**Before the**

**Federal Communications Commission**

**Washington, D.C. 20554**

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| In the Matter of  Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3700-4200 Band | **)**  **)**  **)**  **)**  **)**  **)** | RM-11791 |

To: Consumer & Governmental Affairs Bureau

**COMMENTS OF THE UTILITIES TECHNOLOGY COUNCIL**

The Utilities Technology Council (UTC) hereby files the following comments in response to the Consumer & Governmental Affairs Bureau’s Public Notice in the above-referenced proceeding.[[1]](#footnote-1) UTC supports the petition by the Broadband Access Coalition (BAC) to promote the use of the 3.7-4.2 GHz band (4 GHz band) for greater use by terrestrial fixed point-to-point (P2P) and point-to-multipoint (P2MP) wireless communications services.[[2]](#footnote-2) UTC agrees with the BAC that the 4 GHz band is underused by fixed satellite services (FSS), and that the Commission should audit the band and modify “full-band, full-arc” policies in order to make more effective use of the band by terrestrial fixed P2P and P2MP operations. Since 1999, UTC has advocated through the Fixed Wireless Communications Coalition (FWCC) to eliminate the “full-band, full-arc” scheme for licensing FSS in the 4 GHz band and other bands.[[3]](#footnote-3) The petition by the BAC, as well as a similar pending petition by the FWCC, represent another opportunity for the FCC to reexamine this issue.[[4]](#footnote-4) UTC urges the Commission to take up these petitions as part of a rulemaking proceeding, rather than to delay action on this issue.

1. **Introduction**

UTC is the international association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries (CII).[[5]](#footnote-5) Since 1948, UTC has advocated for policies that would promote access to spectrum for utilities and CII in order to support the safety, reliability and security of the underlying essential electric, gas and water services that utilities and CII provide. Utilities are faced with increasing communications demands due to cybersecurity concerns and the implementation of smart grid technologies. At the same time, utilities are subject to increasing congestion and interference in existing spectrum bands, including bands that utilities use for microwave communications. Hence, utilities and CII need access to additional suitable spectrum to provide capacity and coverage for their private internal wireless communications systems, including microwave communications systems.

The 4 GHz band would provide capacity and coverage for utilities’ increasing wireless communications needs. There is 500 MHz of spectrum available for use and the band is currently allocated in 20 MHz channels. Under the BAC proposal, contiguous 20 MHz channels could be aggregated for up to 160 MHz of bandwidth, subject to coordination, as well as build-out and licensing conditions. In addition, the proposed rules for the band would provide for greater flexibility to permit TDD as well as FDD operation.[[6]](#footnote-6) In addition to providing capacity, the 4 GHz band has excellent propagation characteristics compared to high-band spectrum, offering near-line-of-sight (“NLOS”) capability at low power for last-mile services. As such, this licensed mid-band spectrum could serve to support a variety of broadband communications applications, and UTC urges the Commission to conduct a rulemaking proceeding, based on the petitions that have been filed by the BAC and the FWCC.

1. **The Commission Can Make More Effective Use of the 4 GHz Band by Eliminating Full-Band, Full-Arc Coordination of Satellite Earth Stations.**

The main obstacle to more efficient use of this band has been and continues to be the full-band, full-arc policy of coordinating satellite earth stations, which has the practical effect of preventing the use of the band for terrestrial fixed services (FS).[[7]](#footnote-7) As UTC and the FWCC have advocated for years, full-band, full-arc is a policy that can and should be eliminated and doing so would not cause interference to fixed satellite services (FSS). Full-band, full-arc encourages warehousing of spectrum and leaves it fallow from being used for FS operations. Moreover, as Commissioner O’Rielly has observed, the 4 GHz band does not appear to be used as much as it used to be for satellite earth stations.[[8]](#footnote-8) The BAC Petition and the comments on the record submitted by the FWCC also indicate that many of the satellite earth stations that do appear on the FCC’s databases are not actually operational.[[9]](#footnote-9) There is little incentive for satellite earth station licensees to update the Commission’s records, and the 15-year licensing period also contributes to the problem of outdated and inaccurate information in the Universal Licensing System (ULS) database. As such, UTC supports eliminating the full-band, full-arc policy of coordinating satellite earth stations, and it urges the Commission to ensure that FSS licensees update the information in the ULS database.

1. **The 4 GHz Band Can Be More Equitably Shared and Interference Protection Must Be Ensured.**

The 4 GHz band could be shared more equitably without displacing satellite earth station operations. Compared with the number of FSS licenses in the band, the number of FS licenses is small. According to the BAC Petition, there are only about 118 terrestrial P2P FS stations licensed across the entire United States, primarily in a limited number of rural areas. Clearly, the full-band, full-arc policy of coordination of satellite earth stations has precluded FS use of the band. As such, UTC agrees with the BAC that there has been very limited shared use of the 4 GHz band in the real world.[[10]](#footnote-10)

UTC agrees that the Commission should put this band to more effective use, while protecting against interference to existing operations. While the BAC proposes using it for P2MP use to support commercial broadband wireless, UTC also supports the use of this band for P2P use as well. As such, in expanding the use of the band, the Commission should ensure that fixed P2P operations are protected from interference from P2MP operations. In this regard, UTC is concerned about the potential for interference if the Commission adopts too much flexibility in the licensing process or that it relies on automatic coordination of P2MP systems. As such, UTC agrees with the BAC that the Commission should refrain from adopting any automated coordination database at this time.[[11]](#footnote-11) Moreover, the Commission must ensure that utility microwave systems, which help to support mission critical communications, are protected from interference.

1. **Conclusion**

For all of these reasons, UTC urges the Commission to conduct a rulemaking based upon the petitions by the BAC and the FWCC. By conducting a rulemaking, this spectrum could be put to effective use by some of the proposed rule changes listed in the BAC Petition, including the elimination of the full-band, full-arc coordination rules for satellite earth stations. In addition, there is sufficient information that has already been submitted on the record upon which the FCC could initiate a rulemaking. As such, the Commission should conduct a rulemaking based upon the issues raised in the BAC Petition. Finally, UTC believes that the 4 GHz band can be effectively shared while at the same time protecting against interference. UTC agrees that it is too early to rely on automated coordination, and that P2P operations must be protected from interference. Therefore, UTC supports the BAC Petition and urges the Commission to conduct a rulemaking based upon it, as well as the related pending petition by the FWCC.

Respectfully,

**Utilities Technology Council**

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1. *See* Consumer and Governmental Affairs Bureau, Reference Information Center, Petitions for Rulemaking Filed, Public Notice, Report No. 3080 (rel. July, 27, 2017) (“Public Notice”). [↑](#footnote-ref-1)
2. Petition for Rulemaking, Broadband Access Coalition, RM-11719 (filed June 21, 2017). [↑](#footnote-ref-2)
3. *See* Request for Declaratory Ruling and Petition for Rulemaking of the Fixed Wireless Communications Coalition, (filed May 5, 1999) (requesting the FCC to change the practice of routine full-band, full-arc licensing.). *See also* Reply Comments of the United Telecom Council in IB Docket No. 00-203 (filed Feb. 9, 2001)(supporting the FWCC Petition). *And see* FWCC Letter to FCC, Request for an Audit of Licensed Satellite Earth Stations in Bands Shared with the Terrestrial Fixed Service, Sept. 30, 2016 at 3. FWCC has requested an audit of FSS earth stations in June 2002, February 2004, November 2008, and September 2016. *See id.* at 1-2 and n. 2. [↑](#footnote-ref-3)
4. In 2000, the Commission initiated a rulemaking to consider the FWCC Petition, as well as other proposals.  *See* *FWCC Request for Declaratory ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service that Share Terrestrial Spectrum, FWCC Petition for Rulemaking to Set Loading Standards for Earth Stations in the fixed-Satellite Service that Share Terrestrial Spectrum, Onsat Petition for Declaratory Order that Blanket Licensing Pursuant to Rule 25.115(c) is Available for Very Small Aperture Terminal Satellite Network Operations in C-Band, Onsat Petition for Waiver of Rule 25.212(d) to the Extent Necessary to Permit Routine Licensing of 3.7 Meter Transmit and Receive Stations at C-Band, Ex parte Letter Concerning Deployment of Geostationary Orbit FSS Earth Stations in the Shared Portion of the Ka-Band*, Notice of Proposed Rule Making, IB Docket No. 00-203, FCC 00-369(rel. Oct. 24, 2000). In 2002, the Commission denied the FWCC’s Petition. *See FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service*, 17 FCC Rcd 2002 (2002). In 2016, the Fixed Wireless Communications Coalition filed a Petition for Rulemaking which proposed to revise the full-band, full-arc practice of licensing satellite earth stations so that they would only be permitted to coordinate the amount of spectrum that they actually needed, and which would allow an earth station to reserve “growth capacity” spectrum or allowed an earth station to seek a waiver of the new restrictions to meet its future communications needs. *See e.g.*, Fixed Wireless Communications Coalition Inc., Request for Modified Coordination Procedures in Bands Shared Between the Fixed Service and the Fixed Satellite Service, RM 11778, Petition for Rulemaking (Oct. 11, 2016) (FWCC Petition); *Fixed Wireless Communications Coalition, Inc. Request for Modified Coordination Procedures in Bands Shared Between the Fixed Service and the Fixed Satellite Service*, RM-11778, Public Notice, Consumer and Governmental Affairs Bureau Reference Information Center Petition for Rulemaking Filed, Report No. 3059 (CGB, Dec. 9, 2016) (FWCC Public Notice). This petition is now being considered as part of the Commission’s Notice of Inquiry regarding mid-band spectrum. *See Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, GN Docket No. 17-183 (released, Aug. 3, 2017). [↑](#footnote-ref-4)
5. *See* [www.utc.org](http://www.utc.org). [↑](#footnote-ref-5)
6. BAC Petition at 31-32. [↑](#footnote-ref-6)
7. *See* 47 C.F.R. §25.203(c)(2) (providing that prior coordination of satellite earth stations should be based on the spectrum band and emissions [and not the specific frequency] of operation, as well as the entire geostationary arc at which the earth station’s antenna may be pointed.) [↑](#footnote-ref-7)
8. Commissioner Michael O’Reilly, “A Mid-Band Spectrum Win in the Making,” visited at <https://www.fcc.gov/news-events/blog/2017/07/10/mid-band-spectrum-win-making> (stating, “Gone are the days when hundreds of thousands of six-foot dishes (affectionately referred to as large bird baths) dotted the landscape, serving residents with video services. Subscribers have replaced these dishes with smaller ones (e.g., Dish and DIRECTV) or broadband services delivered via wireless or wireline networks.”) [↑](#footnote-ref-8)
9. *Id.* at 23, *citing* FWCC Letter to FCC, Request for an Audit of Licensed Satellite Earth Stations in Bands Shared with the Terrestrial Fixed Service, Sept. 30, 2016 at 3 (finding that 27 percent of registered earth stations were never built or were subsequently decommissioned, and another 37.7 percent of earth stations were located more than 100 feet from their licensed coordinates.) [↑](#footnote-ref-9)
10. BAC Petition at 5. [↑](#footnote-ref-10)
11. *Id.* at 27 (stating that, “[t]he Coalition emphasizes that it does not seek to extend the Part 96 CBRS regime into the 3700 – 4200 MHz band, and that an SAS for sharing among fixed users is unnecessary.”) [↑](#footnote-ref-11)