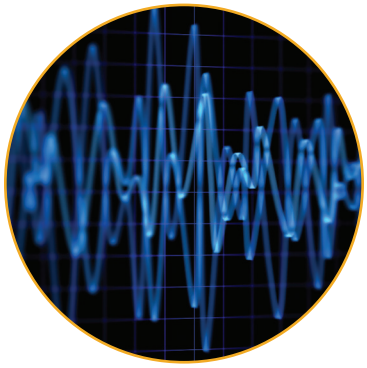
Reliable, Secure Communications Networks Are Critical For the Energy Grid

Edison Electric INSTITUTE

For electric companies to operate and protect the nation's energy grid and deliver a smarter energy future for customers and communities, they need reliable, secure communications networks.

The energy grid powers America's economy and way of life—and the electric power industry often is described as the most critical of all critical infrastructure sectors. All industries, including communications, depend on a reliable and secure energy grid, and electric companies need interference-free wireless spectrum for their private wireless networks to ensure safety and protect the grid.

As communications technologies like 5G cellular communications and small cell networks are created and deployed, public policies should encourage collaboration between the electric power industry and the communications industry. Integrating new communications technologies with the smarter energy infrastructure that electric companies are deploying will help to deliver data-driven, efficient, and sustainable smart communities of the future.



Electric companies need access to **interference-free wireless spectrum** to:

- Ensure safety,
- Protect the energy grid, and
- Drive innovation.

Our Policy Priorities

- Electric companies need access to interference-free wireless spectrum to ensure safety, to protect the energy grid, and to drive innovation.
- The Federal Communications Commission (FCC) should coordinate with and formally engage the Federal Energy Regulatory Commission (FERC) and other stakeholders to fully understand issues regarding the impact of communications policy decisions on the electric power industry.
- Given the importance of the data and transmission carried on 6 GHz communications networks and the risk presented by an adverse FCC decision on the 6 GHz band, FERC should monitor the FCC's 6 GHz rulemaking to ensure reliability and should consider whether to formally comment in that proceeding.
- Technologies that may impact electric companies' wireless network operations, such as Automated Frequency Coordination, must be tested in real-world applications to ensure that it mitigates interference properly.
- As critical infrastructure operators, electric companies should be protected from risk and liability arising from operational impacts caused by wireless interference. The costs of operational impacts caused by interference should not be borne by electricity customers.

Enhancing Safety, Reliability, and Grid Security Requires Wireless Spectrum

Every day, the men and women of America's electric power industry work hard to protect the energy grid and to ensure that customers get the energy they need when they need it. To do so, they depend on the licensed private wireless radio networks they operate. These wireless networks perform several mission-critical tasks for electric companies, and any interference to them risks the safety of life, health, and property. These networks:

- Carry highly sensitive supervisory control and data acquisition (SCADA) data, which is used to operate many types of critical energy infrastructure—for example, by detecting and isolating issues before they become problems.
- Promote situational awareness for energy grid operators by collecting data from smart sensors and smart meters; help to integrate and control distributed energy resources; and support innovative customer solutions.
- Enable communications between electric company personnel in the field during natural disasters and other emergencies.

These networks require bands that permit reliable communication across long distances, including across rural and mountainous areas. Continued access to these bands—especially the 6-gigahertz (6 GHz) band—is vital to electric company operations and to maintaining reliability for customers.

Electric companies' networks are essential for the safe, reliable operation of the energy grid and are built to extremely high standards of reliability, safety, and security. It is essential that the equipment of other users of these bands not interfere with electric company networks.

Smart grid technologies offer numerous benefits for customers—and electric companies are deploying them on a vast scale. To serve the growing number of smart devices and applications that support the energy grid, electric companies' use of communications networks and their need for wireless spectrum are growing. Electric companies use vendor-provided wireline and wireless solutions to meet some of their needs, but also rely on private networks—particularly for the most critical applications.

Interference-free access to the 6 GHz band is critical for electric companies' response to storms and other emergencies.

Communications Policies Should Protect Critical Infrastructure from Interference

It is critical that electric companies' communications networks continue to operate safely, without interference. Every day, electric companies work to meet and exceed stringent electric reliability requirements that are enforced by the federal government. As policymakers consider expanding access to bands of wireless spectrum for unlicensed use, they should ensure that it does not present risks to the safe, reliable operation of the energy grid.

The Automated Frequency Coordination system being proposed by the FCC to mitigate interference in the 6 GHz band remains untested and unproven. If policymakers permit unlicensed use of this band, they should ensure that interference-mitigation measures have been tried, tested, and proven to work. Proven interference-mitigation measures that are secure against cybersecurity attacks should be required for unlicensed wireless spectrum users.

Unlocking a Smarter Future for Customers and Communities

EEI's member companies are leading the way on building the smarter energy infrastructure that is key to enabling smart, resilient communities and to delivering the energy future that customers want and expect. The electric power industry is the most capital-intensive industry in America, and EEI's member companies invest more than $100 billion each year to make the energy grid smarter, stronger, cleaner, more dynamic, and more secure.

Smarter energy infrastructure is essential for providing the energy customers need, but it also delivers much more—it is all about smart connections, including 5G. This infrastructure is a key component of smart community solutions like sensors and monitors that allow communities to monitor and manage pedestrian safety, traffic flows, air quality, energy use, and more, and that provide intelligent services to citizens, such as interactive information kiosks and public Wi-Fi. Public policies should enable electric companies to build smarter energy infrastructure in ways that intelligently harness the interdependency of communications networks and the energy grid.

Achieving the benefits of smarter energy infrastructure for all customers and communities requires greater collaboration with all stakeholders, including cities, communications companies, technology companies, and electric companies. With greater collaboration, partners can meet customers' energy and communications needs while making progress on broader community goals, including sustainability and economic development.

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The **Edison Electric Institute** (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. In addition to our U.S. members, EEI has more than 65 international electric companies, with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

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