE's in-house, secure, cloud-based, open-architecture solution integrating electric grid data, system status visualizations, and peer communications capabilities among other features, to enhance day-to-day operations and conditions experienced during a partial or complete loss of EMS.

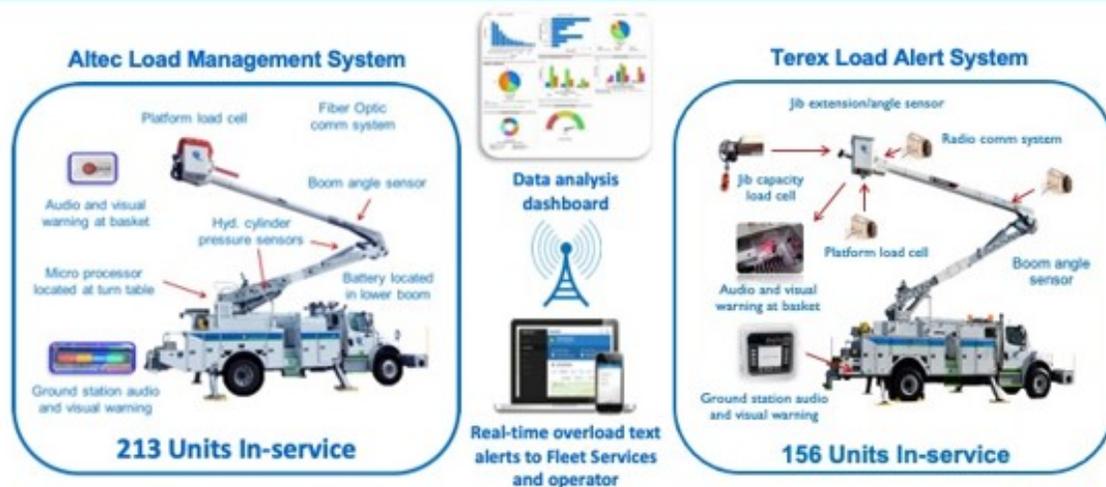
It is the centerpiece of SCE's Comprehensive Situational Awareness for Transmission (CSAT) initiative integrating visualization of electric grid data.

After the presentations, Mr. Donnelly and Mr. Green congratulated the AEIC Award winners and announced that a new AEIC Achievement Awards challenge will begin early in 2021.



(L-R) Alabama Power's Appa Mantha and Scott Bell with the AEIC Achievement Award for developing a real-time outage detection and notification system for industrial revenue meters.

We challenged the industry norms and two manufactures met the challenge



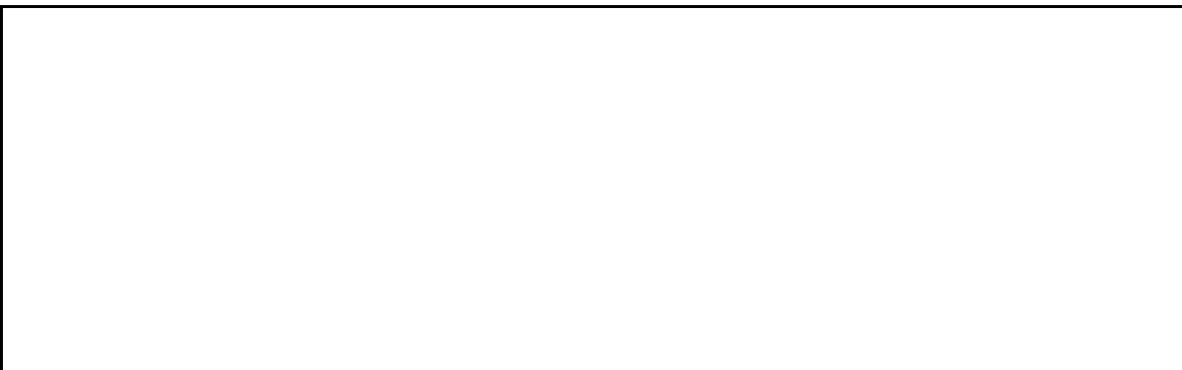
Florida Power & Light worked with bucket truck manufacturers to develop a Load Management System for Aerial Buckets to take the guesswork out of loading conditions and alert operators when overload conditions are approached or exceeded.

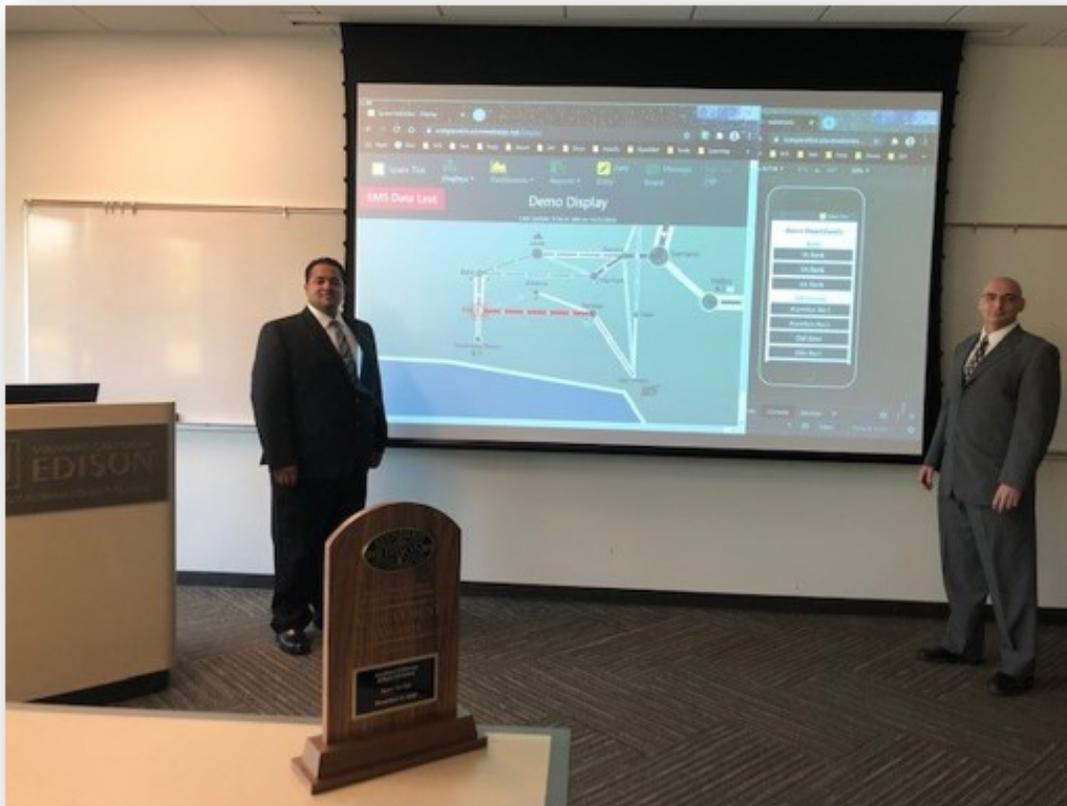


CenterPoint Energy received an AEIC Achievement Award for its EMP Mitigation Module. Pictured in the photo from left to right are: Martin Narendorf - Vice President of Electric Engineering and Asset Optimization, Kevin Bryant - Manager Substation Electrical and Structural, Kenny Mercado - Senior Vice President Electric Utility, Dave Lesar - President and CEO, Doug Darrow - Associate General Counsel Commercial, and Eric Easton - Director, Real-Time Operations

FPL built a new, groundbreaking Power Delivery Resource Optimization Center (PDROC) which is uniquely focused on driving efficiencies and innovating our multi-billion dollar grid construction business

Florida Power & Light received an AEIC Achievement Award for its First-of-a-Kind Power Delivery Resource Optimization Center.





(L-R) Southern California Edison's Lucero Vargas and Erik Takayesu with the AEIC Achievement Award for SCE's Spare Tire Application, the centerpiece of SCE's Comprehensive Situational Awareness for Transmission (CSAT) initiative.

AEIC was founded by Thomas Edison and his associates in 1885 and is one of the most experienced associations in the electric energy industry. AEIC encourages research and enables the exchange of technical information and best practices through a committee structure, staffed with experts from management of member companies, to solve challenges and create opportunities for electric utilities worldwide.

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