

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

AUG 02 1999  
FCC MAIL ROOM

In the Matter of )

Implementation of Sections 309(j) and )  
337 of the Communications Act of 1934 )  
as Amended )

WT Docket No. 99-87

Promotion of Spectrum Efficient )  
Technologies on Certain Part 90 )  
Frequencies )

RM-9332

Establishment of Public Service Radio )  
Pool in the Private Mobile )  
Frequencies Below 800 MHz )

RM-9405

**COMMENTS OF AMERICAN ELECTRIC POWER SERVICE CORPORATION**

Pursuant to Section 1.415 of the FCC's Rules, American Electric Power Service Corporation hereby submits its Comments on behalf of American Electric Power Company, Inc., and its seven electric utility operating companies ("AEP"), in response to the *Notice of Proposed Rulemaking*, released March 25, 1999, in the above-referenced docket. AEP, one of the largest electric utilities in the United States, is concerned about the future availability of spectrum to critical infrastructure industry. AEP believes that the spectrum in use by the power industry today is essential for the continued safe, reliable generation and delivery of electrical energy. AEP strongly supports the position of UTC, and offers the following additional comments in support.

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## **Introduction**

AEP serves a population of over 7 million with a service territory covering nearly 45,000 square miles of the Midwestern United States. AEP uses numerous conventional two-way radio systems in addition to an extensive wide area 800 MHz trunked radio system that covers its entire seven-state service territory. These radio systems play a vital role in ensuring the safety of the public as well as company personnel. Since the inherent danger associated with complex electrical power systems leaves little room for misunderstandings or errors in operation of electrical equipment, two-way radio plays a major role in functions ranging from generating station and coal yard operations to routine switching and tagging procedures to prompt response to downed high voltage lines.

## **Comments**

Public Safety. AEP relies heavily on its wide area 800 MHz trunked radio system as well as other conventional radio systems to quickly dispatch crews to locations of downed power lines. Dispatching services requires group communication among multiple field organizations simultaneously. Commercial telecommunication services like cellular telephone and Personal Communication Services (PCS) are totally inadequate for dispatching crews in a timely manner, especially during major storms or other natural disasters. Immediate response is required to protect the public from coming in contact with deadly high voltage conductors. In a recent period of heavy summer usage, transformer loading caused a fire in an underground vault. A quick customer call to an

AEP call center was transferred to the distribution dispatcher and a crew was routed to the outage within minutes to assist local public safety crews. This is one of many examples of how dispatch radio is used to quickly protect the public.

Shared radio systems. AEP currently shares its 800 MHz trunked radio system with a rural electric cooperative located in central and southern Ohio on a not-for-profit, cost recovery basis and is seeking to expand its sharing agreements with similar organizations. Such agreements are mutually beneficial as they lower AEP's operating costs and give smaller energy providers access to technology they otherwise would not be able to afford. The FCC should continue to allow such arrangements since they promote spectrum efficiency and have the potential to enhance communications in mutual-aid situations.

Protection of incumbent systems. AEP has invested heavily in private two-way radio systems. In the past 10 years, AEP has invested over \$40 million in building out its 800 MHz trunked radio system. Frequency relocation and the replacement cost of equipment could easily double the total cost of the system. Furthermore, nearly all of AEP's 21 major generating stations have conventional radio systems that utilize local repeaters for multiple organizations; the cost of replacement for each system could exceed \$250,000. With this in mind, AEP urges the FCC to adapt equitable rules for relocation in those bands the Commission may decide to put up for auction. AEP also urges the FCC to allow many years to complete such relocation due to the staggering amount of work required to move incumbent users to other systems.

Site-by-site licensing. Due to the patchwork nature of utility service territories, AEP believes that site-by-site licensing should be retained for frequency bands used primarily by utilities and pipelines. In some areas AEP's service territory has highly irregular boundaries. None of the AEP service territory coincides with territories normally associated with geographical licensing (e.g. MTA/BTAs, MEA/BEAs, etc.). Consequently, under a geographic licensing scheme, AEP and other utilities would most likely be required to obtain licenses for geographic areas of which only a small portion would be needed for their use. This situation would be spectrally inefficient and lead to underutilization of spectral resources by utilities and organizations with similar territories.

Narrowbanding above 512 MHz. AEP strongly believes that the use of narrowband equipment should not be mandated in the bands above 512 MHz for the foreseeable future. Such a mandate would be an incredible burden with construction of AEP's 800 MHz system only now coming to a close. AEP requested and received a slow-growth rule waiver from the FCC to allow AEP seven years to build a very large wide area trunked radio system. This wide area system covers more than 45,000 square miles, took seven years to construct and required more than \$40 million in capital investment. Replacing or upgrading this radio system with new technology should not be required until the useful life is fully amortized. Public utility commissions and ratepayers require these assets to be utilized for as long as possible. AEP's previous radio system equipment lasted more than twenty years before being replaced, therefore the life expectancy of this technology and investment should be similar.

Routine use of exempt spectrum. Traffic carried on AEP's wide area trunked radio system is a combination of messages related directly to the safety of the general public as well as routine business communication. As with traditional public safety entities, it is difficult to draw the line where public safety ends and routine business begins. For example, a good deal of AEP's radio traffic is related to the switching and tagging of electrical equipment. These procedures are performed over 50 times a day by crews across the AEP System. While they are part of AEP's routine business, these procedures also protect utility personnel and the general public from downed lines and malfunctioning equipment. This is much like the police officer running a check on an auto or drivers license number. Although such a task may appear routine, it also serves as an essential link in the process of protecting the public from car thefts and apprehending dangerous fugitives. For this reason, AEP asks the FCC to not restrict exempt spectrum to only communications directly related to public safety. It is only possible to make such a distinction in extreme examples. Much of the business conducted by AEP (as well as that conducted by traditional public service entities) over two-way radio is related to both routine business and public safety.

**Conclusion**

In conclusion, AEP urges the FCC to take action in accordance with the views expressed in these comments and those expressed by the UTC.

Respectfully submitted,

American Electric Power Service  
Corporation

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing "Comments of American Electric Power Service Corporation" was sent by first-class mail, postage prepaid, to the following persons this 30th day of July, 1999.

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