

3060-XXXX

December 2020

**3.7 GHz Service Licensee and Earth Station
Operator Agreements; 3.7 GHz Service Licensee
Engineering Analysis**

SUPPORTING STATEMENT

New Collection Titled: 3.7 GHz Service Licensee and Earth Station Operator Agreements; 3.7 GHz Service Licensee Engineering Analysis

A. Justification:

1. ***Circumstances that make this collection necessary.*** The Commission seeks approval for this new information collection from the Office of Management and Budget (OMB) for a three-year time period.

Under this new information collection, the Commission will collect information that will be used to ensure that 3.7-4.2 GHz band stakeholders adopt practices to ensure the effective and efficient use of the band in a manner that protects incumbent C-band operations. This collection will support the efficient and expeditious clearing of the lower portion of the band while minimizing the risk of harmful interference to incumbent operations.

On February 28, 2020, in furtherance of the goal of releasing more mid-band spectrum into the market to support and enable next-generation wireless networks, the Commission adopted a Report and Order, FCC 20-22, (*3.7 GHz Report and Order*), in which it reformed the use of the 3.7-4.2 GHz band, also known as the C-band.¹ Currently, the 3.7-4.2 GHz band is allocated in the United States exclusively for non-Federal use on a primary basis for Fixed Satellite Service (FSS) and Fixed Service. Domestically, space station operators use the 3.7-4.2 GHz band to provide downlink signals of various bandwidths to licensed transmit-receive, registered receive-only, and unregistered receive-only earth stations throughout the United States.

The *3.7 GHz Report and Order* calls for the relocation of existing FSS operations in the band into the upper 200 megahertz of the band (4.0-4.2 GHz) and makes available the lower 280 megahertz (3.7-3.98 GHz) for flexible use throughout the contiguous United States through a Commission-administered public auction of overlay licenses that is scheduled to occur later this year.² The Commission adopted a robust transition schedule to facilitate the prompt relocation of FSS operations so that a significant amount of spectrum could be made available quickly for next-generation wireless deployments. At the same time, the Commission sought to ensure the effective accommodation of relocated incumbent users. To facilitate an efficient transition, the Commission adopted a process for fully reimbursing existing operators for the costs of this relocation and for offering accelerated relocation payments to encourage a timely transition. Flexible-use licensees will be required to reimburse eligible space station operators for their actual relocation costs associated with clearing the lower 300 megahertz of the band while ensuring continued operations for their customers.

The Commission concluded in the *3.7 GHz Report and Order* that, once this transition is complete, coordination measures are needed to protect incumbent C-band operations in the upper portion of the 3.7-

¹ See MOBILE NOW Act, Pub. L. No. 115-141, Division P, Title VI, § 601 *et seq.* (2018) (requiring the Commission to evaluate “the feasibility of allowing commercial wireless services, licensed or unlicensed, to use or share use of the frequencies between 3700 megahertz and 4200 megahertz”).

² The 20 megahertz from 3.98-4.0 GHz is being reserved as a guard band.

4.2 GHz band. To accomplish this goal most effectively, the Commission is seeking approval for a new information collection to collect information from new 3.7 GHz Service licensees as described below:

3.7 GHz Service Licensee and Earth Station Operator Agreements - (47 C.F.R. § 27.1424)

In the *3.7 GHz Report and Order*, 3.7 GHz Service licensees are required to comply with certain technical rules and coordination practices designed to reduce the risk of interference to incumbent operations. Specifically, 3.7 GHz Service licensees are required to comply with specific power flux density (PFD) limits to protect incumbent earth stations from out-of-band emissions and blocking and to coordinate frequency usage with incumbent Telemetry, Tracking, and Command (TT&C) earth stations. The *3.7 GHz Report and Order* allows 3.7 GHz Service licensees and C-Band earth station operators to modify these PFD limits, but it requires a 3.7 GHz Service licensee that is a party to such an agreement to maintain a copy of the agreement in its station files and disclose it, upon request, to prospective licensees, transferees, or spectrum lessees, and to the Commission. This information collection promotes safety of operations in the band and ensures that all relevant stakeholders have access to important coordination and technical aspects of the transition.

3.7 GHz Service Licensee Engineering Analysis - (3.7 GHz Report and Order at paragraph 384)

The Commission concluded in the *3.7 GHz Report and Order* that licensees in the band post-transition shall be required to comply with certain rules to coordinate operations, minimize interference, and protect C-band incumbents. To that end, the *3.7 GHz Report and Order* required any 3.7 GHz Service licensee with base stations located within the appropriate coordination distance to provide upon request an engineering analysis to the TT&C operator to demonstrate their ability to comply with the applicable -6 dB I/N criteria.

Statutory authority for this information collection is contained in sections 1, 2, 4(i), 4(j), 5(c), 201, 302, 303, 304, 307(e), 309, 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j), 155(c), 201, 302, 303, 304, 307(e), 309, 316.

This collection does not have any impacts under the Privacy Act.

2. Use of Information. The information that will be collected under this new information collection is designed to ensure that 3.7 GHz Service licensees operate in a manner that ensures incumbent C-band operations in the upper portion of the 3.7-4.2 GHz band and TT&C operations in the 3700-3980 MHz band are protected. By requiring 3.7 GHz Service licensees to provide a copy of any private agreement with 3.7 GHz earth station operators to prospective licensees, transferees, or spectrum lessees, and to the Commission, the Commission ensures that such agreements continue to protect incumbent C-band operations in the event a 3.7 GHz service license is subsequently transferred to a new licensee. This collection promotes the safety of operations in the band and reduces the risk of harmful interference to incumbents. It also ensures that relevant stakeholders have access to coordination agreements between 3.7 GHz Service licensees and entities operating earth stations or TT&C operations.

The information provided by the 3.7 GHz Service licensee to the TT&C operator ensures the protection of TT&C operations. The information collection will facilitate an efficient and safe transition by requiring 3.7 GHz Service licensees to demonstrate their ability to comply with the -6 dB I/N criteria, thereby minimizing the risk of interference.

3. Technological collection techniques. Entities required to submit information under this new information collection may be asked to file the required information electronically using the

Commission's existing systems. This collection mechanism is being used to reduce the technological burden on the public and the Commission. Moreover, the Commission expects operators in the band to communicate and submit information through electronic mechanisms, as this is the most accurate and efficient means of relaying this information.

4. ***Efforts to identify duplication.*** There will be no duplicative information collected. This information collection is a new information collection to protect incumbent C-band operations in the upper portion of the 3.7-4.2 GHz band post-transition pursuant to the *3.7 GHz Report and Order*. Thus, the information being collected under this collection is not already available.

5. ***Impact on small entities.*** The Commission has made an effort to minimize the burden on all respondents regardless of size by limiting the information collected under this collection to that which is necessary to obtain the information needed to protect incumbent C-band operations in the upper portion of the 3.7-4.2 GHz band pursuant to the *3.7 GHz Report and Order*.

The Commission has taken several actions to minimize the burden on small businesses, organizations, or other small entities. For instance, by allowing 3.7 GHz Service licensees and entities operating earth stations or TT&C operations to modify the PDF limits set forth in the *3.7 GHz Report and Order*, the Commission offers flexibility to affected entities, which may include small entities, and protection to incumbent operations. Moreover, by requiring licensees to provide upon request an engineering analysis to the TT&C operator, the Commission simplifies the coordination process and ensures that 3.7 GHz Service licensees and TT&C operations operate safely and effectively. This information collection is designed to minimize the risk of harmful interference and promote safe operations in the 3.7-4.2 GHz band, which minimizes the potential burden on affected entities, including small entities, if interference were to occur. Entities subject to this information collection should have the processes and procedures in place to facilitate compliance with these rules, thereby resulting in minimal incremental compliance costs.

6. ***Consequences if information is not collected.*** This new information collection is critical to protect incumbent C-band operations in the upper portion of the 3.7-4.2 GHz band. The agreements and engineering analyses provided by 3.7 GHz Service licensees to earth station and TT&C operators will demonstrate the 3.7 GHz licensee's ability to comply with technical requirements and support the protection of incumbent C-band operations. This information ensures that all relevant stakeholders have access to important coordination and technical aspects of the transition, which promotes safe operations and minimizes the risk of interference. Without this information, there remains a risk of interference, which would frustrate operations and have significant negative effects for the American consumer. This information collection reduces the risk of interference and ensures safe operations in the band. Moreover, to the extent that 3.7 GHz Service Licensees and 3.7 GHz Earth Station Operators modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band by private agreement, requiring that 3.7 GHz Service Licensees maintain a copy in its station files and disclose it, upon request, to prospective license assignees, transferees, or spectrum lessees, and to the Commission puts subsequent licensees on notice and ensures these agreements will remain in force even if a license is subsequently transferred. Without this information, there is potential for interference negatively impacting both important next-generation communication services and content distribution for consumers and businesses.

7. ***Special circumstances.*** The new information collection does not have any of the characteristics that would require separate justification under 5 C.F.R. § 1320.5(d)(2).

8. ***Federal Register notice; efforts to consult persons outside the Commission.*** The Commission has met the notice requirements of 5 C.F.R. § 1320.8. The public has been given the opportunity to comment via publication of the Notice in the Federal Register on (see 85 FR 62729) (October 5, 2020). No

comments were received from the public on the information collection requirements contained in this collection.

9. ***Payments or gifts to respondents.*** No payment or gift will be given to respondents.

10. ***Assurance of confidentiality.*** The information collected under this collection will be made publicly available. However, to the extent information submitted pursuant to this information collection is determined to be confidential, it will be protected by the Commission. If a respondent seeks to have information collected pursuant to this information collection withheld from public inspection, the respondent may request confidential treatment pursuant to section 0.459 of the Commission's rules for such information. See 47 C.F.R. § 0.459.

11. ***Questions of a sensitive nature.*** The information collection requirements do not ask questions of a sensitive nature.

12. ***Estimates of the hour burden of the collection to respondents.***

- a. **Number of estimated annual respondents:** 30 respondents.³
- b. **Total number of annual responses:** 30 responses.
- c. **Frequency of response:** The frequency of responses vary depending on the information required. Some responses require a one-time filing, including: (1) the requirement that 3.7 GHz Service Licensees with base stations located within the appropriate coordination distance to provide upon request an engineering analysis to the TT&C operator to demonstrate their ability to comply with the applicable -6 dB I/N criteria; and (2) requests for 3.7 GHz Service Licensees to disclose private agreements to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band to prospective license assignees, transferees, or spectrum lessees, and to the Commission. The requirement that 3.7 GHz Service Licensees maintain a copy of such agreements in their station files is ongoing.
- d. **Total estimated annual burden:** 120 hours, calculated as follows:

3.7 GHz Service Licensee Engineering Analysis

- 1. *3.7 GHz Service Licensees with base stations located within the appropriate coordination distance shall provide upon request an engineering analysis to the TT&C operator to demonstrate their ability to comply with the applicable -6 dB I/N criteria. (3.7 GHz Report and Order at paragraph 384)*

5 hours per respondent for 10 respondents filing once. Total estimated annual hours burden is calculated as follows:

10 estimated responses x 5 hours per response = 50 total estimated burden hours.

³ The Commission estimates that there is a possible pool of respondents of 75 licensees for this collection. However, the annual number of respondents for the collection equates to 30 respondents per year.

3.7 GHz Service Licensee and Earth Station Operator Agreements

2. A 3.7 GHz Service Licensee who is party to a private agreement to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band shall maintain a copy of the agreement in its station files. (47 C.F.R. § 27.1424)

2 hours per respondent for 10 respondents filing once. Total estimated annual hours burden is calculated as follows:

10 estimated responses x 2 hours per response = 20 total estimated burden hours.

3. A 3.7 GHz Service Licensee who is party to a private agreement to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band shall, upon request, disclose it to prospective license assignees, transferees, or spectrum lessees, and to the Commission. (47 C.F.R. § 27.1424)

5 hours per respondent for 10 respondents disclosing information to assignees. Total estimated annual hours burden is calculated as follows:

10 estimated responses x 5 hours per response = 50 total estimated burden hours.

- e. **Total estimate of annual in-house cost to respondents for the estimated hours burden:** \$9,298.80.

Explanation of calculation of in-house costs to respondents for the estimated hours burden:

3.7 GHz Service Licensee Engineering Analysis

1. 3.7 GHz Service Licensees with base stations located within the appropriate coordination distance shall provide upon request an engineering analysis to the TT&C operator to demonstrate their ability to comply with the applicable -6 dB I/N criteria. (3.7 GHz Report and Order at paragraph 384)

The Commission estimates that it will take one in-house engineer at a rate equivalent to the hourly rate of a GS-15, Step 5 government staff member (\$77.49/hour) approximately 3 hours to prepare the required information, and that it will take one in-house attorney at a rate equivalent to the hourly rate of a GS-15, Step 5 government staff member (\$77.49/hour) approximately 2 hours to prepare the required information. We expect this request will be a one-time response. Therefore, the estimated annual in-house cost is as follows:

1 engineer at \$77.49/hour x 3 hours per response x 10 estimated respondents/responses = \$2,324.70.

1 attorney at \$77.49/hour x 2 hours per response x 10 estimated respondents/responses = \$1,549.80

Total In-House Cost for Requested Information: \$3,874.50.

3.7 GHz Service Licensee and Earth Station Operator Agreements

2. *A 3.7 GHz Service Licensee who is party to a private agreement to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band shall maintain a copy of the agreement in its station files. (47 C.F.R. § 27.1424)*

The Commission estimates that it will take one in-house attorney at an hourly rate of a GS-15, Step 5 government staff member (\$77.49/hour) approximately two hours to prepare the required information. We expect the record to be a one-time obligation. Therefore, the estimated annual in-house cost is as follows:

1 attorney at \$77.49/hour x 2 hours per response x 10 estimated respondents/responses = \$1,549.80.

Total In-House Cost for Requested Information: \$1,549.80.

3. *A 3.7 GHz Service Licensee who is party to a private agreement to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band shall, upon request, disclose it to prospective license assignees, transferees, or spectrum lessees, and to the Commission. (47 C.F.R. § 27.1424)*

The Commission estimates that it will take one in-house attorney at an hourly rate of a GS-15, Step 5 government staff member (\$77.49/hour) approximately five hours to prepare the required information. We expect this request will be a one-time response. Therefore, the estimated annual in-house cost is as follows:

1 attorney at \$77.49/hour x 5 hours per response x 10 estimated respondents/responses = \$3,874.50.

Total In-House Cost for Requested Information: \$3,874.50.

13. There are no external cost associated with this information collection. Therefore, the annual cost for the collection is zero.
14. *Estimates of the annual cost burden to the Commission.* The new information collection will be administered by Commission attorneys and engineers. Based on its experience managing similar collections, the Commission estimates that its costs for administering this collection will be as follows, and does not envision other costs, e.g., personnel or other resources from other government agencies or from the private sector:

3.7 GHz Service Licensee and Earth Station Operator Agreements

- a. *The Commission may request private agreements between 3.7 GHz Licensees and 3.7 GHz Earth Station Operators to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band. (47 C.F.R. § 27.1424)*

The Commission estimates that it will take one Commission staff attorney at the GS-15, Step 5 level and one Commission engineer at the GS-15, Step 5 level approximately 4 hours each to review the private agreements between 3.7 GHz Licensees and 3.7 GHz Earth Station Operators to modify the power flux density of any earth station operations in the 4000-4200 MHz band or TT&C operations in the 3700-3980 MHz band.

1 respondent/response x 4 hours x 77.49/hour (Attorney, GS-15, Step 5) = **\$309.96**.

1 respondent/response x 4 hours x 77.49/hour (Engineer, GS-15, Step 5) = **\$309.96**.

Total Estimated Annual Cost to the Federal Government: \$619.92.

15. *Program changes or adjustment.* This is a new information collection resulting in program change increases of 30 respondents, 30 responses and 120 total estimated burden hours because of the information collection requirements adopted in FCC 20-22 in 47 C.F.R. § 27.1424 and 3.7 GHz Report and Order at paragraph 384.

16. *Collections of information whose results will be published.* The information collection will not be published for statistical use.

17. *Display of expiration date for OMB approval of information collection.* The Commission seeks an exemption from the requirement to display the OMB expiration date for this information collection. The Commission publishes a list of all OMB-approved information collections and their corresponding expiration dates in 47 C.F.R. 0.408 of the Commission's rules, 47 C.F.R. § 0.408, and will publish the OMB control number and OMB expiration date for this collection in the list contained in section 0.408 of its rules.

18. *Exception to certification statement for Paperwork Reduction Act submissions.* There are no exceptions to the certification statement.

B. Collections of Information Employing Statistical Methods:

The Commission does not anticipate that this new collection of information will employ statistical methods, and the use of such methods would not reduce the burden or improve accuracy of results.