

electroindustry

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RECAPPING THE NEMA ANNUAL MEETING ALTERNATING CURRENTS

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NEMA by the Numbers

NEMA

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Paul Biggins, Röntgen Award



Dave Kendall, Kite & Key Award



Alan Manche, Kite & Key Award



Bryan Mulligan, Applied Information, Inc.,
Illuminations Award

electroindustry

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Coming next month:

As the national interest in infrastructure appropriations ramps up, we'll look at how the changing utility market will impact NEMA members. Also look for a futurist's thoughts on the disruptive nature of fuel cell technology, and a complete review of the 2018 Motor Summit.



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FROM THE CHAIRMAN

As I wrap up my time as Chairman of the Board of Governors, I am proud to report that NEMA remains relevant, engaged, and fiscally sound. Our collective accomplishments are outlined in the *NEMA by the Numbers* insert, which I urge everyone to review. It portrays how, through our industry-wide work, NEMA provides its Members with a competitive advantage.

Let me share a few highlights.

Standards & Technical Expertise: Standards, code adoption, and enforcement are an underlying strength of a cohesive electrical world. The NEMA Technical Library includes more than 700 documents. They contribute to safe, reliable, and efficient products that facilitate production, promote interoperability, aid in disaster recovery efforts, contribute to national code-making panels, and increase market demand at home and abroad. Our library includes 60 new documents and collaborative efforts with other Standards Developing Organizations. So far, 85 percent of NEMA inputs to the 2020 *National Electrical Code*® have been approved.

Business Intelligence: Member companies—large and small—rely on our business intelligence and market analyses. This is not just my opinion. *The Wall Street Journal* recognized the NEMA team as the second most accurate economic forecaster. Among its outputs are market data reports, sector-specific product shipment forecasts, decision-focused scenarios, economic outlooks, industry surveys, and indexes. The team also publishes a daily digest of relevant news.

Advocacy: Advocacy at every level ensures that NEMA priorities make it into law and regulations—or not, as the case may be. We influenced Congress to enact disaster reform legislation so that recovering communities can *Rebuild Smart*. We were a focused voice in tariff debates and represented our industry in the new U.S.–Mexico–Canada Agreement. Four NEMA priorities became law as part of America's Water Infrastructure Act. In the states, we defeated 29 unfavorable bills and passed four carbon monoxide detection bills. We secured 10 new grid modernization and energy-efficiency bills and \$30 million for the Solid-State Lighting Program at the Department of Energy.

MITA: The Medical Imaging & Technology Alliance (MITA) represents 90 percent of the global market. It continues the fight for a full and final repeal of the medical device excise tax.

Strategic Initiatives: Our Strategic Initiatives Program encompasses research projects related to the Internet of Things (IoT), smart cities, and workforce development. For instance, NEMA published cybersecurity best practices and energy-efficiency models for industrial and building management systems; reported on legal requirements for data privacy and ownership; conducted 16 IoT webinars; quantified the costs and benefits of modern grid technologies; and created a toolkit that addresses workforce gaps in the electroindustry.

In 2018, 85 percent of every dollar paid by Members went to programs and activities in seven core markets: Building Infrastructure, Building Systems, Industrial Products & Systems, Lighting Systems, Medical Imaging, Utility Products & Systems, and our newest, Transportation Systems.

To everyone who has participated on a NEMA project, I commend you for your dedication and outstanding work. And to everyone in the C-suite, thank you for allowing your talented employees to serve this great organization. 🙏

Happy holidays,

David G. Nord
Chairman, NEMA Board of Governors

ESFI Offers Video Series on Workplace Safety

Electricity and electrical products play fundamental roles in how we do business. If not used or maintained appropriately, they can pose serious risks. Over the last ten years, more than 30,000 workers have been injured in workplace electrical accidents.

While electrical hazards are not the leading cause of on-the-job injuries and accidents, they are disproportionately fatal and costly. They not only disrupt the lives of workers and their families but also impact productivity. The good news is that most on-the-job electrocutions and electrical injuries can be prevented.

The Electrical Safety Foundation International (ESFI), the leading authority on workplace electrical safety, recognizes that each work environment presents different electrical hazards. ESFI's workplace safety materials help employees make safe choices and provide tips for creating a safer environment, regardless of the setting.

Visit www.esfi.org or click on the titles below.

- Workplace Safety: Program Introduction
- Workplace Safety: The Importance of Qualified Electrical Workers
- Workplace Safety: Know When to Say When
- Workplace Safety: Always Look Up
- Workplace Safety: Always Look Up—Trades
(en Español: *Siempre Mirar Hacia Arriba*) ©



Photo courtesy of ESFI

Daniel Majano, Program and
Digital Marketing Manager, ESFI

IoT Webinar

**The Security of Things:
Privacy, Protection & Proprietorship**

Dec. 17, 2018

1–2 pm EST

Registration is free for NEMA Members. Nonmember fee is \$49 per webinar; discounts are available for bulk registration. For more information, visit www.iotnowwebinars.org.



Live Webinar:

Improving Building Energy Modeling Tools

December 10, 2018

1:00–3:00 pm EST

REGISTER HERE



Book-a-Speaker



Brian Marchionini took the stage at the Viakable Annual Technological forum. Photo courtesy of Viakable

Brian Marchionini, senior program manager in NEMA's Operations Division, presented at the Viakable Annual Technological Forum on October 5 in Monterrey, Mexico. He discussed grid modernization activities that NEMA is undertaking, including a benefit-cost analysis for grid modernization projects, microgrids, cyber hygiene, distribution automation and utility communication networks, and energy storage systems.

Attendees were impressed with the breadth of NEMA projects. All the presentations provided a broader context of technology and market trends and drivers, which in turn will help Viakable and its sister companies improve the development of new products, processes, and services.

Call for 2020 Strategic Initiatives

Where is our industry heading? What new technologies are on the horizon? What challenges will the future bring? If you have answers to these questions, we want to hear from you. If you have an idea for a Strategic Initiative, let us know.

Through December 31, 2018, NEMA is collecting proposals for forward-looking, cross-cutting, challenge-solving, and opportunity-seizing 2020 Strategic Initiatives. These innovative programs and projects prepare NEMA Members for emerging opportunities and address new challenges across the electrical and medical imaging industries.

Submit your ideas and find out more about current and past Strategic Initiatives at www.nema.org/si. 

OTHER ENGAGEMENTS



Joel Solis, conformity assessment manager at NEMA, presented an overview of the use of electronic labeling (e-labels) within the global community at the Pan American Standards Commission's

(COPANT) November 20 meeting. He also summarized the U.S. electrical industry position on COPANT TC 152, *Energy efficiency and renewable energies*.




Lisa Spellman, AStd, DICOM general secretary, MITA, will moderate a webinar for the Society for Imaging Informatics in Medicine on December 6, 2018. *Medical Imaging Standards: exciting work in 3D manufacturing for*

clinical use and an overview of evolving AI medical imaging standards will probe challenges and opportunities facing artificial intelligence (AI), 3D printing in hospitals, and logistics that include technologies, reimbursement, workforce, and file formats.

OTHER ENGAGEMENTS



NEMA Industry Director Steve Griffith, PMP, will speak at an industry forum powered by the Copper Development Association in Washington, D.C., on December 11, 2018. *EVs: Navigating the Road*

Ahead will bring together leaders from the automotive industry, transportation officials, policy influencers, government officials, and utility experts to discuss the progress in EV innovation and the hurdles that lie ahead for widespread integration. 

Need a speaker? Book a speaker at www.nema.org/book-a-speaker.

Alternating Currents Theme of Annual Meeting



David Nord, NEMA Board of Governors Past Chairman, opened the meeting by announcing the election of new Board Members.



David Nord passes the gavel to Mark Gliebe.




Newly elected Chairman of the Board of Governors Mark Gliebe closed the meeting by urging the industry to work toward a connected future.

NEMA Board of Governors Chairman David Nord gaveled to order the 92nd annual meeting of the association in San Antonio, Texas, on November 15. After reporting that NEMA remains relevant, engaged, and fiscally sound, Mr. Nord announced the election of the Board of Governors.

Jes Hansen, Osram Sylvania, Inc., and Roger Karner, Signify, filled two vacancies. Bill Waltz, Atkore International, was elected for a three-year term. The following Board Members of the Board of Governors were re-elected for additional three-year terms: Revathi Advaiti, Eaton; John Galyen, Danfoss; Gabriel Garza-Herrera, Xignux Corporativo; Mark Gliebe, Regal Beloit Corporation; Vern Nagel, Acuity Brands; David Pacitti, Siemens Healthineers; Michael Pessina, Lutron Electronics Company, Inc.; John Selldorff, Legrand, North and Central America; and Kyle Seymour, S&C Electric.

Mark Gliebe Assumes Chair

At the conclusion of the meeting, Mr. Nord passed the gavel to Mr. Gliebe, chairman and CEO of Regal Beloit Corporation. In his remarks, Mr. Gliebe urged his fellow manufacturers to imagine a connected future; innovate aggressively around connected products and energy-efficient systems; and make a difference in the lives of citizens, the health of our businesses, and the well-being of our countries. 

Save the date!

Naples Grande Beach Resort
November 6–7, 2019, Naples, Florida

All photographs ©Pierce Harman. To view the entire gallery, visit <https://www.pierceharmanphotography.com/nema-annual2018-sanantonio>

Paul Biggins Exemplifies Collaboration



Röntgen
Award

Congratulating Paul Biggins (center) on his award are Larry Dentice, senior vice president and CCO, Canon Medical Systems USA, Inc. (left), and Patrick A. Hope, executive director, MITA.

With more than 35 years of experience in the diagnostic imaging industry, including more than 20 years as first Toshiba's and now Canon's director of regulatory affairs, Paul Biggins has played a critical role within the industry at large and specifically within NEMA's the Medical Imaging & Technology Alliance (MITA).

Read more at www.nema.org/bigginns. 📖

Dave Kendall Recognized for Mentorship



Kite & Key
Awards

Dave Kendall is congratulated by Greg Scheu, President, Americas Region, ABB Inc. (left), and NEMA President and CEO Kevin Cosgriff.

In accepting his Kite & Key Award, Dave Kendall emphasized his role as mentor as his primary contribution to the electroindustry. Mr. Kendall represents ABB on the NEMA Codes and Standards Committee and other committees, including government affairs and other political entities, as well as on the *National Electrical Code*®.

Read more at www.nema.org/kendall. 📖

Applied Information, Inc., Celebrated



Illuminations
Award

Bryan Mulligan (center) accepted this year's award from NEMA Board of Governors Chairman David Nord (left), who recognized Applied Information, Inc., for its innovative technology. Also pictured is NEMA President and CEO Kevin Cosgriff.

Bryan Mulligan, president and founder of Applied Information, Inc., accepted this year's Illuminations Award on behalf of his company, which belongs to the Transportation Management Systems and Associated Control Devices Section (3TS). The award is given annually to a Member of the NEMA Business Innovation Council (BIC) that demonstrates entrepreneurship and innovation.

Read more at www.nema.org/applied-information. 📖

Alan Manche Honored for Dedication



Kite & Key
Awards

Alan Manche (center), accepted his Kite & Key Award from NEMA Board of Governors Chairman David Nord (left) and NEMA President and CEO Kevin Cosgriff.

As vice president of external affairs for Schneider Electric / Square D Company, Kite & Key Award winner Alan Manche manages company activities related to codes and Standards. Mr. Manche has served as chair, vice-chair, and co-chair of several NEMA Sections and Committees as well as National Fire Protection Association technical committees and Underwriters Laboratories technical panels.

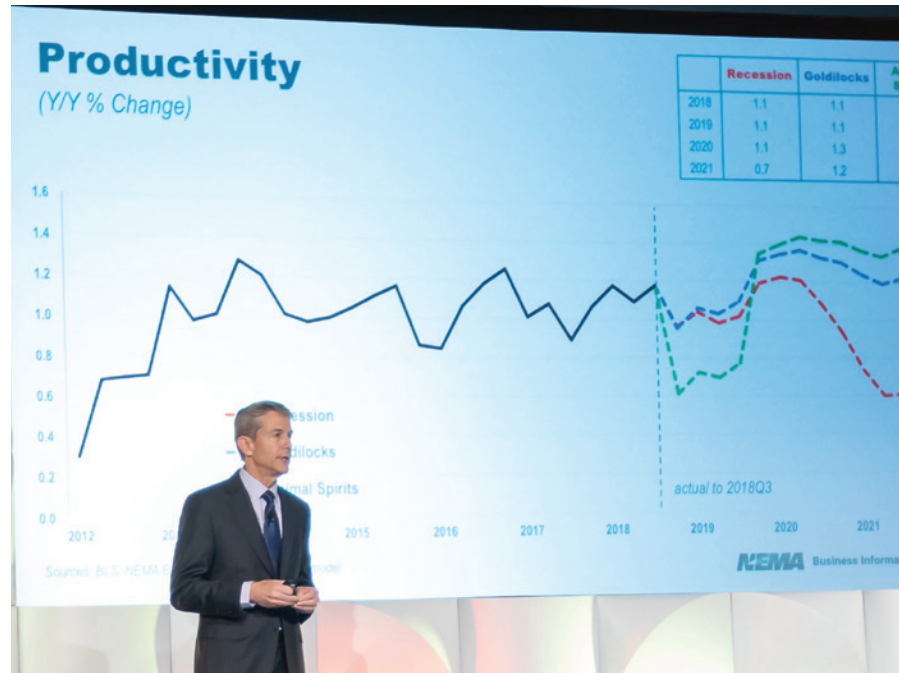
Read more at www.nema.org/manche. 📖

Using Scenarios to Analyze the Economy

Employing a scenario approach in his annual economic outlook, NEMA Vice President and Chief Economist Don Leavens, PhD, analyzed the economic growth impact of monetary policy, investments, productivity, and trade.

He explained that the first scenario, dubbed “Recession,” is based on the assumption that rising interest rates expose an overextended commercial real estate market causing real estate values to slide and business confidence to plunge. His second scenario, “Animal Spirits,” assumed that business confidence soared, resulting in increased investment, higher productivity, and faster economic growth. Lastly, he presented a more neutral scenario, “Goldilocks,” which alluded to economic growth that is neither “too hot nor too cold.”

He commented that of the three scenarios, the Goldilocks scenario was the most likely. He noted that by watching several economic variables over the course of the next year, the audience could determine which of the growth scenarios was occurring. A downturn in construction and a reversal in the Federal Reserve’s interest rate policy were signs the economy could be heading towards recession. Higher productivity and acceleration in economic growth would herald the Animal Spirits scenario. Meanwhile, a steady progression in interest rate hikes and continued modest construction growth would be signs the economy might be levelling to a sustainable pace featured in the Goldilocks scenario. 📍



Don Leavens used a scenario approach to analyze current conditions in the electroindustry.

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Implications of the Midterm Election

Noting a nearly 50 percent record turnout in a midterm election, Reid Wilson of *The Hill* summarized that there was more interest in Election Night 2018 than in the Watergate scandal, and that the election was not about the economy—it was all about President Trump.

Tracing a wide variety of statistics based on exit polls, general demographics, and surveys, Mr. Wilson analyzed TV viewership, voter turnout, House and Senate race results, governor races, women and minorities in Congress, and other issues that ultimately resulted in a divided America. 📍



Reid Wilson, correspondent for *The Hill* newspaper, recapped the 2016 election.

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Future of Connected Transportation: Easy



Bryan Mulligan, President of Applied Information

Bryan Mulligan introduced a panel on the Future of Connected Transportation. The panelists, who explained how real-time data can improve safety and mobility on the road, represented the Colorado Department of Transportation (CDOT), Panasonic USA, and the Ford Motor Company. The companies collaborated on a connected vehicle platform to save lives along the 90-mile stretch of I-70 from Golden to Vail.

Standards, Mr. Mulligan predicted and panelists agreed, will play an essential role in connected transportation. The government's role, however, is shifting. With the evolution of roadway infrastructure from concrete to one that utilizes information and communication technologies, the dynamic is changing to one in which governments set goals, objectives, and outcomes and the private sector chooses the technologies and methods that enable them.

In response to what he called a "hodgepodge of state and local policies," he said that the industry is responding with a "collaboration between automotive and infrastructure folks."

"Data is the new concrete," Amy Ford observed in her comments, referring to Colorado's innovative RoadX system to improve driving, safety, and navigation apps by using real-time data.

Ms. Ford envisions smarter systems in infrastructure, like ramps and gates that improve the flow of traffic and decrease the need for additional lanes, and virtual guardrails that "talk to" cars to prevent crashes and aid in finding drivers who go off treacherous mountain roads. Smart pavement through a mountain pass, for example, will immediately alert first responders if a vehicle leaves the roadway. Future capabilities include inductive charging of electric vehicles.

Furthering her prediction that the future will be autonomous and electric, Ms. Ford wowed the audience with a documentary of the autonomous 18-wheel tractor-trailer, Otto, on its one-time, 120-mile beer haul from Fort Collins to Colorado Springs along I-25.



Amy Ford, Chief of Advanced Mobility, Colorado Department of Transportation (CDOT)

All photographs ©Pierce Harman. To view the entire gallery, visit <https://www.pierceharmanphotography.com/nema-annual2018-sanantonio>



Kellen Pucher, Director, Strategic Initiatives, Connected Vehicles, Panasonic USA

According to Kellen Pucher, “Today’s cars have a lot to say.” As automobiles move from analog vehicles to data machines, the communication between vehicles and infrastructure is evolving from:

- Vehicle-to-vehicle (V2V)—relies on equipment inside vehicles
- Vehicle-to-infrastructure and infrastructure-to-vehicle (V2I/I2V)—relies on roadside infrastructure
- Vehicle-to-everything (V2X)—interacts with a tiered data environment

V2X will increase roadway capacity, decrease crashes, reduce time spent in traffic, and reduce environmental impact by taking advantage of wireless communications.

In 2000, Mr. Pucher explained, the first connected cars had about a million lines of code. By 2010, that number was up to 10 million lines, which is more than an F-35 fighter jet. Today, an average car has more than 100 million lines of code.

“The operating system of the smart roads of the future will encompass the IoT, cloud analytics, and an open ecosystem,” he concluded.

In her opening remarks, Kathleen Baireuther quoted Bill Ford, chairman of Ford Motor Co., as observing that “the mobility model that we have today simply will not work tomorrow. We are going to build smart cars, but we also need to build smart roads, smart parking, smart public transport systems, and more.”

To accomplish that vision, the company relies on connectivity. Today, that means connecting to the cloud with standard mobile devices. Ultimately, as long-range 5G technology becomes available, connectivity will enhance autonomous vehicles (AVs) and automated driving. The company’s approach to AVs focuses on combining human-centered technology with innovative business models.

Being in the auto industry now, Ms. Baireuther concluded, encompasses urbanization, an expanded middle class, concerns about air quality, and—perhaps most instructive—consumer attitudes. As an example, she noted that curb management is replacing parking as a traffic priority. 📍



Kathleen Baireuther, Senior Manager, Smart Mobility’s City Solutions, Ford Motor Co.



CONNECTED TRANSPORTATION

In 2018, NEMA formed the Transportation Systems Division to broaden its role in the movement of goods and people in safe, cyber-secure, and efficient ways. Member companies are well positioned to play a leading role in the electrification of America’s transportation system, which accounts for 25 percent of total U.S. energy use.

The Division is planning government advocacy and technical activities for 2019. To learn more, contact Steve Griffith, industry director for the NEMA Transportation Systems Division, at steve.griffith@nema.org.

Flanking Mr. Griffith (center) were panelists (from the left) Kellen Pucher, Panasonic USA; Amy Ford, Colorado Department of Transportation; Kathleen Baireuther, Ford Motor Co.; and Bryan Mulligan, Applied Information, Inc. 📍

Manufacturing Needs Digital Skillsets



In a provoking breakfast keynote, Paul Wellener, vice chairman and leader of U.S. Industrial Products & Construction, Deloitte Consulting, proclaimed that the jobs are here, but asked, “Where are the people?”

Drawing on the 2018 Deloitte and The Manufacturing Institute skills gap and future of work study, Paul Wellener addressed how the nature of work is changing and what manufacturing jobs will be like in the digital era.

He pointed out how globalization, artificial intelligence, advanced robotics, advanced analytics, and the Internet of Things are transforming the workplace at an unprecedented pace.

Among the findings he shared:

- The skills gap may leave an estimated 2.4 million positions unfilled between 2018 and 2028
- The average time to fill an open job position is on the rise
- The skills shortage could put \$454 billion of manufacturing GDP at risk in 2028 alone
- Higher pay to attract talent is a double-edged sword

He concluded by noting that industrywide approaches to closing the skills gap are fundamental to offset expected shortfalls in skilled workers. Five key competencies are technology and computer skills, programming skills for robots and automation, critical thinking, working with tools and techniques, and digital skills.

Industry leaders should also explore ways to provide exposure to robotics, automation, and computer programming to primary school students as well as those in middle and high school, and to build awareness of manufacturing as a safe industry that can provide long-term career progression with competitive pay. ☺

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Preparing the Electroindustry Workforce



John Hindman, Tooling U-SME's director of learning and performance improvement, led a discussion of NEMA's Youth Apprenticeship Program.

In a full-day workshop, NEMA launched its Workforce Development Workshop to address one of the most broadly faced threats to the electroindustry—the skills gap.

NEMA created two resources, the Industry Promotion Toolkit and Industrial Maintenance Pre-apprenticeship Program, to recruit and train the future workforce while helping our Members promote the electroindustry as a vibrant and dynamic industry.

Jeremy Bout, founder and host of Edge Factor, led the workshop with an introduction to NEMA's Industry Promotion Toolkit and previews of videos that will be available to participating Member companies.

During a keynote lunch by a representative, Mike Meroney, who leads the Texas Workforce Coalition, and Robin Painovich, executive director of the Career & Technical Association of Texas, focused on best practices for businesses to approach and engage with education partners on workforce development.

The afternoon session, led by John Hindman, Tooling U-SME's director of learning and performance improvement, included a discussion of NEMA's Youth Apprenticeship Program in Industrial Maintenance, followed by a preview of materials by Jonathan Stewart, NEMA industry director of the Utility Products and Systems Division.

The materials were developed for use by NEMA Member companies. To learn more, contact Mr. Stewart at jonathan.stewart@nema.org. ☺

Biggest Challenge to Raw Material Supply Chain: Uncertainty

To frame the panel discussion on the “State of the Raw Material Supply Chain,” Alan Price, a partner with Wiley Rein LLP, quoted Dennis Shea, U.S. Ambassador to the World Trade Organization. “In my view,” Mr. Shea said, “the discussion of WTO reform would not have happened but for the disruptively constructive leadership of the United States.”

Mr. Rein laid out three pillars to the disruptive nature of the Trump Administration trade agenda strategy:

- Unilateral action: to remedy certain intractable problems where years of negotiations have failed
- Bilateral negotiations: unilateral action is being used as leverage in bilateral negotiations to force changes to trade behavior
- Multilateral disruption: unilateral action and bilateral negotiation are unfolding in the context of ambivalence to the multilateral system, which may not survive in its current form

Providing insights from their individual companies were panelists Steve Higgins, president, Freeport McMoRan Sales Company, Inc.; Charlie Murrah, president, Power Systems & Solutions Group, Southwire Company; and Greg Scheu, president, ABB Inc.

The panelists discussed their companies’ products, which include aluminum, cobalt, copper, and steel. The dialogue focused on sourcing; tariffs and regulation, specifically Section 232 of the Trade Expansion Act of 1962; the U.S. Trade Representative’s (USTR) Section 301 investigation report of China’s acts, policies, and practices; and the Committee on Foreign Investment in the United States (CFIUS) Reform.

According to the panel members, the biggest challenge is uncertainty, especially not knowing what the rules will be. ☺



NEMA Board of Governors Member Greg Scheu, President, Americas Region, ABB Inc., makes a point during the panel discussion on the “State of the Raw Material Supply Chain.”



Providing insights were on the supply chain were panelists Charlie Murrah, president, Power Systems & Solutions Group, Southwire Company; Steve Higgins, president, Freeport McMoRan Sales Company, Inc.; Alan Price, Wiley Rein LLP, moderator; and Greg Scheu, president, ABB Inc.

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Executives Discuss Future of NEMA at Industry Future Forum



Discussion about the future of NEMA was followed by networking activities, including lawn bowling and golf. Pictured (from the left): Mike Pessina, Lutron; Dave Nord, Hubbell; Jack Nehlig, Phoenix Contact; Mark Wingate and Jeanette Wingate, Maxivolt; Gerald Connolly, Legrand; Deb and John Caskey, NEMA; and Patrick Hope, NEMA.

Each fall, NEMA Member CEOs, senior executives, and future leaders gather to discuss medium- and long-term industry trends. In past years, topics have included cybersecurity, electrification, data and digitalization, workforce development, and the future of intellectual property.

The 2018 Industry Future Forum, held on November 14 in conjunction with the Annual Meeting in San Antonio, Texas, dove into a single topic: Standards and the future of NEMA as a trade association and Standards Developing Organization (SDO).

Participants discussed the relative balance of service offerings needed to support NEMA Members' businesses in the future: Standards development and

related technical activities, government relations and advocacy, business intelligence, communications, and new services. NEMA was urged to continue to be a proactive advocate for the electrical and medical imaging industries and to continue to focus more deeply on digital, electronic technologies.

In 2019, NEMA is launching a new Strategic Initiative focused on Standards. This project will incorporate feedback received during the Industry Future Forum to streamline the NEMA Standards development process to improve relevance, timeliness, and accuracy. Members are encouraged to sign up at www.nema.org/si.

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NEMA Transportation Division Talks Safety and Infrastructure on Hill Day

Members and guests of NEMA's Transportation Division steered their way through a series of outreach meetings in Washington, D.C., on September 26, that began and concluded on Capitol Hill. After opening the trip with a visit to the local office of the National Safety Council to discuss roadway safety initiatives, the group met with Republican staff for the Senate Committee on Environment and Public Works (EPW), which shares legislative and oversight responsibility for highway and infrastructure initiatives, including deployment of traffic management and control systems, known as Intelligent Transportation Systems (ITS), and electric vehicle supply equipment.

In the afternoon, the group traveled to the U.S. Department of Transportation (DOT) headquarters to meet with Deputy Assistant Secretary for Policy Finch Fulton. Discussion topics included emerging DOT policy on connected and autonomous vehicles (CAV) and the role of private-sector standards. Upon returning to Capitol Hill, the group met with staff for Senator Amy Klobuchar (D-MN) and Republican staff for the Senate Committee on Commerce, Science, and Transportation, which has responsibility for legislation and oversight on roadway safety and testing of automated vehicles. In closing, the group met with the transportation staff member for the



Senate Republican Policy Committee, chaired by Sen. John Barrasso (R-WY), to discuss local deployments of ITS and possible improvements to contracting for transportation infrastructure.

NEMA Member companies represented in the group were ABB, Daktronics, Eberle Design, and Miovision Technologies. Sensys Networks and Econolite participated as guests and prospective members. 📸

NEMA's Transportation Division, guests, and staff visited Capitol Hill September 26. They included (from the left) Robert Le Sueur, Sensys Networks; Craig Updyke, NEMA; Bryan Mulligan, Applied Information; Jan Bergstrom, Miovision; Joseph Dudich, Eberle Design; Steve Griffith, NEMA; Philip Squair, NEMA. Not pictured are Asaf Nagler, ABB; Jason Morrison, Daktronics; and Eric Raamot, Econolite. Photo by Capitol Police Department

Karen Willis

Industry Director, NEMA

Transportation and Lighting Collaborate

With a movement toward systems in NEMA product scopes, a recent working lunch involving the Transportation Management Systems Section and the Lighting Systems Division paved the way for collaborative work projects. Among the topics they discussed were:

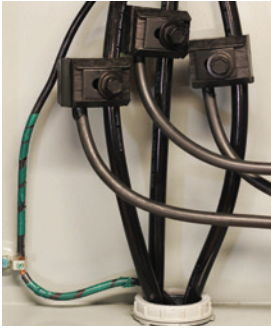
- Standards development needs for harmonized communications;
- State, city, and county procurement guidelines for secure roadway lighting; and
- Lighting's potential role in the autonomous vehicle industry.

They also discussed how they are particularly poised to address safety, which is a core message for intelligent transportation systems.

Participants also agreed that cooperation with other entities, including individual departments of transportation, the National Highway Traffic Safety Administration, ANSI Accredited Standards Committee C137 on Lighting Systems, and NTCIP, will be required.

The initial brainstorming session exemplifies ways that NEMA can integrate expertise from divergent industries and product fields to address similar issues faced by Member organizations. 📸

Standards Establish Test Requirements



ANSI C119.5-2018 *American National Standard for Electric Connectors—Insulation-Piercing Connector Systems, Rated 600 V or Less (Low Voltage Aerial Bundled Cables and Insulated and Non-Insulated Line Wires)* covers insulation-piercing connectors used for making electrical connections between insulated, insulated-to-bare, and bare-to-bare conductors rated 600 V or less and 90°C (low voltage aerial bundled cables and bare and insulated line wires) on overhead

distribution lines for electric utilities. It is available in hard copy or electronic download for \$91.

ANSI C136.31-2018 *American National Standard for Roadway and Area Lighting Equipment—Luminaire Vibration* covers the minimum vibration withstand capability and vibration test methods for roadway and area luminaires. It is available in hard copy or electronic download for \$43. Ⓢ

NFPA Foundation Explores Electrical Safety

Jack Lyons

Northeast Field Representative,
NEMA

The National Fire Protection Association (NFPA) Fire Protection Research Foundation sponsored a meeting of the Electrical Safety Research Advisory Committee (ESRAC) during the Second Draft meetings for the *National Electrical Code*® (NEC) in San Diego, California, in October. NEMA is represented by Vince Baclawski, senior technical director, and Jack Lyons, Northeast field representative.

Casey Grant, director of the foundation, and Donny Cook, advisory committee chair, opened the meeting at which members of the code-making panels and other industry stakeholders examined electrical safety issues that may need to be part of the foundation's research projects.

The agenda included an overview of the foundation; current, completed, and proposed projects; a discussion on Power over Ethernet (PoE); and a discussion on marinas and pools.

IDENTIFYING FUTURE CONCERNS

The ESRAC functions as a steering committee for the foundation to consider projects that have the greatest value for, or impact on, the electroindustry.

The increase in the installation of PoE systems has led to concerns over their effects on building safety. The NEC has addressed the cabling structures within buildings by focusing on the bundling of data cables that make up the systems.

Overheating is a safety and performance issue for PoE, and Article 725 has tackled some of these concerns with ampacity tables for data/power cables along with some new cable designations. Some key takeaways included:

- Identification as inherently safe
- Expanded use in life safety systems
- Electrical safety of workers
- Code applications and licensing requirements
- Cybersecurity

With input from attendees, the committee identified the top five topics for future research projects as:

- Code adoption and regulatory licensing
- Equipment grounding conductors
- Cord-connected appliances in kitchens
- Marinas and pools
- Data collection on electrical fires

In a separate discussion it was noted that NEMA could help in developing or sponsoring webinars on the fundamentals, benefits, and limitations of PoE systems. Ⓢ

NEMA and SASO Collaborate on Standards

NEMA President and CEO Kevin J. Cosgriff traveled to Riyadh, Saudi Arabia, in October to sign a Memorandum of Understanding (MOU) with the Saudi Standards, Metrology and Quality Organization (SASO) on a Technical Cooperation Program (TCP). Mr. Cosgriff met with Dr. Saad Othman Al-kasabi, the governor of SASO, to discuss the TCP and the opportunities it creates for collaboration. They discussed SASO's role in ensuring the safety of Saudi Arabians when it comes to consumer products, transportation, and infrastructure.

The TCP outlines how NEMA and SASO can work together. NEMA has granted SASO access to NEMA Standards and publications so that SASO may study and use them for reference. SASO has been given an expansive set of responsibilities by the government of Saudi Arabia, including safety, transportation, and electrical Standards. The

TCP will foster the relationship between the two organizations and allow NEMA to assist SASO with its Standards developing process.

Since SASO has MOUs with only a few other organizations, this TCP will enhance the relationship of NEMA and SASO, ensuring that consumers in the kingdom have access to genuine, quality, and necessary products appropriate to its electrical infrastructure.

NEMA has a Kingdom of Saudi Arabia Market Access Consortium (KSAMAC) to maintain fair market access in the kingdom by working directly with companies in the country, SASO, the United States Trade Representative's Office, and the U.S. Embassy in Saudi Arabia.

To get involved with the KSAMAC, contact Madeleine Bugel at madeleine.bugel@nema.org.



Craig Updyke

Director, Trade and Commercial
Affairs, NEMA

Trade Agreement Agenda Advances amid Tariffs

The Trump Administration's successful conclusion of negotiations September 30 on a United States–Mexico–Canada Agreement (USMCA) hastened its October 16 notifications to Congress of intent to enter into new trade talks with the European Union, the United Kingdom, and Japan.

All four actions set clocks in motion—60 days until USMCA could be signed and 90 days before proposed new negotiations may begin. While reviewing the USMCA terms, NEMA is consulting with Members on objectives for the EU, UK, and Japan talks as well as navigating tariffs on imports of steel, aluminum, and Chinese-made products and components.

TARGETING ECONOMIC ESPIONAGE

On November 1, then-Attorney General Jeff Sessions and Federal Bureau of Investigation Director Christopher Wray announced a broad new initiative to combat criminal economic activity by China.

“The Chinese government is determined to acquire American technology, and they're willing [to]

use a variety of means to do that—from foreign investments, corporate acquisitions, and cyber intrusions to obtaining the services of current or former company employees to get inside information,” said FBI Director Wray.

“If China acquires an American company's most important technology—the very technology that makes it the leader in a field—that company will suffer severe losses, and our national security could even be impacted. We are committed to continuing to work closely with our federal, state, local, and private sector partners to counter this threat from China,” he concluded.

Later, a senior Justice Department official told NEMA that the primary tool of the interagency initiative is prosecution of individuals and companies in cases of trade-secret theft. The efforts extend to prosecutions under the Foreign Corrupt Practices Act and the Foreign Agents Registration Act as well as implementation with the Treasury Department of the new Foreign Investment Risk Review Modernization Act, which expands the authority of the Committee on Foreign Investment in the U.S. ☎

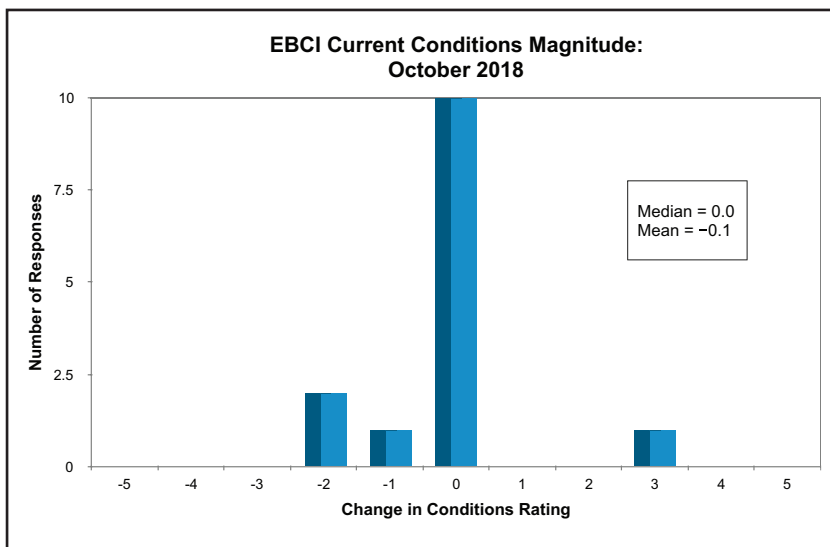
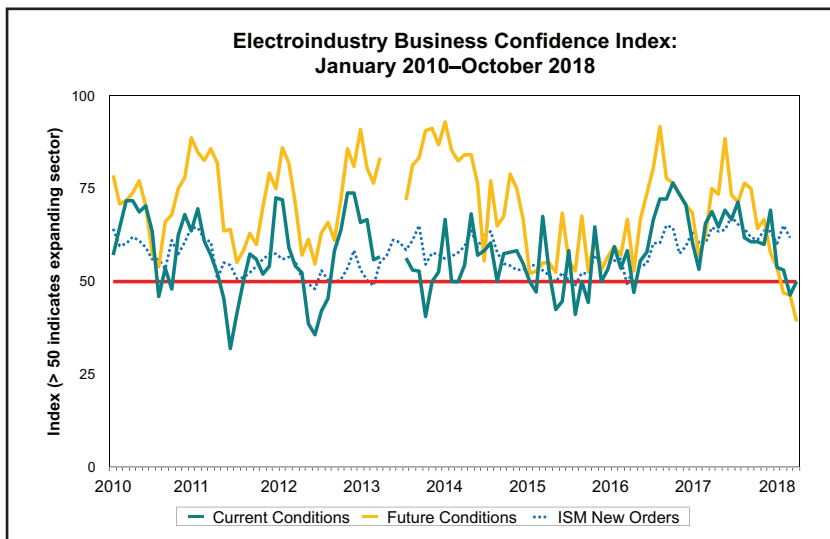
Current Conditions Component Bounces Back to 50; Future Conditions Reading Continues to Erode

	Current Conditions (Compared to Previous Month)	Conditions Six Months From Now (Compared to Current Conditions)
EBCI	50.0 ▲	39.3 ▼
% Better	21% ▲	14% ▼
% Worse	21% ▼	36% ▲
% Unchanged	57% ▲	50% ▲

Number of Respondents: 14

Values reflect the percentage of respondents expecting "Better" conditions, plus one-half of the percentage of respondents expecting "Unchanged" conditions.

A score of 50 or higher suggests conditions appropriate to an expanding economy.



An uptick in the share of respondents that reported unchanged conditions, combined with a decline in the number of responses indicating a worsening business environment, has boosted the current conditions component of the EBCI to an expansionary reading by the narrowest of margins. October's score of 50.0 is nearly 4 points higher than last month's. The underlying distribution reflects conditions that have been perceived as positive for 24 months and are now finely balanced with equal upside and downside risks.

Although the median measure remained at 0, the mean value of the reported intensity of change in electroindustry business conditions edged down to -0.1. This marks the first time the intensity indicator moved into negative territory since September 2016. Panelists are asked to report intensity of change on a scale ranging from -5 (deteriorated significantly) through 0 (unchanged) to +5 (improved significantly).

The future conditions component continued to lose ground, sliding seven points to 39.3 in October, its lowest reading since February 2009. Even though half of the respondents expect conditions to be unchanged six months from now, those foreseeing worse conditions outnumber those indicating a better environment ahead by almost 2 to 1. Concerns about the effect of tariffs, and the apparent likelihood that hoped-for infrastructure expenditures are off the table, serve as a backdrop to the erosion in optimism.

Visit www.nema.org/ebci for the complete October 2018 report. 📄

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I AM NEMA

NEMA Staff Takes Home Honors

As 2018 concludes, we salute the hard work by NEMA staff that led to the following awards and achievements:

- **Muhammad Ali:** Named ANSI Emerging Young Professional.
- **Ken Gettman:** Received IEC 1906 Award from IEC Technical Committee 121, and recognized as an IEEE Life Senior Member.
- **Andrei Moldoveanu:** Elected to SES Board of Directors and promoted from SES Standards Committee Chairman to Technical Director supervising the Standards and the Certification Committees.
- **Donald Leavens and Steve Wilcox:** Recognized by *The Wall Street Journal* as the second most accurate economic forecasters for 2017 among more than 60 nationally recognized forecasters. The NEMA/BIS forecasters have consistently ranked in the top 10 for the last 5 years.
- **Carolyn Hull:** Received a Master of Health Administration and Certificate of Healthcare Corporate Compliance from George Washington University.
- **Craig Updyke:** Appointed to the Commerce Department's Renewable Energy and Energy Efficiency Advisory Committee (REEEAC). ☎



G.P. Russ Chaney, chairman of the board of the American National Standards Institute (ANSI), left, presents the Emerging Young Professional award to Muhammad Ali, NEMA program manager. Photo courtesy of ANSI

I AM THE ELECTROINDUSTRY

Bill Russell Retires, Leaves Industry Poised for Growth



Bill Russell, Former President & CEO, Eberle Design, Inc., and Reno A&E

Bill Russell, the face of Eberle Design, Inc. and Reno A&E, retired in September, having created the brand image of extreme customer service, high-quality products, fair pricing, and on-time delivery.

Having served as president and CEO for 16 years after joining EDI, Bill oversaw the rapid growth of the company, the integration of EDI and RAE, and the transition to private equity ownership. He is regarded as one of the foremost experts in the traffic control electronics industry.

Bill chaired the NEMA 3TS Section for three terms and received the NEMA Kite & Key Award in 2005 for his leadership and service. He was also active with ITS America and served on the International Road Federation Board of Directors.

Not only is Bill the distinguished image of the EDI/RAE brand, but because of his dedication to the electroindustry as well as his personal strength, stability, and reliability, NEMA is well positioned for growth during this dynamic and transformational time in the surface transportation marketplace. ☎



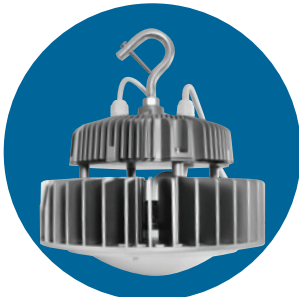
LOCAL STOCK IN USA



**OVER
35
YEARS**

IN BUSINESS

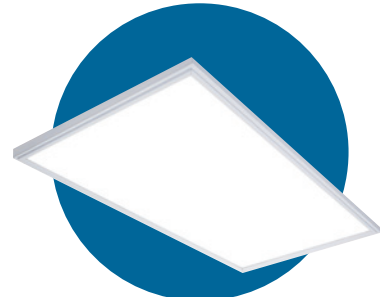
800⁺ FIXTURES
400⁺ LAMPS



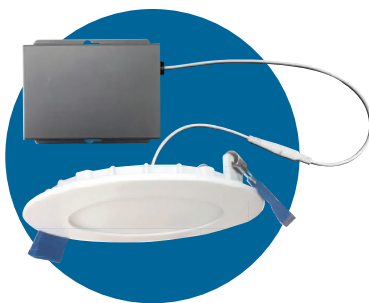
**LED High Bay
Fixtures**



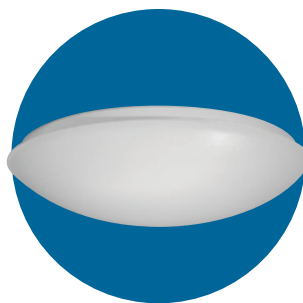
**LED Wall Pack
Classic**



LED Panels



**LED Low Profile
Downlights**



**LED Ceiling
Fixtures**



LED A19



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