

February 12, 2019



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Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington DC 20554

**Re: GN Docket No. 17-183, *Expanding Flexible Use in Mid-Band Spectrum  
Between 3.7 and 24 GHz*  
ET Docket No. 18-295, *Unlicensed Use of the 6 GHz Band*  
*Ex Parte* Communication**

Dear Ms. Dortch:

I am filing this letter on behalf of American Electric Power (AEP).

AEP is very concerned with any entity being allowed to use the 6 GHz spectrum, unless they are properly coordinated and licensed, due to the risk of causing interference to licensed microwave systems. AEP is in agreement with UTC's objection of this proposed rule by the FCC.

The main points of concern are with the safety of our employees and the risks of both the disruption of reliable electric service and the prolonged restoration of electric service outages for our customers caused by the interference to AEP's private telecommunications network. Like many other electric utilities, AEP has a significant private telecommunication network that is used for mission critical purposes, such as; communicating to personnel in the field, to monitor and control the grid and communications to other utilities. AEP's private telecommunication network utilizes several technologies such as fiber optic systems, microwave systems and other wireless solutions. Microwave systems, licensed in the 6 GHz spectrum, are and will continue to be mission critical systems for AEP within this network. In fact, AEP has several microwave system upgrades under way and has plans for several more over the next three years. The majority of AEP's licensed microwave links utilize the 6 GHz spectrum. AEP's microwave systems are used for transporting 800 MHz two-way radio traffic as well as SCADA, voice communication and corporate WAN for substations, power generation plants and service centers. Microwave systems are the primary transport for AEP's 800 MHz two-way radio system. In rural areas where there is limited or no carrier-provided service, and it is challenging to install AEP-owned fiber optic cable, the microwave system is the primary transport system for SCADA.

The reason AEP has a private telecommunications network is to ensure a secure and reliable telecommunications network in order to transmit voice and data communications that are needed to maintain a reliable electric grid. Time and time again, electric utility private telecommunication networks have proven to be more reliable than carrier-provided services during disasters such as hurricanes, major winter storms and tornadoes. At times, electric utilities have restored private telecommunication services in hours versus carriers taking days or weeks to restore services after major hurricanes and other storms. The ability to communicate

to field personnel and have remote control and monitoring ability of the grid is crucial to safely and efficiently operate the electric grid as well as for electric service restoration efforts after major disasters.

AEP is one of the largest electric utilities in the United States, delivering electricity to more than 5 million customers in 11 states. AEP ranks among the nation's largest generators of electricity, owning nearly 26,000 megawatts of generating capacity in the U.S. AEP also owns the nation's largest electricity transmission system, a more than 40,000-mile network that includes more 765 kilovolt extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about 10 percent of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 percent of the electricity demand in ERCOT, the transmission system that covers much of Texas. AEP's utility units operate as AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana and east Texas). AEP's headquarters are in Columbus, Ohio. AEP has over 440 licensed microwave links in the 6 GHz spectrum throughout these eleven states. If non-licensed use of the 6 GHz spectrum is allowed, then the safety of personnel and customers and the ability to maintain reliable electric service throughout these eleven states is at risk due to interference to AEP's licensed 6 GHz microwave network.

Respectfully submitted,



Richard Harper