

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

In the Matter of)
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)
Establishment of an Interference)
Temperature Metric to Quantify and)
Manage Interference and to Expand) **ET Docket No. 03-237**
Available Unlicensed Operation in Certain)
Fixed, Mobile and Satellite Frequency)
Bands)
)

TO: The Commission

REPLY COMMENTS OF XCEL ENERGY INC.

Pursuant to section 1.415¹ of the rules of the Federal Communications Commission, (“Commission” or “FCC”), Xcel Energy Inc. (“Xcel Energy”) respectfully submits its Reply Comments in the above-captioned proceeding in response to the FCC’s Notice of Inquiry (“NOI”) and Notice of Proposed Rulemaking (“NPRM”) in ET Docket No. 03-237.²

As discussed herein, Xcel Energy shares the common conclusions formed by the vast majority of the commenters in this proceeding. Specifically, as Xcel Energy asserted in its initial

¹ 47 C.F.R. § 1.415.

² *In re Establishment of an Interference Temperature Metric to Quantify and Manage Interference and to Expand Available Unlicensed Operation in Certain Fixed, Mobile and Satellite Frequency Bands*, ET Docket No. 03-237, FCC 03-289 (rel. Nov. 28, 2003); 69 Fed. Reg. 2863 (Jan. 21, 2004) (hereinafter, because of the bifurcation of this item, paragraphs 1 to 28 will be referred to as the NOI, while paragraph 28 to the end will be referred to as the NPRM).

comments in this proceeding, by issuing an NOI in tandem with an NPRM seeking implementation of the interference temperature concept, the FCC is clearly engaging in “classic cart-before-the-horse policymaking.”³ Moreover, commenters also concur that “experimenting” on the 6 GHz band is bad policy and inappropriate given the nature of the systems currently occupying the band. In these respects, the NPRM is premature, and should not be implemented at this time.

I. THE QUESTIONS POSED IN THE NOI ILLUSTRATE THAT THE NPRM IS PREMATURE

Commenters in this docket, across nearly all constituencies, have sounded a consistent theme: *implementation of the interference temperature concept is premature.*⁴ Parties argued that by issuing the NPRM, the Commission is erroneously attempting to move forward with new rules even though it acknowledges that more analysis and research are necessary.⁵ As a result, rather than bringing more clarity to the process of spectrum and interference management, the Commission is doing the opposite – making spectrum and interference management less predictable and less reasoned.⁶ As Motorola and many others stated plainly, “establishing interference temperature metrics in any specific frequency bands, including those discussed in

³ Comments of the Verizon Wireless at 4 (“Verizon Wireless Comments”).

⁴ See, Verizon Wireless Comments at 15; Comments of the Cellular Telecommunications Association at 15 (“CTIA Comments”), Comments of Cingular and Bellsouth Comments at 44 (“Cingular/BellSouth Comments”) ; Comments of Globalstar, ICO Global Communications, Inmarsat Ventures, Intelsat Global Services, Lockheed Martin, Loral Space & Communications, New Skies Satellites, Northrup Grumman, Panamsat and SES Americom Joint Satellite at 1-2 (“Joint Satellite Commenters”), Comments of Motorola at 5 (“Motorola Comments”); Comments of the United Telecom Council at 3 (“UTC Comments”).

⁵ Cingular/BellSouth Comments at 44.

⁶ Cingular/BellSouth Comments at 44.

the NPRM, is premature.”⁷ Xcel Energy concurs, and urges the FCC to heed the commenters’ warnings and decline to implement the interference temperature concept until the scope of its implications is fully evaluated and understood.

II. THE FCC SHOULD NOT EXPERIMENT ON BANDS RELIED UPON BY CRITICAL INFRASTRUCTURE ENTITIES

Xcel Energy also agrees with the comments filed by the Fixed Wireless Communications Coalition,⁸ PacifiCorp,⁹ Idaho Power,¹⁰ and the United Telecom Council¹¹ with respect to the fact that the 6 GHz band is “singularly unsuited to an interference temperature regime.”¹² Like Xcel Energy, the FWCC noted that the fixed service bands routinely carry public safety and critical infrastructure communications, including the forwarding of police and fire dispatch communications, coordinating the movement of trains, controlling natural gas and oil pipelines, regulating the electric grid and water utilities, and backhauling wireless telephone traffic, among many others---services that require the highest levels of reliability.¹³ The FWCC pointed out that the interference temperature approach is particularly inappropriate for bands such as the 6 GHz band populated by highly directional and extremely sensitive receivers, carrying continuous data over tens of kilometers, and needing a 99.999+% availability for critical applications.¹⁴

Motorola and other manufacturers also recognized the importance of these spectrum users and

⁷ Motorola Comments at 5.

⁸ *See generally*, Comments of the Fixed Wireless Communications Coalition (“FWCC Comments”).

⁹ *See generally*, Comments of PacifiCorp (“PacifiCorp Comments”).

¹⁰ *See generally*, Comments of Idaho Power (“Idaho Power Comments”).

¹¹ *See generally*, Comments of United Telecom Council (“UTC Comments”).

¹² FWCC Comments at 2.

¹³ FWCC Comments at 2.

¹⁴ FWCC Comments at 21.

their essential communications. Motorola stated, “the critical nature of public safety communications warrants the exclusion of any measure such as interference temperature being implemented in frequency bands used for public safety,” and that “other critical spectrum uses related to homeland security should also be afforded similar consideration.”¹⁵ Utilities such as Xcel Energy fit this criteria exactly.

As UTC noted in its comments, over 9000 frequencies in the 6 GHz band are licensed to over 300 critical infrastructure companies throughout the country.¹⁶ Utilities rely on private communications networks, including vital links in the 6 GHz microwave band, to support their core utility functions and to fulfill their obligations to employees, customers, and the general public to maintain and repair their electric systems as safely and quickly as possible, and to operate their facilities on a day-to-day basis in a safe, reliable, and efficient manner.¹⁷ These networks also support the maintenance of a secure electric grid, including guarding against disruption due to natural and man-made threats.

If unlicensed users are allowed operate in the 6 GHz band (or any other band relied upon by electric utilities) in a manner that raises the noise floor, the availability of circuits, including power line protection circuits, carried by utility radios will decrease, potentially jeopardizing the integrity and stability of the entire power grid.¹⁸ These consequences “can ill be afforded in today’s climate of heightened security and the increased reliance of modern life on the consistent, reliable availability of electricity.”¹⁹ Spectrum relied upon by Critical Infrastructure

¹⁵ Motorola Comments at 7-8.

¹⁶ UTC Comments at 9.

¹⁷ PacifiCorp Comments at 3.

¹⁸ *Id.*

¹⁹ *Id.*

entities should not be used to “experiment” with unlicensed devices. UTC concisely summarized the issue: the “interference temperature” approach is still conceptual, and further study is necessary before it should be introduced in any band, particularly the 6 GHz band that critical infrastructure industries use for microwave communications.²⁰ Accordingly, 6 GHz operations critical to public safety and critical infrastructure will be unjustifiably and inappropriately jeopardized if the interference temperature concept is implemented in bands where these entities operate.

III. CONCLUSION

For the foregoing reasons, Xcel Energy respectfully requests the Commission consider these Reply Comments and proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

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²⁰ UTC Comments at 1.