

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

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| In the Matter of   | ) |                      |
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| Promoting Spectrum Access for Wireless<br>Microphone Operations                                  | ) | GN Docket No. 14-166 |
|  | ) |                      |
| Expanding the Economic and Innovation<br>Opportunities of Spectrum Through Incentive<br>Auctions | ) | GN Docket No. 12-268 |
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**REPLY COMMENTS OF THE UTILITIES TELECOM COUNCIL**

The Utilities Telecom Council (UTC) hereby files its reply comments in response to the Commission’s Notice of Proposed Rulemaking in the above-referenced proceeding.<sup>1</sup> UTC urges the Commission not to allow low power auxiliary service (LPAS) operation in the 941-944 MHz and the 952-960 MHz bands, because of the potential for interference to supervisory control and data acquisition (SCADA) systems in the bands. These SCADA systems are used to protect utility operational reliability and safety; and any interference to these systems could jeopardize public safety, as well as operational reliability.

**I. Introduction**

UTC is the international trade association for the telecommunications and information technology interests of electric, gas, and water utilities, pipeline companies and other critical infrastructure industries (CII). UTC’s members own, manage and control extensive communications systems and infrastructure that they use to support the safe, reliable and secure delivery of essential electric, gas and water services to the public at large. UTC’s members include large investor-owned utilities that serve millions of customers across multi-state service territories, as well as smaller municipal utilities and cooperatively-organized utilities that may serve isolated communities and rural areas across the country. All of these

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<sup>1</sup> *Promoting Spectrum Access for Wireless Microphone Operations*, Notice of Proposed Rulemaking, GN Docket No. 14-166, 29 FCC Rcd 12343 (2014) (“NPRM”).

members rely on their communications networks to support their core utility services.

In its NPRM, the Commission invites comment on the use of the 941-944 MHz and 952-960 MHz bands for wireless microphones. Specifically, it asks whether existing SCADA systems operate in the same general geographic areas as wireless microphone users, or whether the wireless microphone operations would be separated geographically because these are different types of uses. It also asks how much spectrum is unused and available for wireless microphone operations, given the current use of the bands for SCADA operations. Finally, it asks if there are practical considerations, including the fact that there is only a relatively small amount of spectrum in discrete segments potentially unused and available, that would make authorizing wireless microphone operations more problematic or less practical in these bands; and if so, whether there are ways in which the Commission could effectively address these concerns.<sup>2</sup>

Xcel Energy Services (Xcel) filed comments in response to the NPRM which expressed concerns about the use of the bands for wireless microphones.<sup>3</sup> Specifically, Xcel explained that it has invested significantly in its 900 MHz networks to support its critical utility operations, and that it makes extensive use of its licensed 900 MHz MAS frequencies to provide SCADA services in support of its electric generation, transmission, and distribution operations to ensure the safe, efficient, and reliable delivery of electric utility service to the public.<sup>4</sup> Because of the critical nature of Xcel Energy's operations on its 900 MHz frequencies and the potential for interference from wireless microphone operations, Xcel Energy strongly urged the Commission not to permit LPAS operations in the 941-944 MHz and the 952-960 MHz bands.<sup>5</sup> Alternatively, to the extent the Commission authorizes wireless microphone operations in the 941-944 MHz and 952-960 MHz bands, Xcel Energy urged the Commission to adopt protections to prevent harmful interference to incumbent utility operations, including both Private Operational

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<sup>2</sup> NPRM at ¶154.

<sup>3</sup> Comments of Xcel Energy Services in GN Docket No. 14-166 (filed Feb. 4, 2015).

<sup>4</sup> *Id.* at 2-3.

<sup>5</sup> *Id.* at 3.

Fixed Point-to-Point Microwave Services and MAS operations.<sup>6</sup> Specifically, Xcel supported the concept of minimum separation distances between site-based incumbent operations and wireless microphones and the creation of protection zones around incumbent site-based operations; and it recommended that the Commission adopt limitations on power levels for wireless microphones and limit wireless microphones to indoor uses on frequencies licensed for SCADA operations.<sup>7</sup>

**II. The Commission Should Not Allow LPAS Operations in the 941-944 MHz and the 952-960 MHz bands, and Should Protect SCADA Operations, if the FCC Does Allow Such Operations.**

UTC opposes the use of the 941-944 MHz and the 952-960 MHz bands for LPAS, due to the magnitude of the risk of interference to SCADA operations in the band. Given the critical nature of these SCADA systems, any interference to them could have significant impact on the operational safety and reliability of essential electric, gas and water services. As Xcel explains, its SCADA system enables it to monitor transmission and distribution operations in real time and to operate more efficiently by collecting and transmitting data between remote facilities and headquarters – thereby enabling it to quickly identify problems and take steps to prevent or contain outages, efficiently manage load levels, and ensure the safety of the public.<sup>8</sup> UTC agrees with Xcel and echoes that other utilities also rely on their SCADA systems to ensure operational safety and reliability. Because these systems maintain safety and reliability, the Commission should not jeopardize their performance by authorizing the use of LPAS in the bands that are used for SCADA systems.

Interference to SCADA systems from LPAS could prevent utilities from operating monitoring and control systems that protect the grid and other CII delivery systems from faults that can cascade and cause widespread outages, as well as downstream effects. The fundamental problem with LPAS operations is that there is no sure way of knowing when and where they will be used. As a result, these operations represent the potential of interference anywhere at any time. To be sure, the potential for

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<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

interference can be mitigated by establishing exclusion zones around existing SCADA operations and by restricting the operational power of LPAS, but UTC is concerned that such mitigation efforts may prove to be limited in their effectiveness as a practical matter, depending upon whether users of wireless microphones comply with these exclusion zones or power restrictions. It is very likely that wireless microphone users may inadvertently operate within an exclusion zone or operate at higher power levels that could cause interference to SCADA systems.

For all of these reasons, UTC submits that the Commission should refrain from allowing LPAS operations in the 941-944 MHz and the 952-960 MHz bands; and if it does permit such use, it should impose geographic and power restrictions to protect SCADA systems that utilities use to ensure operational safety and reliability.

Respectfully submitted,

**Utilities Telecom Council**

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