

Dec. 5, 2019

The Honorable Michael F. Doyle  
Chairman, House Energy and Commerce  
Committee Subcommittee on Communications  
and Technology

The Honorable Robert E. Latta  
Ranking Member, House Energy and  
Commerce Committee Subcommittee  
on Communications and Technology

*Re: House Energy and Commerce Committee Subcommittee on Communications and Technology  
Hearing on Accountability and Oversight of the Federal Communications Commission*

*Statement for the Record of the Association of American Railroads, American Gas Association, American  
Petroleum Institute, American Public Power Association, the American Water Works Association, Edison  
Electric Institute, International Association of Fire Chiefs, National Rural Electric Cooperative  
Association, and Utilities Technology Council*

Dear Chairman Doyle, Ranking Member Latta, and Members of the Subcommittee on Communications  
and Technology:

Thank you for the opportunity to submit this statement for the record regarding today's hearing on  
Accountability and Oversight of the Federal Communications Commission (FCC, the Commission). This  
is a timely hearing given the number of critical decisions pending before the agency which could impact  
numerous industries and agencies under this Subcommittee's jurisdiction. The FCC has authority over  
commercial spectrum policy, which impacts nearly every major industry in the U.S., including the critical  
infrastructure industries (CII) signing this statement. We urge this Subcommittee to encourage the FCC to  
ensure that its spectrum decisions will adequately protect our collective members' ability to provide their  
essential services and that the Commission meet regularly with other federal agencies as it develops  
policies that impact these CII overseen by other agencies.

The undersigned organizations<sup>1</sup> represent a broad cross-section of CII entities, including public safety and  
first responders, freight rail, and nearly every electric, water, and natural gas utility in the U.S. Our  
members are responsible for providing life-saving and sustaining services which literally connect and  
power our country's economy. While our collective membership performs a diverse array of public  
services and needs, they own, operate, and maintain essential communications networks that underpin the  
reliable and safe operation of our infrastructure and therefore have an important interest in the FCC's  
spectrum policies and decisions.

We applaud the Subcommittee for holding this hearing. The undersigned share the Subcommittee's desire  
to make sure the FCC is appropriately focused on ensuring its decisions and policies benefit the entire  
economy. This is especially true as the interdependencies between the various utility industries, e.g.,  
electric, natural gas, and water, and CII entities the undersigned represent and the telecommunications  
industries strengthen due to advances in technologies that will enable our collective membership to  
become more resilient, efficient, and responsive to customer needs.

Each of the industries we represent deploy, to varying degrees, sophisticated communications networks to  
manage the safe, reliable, and secure operation of our collective critical infrastructure. These networks  
consist of both wireline and wireless components, depending on the type of service and the location of the  
infrastructure. Our collective membership uses a variety of spectrum bands for our needs, including

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<sup>1</sup> The signatories to this letter include organizations and industries from public safety, railroads and public transit, oil  
and gas, as well as utility sectors across the nation.

licensed spectrum in the heavily used 6 GHz band. With the FCC poised to act on a proposal to allow unlicensed use in the 6 GHz band, the undersigned organizations have grave concerns that this plan could negatively impact the networks our collective membership operate to sustain the delivery of critical services. Therefore, we ask members of this Subcommittee to urge the FCC to ensure it will not move forward with its plan to allow unlicensed operation in the 6 GHz band until and unless the Commission has tested and proven that it can protect existing license holders.

With the FCC considering expanding access to the 6 GHz band for unlicensed use, we have significant concerns that this proposal will threaten the integrity of our mission-critical communications networks. While our collective members fully understand and appreciate the need to make more efficient use of spectrum, members of this Subcommittee should ensure the FCC weighs the advantages of expanding access to the 6 GHz band with the potential negative impact this could have on critical infrastructure networks.<sup>2</sup>

We are concerned that the proposed mitigation scheme for protecting public safety and CII users from interference—the Automated Frequency Coordination (AFC) system—is theoretical in nature and has not been tested or proven to work. Moreover, the Commission’s current proposal does not contemplate a mechanism for ensuring that unlicensed users take responsibility for the cost impact of the interference that could result from unlicensed devices operating in the 6 GHz band. Numerous members of Congress and federal agencies have urged the FCC to test its AFC system before proceeding. The Department of Energy has suggested that the Commission should consider working with federal laboratories to ensure that the untested interference mitigation measures proposed in the rulemaking will work before unlicensed operations are allowed in the 6 GHz band.<sup>3</sup> In addition, a bipartisan group of 12 Senators urged the FCC to perform “sufficient, rigorous testing” of the AFC system before it proceeds.<sup>4</sup> More recently, the National Association of Regulatory Utility Commissioners passed a resolution recommending that the FCC not move forward with the 6 GHz proposal “unless and until such time that it has tested and proven that its AFC system works as intended to protect license holders...”<sup>5</sup>

The 6 GHz band is uniquely suited for—and heavily used by—public safety providers and a variety of CII licensees for private point-to-point microwave systems. As a consequence, our collective membership has made significant investments in systems using the 6 GHz band. There are approximately 97,000 microwave links in the 6 GHz band, the vast majority of which are licensed by public safety or CII entities.<sup>6</sup> Given the critical nature of the communications carried on the 6 GHz band, the public safety and CII networks operating in it are built to meet and even exceed 99.999 percent availability. These networks must also transmit with extremely low levels of latency – 20 milliseconds or less of roundtrip delay from one point to another – over long distances. Any harmful interference from unlicensed operations would risk a widespread negative impact to essential services, including emergency response and recovery, electricity, natural gas, heat, water and transportation, such as the following:

- **Public Safety:** Public safety organizations use 6 GHz licensed microwave radio links as their mission critical backhaul for 9-1-1 dispatch and first-responder radio communications. Public-safety microwave systems in the 6 GHz band form complex networks with the required high levels of availability, redundancy and reliability, given their role in supporting public safety’s

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<sup>2</sup> [https://utc.org/wp-content/uploads/2019/11/6-GHz-Coalition-Multi-Sector-Letter-to-Pai\\_110819\\_FINAL.pdf](https://utc.org/wp-content/uploads/2019/11/6-GHz-Coalition-Multi-Sector-Letter-to-Pai_110819_FINAL.pdf)

<sup>3</sup> <https://utc.org/wp-content/uploads/2019/09/FCC-Chairman-Pai-response-letter-9.3.19-003.pdf>

<sup>4</sup> [https://utc.org/wp-content/uploads/2019/11/Risch\\_FINAL-FCC-Letter-re-6-GHz.pdf](https://utc.org/wp-content/uploads/2019/11/Risch_FINAL-FCC-Letter-re-6-GHz.pdf)

<sup>5</sup> Resolution on FCC Proposal to Allow Unlicensed Operations in the 6 GHz Spectrum Band  
<https://pubs.naruc.org/pub/5B694F5B-D52A-A964-2EF3-8C734C18FC89>

<sup>6</sup> This band is also used by the cellular carriers and other telecommunication providers to backhaul mobile device traffic.

mission to protect life and property. Allowing unlicensed operators access to the 6 GHz band will degrade the overall guaranteed protection and performance characteristics of these critical microwave links.

- **Railroads:** Freight, commercial, and commuter railroads rely on at least 1,600 private fixed microwave links in the 6 GHz band to safely coordinate train movements across the U.S. These links relay critical data regarding train signals and remote switching of tracks and routing of trains through rights-of-way, depots, and freight yards, as well as telemetry from trackside detectors and communication base stations located throughout the network. These microwave systems serve as critical backbones for the transport of railroad communications, including dispatch radio traffic, centralized train control systems, positive train control (which is the subject of a federal statutory mandate), phone systems, and crew train orders.
- **Utilities:** Electric, gas, and water utilities operate thousands of microwave links to support voice and data communications with personnel and critical assets such as substations and teleprotection systems on the grid. Given that electric grid operators must match the supply of electricity with demand for electricity instantaneously, these wireless communications must occur at a high rate of speed over long distances. Microwave links backhaul voice communications across utility service territories, including with personnel during emergency response to restore power in the aftermath of an outage. Water utilities use the 6 GHz band as an affordable means for a water system to maintain operational visibility for a geographically dispersed network of pump/lift stations, treatment, and storage assets that provide critical lifeline functionality to the communities they serve. Some of these microwave systems are shared with public safety, further underscoring their criticality and the need to prevent interference to these communications.
- **Offshore Oil and Gas Production:** More than 300 offshore oil and gas production platforms in the Gulf of Mexico use a microwave network in the 6 GHz band to provide highly reliable backhaul network for mission-critical LTE and Wi-Max broadband wireless communication. According to a recent study commissioned by RigNet, the firm which operates the network, the proposed 6 GHz rulemaking would result in interference levels that could degrade critical emergency response communications and jeopardize safety.<sup>7</sup>

There will likely be millions of unlicensed devices seeking access to the 6 GHz band, which will make protecting these public safety and CII networks from interference extremely difficult, if not impossible. Therefore, it is also important that the Commission adopt minimum standards for updating AFC systems and clarify that unlicensed operators or AFC system operators are legally liable for the consequences of interference to licensed microwave systems in the band.

The undersigned entities are appreciative of our nation's need to become more efficient with our finite spectrum resources. Indeed, many of the technological advances which will make CII systems more efficient, nimble, and responsive require access to interference-free spectrum. However, given the historical outcomes of FCC spectrum proceedings, we are concerned that the Commission will not adequately weigh the needs of utilities and other CII in its spectrum policies. Therefore, the undersigned ask that members of this Subcommittee to urge the FCC, either in today's hearing or in ongoing discussions, to test its mitigation measures to prevent interference to our mission-critical networks before proceeding with a final rule. The House Energy and Commerce Committee has a critical role to play in this proceeding, given its oversight role over the telecommunications and energy sectors—both of which

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<https://ecfsapi.fcc.gov/file/10711942815756/RigNet%206GHz%20Roberson%20and%20Associates%20Cover%20Letter%2011July2019.pdf>

are essential for our nation's economy. The organizations represented below rely on the 6 GHz networks to provide communications services to support critical reliability functions. Therefore, we encourage Subcommittee members to view this issue through this broader lens and ensure the FCC actions benefit the U.S. entirely.

The undersigned organizations thank the Subcommittee for holding this important hearing and appreciate the opportunity to submit this statement.

Respectfully,

- Association of American Railroads
- American Gas Association
- American Petroleum Institute
- American Public Power Association
- American Water Works Association
- Edison Electric Institute
- International Association of Fire Chiefs
- National Rural Electric Cooperative Association
- Utilities Technology Council

*Founded in 1934, the Association of American Railroads is the world's leading railroad policy, research, standard setting and technology organization that focuses on the safety and productivity of the U.S. freight rail industry. AAR full members include the seven Class I freight railroads in the United States, Canada and Mexico, as well as Amtrak. Affiliates and Associates include non-Class I and commuter railroads, rail supply companies, engineering firms, signal and communications firms and railcar owners.*

*The American Gas Association (AGA), founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 74 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — more than 71 million customers — receive their gas from AGA members. AGA is an advocate for natural gas utility companies and their customers and provides a broad range of programs and services for member natural gas pipelines, marketers, gatherers, international natural gas companies and industry associates. Today, natural gas meets more than one-fourth of the United States' energy needs.*

*The American Petroleum Institute (API) is the only national trade association representing all facets of the natural gas and oil industry, which supports 10.3 million U.S. jobs and nearly 8 percent of the U.S. economy. API's more than 600 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms. They provide most of the nation's energy and are backed by a growing grassroots movement of more than 47 million Americans. API was formed in 1919 as a standards-setting organization. In its first 100 years, API has developed more than 700 standards to enhance operational and environmental safety, efficiency and sustainability.*

*The American Public Power Association (APPA) is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. It represents public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 93,000 people they employ.*

*The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our membership includes more than 4,000 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. Our 50,000-plus total membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.*

*The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for more than 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.*

*The International Association of Fire Chiefs (IAFC) represents the leadership of firefighters and emergency responders worldwide; our members are the world's leading experts in firefighting, emergency medical services, terrorism response, hazardous materials spills, natural disasters, search and rescue, and public safety policy.*

*The National Rural Electric Cooperative Association (NRECA) is the national service organization for America's Electric Cooperatives. The nation's member-owned, not-for-profit electric cooperatives constitute a unique sector of the electric utility industry – and face a unique set of challenges. NRECA represents the interests of the nation's more than 900 rural electric utilities responsible for keeping the lights on for more than 42 million people across 47 states. From booming suburbs to remote rural communities, America's electric cooperatives are energy providers and engines of economic development. Electric cooperatives play a vital role in transforming communities.*

*Founded in 1948, the Utilities Technology Council (UTC) is the international trade association for the telecommunications and information technology interests of electric, gas, and water utilities. UTC's membership includes approximately 400 utilities across the U.S. and Canada, including large, for profit, investor-owned electric and gas companies that serve millions of customers across multi-state service territories, as well as smaller, not-for-profit, rural electric cooperative and public power utilities, which may serve only a few thousand customers in isolated communities or remote areas. UTC's core utility members own, manage, and control extensive communications infrastructure to support the safe, reliable, and secure delivery of essential energy and water services to the public.*