

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of )  
)  
Amendment of the Commission’s Rules ) GN Docket No. 12-354  
with Regard to Commercial Operations in )  
the 3550-3650 MHz Band )  
)  
)

To: The Wireless Telecommunications Bureau

**REPLY COMMENTS OF XCEL ENERGY SERVICES INC.**

Xcel Energy Services Inc., on behalf of its public utility operating company affiliates, Northern States Power Company – Minnesota, Northern States Power Company – Wisconsin, Public Service Company of Colorado, and Southwestern Public Service Company (collectively, “Xcel Energy”) hereby submits its reply comments in response to the Wireless Telecommunications Bureau’s (“Bureau”) *Public Notice* (“*Public Notice*”) in the above-captioned proceeding.<sup>1</sup>

The Bureau requested comment on a proposed two-prong approach to defining Grandfathered Wireless Protection Zones for existing licensees in the 3650-3700 MHz band (“3.65 GHz band”) with base and fixed stations that were registered on or before April 17, 2015, and that are constructed, in service, and fully compliant by April 17, 2016. In particular, the Bureau proposed to (1) provide protection to unregistered customer premises equipment (“CPE”) based on sectors with a 4.4 km radius around each grandfathered base station and the base station

---

<sup>1</sup> / *Wireless Telecommunications Bureau Seeks Comment on an Appropriate Method for Determining the Protected Contours for Grandfathered 3650-3700 MHz Band Licensees*, GN Docket No. 12-354, Public Notice, DA 15-1208 (rel. October 23, 2015) (“*Public Notice*”);

antenna parameters registered in the Universal Licensing System (“ULS”); and (2) provide protection to registered CPE based on the distance from the base station to the furthest CPE unit registered in ULS and the base station antenna parameters registered in ULS.

Xcel Energy, an electric and natural gas company based in Minneapolis, Minnesota, provides a comprehensive portfolio of energy-related products and services to 3.4 million electricity customers and 1.9 million natural gas customers in eight states – Minnesota, North Dakota, South Dakota, Wisconsin, Michigan, Colorado, Texas, and New Mexico.

Xcel Energy holds a nationwide, non-exclusive license in the 3.65 GHz band, which it plans to use for a Field Area Network (“FAN”) using WiMAX technology. Xcel Energy’s FAN deployment will support mission critical applications, such as Advanced Metering Infrastructure (“AMI”) backhaul, Distribution Automation, and Supervisory Control and Data Acquisition (“SCADA”). It will enable Xcel Energy to more efficiently remotely monitor and control utility devices located on its distribution system such as capacitor banks, reclosers, fault circuit indicators, and distributed generation controllers.

#### **I. THE COMMISSION SHOULD EXPAND THE PROTECTION CONTOURS FOR UTILITY 3.65 GHZ BAND OPERATIONS**

Xcel Energy urges the Commission to expand the Grandfathered Wireless Protection Zones for incumbent utility licensees in the 3.65 GHz band. Xcel Energy strongly agrees with the Utilities Telecom Council (“UTC”) that the Grandfathered Wireless Protection Zones should be expanded to protect CPE units that are farther than 4.4 km from a grandfathered base station.<sup>2</sup>

As explained above, and as described by UTC and other commenters in this proceeding, utilities rely heavily on the 3.65 GHz band for wireless communications to support critical utility operations. These wireless communications systems facilitate internal communications used in

---

<sup>2/</sup> Comments of Utilities Telecom Council (“UTC”) at 4-5 (filed December 28, 2015).

support of vital public services; namely, the safe and reliable provision of electric and natural gas delivery service to the public. As such, it is important that the protection zones be expanded to ensure that critical utility operations are protected against harmful interference.

Utilities, such as CenterPoint Energy Houston Electric, LLC (“CenterPoint”) and Exelon Corporation (“Exelon”), explained that they currently have CPE units that range in distances of up to 24 km from a grandfathered base station, well beyond the proposed 4.4 km protection zone.<sup>3</sup> For example, Exelon stated that it has CPE units that are located 16-24 km away from a grandfathered base station.<sup>4</sup> CenterPoint noted that the flat terrain within its geographic territory enables some CPE units to operate at distances over 19 km from a base station and that it intends to install more CPE units, many of which could also extend beyond the proposed 4.4 km protection zone, to support new advanced meters.<sup>5</sup>

If utilities are limited to a protection zone of 4.4 km, CenterPoint is concerned that “there is greater potential for unacceptable levels of interference.”<sup>6</sup> CenterPoint also expressed concern that utilities will have to transition to new spectrum or “will be required to install more base stations, at substantial additional cost, to ensure reliable communications beyond the 4.4 km protection zone proposed.”<sup>7</sup>

Xcel Energy agrees with UTC and these utilities that the proposed 4.4 km protection zone would not be sufficient to protect utility CPE units from harmful interference. Xcel Energy

---

<sup>3</sup> / Comments of CenterPoint Energy Houston Electric, LLC (“CenterPoint”) at 3 (filed December 9, 2015); Comments of Exelon Corporation (“Exelon”) at 4 (filed December 23, 2015).

<sup>4</sup> / Comments of Exelon at 4.

<sup>5</sup> / Comments of CenterPoint at 3.

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

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

shares the concerns that the Commission’s proposed 4.4 km protection zone would not adequately protect critical utility operations because it would fail to provide protection to CPE units that are located farther than 4.4 km from a grandfathered base station. Xcel Energy and other incumbent utilities would be forced to build out more sites at greater cost or look for alternative spectrum bands to support mission critical communications and protect their significant investments.

Xcel Energy also agrees with UTC that the Commission’s proposal would “leave large potential gaps in the coverage of utility systems . . .” that could “potentially reduc[e] reliability of communications for mission critical utility applications.”<sup>8</sup> UTC noted that the Commission’s proposal would not protect CPE that are constructed after April 17, 2016.<sup>9</sup> Similarly, Exelon explained the Commission’s proposal would fail to protect CPE that are “already planned, but not built-out, or future CPE units that will be communicating with grandfathered base stations.”<sup>10</sup> Xcel Energy is in the process of planning future deployments for its 3.65 GHz band FAN system, including CPE units that will be associated with a grandfathered base station. Xcel Energy has made extensive investments in developing standards for its FAN deployment installations, many of which will not be constructed by April 17, 2016. Therefore, Xcel Energy urges the Commission to adopt UTC’s recommendation that the Grandfathered Wireless Protection Zones “should extend in all directions around the center coordinates of the base station, not just to those sectors where there is existing CPE.”<sup>11</sup>

---

<sup>8</sup> / Comments of UTC at 4.

<sup>9</sup> / *Id.*

<sup>10</sup> / Comments of Exelon at 3.

<sup>11</sup> / Comments of UTC at 2. *See* Comments of CenterPoint at 4 (recommending that the Grandfathered Wireless Protection Zones cover “the full 360 degrees around the grandfathered base station.”). *See also* Comments of Exelon at 4 (proposing protection zones that provide

## II. THE COMMISSION SHOULD ENSURE THAT UTILITIES HAVE FLEXIBILITY IN GRANDFATHERED WIRELESS PROTECTION ZONES

Xcel Energy agrees with UTC that the Grandfathered Wireless Protection Zones should protect not only the specific center operating frequency for each grandfathered base station, but all of the frequencies that an incumbent licensee is authorized to use in the entire 3.65 GHz band.<sup>12</sup> The Grandfathered Wireless Protection Zones apply only to base and fixed stations that were registered on or before April 17, 2015, and that are constructed, in service, and fully compliant by April 17, 2016. In the *Public Notice*, the Bureau proposed that an incumbent licensee must certify which of its base stations meet these requirements. At that same time, the Bureau proposed that licensees must also identify the specific operating frequency for each sector, whether or not that base station has unregistered CPE, and the distance to the furthest registered CPE for that sector.<sup>13</sup>

As explained by UTC, if the Grandfathered Wireless Protection Zones for incumbent utilities are limited to the center frequency of a grandfathered base station, it “would unnecessarily prevent utilities from modifying their operations in order to avoid interference and ensure communications reliability.”<sup>14</sup> CenterPoint asserted that it will “be unable to effectively mitigate harmful interference within its service area” if incumbent licensees are not allowed to use the full 50 MHz of spectrum in the 3.65 GHz band.<sup>15</sup> CenterPoint further warned that it suffer signal degradation that would essentially render it unable to perform critical utility

---

protection to any CPE that is associated with a grandfathered base station, regardless of the location of CPE that is currently deployed).

<sup>12</sup> / Comments of UTC at 5-6.

<sup>13</sup> / *Public Notice* at 3.

<sup>14</sup> / Comments of UTC at 5.

<sup>15</sup> / Comments of CenterPoint at 4.

operations.<sup>16</sup> Exelon also explained that that utilities need to have flexibility to change the operating parameters of a grandfathered base station, such as frequencies and channel bandwidth, to mitigate potential interference.<sup>17</sup>

Xcel Energy is strongly concerned that the Commission's proposal would not provide utilities with sufficient flexibility necessary to avoid harmful interference to protected grandfathered base station operations. Therefore, Xcel Energy agrees that utilities should have sufficient flexibility to change the frequencies and other technical parameters for operations within a Grandfathered Wireless Protection Zone.

### **III. CONCLUSION**

**WHEREFORE, THE PREMISES CONSIDERED,** Xcel Energy respectfully requests the Commission to take action in this docket consistent with the views expressed herein.

Respectfully submitted,

**XCEL ENERGY SERVICES INC.**

/s/ Ronald D. Obermueller

Ronald D. Obermueller  
Xcel Energy Services Inc.  
414 Nicollet Mall  
Minneapolis, MN 55401

Dated: January 12, 2016

---

<sup>16</sup> / *Id.*

<sup>17</sup> / Comments of Exelon at 5.