



About NEMA

The National Electrical Manufacturers Association (NEMA) represents nearly 325 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems. Our combined industries account for 370,000 American jobs in more than 6,100 facilities covering every state. These industries produce \$130 billion in shipments and \$38 billion in exports of electrical equipment and medical imaging technologies per year.

BS-CN Section Members

- Acuity Brands, Inc.
- GE Current, a Daintree company
- Hubbell Lighting, Inc.
- Johnson Controls Inc.
- Lutron Electronics Company, Inc.
- Rockwell Automation
- Schneider Electric
- Siemens Corporation
- Signify North America Corporation

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Connected Building Systems Section (BS-CN)

Connected Building Systems (CBS) are integrated systems of hardware, software and interfacing communications to automatically monitor and control building sub-systems (such as HVAC, lighting, power, fire, access control, and security) in order to optimize building energy performance, occupant comfort, safety, and security.

In response to the increased demand for smart buildings, NEMA has established a Connected Building Systems Section that focuses on thought leadership, outreach, and the development of codes, Standards, and policy.

The NEMA Connected Building Systems Section will engage in the identification, definition, education, and codification/standardization on topics related to systems of building

control with various deployment scales. This could include characteristics and requirements for hardware attributes, software attributes, system interface standards/protocols and system attributes as they relate to factors critical for the full building. This will help to adopt the next generation of IT communication protocols for building automation.

Our Vision

Building technical systems are designed and operated in an integrated manner which leverages interoperable IT and data standards which use data from onsite and external sources to provide expanded occupant and organizational benefits with reduced lifecycle costs.



Technical Activities

- Proper specification of a building management system with other data-integrated building systems. Specification is important to ensure that the end user gets the building performance and user experience they expect. Specification errors happen far too often, causing added project costs, project delays, commissioning issues, and disappointed end users. NEMA is working to answer key questions and follow guiding principles to try and help to avoid integration issues. It is also monitoring cybersecurity of connected building systems.
- Semantic tagging for connected building systems. Tagging helps to provide value from data being generated by the smart devices in homes, buildings, factories, and cities. Applications include automation, control, energy, HVAC, lighting, and other environmental systems. NEMA is tracking the development of semantic tagging and generating new content where applicable to be used in relevant codes and standards activities.
- Fault detection and diagnostics. A connected building system may include linked packages that assist in reducing energy consumption of a building. A FDD system is a cloud-based software platform that utilizes building analytic algorithms to convert data provided by sensors and monitors to automatically identify faults in building systems and provide a prioritized list of actionable resolutions to those faults based on cost/energy avoidance, comfort and maintenance impact. NEMA is advocating on behalf of Section Members for FDD systems.
- Technical communications. The Section has developed communications and outreach materials targeted at a range of stakeholders. The Section has engaged other groups to participate in webinars and other joint activities to promote awareness.

Government Relations Activities

Energy and Infrastructure

- NEMA is an advocacy leader for the electroindustry on public policy related to energy and infrastructure. Our overall approach is to ensure that policymakers look to the future of connected buildings and systems rather than simply filling yesterday's potholes. As new provisions become law, NEMA works to ensure that implementing regulations include NEMA products and priorities.

Tax policy

- Providing economic benefits to the purchase and installation of energy efficient and connected equipment is one of the best ways to encourage the adoption of such new technologies. NEMA actively works to support enactment of tax policies to accomplish this goal.

Show successes

- Recent NEMA advocacy has led to numerous successes, including:
 - Enactment of a DOE Smart Building Acceleration Program
 - Enactment of the IoT Cybersecurity Improvement Act addressing federal buildings
 - Enactment of permanent favorable tax treatment for qualified improvement property
 - Extension of tax credit for energy efficient commercial buildings (179d)

Show Advocacy Priorities

- A top NEMA advocacy priority is to build and maintain close relationships with policymakers, so they understand our perspectives on issues. We will work to ensure that any infrastructure legislation includes provisions and programs that encourage adoption of connected building systems products and technologies that serve to reduce emissions, save energy, increase resilience, and upgrade workplace productivity.

Our Goals

- » Provide thought leadership by developing communications and outreach materials targeted at a range of interested parties
- » Drive Codes, Standards and Policy for the benefit of related building industries