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3.5 GHz Issue Brief

SUMMARY

The Utilities Technology Council (UTC) welcomes efforts by the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA) to make more radio spectrum accessible through spectrum sharing, as is the case in the 3.5 GHz band. This may make it possible for more efficient use of spectrum for utilities and other critical infrastructure industries.

Many utilities were among the winners of the FCC's massive 3.5 spectrum auction, held in mid-2020, including Alabama Power, Exelon, Guadalupe Valley Electric, and Hawaiian Electric Company. UTC is concerned, however, that the FCC's decision to expand the size and terms of licenses within it may have inhibited utilities from obtaining needed Priority Access Licenses (PALs), given the cost of competing against unregulated global telecom firms.

BACKGROUND

The radio portion of the electromagnetic spectrum is needed to enable wireless applications for utilities, public safety, and telecommunications providers, among others. This radio spectrum is subdivided into various "bands" measured by "hertz" that have different properties. Utilities often operate their own "private" communications networks—i.e., networks not owned by telecommunications providers,—typically to ensure optimal reliability for mission critical functions necessary to ensure the delivery of reliable utility services. These utilities have, in some cases, purchased or otherwise gained access to certain bands of spectrum to enable wireless applications. The 3.5 GHz band has always represented both an

opportunity and a challenge for utilities in terms of spectrum access for wireless communications. The band represented an opportunity because utilities had access to bid on as much as 150 MHz of spectrum (3550-3700 MHz) as well as access to "Long-Term Evolution" (LTE) equipment, which is a standard for high-speed wireless communications, that will be available for use in the band.

The challenge for utilities is that they have incumbent systems in the 3.65 GHz portion of the band (3650-3700 MHz) which must contend with the threat of interference from new operations coordinated by a spectrum access system database. Such a situation is untested and may not effectively mitigate the threat of interference to incumbent utility systems in the 3.65 GHz band.

Additional complications arise because the utilities that will ultimately need to transition from current rules that apply to their incumbent systems will lose special protections against interference and will need to comply with new rules, including interconnection with the spectrum access database. Utilities have extensive systems in the band and are concerned that the new licensing regime in the 3.5 GHz band will undermine the reliability of and strand the investments made in these systems.

CITIZENS BROADBAND RADIO SERVICE

In 2015, the FCC issued a proposal to implement a three-tiered spectrum-sharing framework to make up to 150 MHz of 3.5 GHz band spectrum available for mobile broadband in the new Citizens Broadband Radio Service (CBRS). The CBRS spans from 3550 MHz to 3700 MHz and consists of 100 MHz newly available spectrum in the 3550-3650 MHz

range and 50 MHz (3650- 3700 MHz) of spectrum already available for commercial use. The three-tiered licensing scheme is composed of General Authorized Access (GAA) tiers, Priority Access License (PAL) tiers, and incumbent access tiers. Additionally, the 2015 rules included a fixed transition period to protect existing licensees in the 3650-3700 MHz band, many of them held by UTC member utilities.

Following this, the FCC sought comment on the parameters for Grandfathered Wireless Protection Zones (GWPZs), which would protect incumbent utility systems in the 3.65 GHz band from interference from new CBRs operating on a GAA basis in the band.

Only three years later, in October 2018, the FCC revised the rules for the 3.5 GHz band once again to make it more conducive for the telecommunications industry. Specifically, the FCC expanded the geographic size and extended the term of priority access licenses (PALs), and now requires auctions, even if there is only one applicant for a license in a given area.

SITUATIONAL AWARENESS

UTC supports policies aimed at making more spectrum accessible and efficient, as doing so will make more spectrum available to utilities and other critical infrastructure industries. However, we are concerned that the decision to expand the 3.5 GHz band to include the 3.65 GHz band will potentially cause interference to the incumbent systems that operate there.

Moreover, we question whether the GWPZ

adequately protects utilities in the band or if it enables them to expand the coverage of their base stations as they expected when they originally deployed their systems. UTC will monitor developments to determine whether these incumbent systems become subject to interference from certain devices in the 3.65 GHz band.

UTC is also concerned that the FCC's new rules made it harder for utilities to bid into the PAL auction, though a handful of utilities were among the winners of the 2020 auction. UTC will continue to remain engaged as utilities now determine the best use of their 3.5 licenses going forward.

ABOUT UTC

The Utilities Technology Council (UTC) is a global trade association dedicated to serving critical-infrastructure providers. Through advocacy, education and collaboration, UTC creates a favorable business, regulatory and technological environment for companies that own, manage or provide critical telecommunications systems in support of their core business.

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