

APPLICATION

MCI Communications Services, LLC (“MCI”) seeks an earth station license permitting it to operate two 2.4m AvL earth station antennas in Window Rock, Arizona (“Window Rock Earth Station”).¹ The Window Rock Earth Station will communicate with O3b Limited’s (“O3b”) non-geostationary satellite orbit (“NGSO”) Fixed-Satellite Service (“FSS”) system, which is authorized to serve the U.S. market.²

As discussed below, the Window Rock Earth Station will be used to provide connectivity to the Navajo Nation, which is especially critical during the COVID-19 pandemic. The Commission granted special temporary authority (“STA”) for 60 days beginning on December 1, 2020, permitting MCI to operate the Window Rock Earth Station on an unprotected, non-harmful interference basis.³ With this application, MCI seeks a permanent earth station license to deliver these critical services to the Navajo Nation on a long-term basis.

Public Interest Showing

The COVID-19 crisis has presented the Navajo Nation with unique telecommunications challenges, and access to connectivity services such as remote telehealth and distance learning is critical to maintaining safety during the pandemic.⁴ Granting the requested Window Rock Earth station license would align with the Commission’s clear intent to support and promote broadband access and enable telehealth efforts relating to COVID-19 throughout

¹ In response to items E11/E12 of the Form 312, Schedule B, MCI has provided the NAD-83 coordinates for the antennas. The WGS84 coordinates for the site are: 35° 40’ 29.620” N.L., 109° 3’ 26.648” W.L.

² *O3b Limited*, Order and Declaratory Ruling, 33 FCC Rcd 5508 (2018) (“O3b Market Access Grant”).

³ See File No. SES-STA-20201116-01256 (granted Nov. 23, 2020).

⁴ Megan Marples, *Navajo Nation Faces Devastating Loss from COVID-19 Pandemic*, CNN (Nov. 24, 2020), <https://www.kob.com/new-mexico-news/navajo-nation-reports-17-new-covid-19-cases-4-additional-deaths/5832710/>; *Navajo Nation Enters New Lockdown As Coronavirus Cases Rise*, NPR (Nov. 16, 2020), <https://www.npr.org/sections/coronavirus-live-updates/2020/11/16/935445425/navajo-nation-enters-new-lockdown-as-coronavirus-cases-rise>; *Navajo Nation Council Resolution CJY-67-20 broadband and telecommunications expenditures signed into law for \$53,224,989*, The 24TH Navajo Nation Council Office of the Speaker (August 17, 2020), https://mcusercontent.com/3341677ced70eee20b6a79473/files/3d6d4f73-bad6-43ff-8053-99d8c99ee7f6/PDF_Navajo_Nation_Council_Resolution_CJY_67_20_broadband_and_telecommunications_expenditures_signed_into_law_for_53_224_989_PR.pdf?utm_source=PRESS+RELEASEs&utm_campaign=41db148074-EMAIL_CAMPAIGN_2020_08_17_09_42&utm_medium=email&utm_term=0_c3fb2c8cdc-41db148074-17163325.

the Navajo Nation.⁵ Additionally, granting this application will serve the public interest because the Window Rock Earth Station will be used to augment an array of critical connectivity services for the Navajo Nation, such as distance learning, support for telemedicine operations, and fire and emergency situational awareness.⁶

Frequency Plan

The Window Rock Earth Station will communicate with O3b's NGSO system using the following frequencies:

- 27.6-28.4 GHz and 28.6-29.1 GHz (uplink)
- 17.8-18.6 GHz and 18.8-19.3 GHz (downlink)

The Window Rock Earth Station antennas will be mounted on fixed platforms. Although the pointing angle of the antennas will change as O3b's in-orbit satellites are tracked, each platform will remain stationary. MCI's proposed Window Rock Earth Station operations in shared bands are consistent with the Commission's rules and policies. MCI addresses each of these bands below.

Uplink

27.6-28.35 GHz – Sharing with primary terrestrial stations

In the 27.6-28.35 GHz band, the Upper Microwave Flexible Use Service ("UMFUS") has a primary allocation, and FSS operations are permitted on a secondary basis. Pursuant to Section 25.136(a), an earth station licensee may be authorized to operate in this band without providing interference protection to future UMFUS stations if certain requirements are

⁵ "Through the Federal Communications Commission's COVID-19 Telehealth Program ... the Navajo Nation Department of Health, based in Window Rock, AZ, was awarded \$954,990 to provide home healthcare and RPM services throughout the Navajo Nation." Eric Wicklund, *Community Centers, Navajo Nation Get FCC Funding for Telehealth Services*, Telehealth News (May 6, 2020), <https://mhealthintelligence.com/news/community-centers-navajo-nation-get-fcc-funding-for-telehealth-services>; see also COVID-19 Telehealth Program, Final List of COVID-19 Telehealth Program Awardees (July 8, 2020), <https://www.fcc.gov/covid-19-telehealth-program>; FCC Grants Navajo Nation Temporary Spectrum Access During Pandemic (April 17, 2020), <https://www.fcc.gov/document/fcc-grants-navajo-nation-temporary-spectrum-access-during-pandemic>.

⁶ "[A] deal is underway with Verizon to bring internet, via satellite, to tribal members in every region. The nation spans across Utah, New Mexico and Arizona. Bringing internet to the entire nation will be good for economic recovery and create small business opportunities...Bringing widespread internet access will be good for future generations[.]" Christina Flores, *Lawmakers to give \$3.9 million in COVID-19 relief to internet for Navajo School Kids*, KUTV (Aug. 18, 2020), <https://kutv.com/news/local/lawmakers-to-give-39-million-in-covid-19-relief-to-internet-for-navajo-school-kids>.

met.⁷ Attachment B to this application demonstrates that the Window Rock Earth Station will meet all the criteria of Section 25.136(a)(4).

The Comsearch report (Attachment A hereto) demonstrates that the Window Rock Earth Station can operate without causing harmful interference to existing terrestrial deployments. The Commission's Universal Licensing System shows that Celco Partnership ("Verizon") is the license holder for Window Rock, AZ UMFUS licenses in the 27.6-28.35 GHz frequency range. As shown in Attachment C, Verizon consents to MCI's use of these frequencies to provide this service.

27.6-28.4 GHz - Sharing with primary GSO FSS operators

NGSO FSS systems are required to protect geostationary orbit ("GSO") FSS systems throughout the 27.6-28.4 GHz band. Both NGSO and GSO FSS systems are secondary to UMFUS in the 27.6-28.35 GHz band, but the Commission has also specified that NGSO FSS systems in this band must operate on an unprotected, non-interference basis with respect to GSO FSS networks.⁸ In the 28.35-28.4 GHz band, there is a primary allocation for GSO FSS systems and a secondary allocation for NGSO FSS systems.⁹

The Commission granted O3b U.S. market access in Ka-band uplink spectrum in which GSO FSS has priority status based on O3b's demonstration that its NGSO operations are not likely to cause harmful interference to GSO networks,¹⁰ and subject to conditions specifying that the O3b operations are not entitled to protection from interference caused by GSO systems.¹¹ MCI's request to operate the Window Rock Earth Station in the 27.6-28.4 GHz band segment is consistent with these provisions and other applicable Commission requirements.

Pursuant to Sections 25.115(f)(1) and 25.146(a)(2) of the Commission's rules, MCI hereby certifies that the earth station operations proposed herein will comply with the applicable equivalent power flux-density ("EPFD") levels in Article 22, Section II, and Resolution 76 of the ITU Radio Regulations. The Commission has recognized that any NGSO system that complies with these international EPFD limits "is considered as having fulfilled its

⁷ 47 C.F.R. § 25.136(a). *See also Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 (2016) at Appendix A.

⁸ *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809 (2017) (the "NGSO Order") at 7817, ¶ 23 and Appendix B, Adopted Ka-band Plan.

⁹ *See id.*, Appendix B, Adopted Ka-band Plan.

¹⁰ *See, e.g.*, IBFS File No. SAT-AMD-20161115-00116 (the "O3b Amendment"), Technical Annex at 13-19.

¹¹ *See* O3b Market Access Grant, 33 FCC Rcd at 5514, ¶¶ 13-16 and 5525, ¶ 46.

obligation . . . not to cause unacceptable interference to any GSO network.”¹² Moreover, MCI will not claim protection from interference from U.S.-licensed GSO FSS networks in the 27.6-28.4 GHz spectrum.

Downlink

17.8-18.6 GHz – Sharing with primary FS and GSO FSS operators and with other NGSO operators

The 17.8-18.3 GHz band is allocated on a primary basis to the terrestrial fixed service (“FS”) and on a secondary basis to FSS.¹³ The 18.3-18.6 GHz band is allocated in the United States on a primary basis to GSO FSS and on a secondary basis to NGSO FSS. O3b’s space stations transmit in this band pursuant to the O3b Market Access Grant, and the operations of the space stations with the Window Rock Earth Station will comply with the conditions specified in that authorization.¹⁴

Conclusion

The requested earth station license will allow MCI to provide critical connectivity services throughout the Navajo Nation. Accordingly, MCI respectfully requests that the Commission grant the Window Rock Earth Station license to permit MCI to operate two 2.4m AvL antennas in Window Rock, Arizona.

¹² NGSO Order, 32 FCC Rcd at 7820, ¶ 32 (footnote omitted). *See also* 47 C.F.R. § 25.289.

¹³ NGSO Order, 32 FCC Rcd at 7812, ¶¶ 7-8, and 7850, Appendix B.

¹⁴ O3b Market Access Grant, 33 FCC Rcd at 5525-26, ¶ 46.