July 16, 2019

Statement for the Record of the American Public Power Association, the American Water Works Association, the Edison Electric Institute, the National Rural Electric Cooperative Association, and the Utilities Technology Council

House Energy and Commerce Committee Subcommittee on Communications and Technology Hearing on "Our Wireless Future: Building a Comprehensive Approach to Spectrum Policy"

Thank you for the opportunity to submit this statement for the record regarding today's hearing on "Our Wireless Future: Building a Comprehensive Approach to Spectrum Policy." This is an important hearing, and we are pleased that the Subcommittee is looking to take a more holistic approach to our nation's spectrum and wireless policies. This perspective is important as, too often, the Federal Communications Commission (FCC, the Commission) does not appropriately consider the importance of spectrum to the entire U.S. economy, and more specifically to the critical infrastructure industries (CII) that underpin our way of life. Although often viewed primarily as a telecommunications regulatory agency, the FCC's jurisdiction over spectrum affects a multitude of CII such as those represented on this statement. Electric and water utilities and other CII share the FCC's goal of winning the "Race to 5G." However, we will only win this race if the spectrum policies adopted by the FCC support CII, which in turn support the wireless telecommunications providers looking to roll out 5G technologies at some point in the next few years.

The undersigned organizations represent nearly every electric utility in the U.S., along with thousands of water utilities. Our members are responsible for providing life-sustaining services which literally power our country's economy. While our collective members are regulated by numerous sector-specific federal, state, and local agencies, we all rely on the FCC as it relates to its control over policies that impact aspects of the communications networks most of our members use to underpin the reliable and safe operation of their infrastructure.

Electric and water utilities, to varying degrees, deploy sophisticated communications networks to manage the safe, reliable, and secure operation of our nation's electric-power and water resources. These networks consist of both wireline and wireless components. Because significant portions of electric and water infrastructure are in remote, rural areas, utilities often rely on wireless networks for these hard-to-reach areas. For the most part, our collective members own and operate these networks privately, relying on the commercial telecommunications companies for small segments of their networks, if any at all.[1]

[1] Utility Network Baseline-April 2019 Update, Utilities Technology Council https://utc.org/wp-content/uploads/2019/04/UTC-Utility-Network-Baseline-Final.0419.pdf

According to a recent survey published by the Utilities Technology Council[2], the most popular, reliable, and cost-effective wireless transmissions are done via microwave networks, oftentimes located in the 6 GHz spectrum band.

The July 12, 2019, memorandum on today's hearing lists several proceedings in which the FCC has taken action to make more spectrum in mid- and high-bands available for 5G wireless broadband services. These bands include the 3.5 MHz band, the 3.7-4.2 GHz band, the 24 GHz band, and, the 6 GHz band. Electric and water utilities have varying interests in each of these proceedings, as our members' private communications networks utilize numerous bands to meet their reliability and redundancy needs.

Of these bands, the 6 GHz band is of vital importance to the utility industry because it enables the propagation (distance) and low-latency (speed) required by industries that cannot tolerate unreliable infrastructure. Hundreds of utilities have licenses in this band for their microwave communications. In addition to the qualities of the 6 GHz spectrum, the fact that it is also licensed spectrum offers our members the reliability and protection from interference that their private telecommunications networks require. Due to the criticality of these networks, electric utilities in particular cannot tolerate even the risk that these communications systems could be degraded, as degraded situational awareness can result in diminished electric reliability.

For example, electric utilities use the 6 GHz band for teleprotection, a system of devices that relay information and monitor the health and status of power lines. If a line is experiencing a problem or fault, teleprotection systems automatically take actions to prevent the problem from escalating and possibly damaging other elements on the system or causing power outages. If these critical communications are degraded due to interference, utilities may be unable to take corrective action in a timely manner to fix an operational problem on the grid.

The importance of this band was recently acknowledged by Senator Lisa Murkowski (R-AK), who chairs the Senate Energy and Natural Resources Committee. In a June 14, 2019, letter to FCC Chairman Ajit Pai, Chairman Murkowski asks a series of questions as to whether the FCC has considered the impact that interference in the 6 GHz band could have on the electric grid. Chairman Murkowski also asked whether and how often FCC staff have met face-to-face with Federal Energy Regulatory Commission (FERC) staff on this topic.

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 – that in turn support telecommunications, which cannot function without electricity. Importantly, the mechanism proposed by the FCC for protecting licensed users in the band from harmful interference—called the Automated Frequency Coordination (AFC) system—remains untested and unproven. If the FCC is intent on opening up the 6 GHz band despite the serious objections raised by the electric and water sector, then this Subcommittee should at least urge the FCC to ensure, before it opens up the band, that the AFC system works as intended. In fact, proponents of opening the band indicated at a recent FERC technical conference that they would not support opening the band if incumbents like the CII we represent would be negatively impacted. It is essential, then, that testing of the AFC system occur should the FCC proceed.

[2] Ibid.

Again, the undersigned entities appreciate our nation's need to become more efficient with our finite spectrum resources. Indeed, many technological advances, including those empowered by 5G technologies, will make our electric and water utility systems more efficient, nimble, and responsive. Today's hearing is an important step in taking a more holistic view of our nation's spectrum policies to ensure that all industries, not just the wireless and telecommunications sectors, are supported.

Winning the "Race to 5G" will require industries like the utilities we represent to continue providing highly reliable, resilient electricity to millions of new devices and services to enable wider use of wireless broadband in all corners of the U.S., including rural and remote locations often unserved by commercial telecommunications carriers.

To that end, we urge members of this Subcommittee to encourage the FCC to hold discussions with FERC, as indicated by Chairman Murkowski, to better inform their decision-making. The Energy and Commerce Committee is uniquely suited for this discussion as it has jurisdiction over both FERC and the FCC. We urge Members of this Subcommittee to work with your colleagues in the Energy Subcommittee and in the full Committee to foster a strong and viable dialogue between both agencies as the energy and telecommunications industries. The pending 6 GHz proceeding is a prime example of why this dialogue is needed as the undersigned have considerable concern that our operations could be negatively impacted if the FCC proceeds as planned.

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

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 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 300 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.