

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

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

COMMENTS OF THE UTILITIES TELECOM COUNCIL

The Utilities Telecom Council (UTC) hereby files the following comments in response to the Wireless Telecommunications Bureau’s Public Notice in the above-referenced proceeding.¹ UTC has been an active participant throughout this proceeding, and its primary concern has been protecting utility systems that operate in the 3650-3700 MHz band (the 3.65 GHz band). Consistent with its comments and those of utilities on the record, UTC urges the Commission to protect utility systems in the 3.65 GHz band from interference, as described more fully below.

In the Public Notice, the Bureau proposes the methodology for determining the “Grandfathered Wireless Protection Zone” around base and fixed stations that are registered by applications filed in ULS by existing licensees on or before April 17, 2015, and that are constructed, in service, and in full compliance with the rules by April 17, 2016.² Specifically, the Commission proposes a two-pronged approach, under which the Grandfathered Wireless Protection Zone would be defined by: (1) sectors with a 4.4 km radius from each registered base station, and the azimuth and beamwidth registered for that base

¹ See Wireless Telecommunications Bureau Seeks Comment on an Appropriate Method for Determining the Protected Contours for Grandfathered 3650-3700 MHz Band, GN Docket No. 12-354, *Public Notice*, DA 15-1208 (rel. Oct. 23, 2015) (*3650-3700 MHz Band Protection Contours Public Notice*).

² *Id.* See also Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band, GN Docket No. 12-354, *Report and Order and Second Further Notice of Proposed Rulemaking*, 30 FCC Rcd 3959 at 4077, ¶403(2015)(hereinafter “*3.5 GHz Order*”)(limiting the Grandfathered Wireless Protection Zones to only those base and fixed stations that are registered by applications filed in ULS by existing licensees on or before April 17, 2015, and that are constructed, in service, and in full compliance with the rules by April 17, 2016.).

station with associated unregistered customer premises equipment (CPE) to encompass the operational area of unregistered subscriber stations; and (2) sectors (centered on each base station with the registered azimuth and beamwidth) which would encompass all registered subscriber stations within that sector.³ To protect incumbents, the Bureau proposes that the field strength limit of any Citizens Broadband Radio Service station should be 44 dBuV/m/MHz at the boundary of the Grandfathered Wireless Protection Zone.⁴ Finally, the Bureau proposes to implement a mechanism whereby licensees would be required to certify which of their base stations are constructed, in service, and in full compliance with the rules by April 17, 2016.⁵ At the same time, licensees would be required to 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.⁶

The Grandfathered Wireless Protection Zone will be critically important for protecting utility systems in the 3.65 GHz band. It will determine the extent to which existing utility systems would be protected from interference during the transition period.⁷ UTC has several concerns with the proposed Grandfathered Wireless Protection Zone, as more fully described below. To summarize, first the Grandfathered Wireless Protection Zone should protect CPE farther than 4.4 km from the center coordinates of the base station. Second, the Grandfathered Wireless Protection Zone should extend in all directions around the center coordinates of the base station, not just to those sectors where there is existing CPE. Third, it should protect not only the center frequency of the base station, but any other frequencies in the 3.65 GHz band that an incumbent chooses to use in the base station's area of operation,

³ *3650-3700 MHz Band Protection Contours Public Notice* at 2.

⁴ *Id.* at 3.

⁵ *Id.* at 3-4.

⁶ *Id.*

⁷ See *3.5 GHz Order*, 30 FCC Rcd 3959 at ¶400 (specifying a transition period of “five years after the R&O Adoption Date or for the remainder of the license term, whichever is longer”, except that the transition period would not be extended beyond five years for stations that were licensed after the January 8, 2013 Federal Register publication date of the NPRM.)

as well. These revisions to the proposed Grandfathered Wireless Protection Zone are necessary to sufficiently protect incumbent utility systems in the 3.65 GHz band.

I. Introduction and Background

UTC is the international association for the telecom and information technology interests of electric, gas and water utilities and other critical infrastructure industries.⁸ Its members own, manage and operate extensive communications systems that they use in support of their core businesses. Owing to the need to maintain the operational reliability, safety and security of their electric, gas and water services to the public at large, utilities design, build, and maintain their communications systems to extremely high standards for reliability and resiliency. Increasing demands for electric, gas and water services have also meant increasing demands on these communications systems. Smart grid and other forms of automation have increased the need for fixed data communications over wide areas. In order to meet their increasing capacity, coverage, and security needs, utilities have increasingly turned to wireless solutions, using wider channels, including the 3.65 GHz band.

Utilities have extensive communications systems in the 3.65 GHz band. Some have thousands of locations. Utilities use the 3.65 GHz band for applications, such as Supervisory Control and Data Acquisition (SCADA), Distribution Automation (DA), Advanced Metering Infrastructure (AMI) and telemetry, which are used to monitor and control the safe, reliable and efficient delivery of essential, electric, gas and water services to the public at large. Utilities have made substantial investments in these systems and continue to expand existing systems in order to increase capacity and coverage to keep pace with increasing demands and to maintain operational reliability, safety and security. Therefore, the proposed rules for the Grandfathered Wireless Protection Zone would have a unique and significant impact on utilities, and the public interest would be served by developing rules that ensure the protection of incumbent utility systems against harmful interference.

II. The Size of the Grandfathered Wireless Protection Zone Should Be Increased.

⁸ See www.utc.org.

UTC echoes the comments of Centerpoint and Exelon, which urge the Bureau to expand the size of the Grandfathered Wireless Protection Zone.⁹ As these utilities both describe, they have CPE that are able to communicate with base stations at distances that are much farther than the 4.4 km radius proposed as one of the ways for defining the Grandfathered Wireless Protection Zone around incumbent base stations. These utilities report that they have CPE that can talk back to base stations that are as far as 24 km away. As they explain, if the Grandfathered Wireless Protection Zone only extends to 4.4 km away, they will be forced to construct new base stations or transition to new spectrum entirely, if they can't ensure protection of existing CPE beyond 4.4 km from a base station.¹⁰ They also underscore that the proposed Grandfathered Wireless Protection Zone would not protect CPE that are registered as of April 17, 2015, but are not constructed by April 17, 2016.¹¹ This would also leave large potential gaps in the coverage of utility systems, if the Grandfathered Wireless Protection Zone doesn't extend to the maximum distance that would be covered by an incumbent base station at a given location. These areas would be left unprotected, potentially reducing reliability of communications for mission critical utility applications.

UTC agrees with these comments that the Grandfathered Wireless Protection Zone should be expanded so that the existing coverage of their incumbent base stations should be protected in all directions, not just where there is existing CPE.¹² This would protect reasonable investment-backed

⁹ Comments of Centerpoint Energy Houston Electric, LLC at 3-4 (filed Dec. 9, 2015)(hereinafter, "Comments of Centerpoint") and Comments of Exelon Corporation at 2-4 (filed Dec. 23, 2015)(hereinafter, "Comments of Exelon").

¹⁰ See Comments of Centerpoint at 3 (explaining that "CenterPoint requires additional 3650-3700 MHz CPE to support new advanced meters, and to the extent CPE is needed beyond the 4.4 km protection zone, there is greater potential for unacceptable levels of interference. In such cases, CenterPoint would be forced, at a minimum, to construct new base stations, or transition to different spectrum entirely.")

¹¹ See Comments of Exelon at 3 (observing that "[t]he Commission's current proposal [under the second prong for registered CPE] does not take into account CPE units that have already been planned, but not built-out, or future CPE units that will be communicating with grandfathered base stations.")

¹² See Comments of Centerpoint (requesting that "the protection zones for new CPE be the greater of 8 km from the grandfathered base station, or the distance from the grandfathered base station to the furthest registered 3650-3700 MHz CPE, covering the full 360 degrees around the grandfathered base station.") See also Comments of Exelon at 4 (stating that, "the Commission should grant Exelon a protection zone of up to 24 km from each grandfathered base

expectations of utilities when they licensed their base stations -- and moreover, would protect the safe, secure and reliable delivery of essential electric, gas and water services to the public at large.¹³ As such, the public interest would be served by extending the Grandfathered Wireless Protection Zone, as described in the comments filed by utilities on the record and by UTC. Conversely, the public interest would not be served if existing utility systems were effectively frozen in place, and utilities were unable to ensure reliable communications with CPE beyond 4.4 km and to protect the entire coverage area of their existing base stations.

III. Incumbents Should Be Allowed Flexibility to Change Frequencies in Grandfathered Wireless Protection Zones.

UTC also echoes the comments of Centerpoint and Exelon, which urge the Bureau to allow utilities the flexibility to change the frequencies of their existing base stations in Grandfathered Wireless Protection Zones.¹⁴ As they explain, utilities need flexibility to be able to change frequencies in order to avoid interference that they encounter in certain areas.¹⁵ Conversely, restricting the Grandfathered Wireless Protection Zone to the center frequency of the incumbent base station would unnecessarily prevent utilities from modifying their operations in order to avoid interference and ensure communications reliability. As explained above, utilities must ensure the reliability of these communications systems in order to maintain the operational safety, security and reliability of essential electric, gas and water services. Therefore, the Bureau should define and implement the Grandfathered Wireless Protection Zone so that utilities can fully protect their incumbent systems, including modifying

station, regardless of the location of CPE that is currently deployed.”)

¹³ See also Comments of Exelon at 3 (stating that “[l]imiting the protection zone to areas in which CPE currently are registered would be a disservice to grandfathered licensees that use the 3.65 GHz band for fixed communications,” and describing how Exelon and other utilities are already installing fixed CPE on 80-100 foot poles and have investments in poles and associated 3.65 GHz radio equipment to install CPE units, many of which will not be constructed by April 17, 2016.)

¹⁴ See Comments of Centerpoint at 4 and Comments of Exelon at 4-5.

¹⁵ *Id.*

their frequency of operation as necessary to ensure communications reliability.¹⁶

¹⁶ UTC also supports the comments of Exelon, which request clarification that would allow incumbent licensees to submit information regarding the frequencies of operation for use by the FCC database and the SAS so as to allow for a single CPE to be served by multiple 3.65 GHz grandfathered base stations. *See* Comments of Exelon at 5.

