

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

In the Matter of
Service Rules for the Advanced Wireless Services
H Block—Implementing Section 6401 of the
Middle Class Tax Relief and Job Creation Act of
2012 Related to the 1915-1920 MHz and
1995-2000 MHz Bands
WT Docket No. 12-357

NOTICE OF PROPOSED RULEMAKING

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TABLE OF CONTENTS

Table with 2 columns: Heading and Paragraph #. Includes sections like I. INTRODUCTION, II. BACKGROUND, III. DISCUSSION, and sub-sections A through E.

4. Secondary Markets 94

5. Other Operating Requirements..... 99

6. Facilitating Access to Spectrum and the Provision of Service to Tribal Lands 101

F. Procedures for Any H Block Licenses Subject to Assignment by Competitive Bidding 102

 1. Application of Part 1 Competitive Bidding Rules..... 103

 2. Revision to Part 1 Certification Procedures 104

 3. Small Business Provisions for Geographic Area Licenses..... 105

IV. PROCEDURAL MATTERS..... 112

 A. *Ex Parte* Presentations 112

 B. Comment Period and Filing Procedures 113

 C. Initial Regulatory Flexibility Analysis..... 116

 D. Paperwork Reduction Act Analysis 117

 E. Further Information..... 118

V. ORDERING CLAUSES..... 119

APPENDIX A – Proposed Rule Changes

APPENDIX B – Initial Regulatory Flexibility Act Analysis

I. INTRODUCTION

1. Today we propose rules for the Advanced Wireless Services (AWS) H Block that would make available ten megahertz of spectrum for flexible use. The proposal would extend the widely-deployed Personal Communications Services (PCS) band, which is used by the four national providers as well as regional and rural providers to offer mobile service across the nation. The additional spectrum for mobile use will help ensure that the speed, capacity, and ubiquity of the nation’s wireless networks keeps pace with the skyrocketing demand for mobile service.

2. Today’s action is a first step in implementing the Congressional directive in the Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act) that we grant new initial licenses for the 1915-1920 MHz and 1995-2000 MHz bands (the Lower H Block and Upper H Block, respectively) through a system of competitive bidding—unless doing so would cause harmful interference to commercial mobile service licensees in the 1930-1995 MHz (PCS downlink) band.¹ The potential for harmful interference to the PCS downlink band relates only to the Lower H Block, due to the susceptibility of some legacy PCS devices to Lower H Block transmissions, and may be addressed by appropriate technical rules, including reduced power limits on H Block devices. We therefore propose to pair and license the Lower H Block and the Upper H Block for flexible use, including mobile broadband, with an aim to assign the licenses through competitive bidding in 2013. In the event that we conclude that the Lower H Block cannot be used without causing harmful interference to PCS, we propose to license the Upper H Block for full power, and seek comment on appropriate uses for the Lower H Block, including Unlicensed PCS.

3. In addition, we propose licensing, operating, and technical rules for the H Block that would:

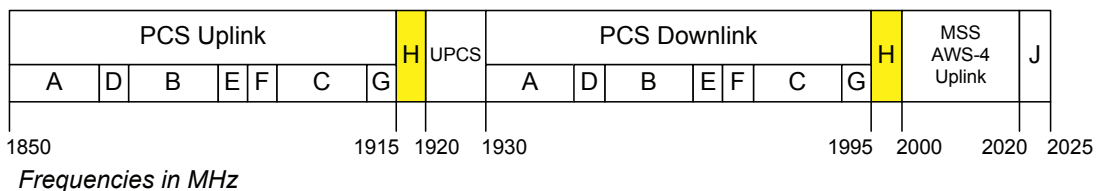
- License the H Block for exclusive geographic areas by Economic Areas (EAs).
- Require an H Block licensee to provide signal coverage and offer service to: (1) at least 40 percent of the population in each licensed area within four years and (2) at least 70 percent of the population in each licensed area at the end of its 10-year license term.
- Allow licensees to disaggregate, partition, and lease the spectrum.

¹ See Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6401, 125 Stat. 156, 222-223 (2012), 47 U.S.C. § 1451 (Spectrum Act). See also, 47 U.S.C. § 309(j).

- Require H Block licensees to pay a *pro rata* share of expenses previously incurred by Sprint and UTAM, Inc. in clearing incumbents from the spectrum.
- Authorize mobile and low power fixed transmissions in the 1915-1920 MHz band.
- Authorize base and fixed transmissions in the 1995-2000 MHz band.

II. BACKGROUND

4. *AWS-2 NPRM and 2008 FNPRM.* In 2004 the Commission adopted a Notice of Proposed Rulemaking in a proceeding known as “AWS-2” (*AWS-2 NPRM*) to seek comments on service rules for the 1915-1920 MHz and 1995-2000 MHz spectrum blocks, referred to collectively as the “H Block.”² In the *AWS-2 NPRM*, the Commission proposed to license the H Block by exclusive, geographic areas under the flexible use Part 27 rules.³



5. The Commission also sought comment on technical rules for the H Block that were more stringent in certain respects, because of concerns about potential intermodulation interference from Lower H Block mobile transmitters into PCS B Block mobiles.⁴ The concerns about interference derived from the use of CDMA technologies in the B Block, and the expected use of CDMA in the H block. In particular, the Commission sought comment on power and out-of-band emission (OOBE) limits for the Lower H Block that were stricter than those typically imposed on similar mobile units.⁵ In response to the *AWS-2 NPRM*, most commenters argued that lower power and stricter OOBE limits were appropriate to address interference. In addition, a few commenters were concerned about potential interference between the Upper H Block base stations and Mobile Satellite Service Ancillary Terrestrial Component (MSS/ATC) base stations receiving in the 2000-2020 MHz band.⁶

² Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, WT Docket No. 04-356, *Notice of Proposed Rulemaking*, 19 FCC Rcd 19263 (2004) (*AWS-2 NPRM*). “Advanced Wireless Services” is the collective term we use for innovative fixed and mobile terrestrial wireless applications using bandwidth that is sufficient for the provision of a variety of applications, including those using voice and data (such as internet browsing, message services, and full-motion video) content. Although AWS has been commonly associated with so-called third generation (3G) applications and has been predicted to build on the successes of such commercial wireless services as cellular and Broadband Personal Communications Services (PCS), the services ultimately provided by AWS licensees are limited only by the Fixed and Mobile designation of the spectrum we allocate for AWS and the service rules we ultimately adopt for the bands.

³ *AWS-2 NPRM*, 19 FCC Rcd at 19264-65 ¶ 1. Designation of the 1915-1920 MHz and 1995-2000 MHz bands as the AWS “H Block” is actually a misnomer, as it refers to a continuation of the PCS-block letter designations in referring to AWS spectrum blocks. The H Block is adjacent to PCS and therefore viewed by some as a PCS extension band. Commenters in WT Docket No. 04-356, as well as the Commission, have long referred to the spectrum as H Block and we have adopted this designation to avoid confusion.

⁴ *AWS-2 NPRM*, 19 FCC Rcd at 19296-19307 ¶¶ 84-116.

⁵ *Id.*, at 19297-99, 19303-04 ¶¶ 87-92, 106-108.

⁶ *See, e.g.*, Comments of TerreStar Networks, Inc., WT Docket No. 04-356 at 1 (Dec. 8, 2004) (stated concerns about both out-of-band and overload interference to MSS/ATC base stations).

6. In 2008, the Commission issued a *Further Notice of Proposed Rulemaking (2008 FNPRM)* in which it proposed and sought comment on rules for H Block including the same stricter-than-typical mobile power and OOBE limits for the Lower H Block that it originally proposed in the *AWS-2 NPRM*.⁷ Similar to the record developed in response to the *AWS-2 NPRM* in 2004, commenters stated that strict power limits for the Lower H Block were necessary to avoid interference to PCS mobile receivers.⁸

7. *Spectrum Act*. In February 2012, Congress passed and the President signed the Middle Class Tax Relief and Job Creation Act of 2012.⁹ The Spectrum Act requires the Commission to auction and license the H Block, with one exception,¹⁰ and another 55 megahertz of spectrum, by February 23, 2015.¹¹ The Spectrum Act directs that the proceeds from these auctions shall be deposited in the Public Safety Trust Fund for certain public safety purposes including the buildout of the Public Safety Broadband Network by the First Responder Network Authority (FirstNet).¹² We anticipate that a 2013 H Block auction will be the first in a series of auctions required under the Spectrum Act.

8. *AWS-4 Proceeding*. The Commission strives to allow spectrum to be utilized for its highest and best use. As a result, the Commission must examine how its rules will affect the spectrum directly at issue as well as the spectrum in other bands, particularly the adjacent ones.¹³ In the *AWS-4 Report and Order*, the Commission examined whether the use of the 2000-2020 MHz band for AWS-4 uplink would affect the use of the 1995-2000 MHz band. After reviewing the issue, the Commission established carefully calibrated, limited technical restrictions on AWS-4 operations in the 2000-2005 MHz uplink band to ensure the full flexible use of the 1995-2000 MHz band.¹⁴ The Commission adopted these limited restrictions for the AWS-4 uplink band to ensure the efficient use of the AWS-4 band while preserving the ability to auction licenses for operations in the 1995-2000 MHz band. This will enable both the AWS-4 band and the 1995-2000 MHz band to be used for providing flexible use services in the most efficient manner possible.¹⁵

9. *Demand for Mobile Spectrum*. Wireless broadband is a key component of economic growth, job creation and global competitiveness because consumers are increasingly using wireless broadband services to assist them in their everyday lives. The rise of wireless broadband reflects a rapid increase in user adoption, the increasing number of devices per user, and the proliferation of uses per device. The explosive growth of wireless broadband services has created increased demand for wireless

⁷ Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band; Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, WT Docket Nos. 07-195, 04-356, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859, 9861 (2008) (2008 FNPRM).

⁸ See, e.g., Comments of AT&T Inc., WT Docket Nos. 07-195, 04-356 at 4-12 (July 25, 2008).

⁹ Title VI of this Act addresses public safety communications and electromagnetic spectrum auctions and is commonly known as the Spectrum Act. Spectrum Act §§ 6001-6703.

¹⁰ See *infra* section III.A.4 (Determination of No Harmful Interference to the 1930-1995 MHz Band).

¹¹ Spectrum Act, § 6401(b).

¹² See *id.*, § 6401(c) (Auction Proceeds).

¹³ Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, WT Docket No. 12-70, Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, ET Docket No. 10-142, Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, WT Docket No. 04-356, *Report and Order and Order of Proposed Modification (AWS-4 Report and Order)*, FCC 12-151 at ¶¶ 52-55 (rel. Dec. 17, 2012).

¹⁴ *Id.* at ¶ 72.

¹⁵ *AWS-4 Report and Order* at ¶¶ 55, 71-72.

spectrum, which is expected to continue increasing, despite technological developments that allow for more efficient spectrum use.¹⁶ As a result, licensed mobile networks need to be able to increase their capacity, and unleashing more spectrum for broadband is essential to meeting this challenge.

III. DISCUSSION

10. To implement the Spectrum Act provisions pertaining to the H Block, and in keeping with our goal of expanding the amount of spectrum available for wireless broadband services, we propose terrestrial service rules for the H Block that would generally follow the Commission's Part 27 rules. In some instances, we propose rules that are modified from Part 27 to account for issues unique to the H Block, particularly to protect PCS licensees from harmful interference.¹⁷ With this *NPRM*, we seek comment on a number of proposals regarding the licensing, use, and assignment of the spectrum, including the costs and benefits of the proposals.

11. Although the Commission previously sought comment on many of these issues in the *AWS-2 NPRM* and the *2008 FNPRM*, wireless broadband technologies and the wireless industry have evolved since the Commission last sought comment on these issues such that, in our assessment, the development of a fresh record is warranted. As a result, we will adopt H Block rules based on the record developed in response to this *Notice* (WT Docket No. 12-357). Parties may re-file in this docket earlier comments with any necessary updates.

12. For each of the issues identified below, we seek comment on the most efficient manner to address the issue. Commenters should also identify the various costs and benefits associated with a particular proposal. We ask that commenters take into account only those costs and benefits that directly result from the implementation of the particular rules that could be adopted, including any proposed requirement or potential alternative requirement. Further, to the extent possible, commenters should provide specific data and information, such as actual or estimated dollar figures for each specific cost or benefit addressed, along with a description of how the data or information was calculated or obtained, and any supporting documentation or other evidentiary support.

A. Spectrum Act Provisions for 1915-1920 MHz and 1995-2000 MHz

13. Section 6401(b) of the Spectrum Act reads, in parts pertinent, as follows:

SEC. 6401. DEADLINES FOR AUCTION OF CERTAIN SPECTRUM

(b) REALLOCATION AND AUCTION.—

(1) IN GENERAL.—Notwithstanding paragraph (15)(A) of section 309(j) of the Communications Act of 1934 (47 U.S.C. 309(j)), not later than 3 years after the date of the enactment of this Act, the Commission shall, except as provided in paragraph (4)—

(A) allocate the spectrum described in paragraph (2) for commercial use;

and

(B) through a system of competitive bidding under such section, grant new initial licenses for the use of such spectrum, subject to flexible-use service rules.

¹⁶ The Council of Economic Advisors similarly found that “the spectrum currently allocated to wireless is not sufficient to handle the projected growth in demand, even with technological improvements allowing for more efficient use of existing spectrum and significant investment in new facilities.” Council of Economic Advisors, *The Economic Benefits of New Spectrum for Wireless Broadband* at 5 (Feb. 21, 2012), available at <http://www.whitehouse.gov/administration/eop/cea/factsheets-reports> (last visited Dec. 11, 2012).

¹⁷ See *infra* ¶¶ 43-50.

(2) SPECTRUM DESCRIBED.—The spectrum described in this paragraph is the following:

- (A) The frequencies between 1915 megahertz and 1920 megahertz.
- (B) The frequencies between 1995 megahertz and 2000 megahertz.

* * *

* * *

(4) DETERMINATION BY COMMISSION.—If the Commission determines that the band of frequencies described in paragraph (2)(A) or the band of frequencies described in paragraph (2)(B) cannot be used without causing harmful interference to commercial mobile service licensees in the frequencies between 1930 megahertz and 1995 megahertz, the Commission may not—

- (A) allocate such band for commercial use under paragraph (1)(A); or
- (B) grant licenses under paragraph (1)(B) for the use of such band.

Spectrum Act, Section 6401(b), 47 USC § 1451(b).

We discuss the Spectrum Act's four main statutory elements related to the H Block—allocation for commercial use, flexible use, assignment of licenses, and a determination regarding interference—in greater detail below.

1. Allocation for Commercial Use

14. Section 6401 of the Spectrum Act requires the Commission to allocate the 1915-1920 MHz and 1995-2000 MHz bands for commercial use.¹⁸ The Spectrum Act does not define the phrase “allocate [the H Block] for commercial use.” When this phrase is read in the context of the Spectrum Act as a whole, we conclude it requires the Commission to make any changes necessary to, or otherwise ensure that, the Non-Federal Table of Allocations reflects that the spectrum identified in section 6401 can be used commercially and licensed to non-federal entities under flexible use service rules through a system of competitive bidding. All of the H Block spectrum is within the 1850-2000 MHz band, which is allocated exclusively for non-federal, fixed and mobile use on a primary basis and designated for use in the commercial PCS/AWS bands.¹⁹ We believe the Commission's prior allocation of the H Block is fully consistent with section 6401's allocation language because the existing allocation is the broadest allocation possible consistent with international allocations.²⁰ We further read section 6401 as directing the Commission to maintain this existing allocation. Given the requirement to license under flexible use

¹⁸ Spectrum Act, § 6401(b)(1)(A).

¹⁹ See 47 C.F.R. § 2.106. In 2003, the Commission allocated the 1995-2000 MHz band for Fixed and Mobile use. See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223, 2225 ¶ 3 (2003) (*AWS Third Report and Order*). In 2004, the Commission designated the 1915-1920 MHz band for AWS and paired it with the 1995-2000 MHz band. See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ET Docket No. 00-258, *Sixth Report and Order, Third Memorandum Opinion and Order and Fifth Memorandum Opinion and Order*, 19 FCC Rcd 20720, 20723 ¶ 3 (2004) (*AWS Sixth Report and Order*).

²⁰ The International Table of Allocations allocates 1915-1920 MHz and 1995-2000 MHz for Fixed and Mobile, and 1995-2000 MHz is part of the 1980-2010 MHz band allocated internationally for Mobile Satellite (earth-to-space) (MSS). Although MSS licenses can be used commercially, the Commission is not authorized to assign licenses for international satellite service through a system of competitive bidding. See Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, 114 Stat. 48 (2000) (“ORBIT Act”).

service rules, we do not read the requirement to allocate the H Block for commercial use to specifically limit eligible uses to commercial uses.²¹

15. Therefore, we tentatively conclude that the existing allocation of the H Block for non-federal fixed and mobile use on a primary basis meets the allocation requirement of section 6401(b)(1)(A) for the H Block, and seek comment on this tentative conclusion. We seek comment on whether there are any additional actions the Commission should take to comply with the requirement to allocate the H Block for commercial use. We ask commenters that believe further action is needed to comply with Congress's mandate to detail what other action is necessary, including the costs and benefits of such action.

2. Flexible Use

16. Consistent with the Spectrum Act's mandate that we license the H Block under flexible use service rules,²² we propose service rules for the H Block that permit a licensee to employ the spectrum for any non-federal use permitted by the United States Table of Frequency Allocations,²³ subject to the Commission's Part 27 flexible use and other applicable rules (including service rules to avoid harmful interference).²⁴ Congress recognized the potential benefits of flexible spectrum allocations and amended the Communications Act in 1997 to add section 303(y), which grants the Commission the authority to adopt flexible allocations if certain factors are met.²⁵ Thus, we propose that the H Block may be used for any fixed or mobile service that is consistent with the allocations for the band. If commenters think any restrictions are warranted, they should describe why such restrictions are needed, quantify the costs and benefits of any such restrictions, and describe how such restrictions would comport with the statutory mandates of section 303(y) of the Communications Act and section 6401 of the Spectrum Act.

3. Assignment of Licenses

17. Section 6401(b) of the Spectrum Act requires the Commission to assign initial licenses for the 1915-1920 and 1995-2000 MHz bands through a system of competitive bidding pursuant to

²¹ Congress also may have intended the reference in section 6401(b)(1)(A) to spectrum for "commercial use" to characterize the nature of the spectrum use as a means of distinguishing it from the reference in section 6401(a) to spectrum allocated for Federal use to be identified by the Secretary of Commerce for reallocation to nonfederal use. *Accord*, Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *Second Report and Order*, 15 FCC Rcd 5299, 5317 ¶ 37 (2000) (Commission determined that Congress, which in 47 U.S.C. § 337(a) directed the Commission to allocate certain spectrum for "commercial use" and to allocate other spectrum for "public safety services," intended the term "commercial use" to characterize the nature of the spectrum use as a means of distinguishing it from the public safety use of the other spectrum referenced in the same section of the statute).

²² Spectrum Act, § 6401(b)(1)(b).

²³ 47 C.F.R. § 2.106.

²⁴ Part 27 licensees must also comply with other Commission rules of general applicability. *See* 47 C.F.R. § 27.3. In addition, flexible use in international border areas is subject to any existing or future international agreements. *See infra* section III.C.3 (Canadian and Mexican Coordination).

²⁵ Section 303(y) provides the Commission with authority to provide for flexibility of use if: "(1) such use is consistent with international agreements to which the United States is a party; and (2) the Commission finds, after notice and an opportunity for public comment, that (A) such an allocation would be in the public interest; (B) such use would not deter investment in communications services and systems, or technology development; and (C) such use would not result in harmful interference among users." Balanced Budget Act of 1997, 47 U.S.C. § 303(y), Pub. L. No. 105-33, 111 Stat. 251, 268-69.

section 309(j) of the Communications Act.²⁶ Accordingly, in section III.F we seek comment on proposals regarding competitive bidding rules that would apply to resolve any mutually exclusive applications accepted for H Block licenses.

4. Determination of No Harmful Interference to the 1930-1995 MHz Band

18. The Commission is prohibited from granting initial licenses under the Spectrum Act for the H Block if the Commission determines that the H Block “cannot be used without causing harmful interference” to commercial mobile licensees in the 1930-1995 MHz band (PCS downlink band).²⁷ We note that the Spectrum Act does not define the term “harmful interference,” and we propose to use the existing definition of “harmful interference” in the Commission’s rules. Under the Commission’s rules harmful interference is “[i]nterference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with [the International Telecommunications Union] Radio Regulations.”²⁸

19. *Upper H Block.* As detailed in the Band Plan section below, the Commission allocated this spectrum for fixed and mobile use in 2003, and it designated it for PCS/AWS base station operations and proposed service rules to that effect in 2004.²⁹ During the eight years that WT Docket No. 04-356 has been pending, no party has filed technical data and/or analysis indicating that base station operations in the Upper H Block would cause harmful interference to licensees in the PCS downlink band.³⁰ Accordingly, we tentatively conclude that licensing the Upper H Block under flexible use service rules will not cause harmful interference to commercial mobile licensees in the 1930-1995 MHz band. We seek comment on this tentative conclusion.

20. *Lower H Block.* In 2004 the Commission designated this spectrum for PCS/AWS mobile operations, paired with Upper H Block, after concluding that harmful interference from Lower H Block to the PCS downlink band could be addressed through appropriate service rules.³¹ In WT Docket No. 04-356, commenters vigorously debated the power and out-of-band emission limits necessary to avoid interference to mobiles receiving in the PCS downlink band.³² Four PCS licensees proposed technical rules for Lower H Block to avoid interference to PCS and at least one PCS licensee continues to advocate for one of the earlier proposals.³³ As discussed in detail below, we propose a band plan and are seeking comment on technical rules to avoid interference, including the earlier proposals by PCS licensees.³⁴

²⁶ Spectrum Act, § 6401(b). The Commission is required to establish by regulation a competitive bidding methodology in accordance with section 309(j)’s statutory requirements when assigning licenses through auction. See 47 U.S.C. § 309(j)(3), (4).

²⁷ Spectrum Act, § 6401(b)(4).

²⁸ 47 C.F.R. § 2.1.

²⁹ See *infra* section III.B (Band Plan).

³⁰ In response to the *AWS-4 NPRM and NOI*, AT&T states that “the Commission should find that, under the requirements of the Spectrum Act, the H Block cannot be made available for commercial mobile use because of the substantial risk of interference to PCS operations.” Comments of AT&T Services, Inc., WT Docket Nos. 12-70, 10-142, 04-356, at 8 (May 17, 2012) (*AT&T AWS-4 Comments* at 8). AT&T states that “opening the upper H Block to terrestrial services would eliminate the existing guard band between PCS and 2 GHz MSS allocations” but nowhere does AT&T explain how licensing the Upper H Block would cause harmful interference to PCS, contrary to the Spectrum Act. *AT&T AWS-4 Comments* at 8.

³¹ See *AWS Sixth Report and Order*, 19 FCC Rcd at 20732-36 ¶¶ 22-29.

³² See *infra* ¶¶ 43, 48.

³³ *Id.*

³⁴ See *infra* sections III.B (Band Plan) and III.C (Technical Issues).

Accordingly, we tentatively conclude that it will be possible to auction and license the Lower H Block under flexible use service rules without causing harmful interference to commercial mobile licensees in the PCS downlink (1930-1995 MHz) band. We seek comment on this tentative conclusion. Regarding the proposed band plan and technical issues discussed in the sections below, we ask that commenters proposing alternative band plans and/or technical rules—including any alternative proposals that have been previously submitted to the Commission—provide detailed analyses of how their proposal will avoid harmful interference to licensees in the PCS downlink band.

21. *Alternatives, if Harmful Interference to PCS.* If, contrary to our expectation, the record results in a determination that licensing the Upper H Block, the Lower H Block, or both, would cause harmful interference to licensees in the PCS downlink band, section 6401(b)(4) of the Spectrum Act nullifies the initial requirement in section 6401(b)(1)(a) that the Commission allocate the interfering spectrum for commercial use. We do not, however, believe that Congress intended section 6401(b)(4)(a) to disturb allocations adopted prior to the Spectrum Act.³⁵ Rather, Congress intended section 6401(b)(4) to avoid harmful interference to the millions of existing customers of PCS licensees that might otherwise result from Commission actions implementing the requirements in section 6401(b)(1) related to H Block.³⁶ Therefore, if we determine that the Lower H Block, the Upper H Block, or both, cannot be used without causing harmful interference to PCS licensees, we tentatively conclude that we may not under the Spectrum Act auction and grant initial licenses, subject to flexible use service rules, for the interfering spectrum. If we determine that half of the H Block cannot be auctioned and licensed, we tentatively conclude that the statute requires us to auction and license the half of the H Block that would not cause harmful interference to PCS downlinks (*i.e.* either the Upper or Lower H Block). Accordingly, we ask commenters to address what should be done in the alternative with the H Block or any portion of the H Block that we determine cannot be licensed under the Spectrum Act due to harmful interference to licensees in the PCS downlink band. In particular, should any such spectrum be designated for Unlicensed PCS (UPCS)?

B. Band Plan

22. In the following sections, we propose to license the H Block as paired 5 megahertz blocks, with the Upper H Block used for high power base stations and the Lower H Block used for mobile and low power fixed operations. We further propose to license the H Block by Economic Areas. We invite commenters to propose other licensing areas including for the Gulf of Mexico.

1. Block Configuration

23. In 2004, the Commission adopted the *AWS Sixth Report and Order* in ET Docket No. 00-258, designating the H Block for licensed fixed and mobile services, including advanced wireless services, and pairing the 1915-1920 MHz band with the 1995-2000 MHz band.³⁷ The Commission decided to pair the 1915-1920 MHz and 1995-2000 MHz bands because it found that pairing this spectrum would promote efficient use of the spectrum, would allow for the introduction of high-value services, and was otherwise preferable to the other options that had been put forth.³⁸

24. In addition, the Commission contemplated that mobile operations would be conducted in the Lower H Block. The Commission reasoned that using the Lower H Block for low power operations would be advantageous because the adjacent 1910-1915 MHz PCS band is used for mobile operations and

³⁵ Commercial use of the H Block is consistent with but not required under the existing allocation and we believe the existing allocation, adopted in 2004, satisfies the initial requirement in section 6401(b)(1)(a) to allocate the H Block for commercial use. *See supra* section III.A.1 (Allocation for Commercial Use).

³⁶ *See* Spectrum Act, § 6401(b)(4).

³⁷ *AWS Sixth Report and Order*.

³⁸ *Id.*, at 20740 ¶ 41.

using the Lower H Block for high power base station operations could result in harmful interference to the PCS band.³⁹

25. We see no reason to diverge from the reasoning in the *AWS Sixth Report and Order*. Accordingly, we tentatively conclude that the 1915-1920 MHz and 1995-2000 MHz bands should be paired as a single band. In addition, we propose that high power base station operations will be prohibited in the Lower H Block. We seek comments on the costs and benefits of licensing the 1915-1920 MHz and 1995-2000 MHz bands in this manner. We also seek comment on alternate configurations of the H Block. Commenters should address any technical issues implicated in an alternate band plan, and should discuss the costs and benefits of any alternative proposal.

2. Service Area

26. *Geographic Area Licensing.* We propose to adopt a geographic area licensing scheme for the H Block because it is well-suited for the types of fixed and mobile services that would likely be deployed in these bands. Additionally, geographic area licensing is consistent with the Commission's licensing approach for the AWS-1, Broadband PCS, Commercial 700 MHz bands, and AWS-4 bands.⁴⁰ Based on the Commission's experience administering these services, geographic area licensing: (1) provides licensees with substantial flexibility to respond to market demand, which results in significant improvements in spectrum utilization; (2) permits economies of scale because licensees can coordinate usage across an entire geographic area to maximize spectrum use; and (3) reduces the regulatory burdens and transaction costs because wide-area licensing does not require site-by-site approval so a licensee can aggregate its service territories without incurring the administrative costs and delays associated with site-by-site licensing.⁴¹ We seek comment on this approach, including the costs and benefits of adopting a geographic area licensing scheme.

27. In the event that commenters do not support geographic area licensing for the H Block, commenters should explain their position and identify any alternative licensing proposals that they support, including the costs and benefits associated with such alternative proposals. Commenters should also address how an alternative licensing approach would be consistent with the statutory requirement to assign licenses in the H Block through competitive bidding and the statutory objectives that the Commission is required to promote in establishing methodologies for competitive bidding.

28. *Service Area Size.* We seek to adopt a service area size for the H Block that meets several statutory goals. These include facilitating access to spectrum by both small and large providers, providing for the efficient use of the spectrum, encouraging deployment of wireless broadband services to consumers, especially those in rural areas, and promoting investment in and rapid deployment of new technologies and services consistent with our obligations under section 309(j) of the Communications Act.⁴²

29. To accomplish these goals, we propose to license the H Block on an Economic Area (EA) basis.⁴³ The adjacent bands, both PCS⁴⁴ and AWS-4,⁴⁵ are licensed on an EA basis. EAs are small

³⁹ *AWS-2 NPRM*, 19 FCC Rcd at 19303-04 ¶¶ 106-108.

⁴⁰ See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162, 25174 ¶ 30 (2003) (*AWS-1 Report and Order*); 47 C.F.R. §§ 24.202 (geographic service areas for Broadband PCS), 27.6(b),(h) (geographic service areas for Commercial 700 MHz and AWS-1, respectively). See also *AWS-4 Report and Order* at ¶ 48.

⁴¹ See *AWS-1 Report and Order*, 18 FCC Rcd at 25174 ¶ 31. We also note that adopting a geographic area licensing approach allows the Commission to assign initial licenses through a system of competitive bidding in accordance with the Spectrum Act.

⁴² See, e.g., *id.* at 25715-16 ¶ 35 (2003); see also 47 U.S.C. § 309(j).

⁴³ 47 C.F.R. § 27.6.

enough to provide spectrum access opportunities for smaller carriers but also may be aggregated up to larger license areas to achieve economies of scale. We seek comment on this approach and ask commenters to discuss and quantify the economic, technical, and other public interest considerations of any particular geographic scheme for this band, as well as the impact that any such scheme would have on rural service and competition.

30. We also seek comment on whether we should license the H Block on a nationwide basis. We seek comment on the extent to which nationwide licenses maximize or limit the opportunity for licensees to provide the widest array of services, and whether nationwide licenses provide the necessary incentives to foster the growth of existing technologies and the development of new technologies. We also ask commenters to compare the advantages and disadvantages of nationwide licensing to those of licensing by EAs, including economic and financial considerations.

31. In response to the *AWS-2 NPRM*, some commenters argued that licensing the H Block using smaller geographic areas than EAs would accommodate its possible use as complementary spectrum to existing PCS offerings.⁴⁶ Other commenters agreed and also noted that small and rural wireless providers would benefit if the Commission licensed the H Block using smaller geographic areas than EAs.⁴⁷ Would licensing the H Block by areas smaller than EAs (e.g. Cellular Market Areas comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs)⁴⁸) facilitate its use by smaller and rural operators?⁴⁹ Would the benefits of smaller licenses outweigh any potential diseconomies of scale? Are there other geographic licensing methods that would better meet the stated goals for this band?

3. Licensing the Gulf of Mexico

32. In addition, we seek comment on how to license the Gulf of Mexico. Should the Gulf of Mexico be part of another service area(s)⁵⁰ or should we separately license a service area(s) to cover the Gulf of Mexico?⁵¹ Are there any public interest benefits that would be served by creating a Gulf of Mexico licensing area? Further, would the interests of the land based licensees be protected if we proceeded to license the Gulf of Mexico? Commenters that advocate a separate service area(s) to cover the Gulf of Mexico should discuss what boundaries should be used, and whether special interference protection criteria or performance requirements are necessary due to the unique radio propagation characteristics and antenna siting challenges that exist for Gulf licensees.

(Continued from previous page) _____

⁴⁴ See 47 C.F.R. § 24.229(c).

⁴⁵ *AWS-4 Report and Order* at ¶ 49-50.

⁴⁶ See Comments of CTIA—The Wireless Association, WT Docket No. 04-356 at 4-6 (Dec. 8, 2004); Comments of Rural Cellular Association, WT Docket No. 04-356 at 2-5 (Dec. 8, 2004).

⁴⁷ See, e.g., UTStarcom Comments, WT Docket No. 04-356 at 2-5 (Dec. 8, 2004) (sought licensing the H Block based on a county-sized license area to allow small, entrepreneurial businesses to obtain spectrum for services to tribal lands, rural areas, and other small communities).

⁴⁸ Comments of the Rural Telecommunications Group, Inc., WT Docket No. 04-356 at 2-5 (Dec. 8, 2004) (sought to license the H Block by Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) to ensure that the H Block is deployed in both urban and rural areas). Cellular markets are defined in 47 C.F.R. § 22.909 and a map showing the areas is available at: <http://wireless.fcc.gov/auctions/data/maps/CMA.pdf>. (last visited Dec. 11, 2012).

⁴⁹ See 47 C.F.R. §§ 24.202, 24.229.

⁵⁰ See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476, 500 ¶ 56, n.137 (2000).

⁵¹ See Service Rules for the 746-764 and 776-794 MHz Bands, WT Docket No. 06-150, *Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064, 8085 ¶ 49 (2007) (*700 MHz First Report and Order*).

C. Technical Issues

33. As discussed above, we are proposing that the Upper H Block be used for base station (*i.e.*, high power) operations, and the Lower H Block for mobile and other low power operations.⁵² In this section we consider whether technical standards generally applicable to AWS and PCS stations⁵³ are appropriate for these bands, or whether different standards are necessary to provide interference protection to services operating in adjacent spectrum bands. In light of the Spectrum Act and our assessment of the relevant public interest benefits, a key goal in this proceeding is to develop technical rules that will permit optimal use of the H Block without causing harmful interference to commercial mobile service licensees in the 1930-1995 MHz PCS band. In responding to our inquiries, we ask commenting parties to provide test data and specific technical analysis to support their positions.

1. Upper H Block: 1995-2000 MHz

34. Immediately below the Upper H Block is the 1930-1995 MHz PCS band, which is used for base station transmit/mobile receive (*i.e.*, downlink). The Commission has tentatively concluded that base stations operating in the Upper H Block would be compatible with similar use of the spectrum below 1995 MHz, and there would be no need to apply technical standards more restrictive than those established for other AWS stations.⁵⁴ The record developed in WT Docket No. 04-356 does not demonstrate any disagreement with this approach.

35. Immediately above the Upper H Block is the 2000-2020 MHz band, which is allocated on a co-primary basis for Fixed, Mobile, and Mobile Satellite (Earth-to-space, *i.e.*, for uplink mobile transmit/satellite receive).⁵⁵ In the *AWS-4 Report and Order*, we adopted service rules under which 2000-2020 MHz will be used terrestrially for mobile transmit/base station receive.⁵⁶ The Commission has previously concluded that there is potential for mutual interference between these two bands,⁵⁷ and in WT Docket No. 04-356 MSS commenters raised concerns.⁵⁸ In the *AWS-4 Report and Order*, we concluded that the public interest is best served by requiring AWS-4 uplinks to operate at lower power levels in 2000-2005 MHz and emit lower emissions below 2000 MHz.⁵⁹ We further concluded that 2 GHz MSS operators and AWS-4 licensees must accept any harmful interference from future, lawful operations in the Upper H Block due to out-of-band emissions in the 2000-2005 MHz band or receiver overload from transmitters operating within the 1995-2000 MHz band.⁶⁰

⁵² See *supra* III.B (Band Plan).

⁵³ *E.g.*, 47 C.F.R. §§ 27.50(d), 27.53(h) (AWS technical standards).

⁵⁴ See *AWS-2 NPRM*, 19 FCC Rcd at 19299-300 ¶ 93.

⁵⁵ 47 C.F.R. § 2.106.

⁵⁶ *AWS-4 Report and Order* at ¶ 17.

⁵⁷ Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, IB Docket No. 01-185, *Report and Order and Notice of Proposed Rulemaking*, 18 FCC Rcd 1962, 2025 ¶ 118. See also *AWS Sixth Report and Order*, 19 FCC Rcd at 20736 ¶ 29; *AWS-4 NPRM*, 27 FCC Rcd at 3575 ¶ 36.

⁵⁸ TerreStar expressed concern about out-of-band and overload interference to both satellite receivers and ATC base stations. Letter from Jonathan D. Blake and Kurt Wimmer, Counsel for TerreStar Networks, Inc., to Marlene Dortch, FCC, ET Docket No. 00-258 at 2 (Aug. 17, 2004); Comments of TerreStar Networks, Inc., WT Docket No. 04-356 at 1, App. (Dec. 8, 2004).

⁵⁹ *AWS-4 Report and Order* at ¶ 72.

⁶⁰ *Id.*

a. Upper H Block Power Limits

36. We propose to adopt the standard base station power limits that apply to AWS and PCS stations: 1640 watts peak equivalent isotropically radiated power (EIRP) in non-rural areas and 3280 watts peak EIRP in rural areas. We seek comment on this proposal.

b. Upper H Block Out-of-Band Emissions Limits

37. Given the considerations addressed above, we propose an out-of-band emissions (OOBE) limit for base stations of $43 + 10 \log_{10}(P)$ dB, where P is the transmit power in watts, outside of the 1995-2000 MHz band. To provide some interference mitigation to AWS-4 uplink operations above 2000 MHz while ensuring that all of the Upper H Block spectrum can be used for more valuable downlink operations,⁶¹ we propose a further OOBE limit of $70 + 10 \log_{10}(P)$ dB above 2005 MHz. We seek comment on our proposals and any alternative proposals, including comments on the associated costs and benefits of each proposal.

c. Co-Channel Interference Between Licensees Operating in Adjacent Regions

38. If we ultimately decide to license this band on the basis of geographic service areas that are less than nationwide (*e.g.*, EAs), we will have to ensure that such licensees do not cause interference to co-channel systems operating along their common geographic borders.⁶² In other services, the Commission has offered either a “boundary limit”⁶³ or a “coordination”⁶⁴ approach to provide interference protection between co-channel licensees operating in these bands. Both approaches have certain advantages and disadvantages. For example, coordination would likely minimize the potential for interference to coordinated stations, but could also impose unnecessary costs in coordinating facilities that have a low potential for interference. A boundary limit approach would establish an accepted standard, which would enable licensees to deploy facilities in boundary areas without the need for coordination, but could require some additional planning between licensees to ensure that potential interference does not occur.

39. In other bands where spectrum has been allocated for fixed and mobile services, we have uniformly adopted the boundary limit method to minimize co-channel interference. For example, for the PCS and AWS-1 bands, which are closest in frequency to the H Block, there is a field strength limit of 47 dB μ V/m at the boundary of licensed geographic areas.⁶⁵ We propose that the boundary limit approach should be adopted for the H Block as the means for protecting licensees from co-channel interference at their borders, and propose to specify a boundary field strength limit of 47 dB μ V/m. We seek comment on these proposals. We also ask whether, if the boundary limit method is adopted, we should permit licensees operating in adjoining areas to employ alternative, agreed-upon signal limits at their common borders.

⁶¹ *Id.* at ¶¶ 53, 71-72.

⁶² If we authorize a single licensee in this band, it will not be necessary to adopt co-channel interference protection criteria. Our co-channel protection rules would, however, apply to any partitioned portions of a nationwide license. *See* 47 C.F.R. § 27.55.

⁶³ With this method, a licensee would be required to limit the field strength of its transmissions to some prescribed level at its geographic border.

⁶⁴ Under this approach, licensees operating on the same spectrum in adjacent areas would be required to coordinate the location of their stations.

⁶⁵ 47 C.F.R. §§ 24.236, 27.55(a)(1). *Cf.* 47 C.F.R. § 27.55(a)(2) (40 dB μ V/m field strength limit is used in the 700 MHz services).

2. Lower H Block: 1915-1920 MHz

40. Immediately below the Lower H Block is the 1850-1915 MHz PCS band, which is used for mobile transmit/base receive. Use of the Lower H Block for mobile transmit/base receive, as we have proposed, would be compatible with this adjacent PCS band.⁶⁶ Thus there would be no need to apply technical standards more restrictive than those established for AWS and PCS stations to protect PCS operations below 1915 MHz.

41. Above the Lower H Block is the 1920-1930 MHz unlicensed PCS (UPCS) band, which does not require protection,⁶⁷ and the 1930-1995 PCS base transmit/mobile receive band. The latter presents protection challenges for use of the Lower H Block. The Commission has previously concluded that there is potential for mobile transmitters in the 1915-1920 MHz band to cause out-of-band and overload interference to mobile receivers in the 1930-1995 MHz band, but only when certain worst-case conditions are all present. Specifically, “[t]he worst case occurs when the mobile transmitter is operating at maximum power (near the edge of its service area) at the upper edge of the band (near 1920 MHz) and the mobile receiver is trying to receive a weak signal (near the edge of its service area) at the lower edge of the band (near 1930 MHz) and only free space loss is considered.”⁶⁸ Additionally, both mobiles must be in close proximity to each other, less than a few meters, and in line-of-sight conditions. The Commission found that the confluence of these worst-case circumstances is very infrequent and that the risk of actual interference is further mitigated by normal network management practices such as handoff and power management.⁶⁹ Nevertheless, the Commission concluded that technical standards for the Lower H Block more restrictive than those established for PCS may be appropriate to avoid impairing incumbent PCS operations above 1930 MHz.⁷⁰

42. The Spectrum Act sharply focuses these concerns by requiring us to auction the H Block spectrum unless we determine that the frequencies cannot be used without causing harmful interference to commercial mobile service licensees in the frequencies between 1930 MHz and 1995 MHz (PCS downlink).⁷¹ We therefore wish to review previous proposals for Lower H Block power and emissions limits, evaluate how the interference environment may have changed since those earlier discussions, and determine what limits are appropriate for the current environment and whether they may be increased in the future.

a. Lower H Block Power Limits

43. Several parties have expressed concern about the potential for intermodulation interference, which can result from receiver overload, impacting PCS user equipment (UEs) receiving in

⁶⁶ *AWS Sixth Report and Order*, 19 FCC Rcd at 20729 ¶ 17. Most of the Broadband PCS bands, 1930-1990 MHz and 1850-1910 MHz, are used for base and mobiles, respectively, based on industry standards. The PCS G Block, 1990-1995 MHz and 1910-1915 MHz, is used for base and mobiles, respectively, pursuant to 47 C.F.R. § 24.229(c).

⁶⁷ UPCS is authorized to operate on a non-interference basis under Part 15 of the Commission’s rules. *See* 47 C.F.R. Part 15, Subpart D (Unlicensed Personal Communications Service Devices). *See also* 47 C.F.R. § 15.5 (b) (“Operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator”).

⁶⁸ *AWS Sixth Report and Order*, 19 FCC Rcd at 20731-32 ¶ 22. Considering only free space losses actually overstates the potential for interference, because it ignores environmental factors (for example, body shielding) that could reduce the signal strength of an H Block signal reaching a nearby PCS receiver.

⁶⁹ *Id.* at 20732-35 ¶¶ 23-26.

⁷⁰ *Id.* at 20736 ¶ 28.

⁷¹ *See supra* ¶ 18.

the PCS B Block (1950-1965 MHz).⁷² In the *2008 FNPRM*, the Commission proposed a limit on the EIRP from H Block mobile transmitters of 23 dBm/MHz.⁷³ In response, Sprint and Verizon Wireless (both licensees of significant portions of PCS including B Block) and Nextel reiterated their 2005 proposal for graded power limits to avoid interference to PCS as follows: a limit on mobile EIRP of 6 dBm/MHz in the 1917-1920 MHz band, and a limit of 30 dBm/MHz in the 1915-1917 MHz band.⁷⁴ This proposal was supported by testing of a variety of mobiles commissioned by CTIA in 2004. Sprint has repeatedly and recently stated that the H Block can be auctioned and licensed without interfering with PCS operations by using these earlier-proposed, graded power limits.⁷⁵ AT&T, also a licensee of a significant portion of PCS spectrum, including the B Block, did not concur with the plan put forth by Sprint, Verizon and Nextel and submitted an alternative solution. AT&T proposed a uniform, “technologically neutral,” 13 dBm/MHz power limit on the Lower H Block to protect PCS, arguing that the split-band approach favored CDMA over GSM and wideband technologies, such as W-CDMA and UMTS/HSPA.⁷⁶ In response to the *AWS-4 NPRM*, AT&T favored leaving the H Block idle to serve as a guard band to protect AWS-4 and PCS.⁷⁷ More recently, AT&T argues in the alternative that if the Commission proceeds with an auction of the entire H Block despite AT&T’s concerns, we should adopt technical rules to protect PCS devices from harmful interference including appropriate power limits on H Block mobiles.⁷⁸

44. We seek to establish technical requirements that will support flexible use of this spectrum in accordance with the Spectrum Act without causing harmful interference to PCS licensees. The record in WT Docket No. 04-356 was largely developed between four and eight years ago. Since then, the mobile broadband industry, including the wireless network equipment sector, has undergone a rapid evolution. The marketplace has seen greater adoption of wideband technologies such as UMTS and LTE, as well as the authorization and launch of PCS services in the G Block. Advances in mobile device

⁷² See, e.g., Comments of QUALCOMM Inc., WT Docket No. 04-356 at 2 (Dec. 8, 2004).

⁷³ See *2008 FNPRM*, 23 FCC Rcd at 9861 ¶ 4.

⁷⁴ Letter from Donald C. Brittingham, Verizon Wireless, to Marlene H. Dortch, FCC, WT Docket No. 04-356 at 1 (June 5, 2008); Joint Reply Comments of Sprint Corp., Verizon Wireless and Nextel Communications, WT Docket No. 04-356 at 2-3 (Feb. 8, 2005). At the time of the February 2005 joint filing, Nextel was the conditional licensee of the PCS G Block at 1910-1915/1990-1995 MHz. Later in 2005, Nextel merged with Sprint.

⁷⁵ Joint Reply Comments of Sprint Corp., Verizon Wireless and Nextel Communications, WT Docket No. 04-356 at 2-3 (Feb. 8, 2005); Letter from Trey Hanbury, Sprint Nextel, to Marlene H. Dortch, FCC, WT Docket No. 04-356 at 2 (July 24, 2012). See also Reply Comments of United States Cellular Corp., WT Docket No. 04-356 at 2-3 (June 1, 2012); Comments of RCA–The Competitive Carriers Ass’n, WT Docket No. 04-356 at 12-13 (May 17, 2012). We also note that a few commenters to the *AWS-2 NPRM* viewed the proposed limits as based on conservative assumptions or unnecessary. See Comments of T-Mobile USA, Inc., WT Docket No. 04-356 at 4-10 (Dec. 8, 2004) (discussing proposed limits relative to GSM operations and not opining on limits needed to protect CDMA networks); Comments of Nextel Communications, WT Docket No. 04-356 at 12-38 (Dec. 8, 2004) (stating that standard FCC limits will protect incumbent PCS operations).

⁷⁶ Comments of AT&T Inc., WT Docket No. 04-356 at 11-12 (July 25, 2008). See also Reply Comments of Cingular Wireless LLC, WT Docket No. 04-356 at 15-19 (Feb. 8, 2005).

⁷⁷ Comments of AT&T, WT Docket No. 04-356 at 8 (May 17, 2012) (stating that the Lower H Block should be preserved as a guard band because “reducing an already narrow PCS duplex gap to just 10 megahertz ... would create a likelihood of self-interference within the PCS band”).

⁷⁸ See Letter from Joan Marsh, AT&T Services, Inc., to Marlene H. Dortch, FCC, WT Docket No. 04-356 at 3-4 (Oct. 5, 2012) (noting that Verizon proposed staggered power limits for Lower H Block devices in 2005 based on testing by CTIA and Motorola and that these tests did not contemplate LTE use of the H Block). “Prior to making the H Block available at auction, the Commission should adopt power limits and any other protections testing suggests are necessary to prevent harmful interference caused by mobile broadband use of the H Block to current and future PCS band operations.” *Id.* at 4.

development have unleashed new designs and ushered in the advent of the smartphone. We seek comment on how changes in the industry may have affected the assumptions underlying previous analyses. How have filtering techniques and duplex design improved? Given that the Commission's intentions to authorize mobile service in the H Block have been known in the industry since at least 2004, have better duplexer filters been employed in user equipment? How has the population of mobile devices changed, what is the mix of technologies in use in the marketplace, and what is the performance of this new generation of devices?

45. We seek comment on the appropriate power limit for 1915-1920 MHz mobile devices in order to prevent interference to PCS operations. Commenters are asked to submit detailed technical analyses or studies in support of their recommendations and are encouraged to provide test data wherever possible. The assumptions that underpin the analyses should identify how harmful interference is defined. What probability of interference is deemed acceptable (what percentage of mobiles, what percentage of locations)? For example, the Commission's earlier proposal, 23 dBm/MHz, was based on a mobile separation of two meters between users, while others argued for a one-meter separation. Likewise, is defining harmful interference based on degradation to a receiver's noise floor appropriate for a system which is inherently interference-limited? If stricter limitations on mobile transmit power are deemed necessary to protect current legacy devices, should the power limits sunset after a period of time, allowing time for new, more resilient mobiles to comprise the bulk of the mobile population? How much time will licensees need to obtain and deploy UEs with the better filters, if better filters are still needed? How long will consumers' legacy UEs need to be protected? We also seek comment on the costs and benefits of alternative power limits.

46. The 1915-1920 MHz band is also allocated for fixed services, so fixed stations will be allowed to operate in the band. However, because fixed station antennas are generally located some distance above ground level, the possibility of interference from fixed stations to PCS mobiles will likely be less than the anticipated interference from 1915-1920 MHz mobiles to PCS mobiles. We therefore believe that 1915-1920 MHz fixed stations should be permitted to employ a higher power level than mobiles operating in that band. We seek comment as to what that power level should be.

b. Lower H Block Out-of-Band Emissions Limits

47. The Commission has previously concluded that, in certain circumstances, attenuating transmitter OOBs by $43 + 10 \log_{10}(P)$ dB is appropriate to minimize harmful electromagnetic interference between operators.⁷⁹ This limit is generally applied in cases where adjacent services have similar characteristics, such as base-to-base or mobile-to-mobile and adhere to similar power limits. This limit has served well as a basis for development of industry standards which may impose tighter limits in some cases. An OOB limit of $43 + 10 \log_{10}(P)$ dB applies to most of the services authorized under Parts 24 and 27. In particular, this is the limit imposed on transmitters operating in both the 1930-1995 MHz PCS band and the 1920-1930 MHz UPCS band adjacent to the Lower H Block. As both of these services in adjacent bands provide for mobiles with similar power, the same OOB limit appears appropriate for the Lower H Block. We therefore propose to require attenuation of $43 + 10 \log_{10}(P)$ dB to emissions from transmitters in the 1915-1920 MHz band.

48. The risk of mobile-to-mobile interference discussed in paragraph 41, *supra*, may require a further OOB limitation to protect against the potential for interference from the out-of-band emissions of Lower H Block transmitters into PCS mobiles receiving in the 1930-1995 MHz band. Currently, the Commission's rules require licensees operating in the 1850-1915 MHz PCS band to comply with the

⁷⁹ See, e.g., 47 C.F.R. §§ 24.238(a); 27.53(h) (for PCS and AWS, respectively).

43 + 10 log₁₀ (P) dB OOB limit at the edge of their authorized spectrum block.⁸⁰ This level of required attenuation of emissions with respect to the transmitter power can be translated into a power spectral density of -13 dBm/MHz for out-of-band emissions. We are aware that PCS-industry standards require equipment manufacturers to incorporate a stronger OOB suppression capability in PCS mobiles.⁸¹ In the 2008 *FNPRM*, the Commission proposed a stricter limit on out-of-band emissions from Lower H Block transmitters of -60 dBm/MHz in the frequency range of 1930-1990 MHz (PCS downlink band), equivalent to an attenuation of 90 + 10 log₁₀ (P) dB.⁸² The joint proposal of Sprint and Verizon requested a limit of -76 dBm/MHz.⁸³ Their analysis assumed a one-meter separation and mobile receivers operating in noise-limited faded signal conditions, and included test data commissioned by CTIA.⁸⁴ Most of the mobiles tested met this limit.⁸⁵ The -76 dBm/MHz specification is also the industry standard for CDMA devices under TIA-98F.⁸⁶ Ericsson and Motorola submitted comments supporting the use of industry standards as the basis for OOB limits and cited -61 dBm/MHz for the GSM Standard, with Motorola citing -76 dBm/MHz for the CDMA standard.⁸⁷ Ericsson provided a later submission specifically supporting a limit of -66 dBm/MHz.⁸⁸ Motorola, responding to CTIA's measurements, noted the failure of two GSM devices to meet the tighter CDMA-based OOB limits of -76 dBm/MHz and thus advocated a limit of -71 dBm/100 kHz, which is equivalent to -61 dBm/MHz.⁸⁹

49. As discussed earlier, there has been considerable technological advancement in devices and technologies deployed in the mobile broadband industry since this issue was last under review. We note that many of the arguments for proposed OOB limits were linked to industry standards at the time. The 3GPP standard for emerging 4G technology allows for a higher level of OOB, generally -50 dBm/MHz in most bands, but has implemented a limit of -40 dBm/MHz in several bands. The current LTE standards for the use in PCS requires mobiles in 1850-1915 MHz to meet a limit of -50 dBm/MHz in 1930-1995 MHz.⁹⁰ In this and the concurrent AWS-4 proceeding, Sprint has expressed support for an OOB limit of -40 dBm/MHz from AWS-4 transmitters into the PCS downlink band at 1930-1995

⁸⁰ Section 24.238(a) of our rules requires emissions in the PCS spectrum blocks to be attenuated by a factor of 43 + 10 log₁₀ (P) dB at the band edge. 47 C.F.R. § 24.238(a). Thus, for example, transmissions from the uppermost PCS mobile spectrum block have to meet this requirement at 1915 MHz.

⁸¹ Letter from Lawrence R. Krevor, Sprint Nextel, to Marlene H. Dortch, FCC, WT Docket No. 04-356 at 2 (Oct. 10, 2012).

⁸² *AWS-2 FNPRM*, 19 FCC Rcd at 9861 ¶ 4.

⁸³ Joint Comments of Sprint Corp. and Verizon Wireless, WT Docket No. 04-356 at 21-22 (Dec. 8, 2004).

⁸⁴ *Id.*, Att. A at 3-6, 22-24.

⁸⁵ *Id.*, Att. A at 20-21. (Two of the GSM mobiles did not meet the limit of -76 dBm/MHz; all CDMA and UMTS mobiles did.)

⁸⁶ ANSI/TIA-98F-1, Recommended Minimum Performance Standards for cdma2000[®] Spread Spectrum Mobile Stations – Addendum, June 21, 2006, Section 3.6.1.3, page 3-89.

⁸⁷ Letter from Mark Racek, Ericsson Inc., *et al.*, to Marlene H. Dortch, FCC, WT Docket No. 04-356 at 2 (Mar. 18, 2005); Comments of Motorola, Inc., WT Docket No. 04-356 at 7 (Dec. 8, 2004).

⁸⁸ Comments of Ericsson Inc. and Sony Ericsson Mobile Communications (USA) Inc., WT Docket No. 07-195, at 12-13 (July 25, 2008).

⁸⁹ Reply Comments of Motorola, Inc., WT Docket No. 04-356 at 4-6 (Feb. 8, 2005).

⁹⁰ This applies to both LTE band 2, supporting PCS blocks A through F, and LTE band 25, supporting PCS blocks A through G. See 3GPP TS36.101 at 67-69, Table 6.6.3.2-1.

MHz.⁹¹ In the *AWS-4 Report and Order*, we apply the limit of $70 + 10 \log_{10}(P)$ dB, which is equivalent to -40 dBm/MHz, to all emissions below 2000 MHz.⁹² We believe that the current capabilities for mobile device manufacturers will support this level of tolerance for interference. Given that other operations may already be imposing out-of-band emissions at the -40 dBm/MHz level, should the Commission adopt this limit specifically for Lower H Block emissions in the 1930-1995 MHz range?

50. The consensus from the record developed in WT Docket No. 04-356 supports the creation of a specific OOB limit for emissions from Lower H Block transmitters into the 1930-1995 MHz band, even though no other PCS mobiles are subject to such tighter limits in this band. We seek comment on the appropriate OOB limit for the Lower H Block necessary to prevent interference to PCS operations. Commenters are asked to submit detailed technical analyses or studies in support of their recommendations and are encouraged to provide test data wherever possible. As with comments regarding power limits, the assumptions that underpin the analyses should identify how harmful interference is defined. What probability of interference is deemed acceptable (what percentage of mobiles, what percentage of locations)? For example, the Commission's earlier proposal was based on a mobile separation of two meters between users, while others argued for a one-meter separation. Commenters should also discuss if certain limits favor or prohibit certain technologies, and are therefore not technologically neutral. For example, would imposing a limit of -76 dBm/MHz favor CDMA2000 over LTE, because CDMA2000 specifies -76 dBm/MHz for this band, while LTE specifies only -50 dBm/MHz? If stricter limitations on OOB are deemed necessary to protect current legacy devices, should these limits sunset after a period of time, allowing time for new, more resilient mobiles to comprise the bulk of the mobile population? How much time will licensees need to obtain and deploy UEs with the better filters? How long will consumers' legacy UEs need to be protected? We also seek comment on the costs and benefits of alternative OOB limits.

51. To fully define an emissions limit, the Commission's rules generally specify details on how to measure the power of the emissions, such as the measurement bandwidth. For the Broadband PCS band, the measurement bandwidth used to determine compliance with this limit for mobile stations is one MHz or greater, with some modification in the one-MHz bands immediately outside and adjacent to the frequency block where a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.⁹³ We believe that it is reasonable to apply this same procedure to transmissions in the 1915-1920 MHz band.

3. Canadian and Mexican Coordination

52. Section 27.57(c) of our rules provides that AWS-1 operations are subject to international agreements with Mexico and Canada.⁹⁴ We propose to use this approach for the H Block. Until such time as any adjusted agreements between the United States, Mexico and/or Canada can be agreed to, operations must not cause harmful interference across the border, consistent with the terms of the agreements currently in force. We note that our proposed rules, and any rules that may ultimately become effective pursuant to the above-captioned proceeding, may need to be modified to comply with any future agreements with Canada and Mexico regarding the use of the H Block. We seek comment on this issue, including costs, benefits and any alternative approaches.

⁹¹ See Letter from Marc S. Martin, counsel for Sprint Nextel Corp., to Marlene H. Dortch, FCC, WT Docket No. 04-356, at 3-4 (Dec. 6, 2012).

⁹² *AWS-4 Report and Order* at ¶¶ 82, 85, 97.

⁹³ 47 C.F.R. § 24.238(b).

⁹⁴ 47 C.F.R. § 27.57(c).

4. Other Technical Issues

53. Part 27 contains several additional technical rules applicable to all Part 27 services, including Section 27.51 (Equipment authorization), Section 27.52 (RF safety),⁹⁵ Section 27.54 (Frequency stability), Section 27.56 (Antennas structures; air navigation safety), and Section 27.63 (Disturbance of AM broadcast station antenna patterns).⁹⁶ As we are proposing to license the H Block as Advanced Wireless Services under Part 27, we propose that all of these Part 27 technical rules should apply to all H Block licenses and licensees, including licensees who acquire their licenses through partitioning or disaggregation. We seek comment on this approach, including comments on the associated costs and benefits.

54. We recognize that the H Block, governed under Part 27 rules, is adjacent to Broadband PCS spectrum administered under Part 24. The adjacent blocks are harmonized with the same uplink/downlink configuration. It is possible that the licensee of a PCS G Block geographic area may also acquire the authorization for the adjoining H Block through the competitive bidding process. In that event, the licensee may wish to deploy a wider channel bandwidth operating across both bands, and we believe that such flexibility is appropriate. For one thing, wider channel bandwidths may provide higher data rates and potentially more efficient use of the spectrum. The potential for this situation raises questions about the possible effects of the combined blocks operating under different rule parts. Under the technical rules proposed herein, the limits on OOB and power are similar, but not precisely the same. We anticipate that the licensee's combined operations should satisfy the more restrictive limit if a conflict arises. For example, an OOB limit of $43 + 10 \log_{10}(P)$ dB applies to both the Upper G Block and the Upper H block. However, the Upper H Block has an additional requirement to meet an OOB limit of $70 + 10 \log_{10}(P)$ dB above 2005 MHz. The combined operations of both blocks would still need to meet this tighter restriction above 2005 MHz. We further propose that to the extent a service provider establishes unified operations across the adjacent blocks, the operator may choose not to observe emission limits strictly between its adjacent block licenses in a geographic area, so long as it complies with other Commission rules and is not adversely affecting the operations of other parties by virtue of exceeding the emission limit. We seek comment on this observation. We also seek comment to identify potential conflicts between the two rule parts under this scenario and proposals on how they could be reconciled. Commenters should discuss and quantify any costs and benefits associated with such combined operations and any effects on competition, innovation and investment.

D. Cost-Sharing

1. 1915-1920 MHz Band

55. *Background.* The 1915-1920 MHz band is a subset of a larger band at 1910-1930 MHz that is allocated for Fixed and Mobile services on a primary basis.⁹⁷ In 1993, the Commission designated

⁹⁵ In response to the *AWS-2 NPRM*, a few commenters stated that the Commission's RF safety rules are inadequate because the rules are based on physics rather than biological studies. *See, e.g.*, Richard Albanese Comments; Canyon Area Residents for the Environment (CARE) Reply Comments. To address RF safety, the Commission has proposed to amend its rules "to ensure that the public is appropriately protected from any potential adverse effects from RF exposure." Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields, ET Docket No. 03-137, *Notice of Proposed Rulemaking*, 18 FCC Rcd 13187, 13188 ¶ 1 (2003). To the extent that commenters desire to change the RF standards, commenters can file in this proceeding but should also file in ET Docket No. 03-137.

⁹⁶ 47 C.F.R. §§ 27.51, 27.52, 27.54, 27.56, 27.63.

⁹⁷ *See* 47 C.F.R. §§ 2.106, 101.69.

the 1910-1930 MHz band for use by Unlicensed Personal Communications Service (UPCS) devices.⁹⁸ Before 1993, the 1910-1930 MHz band was allocated for Fixed services and used for fixed point to point microwave links.⁹⁹ To facilitate the introduction of UPCS systems, the Commission designated the Unlicensed PCS Ad Hoc Committee for 2 GHz Microwave Transition and Management (now known as “UTAM, Inc.”) as the sole entity to coordinate and manage the transition.¹⁰⁰ In accordance with the Commission’s policies established in the *Emerging Technologies* proceeding,¹⁰¹ UTAM subsequently relocated virtually all of the incumbent microwave links, thereby clearing the 1910-1930 MHz band for use by UPCS systems.

56. In 2003, the Commission sought comment on re-designating all or a portion of the 1910-1920 MHz segment for AWS use.¹⁰² In 2004, the Commission re-designated the 1910-1915 MHz band from the UPCS to Fixed and Mobile services and assigned that spectrum to Sprint Nextel, Inc. (“Sprint”) as replacement spectrum for Sprint’s operations being relocated from the 800 MHz band.¹⁰³ Shortly thereafter, the Commission re-designated the 1915-1920 MHz band from UPCS for use by licensed AWS operations.¹⁰⁴ In so doing, the Commission acknowledged that “UTAM must be fully and fairly reimbursed for relocating incumbent microwave users in this band” and agreed “that UTAM should be made whole for the investments it has made in clearing the UPCS bands.”¹⁰⁵ Relative to the Lower H Block, the Commission specifically concluded that “UTAM is entitled to reimbursement of twenty-five percent—on a *pro-rata* basis—of the total costs it has incurred, including its future payment obligations for links it has relocated, as of the date that a new entrant gains access to the 1915-1920 MHz spectrum

⁹⁸ In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, 8 FCC Rcd 6589 (1993); see 47 C.F.R. Part 15 – Radio Frequency Devices. Subpart D of Part 15 is titled “Unlicensed Personal Communications Services Devices.”

⁹⁹ See 47 C.F.R. § 2.106 (1992).

¹⁰⁰ See Amendment of the Commission’s Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Second Report and Order*, 8 FCC Rcd 7700, 7738 ¶ 88 (1993). See also 47 C.F.R. § 15.307 (UTAM designated to manage transition of 1910-1930 MHz band from fixed microwave under Part 101 to Unlicensed PCS).

¹⁰¹ See *id.*; see also Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 (1992); *Second Report and Order*, 8 FCC Rcd 6495 (1993); *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589 (1993); *Memorandum Opinion and Order*, 9 FCC Rcd 1943 (1994); *Second Memorandum Opinion and Order*, 9 FCC Rcd 7797 (1994); *aff’d Association of Public Safety Communications Officials-International, Inc. v. FCC*, 76 F.3d 395 (D.C. Cir. 1996) (collectively, “*Emerging Technologies* proceeding”).

¹⁰² Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, IB Docket No. 99-81, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223, 2247-48 ¶¶ 46-49 (2003) (“*AWS Third Report and Order and Third NPRM*”).

¹⁰³ See *800 MHz Report and Order*, 19 FCC Rcd at 15085, 15088 ¶¶ 223, 227. In the *800 MHz Report and Order*, the Commission imposed on the licensee of the 1910-1915 MHz band an obligation to reimburse UTAM for 25 percent of its total costs in clearing the 1910-1930 MHz band as of the date it gains access to the 1910-1915 MHz band (*i.e.*, reimbursement in direct proportion to the 5:20 relationship in the sizes of the 1910-1915 MHz spectrum blocks).

¹⁰⁴ See *AWS Sixth Report and Order*, 19 FCC Rcd at 20740 ¶ 41.

¹⁰⁵ *Id.*, at 20745 ¶ 53.

band.”¹⁰⁶ The Commission also determined that AWS licensees would be required to pay their portion of the 25 percent of costs prior to commencement of their operations.¹⁰⁷

57. In the *AWS-2 NPRM*, the Commission requested comments on methods for apportioning the relocation costs among H Block licensees, including what method of allocating relocation costs would be most advantageous to reimbursing UTAM and for providing certainty for bidders.¹⁰⁸ The *AWS-2 NPRM* also sought comment on what rules should govern the allocation of relocation costs among multiple AWS licensees in the 1915-1920 MHz band.¹⁰⁹ Because UTAM requested that reimbursement payments from AWS licensees be due as a precondition to the granting of a license, the Commission sought comment on whether it would be advantageous to require AWS licensees to reimburse UTAM for its band clearing costs “earlier than the commencement of actual service.”¹¹⁰ To the extent that the Commission opted not to do so, the Commission also sought comment on whether it should specify when AWS entrants will be considered to have commenced operations.¹¹¹

58. *Discussion.* In deciding how to apportion UTAM’s reimbursement among H Block licensees in the 1915-1920 MHz band, we believe it is important to provide auction bidders with reasonable certainty as to the range of the reimbursement obligation associated with each license under various auction outcomes. We also believe it is important for UTAM to be fully reimbursed as soon as possible given that UTAM cleared the band over ten years ago. Accordingly, we propose to require H Block licensees to pay a *pro rata* amount of the 25 percent owed to UTAM based on the gross winning bids of the initial H Block auction. Specifically, we propose that the reimbursement amount owed (“RN”) be determined by dividing the gross winning bid (“GWB”) ¹¹² for an H Block license (*i.e.*, an individual EA) by the sum of the gross winning bids for all H Block licenses won in the initial auction and then multiplying by \$12,629,857.¹¹³ In other words, the cost-sharing formula would read as follows:

$$RN = \left(\frac{\text{EA GWB}}{\text{Sum of GWBs}} \right) \times \$12,629,857$$

59. This formula would ensure that UTAM receives full reimbursement after the first auction by effectively apportioning the reimbursement costs associated with any unsold H Block licenses among the winning bidders of H Block licenses in the first auction—with an exception in the event a successful bidder’s long-form application is not filed or granted,¹¹⁴ and a contingency to cover an unlikely scenario.

¹⁰⁶ *AWS Sixth Report and Order*, 19 FCC Rcd at 20745 ¶ 53.

¹⁰⁷ *See id.*, at 20745 ¶ 53.

¹⁰⁸ *AWS-2 NPRM*, 19 FCC Rcd at 19278, 19279-80 ¶¶ 34, 39

¹⁰⁹ *Id.*, at 19280 ¶ 40.

¹¹⁰ *Id.*, at 19281 ¶ 42.

¹¹¹ *Id.*, at 19281 ¶ 42.

¹¹² Basing the proposed cost-sharing formula on gross, rather than net, winning bids, avoids having to recalculate obligations in the event that a bidding credit is adjusted or denied during the review of the long-form applications.

¹¹³ UTAM has disclosed in the record of this proceeding that the amount collectively owed by H Block licensees for UTAM’s clearing of the 1910-1930 MHz band is \$12,629,857. *See* Letter from Michael Stima, Managing Director, UTAM, Inc. to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 04-356, filed May 21, 2007, Attachment 1.

¹¹⁴ The Commission imposes payment obligations on bidders that withdraw provisionally winning bids during the course of an auction, on those that default on payments due after an auction closes, and on those that are disqualified. *See* 47 C.F.R. § 1.2110(f)(2)(i). To the extent such were to occur and a winning bidder were not (continued....)

We further propose that winning bidders of H Block licenses in the first auction of this spectrum would not have a right to seek reimbursement from other H Block licensees including for licenses awarded in subsequent auctions. We believe this approach would avoid recordkeeping burdens and potential disputes and that it is appropriate given that—in the event that most licenses are awarded—the reimbursement obligation for an individual license will represent but a fraction of overall reimbursement to UTAM. We seek comment on our proposals including the following contingency: in the unlikely event that licenses covering less than 40 percent of the population of the United States¹¹⁵ are awarded in the first auction, we propose that winning bidders—in the first auction of this spectrum as well as in subsequent auctions—will be required to timely pay UTAM their *pro rata* share calculated by dividing the population of the individual EA awarded at auction by the total U.S. population and then multiplying by \$12,629,857. This contingent proposal would ensure that UTAM is reimbursed as soon as possible while also protecting winning bidders of H Block licenses from bearing an undue burden of the reimbursement obligation due to UTAM. We seek comment on our proposal.

60. Alternatively, we specifically seek comment on the relative costs and benefits of adopting a population based cost-sharing formula as the general rule for the H Block.¹¹⁶ We acknowledge that using a population based approach in all events would offer bidders certainty as to the obligation attached to each license, but this approach could also defer UTAM's full reimbursement indefinitely if less than all of the licenses are awarded during the initial auction.

61. We further propose that winning bidders promptly pay UTAM the amount owed, as calculated pursuant to the formula that we adopt, within 30 days of grant of their long-form applications for the licenses. For PCS and AWS-1, and AWS-4, cost sharing obligations are triggered when a licensee proposes to operate a base station in an area cleared of incumbents by another licensee. In this case, however, UTAM's members received no benefit for clearing the Lower H Block nationwide over ten years ago, and the Commission determined in 2003 that the new PCS/AWS licensees entering the band would reap the benefits of UTAM's efforts and that UTAM should be fully reimbursed.¹¹⁷ Moreover, as noted above, given the relative fraction of overall reimbursement to UTAM that will be owed by each winning bidder, we believe that it will not disincentivize parties from filing applications or impose a burden on winning bidders to reimburse UTAM within 30 days of the grant of their long-form applications. We seek comment on the above proposals, including the costs and benefits.

2. 1995-2000 MHz Band

62. *Background.* The 1995-2000 MHz band is part of the 1990-2025 MHz band that the Commission reallocated from the Broadcast Auxiliary Service (BAS) to emerging technologies such as

(Continued from previous page)

awarded a license, we propose that the EA license at issue be deemed to have triggered a reimbursement obligation that will be paid to Sprint by the licensee acquiring the license at a reauction. The amount owed to Sprint by the licensee acquiring the EA license at reauction will be based on the gross winning bid for the EA license in the initial auction. Accordingly, an applicant at reauction will know with the certainty the reimbursement obligation owed to Sprint and take it into account in placing its bids for each EA license. Our proposal balances the interests of all parties while adopting a cost-sharing formula that is easy to administer.

¹¹⁵ The population percentage would be as measured using 2000 Census data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

¹¹⁶ For example, some EAs, such as for the Gulf of Mexico, may have a relative value that is not directly tied to population. In these cases, a population based cost-sharing formula may not fairly apportion relocation costs among the winning bidders of such licenses.

¹¹⁷ *AWS Third Report and Order and Third NPRM*, 18 FCC Rcd at 2251 ¶ 58 (UTAM cleared the band in the expectation that it would be used for UPCS to the benefit of its members that manufacture such devices, and the Commission's reallocation of the band denied them the opportunity of any future use of the band by UPCS).

PCS, AWS, and MSS.¹¹⁸ Consistent with the relocation principles first established in the Commission's *Emerging Technologies* proceeding, each new entrant had an independent responsibility to relocate incumbent BAS licensees.¹¹⁹ In addition, as a general rule, the Commission's traditional cost-sharing principles are applicable to the 1990-2025 MHz band.¹²⁰ Sprint, which is the PCS licensee at 1990-1995 MHz, completed the BAS transition for the entire 35 megahertz in 2010.¹²¹ In 2011, Sprint notified the Commission that it entered in a private settlement with DISH to resolve the dispute with MSS licensees with respect to MSS licensees' obligation to reimburse Sprint for their share of the BAS relocation costs.¹²² Accordingly, the only remaining cost-sharing obligations in the 1990-2025 MHz band are attributable to the remaining, unassigned ten megahertz of spectrum in the 1990-2025 MHz band: 1995-2000 MHz and 2020-2025 MHz.¹²³

63. In the *AWS Sixth Report and Order*, the Commission determined that all new entrants to the 1990-2025 MHz band may be required to bear a proportional share of the costs incurred in the BAS clearance on a *pro rata* basis according to the amount of spectrum each licensee is assigned. However, the Commission did not decide specifically how to allocate that share.¹²⁴ In the *AWS-2 NPRM*, the Commission sought comment on how the reimbursement rights and obligations of each AWS licensee could be most efficiently and equitably allocated if the H Block were licensed on a geographic area basis other than as a nationwide license.¹²⁵ To the extent that not all spectrum in the 1990-2025 MHz band would have been licensed, the Commission sought comment on whether to require those entrants who are licensed at that time to bear a *pro rata* share of the relocation costs based on the amount of spectrum they

¹¹⁸ See 47 C.F.R. § 74.690. Of the total 35 megahertz of spectrum, five megahertz was authorized for PCS and held by Sprint; 10 megahertz is authorized for, and to be auctioned and licensed as, AWS; and 20 megahertz is authorized for MSS and AWS-4.

¹¹⁹ *2010 BAS Ruling*, 25 FCC Rcd at 13876 ¶ 5.

¹²⁰ See *Improving Public Safety Communications in the 800 MHz Band*, WT Docket No. 02-55, ET Docket No. 00-258, ET Docket No. 95-18, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 15095, 15099 ¶¶ 252, 261 (2004). Under these procedures, the first new entrant into the band that incurs relocation expenses for the relocation of incumbents from portions of the band that the new entrant will not occupy is, as a general matter, eligible to obtain reimbursement from subsequent entrants in the band. 47 C.F.R. §§ 27.1160-1174, 101.82.

¹²¹ Letter from Brett S. Haan, 800 MHz Transition Administrator, LLC, to David L. Furth, Deputy Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission (May 13, 2011), at 2, *citing* Letter from Robert H. McNamara, Sprint Nextel Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 02-55 (dated July 15, 2010). Sprint has stated that the *pro rata* share of the overall BAS relocation costs attributable to each five megahertz of relocated BAS spectrum amounts to \$94,875,516.

¹²² See *Applications of New DBSD Satellite Services G.P., Debtor-in-Possession, and TerreStar Licensee Inc., Debtor-in-Possession, Withdrawal of Petition to Condition Approval of Sprint Nextel Corporation*, IB Docket No. 11-149 (Nov. 3, 2011) (informing the Commission that Sprint had reached an agreement with DISH to settle its outstanding disputes).

¹²³ As the 1995-2000 MHz band represents one-seventh of the relocated BAS spectrum, the relocation costs collectively attributable to the H Block licenses amounts to \$94,875,516. Another 5 megahertz in the 1990-2025 MHz band is currently part of the J Block (2020-2025 MHz). The Commission will address the one-seventh owed to Sprint for the relocation costs associated with the 2020-2025 MHz band in the appropriate proceeding.

¹²⁴ *AWS Sixth Report and Order*, 19 FCC Rcd at 20753 ¶¶ 72-73.

¹²⁵ The Commission sought comment on whether to determine the *pro rata* amount owed by the licensee of each individual H Block license on the basis of the geographic area or population covered by each license, or the value of each license as indicated by the winning auction bid, or by some other means. See *AWS-2 NPRM*, 19 FCC Rcd at 19287-19288 ¶ 60.

have been assigned relative to the amount of 1990-2025 MHz spectrum that has been licensed.¹²⁶ In addition, the Commission also sought comment on whether to impose reimbursement obligations on later arriving new entrants, on the appropriate length of such an obligation, and on the mechanism for applying those obligations.¹²⁷

64. *Discussion.* Consistent with the Commission's intent that all entrants to the 1990-2025 MHz band bear a proportional share of the costs incurred in the BAS clearance on a *pro rata* basis according to the amount of spectrum each entrant is assigned, H Block licensees will be responsible for reimbursing Sprint for one-seventh of the BAS relocation costs (*i.e.*, the proportional share of the costs associated with Sprint relocating 5 megahertz of BAS spectrum that will be used by H Block entrants). We believe it is important to provide auction bidders with reasonable certainty as to the range of the reimbursement obligation associated with each license under various auction outcomes. We also believe it is important for Sprint to be fully reimbursed as soon as possible given that Sprint cleared the H Block so H Block licensees will receive unencumbered spectrum. Accordingly, we propose to require H Block licensees to reimburse Sprint based on the gross winning bids of the initial H Block auction. Specifically, we propose that the reimbursement amount owed ("RN") be determined by dividing the gross winning bid ("GWB")¹²⁸ for an H Block license (*i.e.*, an individual EA) by the sum of the gross winning bids for all H Block licenses won in the initial auction and then multiplying by \$94,875,516. In other words, the cost-sharing formula would read as follows:

$$RN = \left(\frac{\text{EA GWB}}{\text{Sum of GWBs}} \right) \times \$94,875,516$$

Because certain EAs, such as for the Gulf of Mexico, have a relative value that is not directly tied to population, our proposal seeks to allow the market to determine the value of each EA license and the associated amount of the reimbursement obligation. However, parties can comment on alternative cost-sharing formulas, including one based on population as described below. We seek comment on our proposals.

65. This formula would ensure that Sprint receives full reimbursement after the first auction by effectively apportioning the reimbursement costs associated with any unsold H Block licenses among the winning bidders of H Block licenses in the first auction—with an exception in the event a successful bidder's long-form application is not filed or granted,¹²⁹ and a contingency to cover an unlikely scenario. We further propose that winning bidders of H Block licenses in the first auction of this spectrum would not have a right to seek reimbursement from other H Block licensees including for licenses awarded in subsequent auctions. We believe this approach would avoid recordkeeping burdens and potential disputes and that it is appropriate given that—in the event that most licenses are awarded—the reimbursement

¹²⁶ See *AWS-2 NPRM*, 19 FCC Rcd at 19288 ¶ 61.

¹²⁷ *Id.*, at 19288 ¶ 61.

¹²⁸ Basing the proposed cost-sharing formula on gross, rather than net, winning bids, avoids having to recalculate obligations in the event that a bidding credit is adjusted or denied during the review of the long-form applications.

¹²⁹ The Commission imposes payment obligations on bidders that withdraw provisionally winning bids during the course of an auction, on those that default on payments due after an auction closes, and on those that are disqualified. See 47 C.F.R. §§ 1.2110(f)(2)(i). To the extent such were to occur and a winning bidder were not awarded a license, we propose that the EA license at issue be deemed to have triggered a reimbursement obligation that will be paid to Sprint by the licensee acquiring the license at a reauction. The amount owed to Sprint by the licensee acquiring the EA license at reauction will be based on the gross winning bid for the EA license in the initial auction. Accordingly, an applicant at reauction will know with the certainty the reimbursement obligation owed to Sprint and take it into account in placing its bids for each EA license. Our proposal balances the interests of all parties while adopting a cost-sharing formula that is easy to administer.

obligation for an individual license will represent but a fraction of overall reimbursement to Sprint. We seek comment on our proposals including the following contingency: in the unlikely event that licenses covering less than 40 percent of the population of the United States¹³⁰ are awarded in the first auction, we propose that winning bidders—in the first auction of this spectrum as well as in subsequent auctions—will be required to timely pay Sprint their *pro rata* share calculated by dividing the population of the individual EA awarded at auction by the total U.S. population and then multiplying by \$94,875,516. This contingent proposal would ensure that Sprint is reimbursed as soon as possible while also protecting winning bidders of H Block licenses from bearing an undue burden of the reimbursement obligation due to Sprint. We seek comment on our proposal.

66. Alternatively, we specifically seek comment on the relative costs and benefits of adopting a population based cost-sharing formula as the general rule for the H Block.¹³¹ We acknowledge that using a population based approach in all events would offer bidders certainty as to the obligation attached to each license but this approach could also defer Sprint's full reimbursement indefinitely if less than all of the licenses are awarded during the initial auction.

67. We further propose that winning bidders promptly pay Sprint the amount owed, as calculated pursuant to the formula that we adopt, within 30 days of grant of their long form applications for the licenses. For PCS and AWS-1, and AWS-4, cost sharing obligations are triggered when a licensee proposes to operate a base station in an area cleared of incumbents by another licensee. In this case, rather than Sprint itself benefiting from its band clearing efforts, other entrants in the band will reap the benefits of Sprint's efforts. Accordingly, we find no significant reason to treat Sprint any differently than UTAM and propose that Sprint be fully reimbursed by AWS licensees that will benefit from Sprint's clearing of the H Block.¹³² Moreover, as noted above, given the relative fraction of overall reimbursement to Sprint that will be owed by each winning bidder, we believe that it will not disincentivize parties from filing applications or impose a burden on winning bidders to reimburse Sprint within 30 days of the grant of their long-form applications. We seek comment on the above proposals, including the costs and benefits.

68. Consistent with precedent, we propose a specific date on which the reimbursement obligation adopted above will terminate.¹³³ In recent instances, the relocation and cost-sharing obligations sunset ten years after the first ET license is issued in the respective band.¹³⁴ To the extent that Sprint had not completed the relocation of BAS from the 1990-2025 MHz band, BAS operations in the

¹³⁰ The population percentage would be as measured using 2000 Census data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

¹³¹ For example, some EAs, such as for the Gulf of Mexico, may have a relative value that is not directly tied to population. In these cases, a population based cost-sharing formula may not fairly apportion relocation costs among the winning bidders of such licenses.

¹³² *AWS Third Report and Order and Third NPRM*, 18 FCC Rcd at 2251 ¶ 58.

¹³³ We recognize that our proposal assumes that most of the H-block licenses will be awarded the first time they are offered at auction and that H Block licensees will satisfy their reimbursement obligation to Sprint within thirty days of the grant of their long-form application. However, as proposed above, if the licenses sold at the first auction cover less than forty (40) percent of the nation's population collectively, an AWS licensee that obtains a license for a market not awarded in the first H Block auction will have a reimbursement obligation to Sprint. Therefore, we find it necessary to adopt a sunset date for the termination of the reimbursement obligation of H Block licensees to Sprint. We believe that the proposed sunset date balances the interests of all parties by encouraging timely payment to Sprint while ensuring that, consistent with precedent, the reimbursement obligation terminates on a specific date for any licenses that have not yet triggered an obligation to pay Sprint.

¹³⁴ *See, e.g.*, 47 C.F.R. § 101.79(a)(1)-(a)(2).

band would have become secondary after December 9, 2013.¹³⁵ However, in this instance, we do not believe that the public interest would be served by adopting December 9, 2013 as the sunset date for terminating the requirement that H Block licensees collectively reimburse Sprint for one-seventh of the BAS relocation costs.¹³⁶ Rather, we propose a sunset date for the cost-sharing obligations of H Block licensees to Sprint that is ten years after the first H Block license is issued in the band. We find that a number of factors support our proposal. As discussed above, Sprint relocated BAS incumbents from the 1995-2000 MHz band, even though H Block licensees and not Sprint itself will reap the benefits of Sprint's relocation of BAS. In addition, the integrated nature of BAS operations required relocations on a market-by-market basis, and such a requirement would have imposed significant costs on individual H Block entrants because isolated, link-by-link relocation was infeasible. It therefore served the public interest for Sprint to undertake the relocation on an integrated, nationwide basis. Because H Block licenses have yet to be auctioned and because interested applicants will be able to calculate their reimbursement obligation to Sprint in bidding on licenses, we do not believe that our proposal imposes a burden on the winning bidders of H Block licenses. We seek comment on our proposed sunset date, including the costs and benefits.

E. Regulatory Issues; Licensing and Operating Rules

69. We are proposing licensing and operating rules that will provide H Block licensees with the flexibility to provide any fixed or mobile service that is consistent with the allocations for this spectrum. Specifically, we are seeking comment on the appropriate license term, criteria for renewal, and other licensing and operating rules pertaining to the H Block. In addition, we seek comment on the potential impact of all of our proposals on competition. In addressing these issues, commenters should discuss the costs and benefits associated with these proposals and any alternative that commenters propose.

1. Regulatory Status

70. We propose to apply the regulatory status provisions of section 27.10 of the Commission's Rules to licensees in the H Block. The Commission's current mobile service license application requires an applicant for mobile services to identify the regulatory status of the service(s) it intends to provide¹³⁷ because service offerings may bear on eligibility and other statutory and regulatory

¹³⁵ See 47 C.F.R. § 74.690e(6). The date of December 9, 2013 was ten years after the mandatory negotiation period began for MSS operators, which was commenced via the release of a Commission order and not by the traditional means of a new entrant stating its intent in writing to negotiate with an incumbent.

¹³⁶ We also do not believe it is in the public interest to tie Sprint's reimbursement rights for clearing the 1995-2000 MHz band to the 800 MHz band realignment. In the *AWS Sixth Report and Order* the Commission stated that Nextel (now Sprint) could seek reimbursement for relocating the BAS incumbents from AWS licensees that enter the band prior to the end of the 800 MHz reconfiguration period. *AWS Sixth Report and Order*, 19 FCC Rcd at 20753 ¶ 72. In 2010, the Commission addressed the issue of cost-sharing between Sprint and MSS licensees with respect to Sprint's relocation of BAS incumbents from the 1990-2025 MHz band; explained that the Commission tied the reimbursement obligations to the completion of the 800 MHz band realignment for administrative convenience and efficiency and not to provide entrants with a means to avoid paying BAS relocation costs; and concluded that fairness as well as our well-established cost sharing principles dictate that all of the new entrants should bear the burden of the increased cost and complexity of the BAS transition and not just Sprint. Improving Public Safety Communications in the 800 MHz Band, WT Docket No. 02-55, ET Docket No. 00-258, ET Docket No. 95-18, *Fifth Report and Order*, *Eleventh Report and Order*, *Sixth Report and Order*, and *Declaratory Ruling*, 25 FCC Rcd 13883-13885 ¶¶ 24-27 (2010). As explained below, we believe it is fair to all parties to require AWS licenses to pay their fair share of BAS relocation costs. We find no reason to connect the reimbursement obligation owed by H Block licensees to Sprint to the 800 MHz band realignment.

¹³⁷ In the *LMDS Second Report and Order*, the Commission required applicants for fixed services to indicate if they planned to offer services as a common carrier, a non-common carrier, or both, and to notify the Commission of any changes in status without prior authorization. Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's (continued....)

requirements.¹³⁸ Under Part 27, the Commission permits applicants who may wish to provide both common carrier and non-common carrier services (or to switch between them) under a single license to request status as both a common carrier and a non-common carrier.¹³⁹ Thus, a Part 27 applicant is not required to choose between providing common carrier and non-common carrier services. We propose to adopt this same approach here. Licensees in the H Block would be able to provide all allowable services anywhere within their licensed area at any time, consistent with their regulatory status.¹⁴⁰ We believe that this approach is likely to achieve efficiencies in the licensing and administrative process, and provide flexibility to the marketplace. We seek comment on the appropriate licensing approach and ask that commenters discuss the costs and benefits of their proposed licensing approach.

71. We further propose that applicants and licensees in the H Block be required to indicate a regulatory status for any services they choose to provide. Apart from this designation of regulatory status, we do not propose to require applicants to describe the services they seek to provide.¹⁴¹ We caution potential applicants that an election to provide service on a common carrier basis typically requires that the elements of common carriage be present,¹⁴² otherwise the applicant must choose non-common carrier status.¹⁴³ If potential applicants are unsure of the nature of their services and their classification as common carrier services, they may submit a petition with their applications, or at any time, requesting clarification and including service descriptions for that purpose.¹⁴⁴ We propose to apply this framework to H Block licensees and seek comment on this proposal, including the costs and benefits of this proposal.

72. We also propose that if a licensee were to change the service or services it offers such that it would be inconsistent with its regulatory status, the licensee must notify the Commission.¹⁴⁵ A change in a licensee's regulatory status would not require prior Commission authorization, provided the licensee was in compliance with the foreign ownership requirements of section 310(b) of the Communications Act that would apply as a result of the change, consistent with the Commission's rules for AWS-1 spectrum.¹⁴⁶ Consistent with our Part 27 rules, we propose to require licensees to file the notification within 30 days of a change made without the need for prior Commission approval, except that a different time period may apply where the change results in the discontinuance, reduction, or

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Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Docket No. 92-297, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 12545, 12636-38, 12644-45, 12652-54 ¶¶ 205-208, 225-226, 245-251 (1997) (*LMDS Second Report and Order*); *aff'd, Melcher v. FCC*, 134 F.3d 1143 (D.C. Cir. 1998).

¹³⁸ See, e.g., *infra* section III.E.2.a (Foreign Ownership Reporting).

¹³⁹ See 47 C.F.R. § 27.10; *Part 27 Report and Order*, 12 FCC Rcd at 10846-48 ¶¶ 119-122.

¹⁴⁰ For instance, we note that to the extent a licensee provides a Commercial Mobile Radio Service, such service would be subject to the provisions of Part 20 of the Commission's rules, 47 C.F.R. Part 20.

¹⁴¹ See *Part 27 Report and Order* at 10848 ¶ 121; see also *LMDS Second Report and Order*, 12 FCC Rcd at 12644 ¶ 223; 47 C.F.R. § 101.1013.

¹⁴² See 47 U.S.C. § 153(51) ("A telecommunications carrier shall be treated as a common carrier under this chapter only to the extent that it is engaged in providing telecommunication services"); see also 47 U.S.C. § 332(c)(1)(A) ("A person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this chapter.").

¹⁴³ See *Part 27 Report and Order*, 12 FCC Rcd at 10848 ¶¶ 121-22. The Commission examined services in the *LMDS Second Report and Order* and explained that any video programming service would be treated as a non-common carrier service. *LMDS Second Report and Order*, 12 FCC Rcd at 12639-42 ¶¶ 213-17.

¹⁴⁴ *Part 27 Report and Order*, 12 FCC Rcd at 10848 ¶ 121.

¹⁴⁵ See 47 C.F.R. § 27.10(d); see also 47 C.F.R. § 27.66.

¹⁴⁶ 47 U.S.C. § 310(b).

impairment of the existing service.¹⁴⁷ We seek comment on this proposal, including the costs and benefits.

2. Ownership Restrictions

a. Foreign Ownership Reporting

73. We propose to apply the provisions of section 27.12 of the Commission's rules to applicants for licenses in the H Block.¹⁴⁸ Section 27.12 implements section 310 of the Communications Act, including foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants.¹⁴⁹ An applicant requesting authorization to provide services in this band other than broadcast, common carrier, aeronautical en route, and aeronautical fixed services would be subject to the restrictions in section 310(a), but not to the additional restrictions in section 310(b). An applicant requesting authorization for broadcast, common carrier, aeronautical en route, or aeronautical fixed services would be subject to both sections 310(a) and 310(b). We do not believe that applicants for this band should be subject to different obligations in reporting their foreign ownership based on the type of service authorization requested in the application. Consequently, we propose to require all applicants to provide the same foreign ownership information, which covers both sections 310(a) and 310(b), regardless of which service they propose to provide in the band. We note, however, that we would be unlikely to deny a license to an applicant requesting to provide exclusively services that are not subject to section 310(b), solely because its foreign ownership would disqualify it from receiving a license if the applicant had applied for authority to provide such services. However, if any such licensee later desires to provide any services that are subject to the restrictions in section 310(b) we would require the licensee to apply to the Commission for an amended license, and we would consider issues related to foreign ownership at that time. We request comment on this proposal, including any costs and benefits.

b. Eligibility and Mobile Spectrum Holding Policies

74. We propose to adopt an open eligibility standard for the H Block. We believe that adopting such a standard should encourage efforts to develop new technologies, products and services, while helping to ensure efficient use of this spectrum.¹⁵⁰ An open eligibility standard is consistent with the Commission's past practice for mobile wireless spectrum allocations,¹⁵¹ as well as with section 6404 of the Spectrum Act.¹⁵² We seek comment on our open eligibility approach.

75. We note that an open eligibility approach would not affect citizenship, character, or other generally applicable qualifications that may apply under our rules. Additionally, section 6004 of the Spectrum Act restricts participation in auctions required under the Spectrum Act, which includes the H Block, by "person[s] who [have] been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant."¹⁵³ We seek comment on our proposal to address this issue in the competitive bidding procedures section

¹⁴⁷ See 47 C.F.R. § 27.66.

¹⁴⁸ 47 C.F.R. § 27.12 (except as provided in §§ 27.604, 27.1201, and 27.1202, any entity other than those precluded by § 310 of the Communications Act is eligible to hold a license under Part 27).

¹⁴⁹ 47 U.S.C. § 310.

¹⁵⁰ See 47 U.S.C. § 309(j)(3).

¹⁵¹ See, e.g., *AWS-4 Report and Order* at ¶ 242; *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd 15289, 15381-84 ¶¶ 253, 256 & n.573 (2007).

¹⁵² Spectrum Act, § 6404 (adopting 47 U.S.C. § 309(j)(17)(A)).

¹⁵³ See Spectrum Act, § 6004; 47 U.S.C. § 1404.

below.¹⁵⁴ Further, as the Commission observed in the *Incentive Auction NPRM*, section 6004 does not address eligibility to acquire licenses on the secondary market from the initial or subsequent licensee.¹⁵⁵ We seek comment on whether section 6004 permits or requires the Commission to restrict eligibility of the persons described therein to acquire licenses in the secondary market, and whether and to what extent such restriction is consistent with other provisions of the Communications Act.¹⁵⁶ If such restrictions should be implemented, should we do so by requiring certifications in applications similar to those required under our rules for enforcement of the Anti-Drug Abuse Act of 1988?¹⁵⁷ Would it be permissible and appropriate to address such situations on a case-by-case basis in light of the specific facts and circumstances?¹⁵⁸ Should we apply the same attribution rules in doing so, where the relevant person is not the sole owner of the proposed licensee?

76. We seek comment generally on whether and how to address any mobile spectrum holdings issues involving H Block spectrum in order to meet our statutory requirements and our goals for the H Block. Section 309(j)(3)(B) of the Communications Act provides that in designing systems of competitive bidding, the Commission shall “promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses.”¹⁵⁹ More recently, section 6404 of the Spectrum Act recognizes the Commission’s authority “to adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition.”¹⁶⁰ We note that we recently initiated a proceeding to revisit the mobile spectrum holdings policies that apply to both transactions and auctions.¹⁶¹ In the past, the Commission has sought comment on these issues with respect to particular spectrum bands prior to auctioning spectrum licenses.¹⁶²

77. We seek comment on whether the acquisition of H Block spectrum should be subject to the same general mobile spectrum holding policies applicable to frequency bands that the Commission has determined to be available and suitable for wireless services.¹⁶³ Alternatively, depending on the specific rules and requirements that apply to H Block spectrum, should we distinguish H Block spectrum for purposes of evaluating mobile spectrum holdings? Commenters should discuss and quantify any costs and benefits associated with any proposals on the applicability of spectrum holdings policies to H Block spectrum.

¹⁵⁴ See *infra* section III.F.2 (Revision to Part 1 Certification Procedures).

¹⁵⁵ Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Docket No. 12-268, *Notice of Proposed Rulemaking*, 27 FCC Rcd 12357, 12483-84 ¶ 382 (2012) (*Incentive Auction NPRM*) (citing Spectrum Act at § 6004(c))

¹⁵⁶ See, e.g., 47 U.S.C. §§ 308(b), 310(d).

¹⁵⁷ See 47 C.F.R. § 1.2001.

¹⁵⁸ See 47 C.F.R. § 73.4280.

¹⁵⁹ 47 U.S.C. § 309(j)(3)(B).

¹⁶⁰ Spectrum Act, § 6404.

¹⁶¹ See Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269, *Notice of Proposed Rulemaking*, 27 FCC Rcd 11710 (2012) (2012) (*Mobile Spectrum Holdings NPRM*).

¹⁶² See, e.g., *AWS-4 NPRM*, 27 FCC Rcd at 3596-97 ¶¶ 110-11; *AWS-3 NPRM*, 22 FCC Rcd at 17079 ¶¶ 101-02.

¹⁶³ During the pendency of the *Mobile Spectrum Holdings NPRM*, the Commission is continuing to apply its current case-by-case approach to evaluate mobile spectrum holdings during the consideration of secondary market transactions and initial spectrum licensing after auctions. See *Mobile Spectrum Holdings NPRM*, 27 FCC Rcd at 11718, n. 59.

3. License Term, Performance Requirements, Renewal Criteria, Permanent Discontinuance of Operations

a. License Term

78. We propose to establish a 10-year term for licenses for the H Block. The Communications Act does not specify a term limit for AWS band licenses.¹⁶⁴ The Commission has adopted 10-year license terms for most wireless radio services licenses.¹⁶⁵ To maintain this consistency among wireless services, in the *AWS-2 NPRM*, the Commission proposed that H Block licenses have a term of 10 years.¹⁶⁶ We continue to believe that a 10-year license term is appropriate, and consequently propose, a 10 year license term for the H Block spectrum. We seek comment on this proposal, including any costs and benefits of the proposal. In addition, we invite commenters to submit alternate proposals for the appropriate license term, which should similarly include a discussion on the costs and benefits.

79. Under our license term proposal, if a license in these bands is partitioned or disaggregated, any partitionee or disaggregatee would be authorized to hold its license for the remainder of the partitioner's or disaggregator's original license term.¹⁶⁷ This approach is similar to the partitioning provisions the Commission adopted for BRS,¹⁶⁸ for broadband PCS licenses,¹⁶⁹ for the 700 MHz band licenses,¹⁷⁰ and for AWS-1 licenses at 1710-1755 MHz and 2110-2155 MHz,¹⁷¹ and AWS-4.¹⁷² We emphasize that nothing in our proposal is intended to enable a licensee, by partitioning or disaggregating the license, to confer greater rights than it was awarded under the terms of its license grant. Similarly, nothing in our proposal is intended to enable any partitionee or disaggregatee to obtain rights in excess of those previously possessed by the underlying licensee. We seek comment on these proposals, including the cost and benefits thereof.

b. Performance Requirements

80. The Commission establishes performance requirements to promote the efficient deployment of wireless services, including to rural areas, and ensure that spectrum is used. Over the

¹⁶⁴ The only statutory limit on license terms is eight years for licenses in the broadcast services. *See* 47 U.S.C. § 307(c)(1); *see also* 47 C.F.R. § 73.1020(a).

¹⁶⁵ *See, e.g.*, 47 C.F.R. §§ 24.15, 27.13(a).

¹⁶⁶ *AWS-2 NPRM*, 19 FCC Rcd at 19292 ¶ 70.

¹⁶⁷ "Partitioning" is the assignment of geographic portions of a license along geopolitical or other boundaries. "Disaggregation" is the assignment of discrete portions of "blocks" of spectrum licensed to a geographic licensee or qualifying entity. Disaggregation allows for multiple transmitters in the same geographic area operated by different companies on adjacent frequencies (thus increasing the possibility of harmful interference). For further detail, *see supra* section III.E.4.a (Partitioning and Disaggregation).

¹⁶⁸ *See* Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Docket No. 94-131, PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589, 9614 ¶ 46 (1995).

¹⁶⁹ *See* Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, WT Docket No. 96-148, GN Docket No. 96-113, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 21831, 21870 ¶¶ 76-77 (1996).

¹⁷⁰ *See* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476, 506-08 ¶¶ 74-78 (2000); Reallocation and Service Rules for 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Report and Order*, 17 FCC Rcd 1022, 1079-81 ¶¶ 152-157 (2002).

¹⁷¹ *AWS-1 Report and Order*, 18 FCC Rcd at 25193-95 ¶¶ 81-83.

¹⁷² *AWS-4 Report and Order* at ¶ 263.

years, the Commission has applied different performance and construction requirements to different spectrum bands. For example, within four (4) years, an AWS-4 licensee must provide reliable terrestrial signal coverage and offer terrestrial service to at least forty (40) percent of its total AWS-4 population. Within seven (7) years, an AWS-4 licensee must provide reliable terrestrial signal coverage and offer terrestrial service to at least seventy (70) percent of the population in each of its license areas.¹⁷³ Similarly, for licensees operating in the 2.3 GHz Wireless Communications Services (WCS) band, the Commission adopted performance requirements that included population-based construction requirements (40 percent of the license area's population within four (4) years and 75 percent within six -and-a-half (6.5) years) and reporting requirements.¹⁷⁴ In the *AWS-2 NPRM*, the Commission broadly sought comment on whether it should establish any specific performance requirements in the H Block, including interim performance requirements.¹⁷⁵

81. Today, we continue to believe that performance requirements play a critical role in ensuring that licensed spectrum does not lie fallow, and now propose to establish the following performance requirements. We seek comment on the following buildout requirements for the H Block:

- H Block Interim Buildout Requirement: Within four (4) years, an H Block licensee shall provide signal coverage and offer service to at least forty (40) percent of the population in each of its license areas.
- H Block Final Buildout Requirement: By the end of the license term, i.e., within ten (10) years, an H Block licensee shall provide signal coverage and offer service to at least seventy (70) percent of the population in each of its license areas.

82. We propose these performance requirements in an effort to foster deployment expeditiously in the H Block for the provision of wireless, terrestrial broadband service, and to enable the Commission to take appropriate corrective action should such deployment fail to occur. Specifically, the interim benchmark at four years would ensure that a licensee begins deploying facilities quickly, thereby evidencing meaningful utilization of the spectrum. At the same time, by proposing a relatively low population threshold in the interim benchmark, we acknowledge that large-scale network deployment may ramp up over time as equipment becomes available and a customer base is established. In addition, by proposing a final buildout requirement timeline of ten years, we believe we allow a reasonable amount of time for any H Block licensee to attain nationwide scale.¹⁷⁶

83. We seek comment on these proposed buildout requirements. We encourage comment on whether our proposals represent the appropriate balance between requirements that are too low as to not result in meaningful buildout and those that would be so high as to be unattainable. We also seek comment on whether other benchmarks represent more appropriate requirements? Commenters should discuss and quantify how any supported buildout requirements will affect investment and innovation as well as discuss and quantify other costs and benefits associated with the proposal.

¹⁷³ *Id.* ¶ 187. In the *AWS-4 Report and Order*, we noted that the incumbent licensee generally supported our seven year end-of-term buildout benchmark and agreed to aggressively build out the spectrum. As a result of this commitment, we adopted a Final Build Out requirement of 7 years. *Id.*

¹⁷⁴ See 47 C.F.R. § 27.14(p) (2012). See Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band, WT Docket No. 07-293, Establishment of Rules and Policies for the Digital Audio Radio Satellite Service, IB Docket No. 95-91, Order on Reconsideration, 27 FCC Rcd 13651, 13696-13701 ¶¶ 111-121.

¹⁷⁵ *AWS-2 NPRM*, 19 FCC Rcd at 19292 ¶ 74.

¹⁷⁶ The population of each EA can be dramatically different so we believe it is more appropriate to require the licensee to cover a certain percentage of the population in each EA rather than a certain number of people in each EA. See Metropolitan Area and BEA Economic Area Projections of Economic Activity and Population to the Year 2005, Survey of Current Business, 56, 64-72 (June 1996).

84. *Agreements between H Block and AWS-4 licensees.* In the *AWS-4 Report and Order*, we permit AWS-4 licensees to enter into private operator-to-operator agreements with all 1995-2000 MHz licensees so that AWS-4 operations above 2000 MHz may have an OOB level in excess of $70 + 10 \log_{10}(P)$ dB into the 1995-2000 MHz band.¹⁷⁷ In the event that an AWS-4 licensee reaches such an agreement with all 1995-2000 MHz licensees, should the H Block licensees' performance requirements be reduced or eliminated because accepting a higher OOB level increases the use of the 2000-2005 MHz band? Implementing such an approach would enable a market-based solution for AWS-4 licensees who seek to remove technical rules designed to protect the H Block by allowing them to acquire H Block licenses at auction (or, later, on the secondary market) and prioritize deployment of AWS-4 over H Block.

85. *Penalties for Failure to Meet Construction Requirements.* Along with construction benchmarks, we seek to adopt meaningful and enforceable consequences, or penalties, for failing to meet the benchmarks. Building on what we have learned from other bands and considering the unique characteristics of the H Block, we propose and seek comment, including on the costs and benefits, of the following penalties in the event an H Block licensee fails to satisfy its buildout requirements:

- In the event an H Block licensee fails to meet the H Block Interim Buildout Requirement in its license area, the term of the license shall be reduced by two years.
- In the event an H Block licensee fails to meet the H Block Final Buildout Requirement in its license area, the H Block license for each license area in which it fails to meet the buildout requirement shall terminate automatically without Commission action.

86. We further propose that, in the event a licensee's authority to operate terminates, the licensee's spectrum rights would become available for reassignment pursuant to the competitive bidding provisions of section 309(j). Further, consistent with the Commission's rules for other spectrum bands, including AWS-1 and the Broadband Radio Service, we propose that any H Block licensee who forfeits its license for failure to meet its performance requirements would be precluded from regaining the license.¹⁷⁸

87. *Compliance Procedures.* Consistent with section 1.946(d) of the Commission's rules, we propose to require H Block licensees to demonstrate compliance with the performance requirements by filing a construction notification within 15 days of the relevant milestone certifying that they have met the applicable performance benchmark.¹⁷⁹ Further, we propose that each construction notification include electronic coverage maps and supporting documentation, which must be truthful and accurate and must not omit material information that is necessary for the Commission to determine compliance with its performance requirements.¹⁸⁰

88. Electronic coverage maps must accurately depict the boundaries of each license area in the licensee's service territory. If a licensee does not provide reliable signal coverage to an entire license area, we propose that its map must accurately depict the boundaries of the area or areas within each

¹⁷⁷ *AWS-4 Report and Order* at ¶ 96. The Commission found that technological improvements in devices in the 1995-2000 MHz band, as well as willingness on the part of licensees of the 1995-2000 MHz band to accept a higher probability of interference, could reduce the need for the OOB restrictions for AWS-4 emissions in the 1995-2000 MHz band.

¹⁷⁸ See, e.g., 27 C.F.R. § 27.14(a), (o).

¹⁷⁹ See 47 C.F.R. § 1.946(d) ("notification[s] must be filed with Commission within 15 days of the expiration of the applicable construction or coverage period").

¹⁸⁰ See, e.g., 47 C.F.R. § 1.17 (Truthful and accurate statements to the Commission); 47 C.F.R. § 1.917(c) ("Willful false statements . . . are punishable by fine and imprisonment, 18 U.S.C. 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to 312(a)(1) of the Communications Act of 1934, as amended.").

license area not being served. Further, we propose that each licensee also must file supporting documentation certifying the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee's technology.

c. Renewal Criteria

89. Pursuant to section 308(b) of the Communications Act, the Commission may require renewal applicants to "set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station" as well as "such other information as it may require."¹⁸¹ We propose to adopt H Block license renewal requirements consistent with those adopted in the *700 MHz First Report and Order* and the *AWS-4 Report and Order*, which form the basis of the renewal paradigm proposed in our *Wireless Radio Services Renewal NPRM*.¹⁸² We emphasize that, as the Commission made clear in these proceedings, a licensee's performance showing and its renewal showing are two distinct showings. A performance showing provides a snapshot in time of the level of a licensee's service, while a renewal showing provides information regarding the level and types of service provided over the entire license term.

90. We propose that applicants for renewal of H Block licenses file a "renewal showing," in which they demonstrate that they have provided, and are continuing to provide, service to the public, and that they are compliant with the Communications Act and the Commission's rules and policies.¹⁸³ In the *700 MHz First Report and Order*, the Commission explained that in the renewal context, the Commission considers "a variety of factors including the level and quality of service, whether service was ever interrupted or discontinued, whether service has been provided to rural areas, and any other factors associated with a licensee's level of service to the public."¹⁸⁴ As we adopted in the *AWS-4 Report and Order*, we also propose to consider the extent to which service is provided to qualifying tribal lands.¹⁸⁵ We propose that these same factors should be considered when evaluating renewal showings for the H Block and seek comment on this approach. Commenters should discuss and quantify the costs and benefits of this approach.

91. As explained above, today we are proposing that H Block licensees meet four and ten-year performance obligations.¹⁸⁶ We therefore seek comment on whether the public interest would be served by awarding H Block licensees renewal expectancies where they maintain the level of service demonstrated at the ten year performance benchmark through the end of their license term, provided that they have otherwise complied with the Communications Act and the Commission's rules and policies during their license term. We also seek comment on whether H Block licensees should obtain a renewal expectancy for subsequent license terms, if they continue to provide at least the level of service demonstrated at the ten year performance benchmark through the end of any subsequent license terms. Commenters should discuss and quantify the costs and benefits of this approach.

92. Finally, consistent with the *AWS-4 Report and Order*, the *700 MHz First Report and Order* and the *WRS Renewals NPRM and Order*, we propose to prohibit the filing of mutually exclusive

¹⁸¹ 47 U.S.C. § 308(b).

¹⁸² *WRS Renewals NPRM and Order*, 25 FCC Rcd at 6997-98, 7002-09 ¶¶ 2, 16-32. See also *700 MHz First Report and Order*, 22 FCC Rcd at 8093-94 ¶ 75-77; *AWS-4 Report and Order* at ¶ 269-71.

¹⁸³ See *WRS Renewals NPRM and Order*, 25 FCC Rcd at 6997-98, 7002-09 ¶¶ 2, 16-32.

¹⁸⁴ *700 MHz First Report and Order*, 22 FCC Rcd at 8093 ¶ 75.

¹⁸⁵ See *AWS-4 Report and Order* at ¶ 271. See also *WRS Renewals NPRM and Order*, 25 FCC Rcd at 7043 App. A (proposed rule 1.949(c)(4)).

¹⁸⁶ See *supra* section III.E.3.b (Performance Requirements).

renewal applications,¹⁸⁷ and that if a license is not renewed, the associated spectrum would be returned to the Commission for reassignment.¹⁸⁸ We seek comment on these proposals, including on the associated costs and benefits.

d. Permanent Discontinuance of Operations

93. We also request comment on the Commission's rules governing the permanent discontinuance of operations, which are intended to afford licensees operational flexibility to use their spectrum efficiently while ensuring that spectrum does not lay idle for extended periods.¹⁸⁹ Under section 1.955(a)(3) of the Commission's rules, an authorization will automatically terminate, without specific Commission action, if service is "permanently discontinued."¹⁹⁰ For the H Block, we propose to define "permanently discontinued" as a period of 180 consecutive days during which a licensee does not operate and does not serve at least one subscriber that is not affiliated with, controlled by, or related to the provider. We believe this definition strikes an appropriate balance between our twin goals of providing licensees operational flexibility while ensuring that spectrum does not lie fallow. Licensees would not be subject to this requirement until the date of the first performance requirement benchmark, which is proposed as 4 years from the license grant, so they will have adequate time to construct their network. In addition, consistent with section 1.955(a)(3) of the Commission's rules, we propose that, if an H Block licensee permanently discontinues service, the licensee must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 and requesting license cancellation. An authorization will automatically terminate without specific Commission action if service is permanently discontinued even if a licensee fails to file the required form. We seek comment on these proposals, including the associated costs and benefits.

4. Secondary Markets

a. Partitioning and Disaggregation

94. The Commission's Part 27 rules generally allow for geographic partitioning and spectrum disaggregation.¹⁹¹ Geographic partitioning refers to the assignment of geographic portions of a license to another licensee along geopolitical or other boundaries. Spectrum disaggregation refers to the assignment of discrete amounts of spectrum under the license to another entity. Disaggregation allows for multiple transmitters in the same geographic area operated by different companies on adjacent frequencies in the same band. As the Commission noted when first establishing partitioning and disaggregation rules, allowing such flexibility could facilitate the efficient use of spectrum by enabling licensees to make offerings directly responsive to market demands for particular types of services, increasing competition by allowing market entry by new entrants, and expediting provision of services that might not otherwise be provided in the near term.¹⁹²

95. We propose to permit partitioning and disaggregation by licensees in the H Block. To ensure that the public interest would be served if partitioning or disaggregation is allowed, we propose

¹⁸⁷ See *AWS-4 Report and Order* at ¶ 272; *700 MHz First Report and Order*, 22 FCC Rcd at 8093-8094 ¶¶ 76-77; *WRS Renewals NPRM and Order*, 25 FCC Rcd at 6998, 7012-13 ¶¶ 3, 40-42.

¹⁸⁸ *WRS Renewals NPRM and Order*, 25 FCC Rcd at 6998, 7013-14 ¶¶ 3, 43-44; *700 MHz First Report and Order*, 22 FCC Rcd at 8093 ¶ 76.

¹⁸⁹ See *WRS Renewals NPRM and Order*, 25 FCC Rcd at 7017 ¶ 49-50.

¹⁹⁰ 47 C.F.R. § 1.955(a)(3).

¹⁹¹ See 47 C.F.R. § 27.15.

¹⁹² Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Service Licensees, WT Docket No. 96-148, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 21831, 21833 ¶ 1 (1996).

requiring each H Block licensee that is a party to a partitioning, disaggregation or combination of both to independently meet the applicable performance and renewal requirements. We believe this approach would facilitate efficient spectrum use, while enabling service providers to configure geographic area licenses and spectrum blocks to meet their operational needs.¹⁹³ We seek comment on these proposals. Commenters should discuss and quantify the costs and benefits of these proposals with respect to competition, innovation, and investment.

96. We also seek comment on whether the Commission should adopt additional or different mechanisms to encourage partitioning and/or disaggregation of H Block spectrum and the extent to which such policies ultimately may promote more service, especially in rural areas. Commenters should discuss and quantify the costs and benefits of promoting more service using mechanisms to encourage partitioning and disaggregation of H Block spectrum, including the effects of the proposal.

b. Spectrum Leasing

97. In 2003, in order to promote more efficient use of terrestrial wireless spectrum through secondary market transactions, while also eliminating regulatory uncertainty, the Commission adopted a comprehensive set of policies and rules to govern spectrum leasing arrangements between terrestrial licensees and spectrum lessees.¹⁹⁴ These policies and rules enable terrestrially based Wireless Radio Service licensees holding “exclusive use” spectrum rights to lease some or all of the spectrum usage rights associated with their licenses to third party spectrum lessees, which then are permitted to provide wireless services consistent with the underlying license authorization.¹⁹⁵ Through these actions, the Commission sought to promote more efficient, innovative, and dynamic use of the terrestrial spectrum, expand the scope of available wireless services and devices, enhance economic opportunities for accessing spectrum, and promote competition among terrestrial wireless service providers.¹⁹⁶ In 2004, the Commission built upon this spectrum leasing framework by establishing immediate approval procedures for certain categories of terrestrial spectrum leasing arrangements and extending the spectrum leasing policies to additional Wireless Radio Services.¹⁹⁷

98. We propose that the spectrum leasing policies and rules established in those proceedings be applied to the H Block in the same manner that those policies apply to other Part 27 services.¹⁹⁸ We seek comment on this proposal. Commenters should discuss the effects on competition, innovation and investment, and on extending our secondary spectrum leasing policies and rules to the H Block.

¹⁹³ See generally Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services, WT Docket No. 10-112, *Notice of Proposed Rulemaking and Order*, 25 FCC Rcd 6996, 6998-99, 7029-33 ¶¶ 5, 91-97 (2010) (*WRS Renewals NPRM and Order*).

¹⁹⁴ Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) (*Secondary Markets First Report and Order*), *Erratum*, 18 FCC Rcd 24817 (2003).

¹⁹⁵ *Secondary Markets First Report and Order*, 18 FCC Rcd at 20609-13, 20648-49 ¶¶ 8-9, 12-13, 91-92. Wireless Radio Services do not include satellite services. 47 C.F.R. § 1.907. Under these secondary market policies and rules, the service rules and policies applicable to the licensee under its license authorization – including all technical, interference, and operational rules – apply to the spectrum lessee as well. *Secondary Markets First Report and Order*, 18 FCC Rcd at 20648-49 ¶¶ 91-92; see 47 C.F.R. §§ 1.9020(c)-(d), 1.9030 (c)-(d), 1.9035(c)-(d). The rules and procedures for spectrum leasing arrangements are set forth in Part 1, Subpart X. 47 C.F.R. §§ 1.9001 *et seq.*

¹⁹⁶ See *Secondary Markets First Report and Order*, 18 FCC Rcd at 20607 ¶ 2.

¹⁹⁷ Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503 (2004) (*Secondary Markets Second Report and Order*).

¹⁹⁸ *Id.* See e.g., 47 C.F.R. 1.9005(j).

5. Other Operating Requirements

99. Even though licenses in the H Block may be issued pursuant to one rule part, licensees in this band may be required to comply with rules contained in other parts of the Commission's rules by virtue of the particular services they provide. For example:

- Applicants and licensees would be subject to the application filing procedures for the Universal Licensing System, set forth in Part 1 of our rules.¹⁹⁹
- Licensees would be required to comply with the practices and procedures listed in Part 1 of our rules for license applications, adjudicatory proceedings, *etc.*
- Licensees would be required to comply with the Commission's environmental provisions, including section 1.1307.²⁰⁰
- Licensees would be required to comply with the antenna structure provisions of Part 17 of our rules.
- To the extent a licensee provides a Commercial Mobile Radio Service, such service would be subject to the provisions of Part 20 of the Commission's rules, including 911/E911 and hearing aid-compatibility requirements, along with the provisions in the rule part under which the license was issued.²⁰¹ Part 20 applies to all CMRS providers, even though the stations may be licensed under other parts of our rules.²⁰²
- To the extent a licensee provides interconnected VoIP services, the licensee would be subject to the E911 service requirements set forth in Part 9 of our rules.²⁰³
- The application of general provisions of Parts 22, 24, 27, or 101 would include rules related to equal employment opportunity, *etc.*

100. We seek comment on whether we need to modify any of these rules to ensure that H Block licensees are covered under the necessary provisions. We seek comment on applying these rules to the H Block spectrum and specifically on any rules that would be affected by our proposal to apply elements of the framework of these parts, whether separately or in conjunction with other requirements. What are the potential problems that may be associated with the Commission's adoption of any of these potential requirements, and how do they compare to the potential benefits?

6. Facilitating Access to Spectrum and the Provision of Service to Tribal Lands

101. The Commission currently has under consideration various provisions and policies intended to promote greater use of spectrum over Tribal lands.²⁰⁴ We propose to extend any rules and policies adopted in that proceeding to any licenses that may be issued through competitive bidding in this proceeding. We seek comment on this proposal, including any costs and benefits.

¹⁹⁹ See 47 C.F.R. Part 1, Subpart F.

²⁰⁰ 47 C.F.R. § 1.1307.

²⁰¹ 47 C.F.R. Part 20; *see also* 47 C.F.R. § 27.3(g).

²⁰² *See, e.g.,* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, *Second Report and Order*, 22 FCC Rcd 15289, 15478-79 ¶¶ 550-53 (2007).

²⁰³ 47 C.F.R. Part 9.

²⁰⁴ Improving Communications Services for Native Nations by Promoting Greater Utilization of Spectrum over Tribal Lands, WT Docket 11-40, *Notice of Proposed Rulemaking*, 26 FCC Rcd 2623 (2011) (*Tribal Lands NPRM*).

F. Procedures for Any H Block Licenses Subject to Assignment by Competitive Bidding

102. As discussed above, if we adopt a geographic area licensing scheme for the 1915-1920 MHz and 1995-2000 MHz bands, we will resolve mutually exclusive applications through competitive bidding, consistent with our statutory mandate.²⁰⁵

1. Application of Part 1 Competitive Bidding Rules

103. We propose that the Commission would conduct any auction for H Block licenses in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of the Commission's rules, and substantially consistent with the competitive bidding procedures that have been employed in previous auctions.²⁰⁶ Specifically, we propose to employ the Part 1 rules governing competitive bidding design, designated entity preferences, unjust enrichment, application and payment procedures, reporting requirements, and the prohibition on certain communications between auction applicants.²⁰⁷ Under this proposal, such rules would be subject to any modifications that the Commission may adopt for its Part 1 general competitive bidding rules in the future. In addition, consistent with our long-standing approach, auction-specific matters such as the competitive bidding design and mechanisms, as well as minimum opening bids and/or reserve prices, would be determined by the Wireless Telecommunications Bureau pursuant to its delegated authority.²⁰⁸ We seek comment on this approach, including the costs and benefits of this approach. We also seek comment on whether any of our Part 1 rules would be inappropriate or should be modified for an auction of licenses in the H Block.

2. Revision to Part 1 Certification Procedures

104. Section 6004 of the Spectrum Act prohibits "a person who has been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant" from participating in a system of competitive bidding

²⁰⁵ 47 U.S.C. §§ 309(j), 1451.

²⁰⁶ See 47 C.F.R. §§ 1.2101-1.2114.

²⁰⁷ See, e.g., Amendment of Part 1 of the Commission's Rules—Competitive Bidding Procedures, WT Docket No. 97-82, *Order, Memorandum Opinion and Order and Notice of Proposed Rule Making*, 12 FCC Rcd 5686 (1997); *Third Report and Order and Second Further Notice of Proposed Rule Making*, 13 FCC Rcd 374 (1997) (*Part 1 Third Report and Order*); *Order on Reconsideration of the Third Report and Order, Fifth Report and Order, and Fourth Further Notice of Proposed Rule Making*, 15 FCC Rcd 15293 (2000), *aff'd in part and modified in part, Second Order on Reconsideration of the Third Report and Order, and Order on Reconsideration of the Fifth Report and Order*, 18 FCC Rcd 10180 (2003); *Seventh Report and Order*, 16 FCC Rcd 17546 (2001); *Eighth Report and Order*, 17 FCC Rcd 2962 (2002); *Second Order on Reconsideration of the Part 1 Fifth Report and Order*, 20 FCC Rcd 1942 (2005); Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures, WT Docket 05-211, *Report and Order*, 21 FCC Rcd 891 (2006) (*CSEA/Part 1 Report and Order*), *recons. pending*; *Second Report and Order and Second Further Notice of Proposed Rule Making*, 21 FCC Rcd 4753 (2006) (*CSEA/Part 1 Designated Entity Second Report and Order and Second FNPRM*), *recons. pending*; *Order on Reconsideration of the Second Report and Order*, 21 FCC Rcd 6703 (2006) (modified by *Erratum and Notice of Office of Management and Budget Approval of Information Collections*, 21 FCC Rcd 6622 (WTB 2006)), *petition for review dismissed sub nom. Council Tree Communications, Inc. v. FCC*, 503 F.3d 284 (3d Cir. 2007); *Second Order on Reconsideration of the Second Report and Order*, 23 FCC Rcd 5425 (2008), *vacated in part, Council Tree Communications, Inc. v. FCC*, 619 F.3d 235 (3d Cir. 2010); *Order*, 27 FCC Rcd 908 (2012).

²⁰⁸ See 47 C.F.R. §§ 0.131 (c), 0.331; see also, Amendment of Part 1 of Commission's Rules – Competitive Bidding Procedures, *Third Report and Order and Second Further Notice of Proposed Rule Making*, WT Docket No. 97-82, 13 FCC Rcd 374, 448-49, 454-55 (1997) (directing the Bureau to seek comment on specific mechanisms relating to auction conduct pursuant to the BBA) (*Part 1 Third Report and Order*).

under section 309(j) required to be conducted under Title VI of the Spectrum Act.²⁰⁹ Accordingly, we propose to require that an auction applicant certify, under penalty of perjury, that it and all of the related individuals and entities required to be disclosed on the short-form application are not such persons. For purposes of this certification, we propose to define “person” as an individual, partnership, association, joint-stock company, trust, or corporation.²¹⁰ We also propose to define “reasons of national security” to mean matters relating to the national defense and foreign relations of the United States.²¹¹ Our existing rules also include various certifications that a party must make in any application to participate in competitive bidding.²¹² As with other required certifications, failure to include the required certification by the applicable filing deadline would render the application unacceptable for filing, and the application would be dismissed with prejudice.²¹³ We seek comment on this proposal.²¹⁴

3. Small Business Provisions for Geographic Area Licenses

105. In authorizing the Commission to use competitive bidding, Congress mandated that the Commission “ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services.”²¹⁵ In addition, section 309(j)(3)(B) of the Communications Act provides that, in establishing eligibility criteria and bidding methodologies, the Commission shall promote “economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.”²¹⁶ One of the principal means by which the Commission fulfills this mandate is through the award of bidding credits to small businesses.

106. In the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission stated that it would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.²¹⁷ Further, in the *Part 1 Third Report and Order*, the Commission, while standardizing many auction rules, determined that it would continue a service-by-service approach to defining small businesses.²¹⁸

107. In the event that the Commission assigns exclusive geographic area licenses for the H Block, we believe that this spectrum would be employed for purposes similar to those for which the AWS-1 band is used. We therefore propose to establish the same small business size standards and

²⁰⁹ See Spectrum Act § 6004(b)-(c).

²¹⁰ See, e.g., 47 U.S.C. § 153(39) (“The term ‘person’ includes an individual, partnership, association, joint-stock company trust or corporation.”).

²¹¹ See, e.g., 18 U.S.C. app. 3 § 1(b) (defining “national security” as “the national defense and foreign relations of the United States”).

²¹² See 47 C.F.R. § 1.2105(a).

²¹³ See 47 C.F.R. § 1.2105(b)(1).

²¹⁴ We note that in the *Incentive Auction NPRM*, the Commission also sought comment on the implementation of section 6004 of the Spectrum Act for the broadcast television spectrum incentive auction. See *Incentive Auction NPRM*, 27 FCC Rcd at 12444-45, 12458 ¶¶ 251-52, 305.

²¹⁵ 47 U.S.C. § 309(j)(4)(D).

²¹⁶ 47 U.S.C. § 309(j)(3)(B).

²¹⁷ Implementation of Section 309(j) of the Communications Act—Competitive Bidding, PP Docket No. 93-253, *Second Memorandum Opinion and Order*, 9 FCC Rcd 7245, 7269 ¶ 145 (1994); 47 C.F.R. § 1.2110(c)(1).

²¹⁸ *Part 1 Third Report and Order*, 13 FCC Rcd at 388 ¶ 18; 47 C.F.R. § 1.2110(c)(1).

associated bidding credits for the H Block as the Commission adopted for the AWS-1 band.²¹⁹ We note that these small business size standards and associated bidding credits were proposed for the AWS-1 band because of the similarities between the AWS-1 service and the broadband PCS service²²⁰ and the Commission followed this approach when proposing small business size standards and associated bidding credits in the *AWS-2 NPRM*.²²¹ Thus, we propose to define a small business as an entity with average gross revenues for the preceding three years not exceeding \$40 million, and a very small business as an entity with average gross revenues for the preceding three years not exceeding \$15 million.²²² We seek comment on this proposal, including the costs and benefits of the proposal.

108. We propose to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent, as set forth in the standardized schedule in Part 1 of our Rules.²²³ We seek comment on the use of these standards and associated bidding credits, with particular focus on the appropriate definitions of small businesses and very small businesses as they may relate to the size of the geographic area to be served and the spectrum allocated to each license. Commenters should discuss and quantify any costs or benefits associated with these standards and associated bidding credits as they relate to the proposed geographic areas. In discussing these issues, commenters are requested to address and quantify the expected capital requirements for services in these bands and other characteristics of the service. Commenters are also invited to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments and any quantification of costs and benefits regarding the appropriate small business size standards.

109. In establishing the criteria for small business bidding credits, we acknowledge the difficulty in accurately predicting the market forces that will exist at the time these frequencies are licensed. Thus, our forecasts of types of services that will be offered over these bands may require adjustment depending upon ongoing technological developments and changes in market conditions.

110. We seek comment on whether the small business provisions we propose today are sufficient to promote participation by businesses owned by minorities and women, as well as rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned or women-owned businesses, they should address how such provisions should be crafted to meet the relevant standards of judicial review.²²⁴

111. In addition, we note that under our Part 1 rules, a winning bidder for a market will be eligible to receive a bidding credit for serving a qualifying tribal land within that market, provided that it complies with the applicable competitive bidding rules.²²⁵ The Commission currently has under consideration various provisions and policies intended to promote greater use of spectrum over tribal

²¹⁹ See 47 C.F.R. § 24.720 (1994); *AWS-1 Report and Order*, 18 FCC Rcd at 25220 ¶¶ 149.

²²⁰ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Notice of Proposed Rulemaking*, 17 FCC Rcd 24135, 24164-65 ¶¶ 76-77 (2002).

²²¹ *AWS-2 NPRM*, 19 FCC Rcd at 19308-09 ¶¶ 122-23.

²²² We are coordinating these proposed small business size standards with the U.S. Small Business Administration.

²²³ In the *Part 1 Third Report and Order*, the Commission adopted a standard schedule of bidding credits, the levels of which were developed based on our auction experience. *Part 1 Third Report and Order*, 13 FCC Rcd at 403-04 ¶ 47; see also 47 C.F.R. § 1.2110(f)(2).

²²⁴ *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995) (requiring a strict scrutiny standard of review for Congressionally mandated race-conscious measures); *United States v. Virginia*, 518 U.S. 515 (1996) (applying an intermediate standard of review to a state program based on gender classification).

²²⁵ 47 C.F.R. § 1.2110(f)(3).

lands. We propose to extend any rules and policies adopted in that proceeding to any H Block licenses that may be assigned through competitive bidding.²²⁶ We seek comment on this proposal.

IV. PROCEDURAL MATTERS

A. *Ex Parte* Presentations

112. The proceedings shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²²⁷ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

B. Comment Period and Filing Procedures

113. Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission’s Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

²²⁶ *Tribal Lands NPRM*, 26 FCC Rcd at 2630-31 ¶¶ 19-20.

²²⁷ 47 C.F.R. §§ 1.1200 *et seq.*

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

114. People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

115. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street, S.W., CY-A257, Washington, D.C., 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

C. Initial Regulatory Flexibility Analysis

116. As required by the Regulatory Flexibility Act,²²⁸ the Commission has prepared an Initial Regulatory Flexibility Analysis (“IRFA”) of the possible significant economic impact on small entities of the policies and rules addressed in this *NPRM*. The IRFA is set forth in Appendix B. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines for comments on the *NPRM*, and should have a separate and distinct heading designating them as responses to the IRFA.

D. Paperwork Reduction Act Analysis

117. This document contains proposed new or modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

E. Further Information

118. For additional information on this proceeding, contact Peter Daronco of the Broadband Division, Wireless Telecommunications Bureau, at (202) 418-BITS.

V. ORDERING CLAUSES

119. Accordingly, IT IS ORDERED, pursuant to sections 1, 2, 4(i), 201, 301, 302, 303, 307, 308, 309, 310, 316, 319, 324, 332, 333, 1404, and 1451 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 201, 301, 302, 303, 307, 308, 309, 310, 316, 319, 324, 332, 333, 1404, and 1451, that this Notice of Proposed Rulemaking is hereby ADOPTED.

120. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this Notice and that comment is sought on these proposals.

121. IT IS FURTHER ORDERED that the Initial Regulatory Flexibility Analysis IS ADOPTED.

²²⁸ See 5 U.S.C. § 603.

122. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR parts 1 and 27 as follows:

PART 1—PRACTICE AND PROCEDURE

1. The authority citation for part 1 is revised to read as follows:

Authority: 15 U.S.C. 79 et seq.; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 227, 303(r), 309 and 1404.

2. Section 1.949 is amended by adding paragraph (c) to read as follows:

§ 1.949 Application for renewal of license.

(c) Renewal Showing. An applicant for renewal of a geographic-area authorization in the 1915-1920 MHz and 1995-2000 service bands must make a renewal showing, independent of its performance requirements, as a condition of renewal. The showing must include a detailed description of the applicant's provision of service during the entire license period and address:

- (1) The level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered);
- (2) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;
- (3) The extent to which service is provided to rural areas;
- (4) The extent to which service is provided to qualifying tribal land as defined in § 1.2110(f)(3)(i); and
- (5) Any other factors associated with the level of service to the public.

3. Section 1.2105 is amended by adding paragraph (a)(2)(xii) to read as follows:

§ 1.2105 Bidding application and certification procedures; prohibition of certain communications.

(a) * * *

(2) * * *

(xii) For auctions required to be conducted under Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. No. 112-96) the Commission may require certification under penalty of perjury that the applicant and all of the person(s) disclosed under paragraph (a)(2)(ii) of this section are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. For the purposes of this certification, the term “person” means an individual, partnership, association, joint-stock company, trust, or corporation, and the term “reasons of national security” means matters relating to the national defense and foreign relations of the United States.

* * * * *

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

4. The authority citation for part 27 is revised to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, 337, and 1451 unless otherwise noted.

5. Section 27.1 is amended by adding paragraph (b)(10) to read as follows:

§ 27.1 Basis and purpose.

(b) ***

(10) 1915-1920 MHz and 1995-2000 MHz.

6. Section 27.4 is amended by revising the definition of “Advanced wireless service (AWS)” to read as follows:

§ 27.4 Terms and definitions.

*** A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(h) or § 27.5(j).

7. Section 27.5 is amended by adding paragraph (j) to read as follows:

§ 27.5 Frequencies.

(j) 1915-1920 MHz and 1995-2000 MHz bands. The paired 1915-1920 MHz and 1995-2000 MHz bands are available for assignment on an Economic Area basis.

8. Section 27.6 is amended by adding paragraph (i) to read as follows:

§ 27.6 Service areas.

(i) 1915-1920 MHz and 1995-2000 MHz bands. AWS service areas for the 1915-1920 MHz and 1995-2000 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

9. Section 27.13 is amended by adding paragraph (i) to read as follows:

§ 27.13 License period.

(i) 1915-1920 MHz and 1995-2000 MHz bands. Authorizations for 1915-1920 MHz and 1995-2000 MHz bands will have a term not to exceed ten years from the date of issuance or renewal.

10. Section 27. 14 is amended by revising the first sentence of paragraphs (a), (f), and (k), and adding paragraph (q) to read as follows::

§ 27.14 Construction requirements; Criteria for renewal.

(a) AWS and WCS licensees, with the exception of WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Block C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, Block D in the 758–763 MHz and 788–793 MHz bands, Block A in the 2305–2310 MHz and 2350–2355 MHz bands, Block B in the 2310–2315 MHz and 2355–2360 MHz bands, Block C in the 2315–2320 MHz band, and Block D in the 2345–2350 MHz band, and with the exception of licensees holding AWS authorizations in the 1915-1920 MHz and 1995-2000 MHz bands, must, as a performance requirement, make a showing of “substantial service” in their license area within the prescribed license term set forth in § 27.13. ***

(f) Comparative renewal proceedings do not apply to WCS licensees holding authorizations for the 698–746 MHz, 747–762 MHz, and 777–792 MHz bands and licensees holding AWS authorizations for the 1915-1920 MHz and 1995-2000 MHz bands. ***

(k) Licensees holding WCS or AWS authorizations in the spectrum blocks enumerated in paragraphs (g), (h), (i), or (q) of this section, including any licensee that obtained its license pursuant to the procedures set forth in paragraph (j) of this section, shall demonstrate compliance with performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the applicable benchmark, in accordance with the provisions set forth in § 1.946(d) of this chapter. ***

* * * * *

(q) The following provisions apply to any licensee holding an AWS authorization in the 1915-1920 MHz and 1995-2000 MHz bands (an “H Block licensee”):

(1) An H Block licensee shall provide signal coverage and offer service within four (4) years from the date of the initial license to at least forty (40) percent of the total population in each service area that it has licensed in the 1915-1920 MHz and 1995-2000 MHz bands (“H Block Interim Buildout Requirement”).

(2) An H Block licensee shall provide signal coverage and offer service within ten (10) years from the date of the initial license to at least seventy (70) percent of the population in each of its licensed areas in the 1915-1920 MHz and 1995-2000 MHz bands (“H Block Final Buildout Requirement”).

(3) If an H Block licensee fails to establish that it meets the H Block Interim Buildout Requirement for a particular licensed area, then the H Block Final Buildout Requirement (in this paragraph (q)) and the H Block license term (as set forth in § 27.13) for each license area in which it fails to meet the H Block Interim Buildout Requirement shall be accelerated by two years (from ten to eight years).

(4) If an H Block licensee fails to establish that it meets the H Block Final Buildout Requirement for a particular licensed areas in the 1915-1920 MHz and 1995-2000 MHz bands, its authorization for each license area in which it fails to meet the H Block Final Buildout Requirement shall terminate

automatically without Commission action. The H Block licensee that has its license automatically terminate under subsection (q) will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will only be deemed served by the licensee if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may only include the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

11. Section 27.15 is amended by revising the first sentence in paragraph (d)(1)(i); adding paragraph (d)(1)(iii); revising the first sentence in paragraph (d)(2)(i), and adding paragraph (d)(2)(iii) to read as follows:

§ 27.15 Geographic partitioning and spectrum disaggregation.

(d) ***

(1) ***

(i) Except for WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, or Block D in the 758–763 MHz and 788–793 MHz bands; and for licensees holding AWS authorizations in the 1915-1920 MHz and 1995-2000 MHz bands; the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. ***

(iii) For licensees holding AWS authorizations in the 1915-1920 MHz and 1995-2000 MHz bands, the

following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a geographic partitioning must individually meet any service-specific performance requirements (*i.e.*, construction and operation requirements). If a partitioner or partitionee fails to meet any service-specific performance requirements on or before the required date, then the consequences for this failure shall be those enumerated in § 27.14(q)

(2) ***

(i) Except for WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, or Block D in the 758–763 MHz and 788–793 MHz bands; and for licensees holding AWS authorizations in 1915-1920 MHz and 1995-2000 MHz bands; the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. ***

(iii) For licensees holding AWS authorizations in the 1915-1920 MHz and 1995-2000 MHz bands, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a spectrum disaggregation must individually meet any service-specific performance requirements (*i.e.*, construction and operation requirements). If a disaggregator or a disagregatee fails to meet any service-specific performance requirements on or before the required date, then the consequences for this failure shall be those enumerated in § 27.14(q).

12. Section 27.17 is added to read as follows:

§ 27.17 Discontinuance of service in the 1915-1920 MHz and 1995-2000 MHz bands.

- (a) Termination of Authorization. A licensee's AWS authorization in the 1915-1920 MHz and 1995-2000 MHz bands will automatically terminate, without specific Commission action, without specific Commission action, if it permanently discontinues service after meeting the H Block Interim Buildout Requirement specified in § 27.14 of the Commission's rules.
- (b) Permanent discontinuance of service is defined as 180 consecutive days during which a licensee

holding AWS authority in the 1915-1920 MHz and 1995-2000 MHz bands does not operate or, in the case of a commercial mobile radio service provider, does not provide service to at least one subscriber that is not affiliated with, controlled by, or related to the providing carrier.

(c) Filing Requirements. A licensee of the 1915-1920 MHz and 1995-2000 MHz bands that permanently discontinues service as defined in this section must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 requesting license cancellation. An authorization will automatically terminate, without specific Commission action, if service is permanently discontinued as defined in this section, even if a licensee fails to file the required form requesting license cancellation.

13. Section 27.50 is amended by revising paragraph (d) introductory text, paragraphs (d)(1) and (2), and adding paragraph (d) (7), to read as follows:

§ 27.50 Power limits and duty cycle.

(d) The following power and antenna height requirements apply to stations transmitting in the 1710-1755 MHz, 2110-2155 MHz, 1915-1920 MHz and 1995-2000 MHz bands:

(1) The power of each fixed or base station transmitting in the 1995-2000 MHz or the 2110-2155 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(2) The power of each fixed or base station transmitting in the 1995-2000 MHz or the 2110-2155 MHz band and situated in any geographic location other than that described in paragraph (d)(1) is limited to:

(7) Fixed, mobile and portable (hand-held) stations operating in the 1915-1920 MHz band are limited to 1 Watt EIRP, except that the total power of any portion of an emission that falls within the 1917-1920 MHz band may not exceed 4 milliwatts (6 dBm).

14. Section 27.53 is amended by revising paragraph (h) to read as follows:

§ 27.53 Emission limits.

(h) AWS Emission Limits.

(1) General Protection Levels. Except as otherwise specified below, for operations in the 1710–1755 MHz, 2110–2155 MHz, 1915-1920 MHz, and 1995-2000 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB.

(2) Additional Protection Levels. Notwithstanding the foregoing paragraph (1):

(i) For operations in the 1915-1920 MHz band, the power of any emission above 1930 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(ii) For operations in the 1995-2000 MHz band, the power of any emission above 2005 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(3) Measurement Procedure.

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

15. Section 27.55 is amended by revising paragraphs (a)(1) to read as follows:

§ 27.55 Power strength limits.

(a)***

(1) 1995-2000, 2110-2155, 2305-2320, 2345-2360 MHz bands: 47 dB μ V/m.

16. Section 27.57 is amended by revising paragraph (c) to read as follows:

§ 27.57 International Coordination

(c) Operation in the 1710-1755 MHz, 1915-1920 MHz, 1995-2000 MHz and 2110-2155 MHz bands is subject to international agreements with Mexico and Canada.

17. Subpart K of part 27 is added to read as follows:

Subpart K—1915-1920 MHz and 1995-2000 MHz

LICENSING AND COMPETITIVE BIDDING PROVISIONS

§ 27.1001 1915-1920 MHz and 1995-2000 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1915-1920 MHz and 1995-2000 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1002 Designated Entities in the 1915-1920 MHz and 1995-2000 MHz bands.

Eligibility for small business provisions:

(a)(1) A small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding \$40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding \$15 million for the preceding three years.

(b) Bidding credits. A winning bidder that qualifies as a small business as defined in this section or a

consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

REIMBURSEMENT OBLIGATION OF AWS LICENSEES AT 1915-1920 MHz AND 1995-2000 MHz

§ 27.1021 Reimbursement obligation of AWS licensees at 1915-1920 MHz.

AWS licensees of the H Block (1915-1920 MHz paired with 1995-2000 MHz) are collectively responsible for reimbursing UTAM, Inc. a pro rata share of the expenses that UTAM, Inc. has incurred from relocating and clearing incumbent Fixed Microwave Service (FS) licensees from the 1910-1930 MHz band. Specifically, within 30 days of grant of its long-form application, AWS licensees in the 1915-1920 MHz band, which constitutes 25 percent of the 1910-1930 MHz band, shall, on a pro rata shared basis as set forth below in this section reimburse 25 percent of the total relocation costs incurred by UTAM, Inc.

(a) To the extent that H Block licenses awarded in the first auction for this spectrum cover, collectively, at least forty (40) percent of the nation's population, the amount owed to UTAM, Inc. by the winning bidder of each individual H Block license awarded in the first auction will be determined by dividing the gross winning bid ("GWB") for each individual H Block license (i.e., an Economic Area (EA)) by the sum of the gross winning bids for all H Block licenses awarded in the first auction, and then multiplying by \$12,629,857.

$$RN = \left(\frac{\text{BTA GWB}}{\text{Sum of GWBs}} \right) \times \$12,629,857.00$$

Except as provided in paragraphs (b) and (c), an AWS licensee that obtains a license for a market not awarded in the first H Block auction will not have a reimbursement obligation to UTAM, Inc.

(b) The Commission imposes payment obligations on bidders that withdraw provisionally winning bids during the course of an auction, on those that default on payments due after an auction closes, and on those that are disqualified. See 47 CFR 1.2110(f)(2)(i). In the initial auction, a winning bidder of an EA

license that is not awarded a license for any reason will be deemed to have triggered a reimbursement obligation to UTAM, Inc. that will be paid to UTAM, Inc. by the licensee acquiring the EA license at reauction. The amount owed to UTAM, Inc. by the licensee acquiring the EA license at reauction will be based on the gross winning bid for the EA license in the initial auction. Accordingly, an applicant at reauction will know with certainty the reimbursement obligation it will owe for each EA license subject to this paragraph (b).

(c) To the extent that H Block licenses awarded in the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation's population, then the amount owed to UTAM, Inc. shall be more equitably dispersed across all EA licenses based on the relative population of the EA to the population of the United States. Specifically, the amount that the licensee of an individual H Block license must reimburse UTAM, Inc. shall be calculated by dividing the population of the individual BTA by the total U.S. population, and then multiplying by \$12,629,857.

$$RN = \left(\frac{\text{EA POP}}{\text{U.S. POP}} \right) \times \$12,629,857$$

(d) For purposes of compliance with this section, licensees should determine population based on 2000 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

§ 27.1031 Reimbursement obligation of AWS licensees at 1995-2000 MHz.

AWS licensees of the H Block (1915-1920 MHz paired with 1995-2000 MHz) are collectively responsible for reimbursing Sprint Nextel, Inc. or a successor in interest to Sprint Nextel, Inc. (Sprint), a pro rata share of the eligible expenses that Sprint has incurred from relocating and clearing Broadcast Auxiliary Service (BAS), Cable Television Relay Service (CARS), and Local Television Transmission Service (LTTS) incumbents from the 1990-2025 MHz band. Specifically, within 30 days of grant of its long-form application, AWS licensees in the 1995-2000 MHz band, which constitutes one-seventh of the 35 megahertz of spectrum at 1990-2025 MHz, shall, on a pro rata shared basis as set forth below in this

section reimburse one-seventh of the eligible expenses incurred by Sprint.

(a) To the extent that H Block licenses awarded in the first auction for this spectrum cover, collectively, at least forty (40) percent of the nation's population, the amount owed to Sprint by the winning bidder of each individual H Block license awarded in the first auction will be determined by dividing the gross winning bid ("GWB") for each individual H Block license (*i.e.*, an Economic Area (EA)) by the sum of the gross winning bids for all H Block licenses awarded in the first auction, and then multiplying by \$94,875,516.

$$RN = \left(\frac{\text{EA GWB}}{\text{Sum of GWBs}} \right) \times \$94,875,516$$

Except as provided in paragraphs (b) and (c), an AWS licensee that obtains a license for a market not awarded in the first H Block auction will not have a reimbursement obligation to Sprint.

(b) The Commission imposes payment obligations on bidders that withdraw provisionally winning bids during the course of an auction, on those that default on payments due after an auction closes, and on those that are disqualified. See 47 CFR 1.2110(f)(2)(i). In the first auction, a winning bidder of an EA license that is not awarded a license for any reason will be deemed to have triggered a reimbursement obligation to Sprint that will be paid to Sprint by the licensee acquiring the EA license at reauction. The amount owed to Sprint by the licensee acquiring the EA license at reauction will be based on the gross winning bid for the EA license in the first auction. Accordingly, an applicant at reauction will know with certainty the reimbursement obligation it will owe for each EA license subject to this paragraph (b).

(c) To the extent that H Block licenses awarded in the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation's population, then the amount owed to Sprint shall be more equitably dispersed across all EA licenses based on the relative population of the EA to the population of the United States. Specifically, the amount that the licensee of an individual H Block license must reimburse Sprint shall be calculated by dividing the population of the individual EA by the total U.S. population, and then multiplying by \$94,875,516.

$$RN = \left(\frac{\text{EA POP}}{\text{U.S. POP}} \right) \times \$94,875,516$$

(d) For purposes of compliance with this section, licensees should determine population based on 2000 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

§ 27.1041 Termination of Cost-Sharing Obligations.

(a) The cost-sharing obligation adopted in this subpart will sunset ten years after the first H Block license is issued in the band.

(b) An H Block licensee must satisfy in full its payment obligations under this subpart K within thirty days of the grant of its long-form application. The failure to timely satisfy a payment obligation in full prior to the applicable sunset date will not terminate the debt owed or a party's right to collect the debt.

APPENDIX B

Initial Regulatory Flexibility Act Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this *Notice of Proposed Rulemaking (NPRM)*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines specified in the *NPRM* for comments. The Commission will send a copy of the *NPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *NPRM* and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. Wireless broadband is a key component of economic growth, job creation and global competitiveness because consumers are increasingly using wireless broadband services to assist them in their everyday lives.⁴ The explosive growth of wireless broadband services has created increased demand for wireless spectrum, which is expected to continue increasing, despite technological developments that allow for more efficient spectrum use. Unleashing more spectrum for broadband is essential to meeting this demand. In this *NPRM*, we seek to increase the nation's supply of spectrum for mobile broadband by proposing rules for licensed fixed and mobile services, including advanced wireless services (AWS), in the H Block.⁵ These service rules would make available 10 MHz of spectrum for flexible use in accordance with the Spectrum Act, without causing harmful interference to PCS licensees. In proposing terrestrial service rules for the band, which include technical rules to protect against harmful interference, licensing rules to establish geographic license areas and spectrum block sizes, and performance requirements to promote robust buildout, we advance toward enabling rapid and efficient deployment in the band.⁶ We do so by proposing service, technical, assignment, and licensing rules for this spectrum that generally follow the Commission's Part 27 rules that generally govern flexible use terrestrial wireless service—except that in order to protect PCS licenses, our proposed rules are more stringent in certain respects.⁷ Overall, these proposals are designed to provide for flexible use of this spectrum by allowing licensees to choose their type of service offerings, to encourage innovation and investment in mobile broadband use in this spectrum, and to provide a stable regulatory environment in which broadband deployment would be able to develop through the application of standard terrestrial wireless rules. The market-oriented licensing framework for these bands would ensure that this spectrum is efficiently utilized and will foster the development of new and innovative technologies and services, as well as encourage the growth and development of broadband services, ultimately leading to greater benefits to consumers.

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ See *id.*

⁴ See *NPRM* at ¶ 9.

⁵ See *NPRM* at ¶ 10.

⁶ See *NPRM* sections III.B.2 (Service Area) and III.E.3.b (Performance Requirements).

⁷ See *NPRM* at ¶ 10.

B. Legal Basis

3. The proposed action is authorized pursuant to sections 1, 2, 4(i), 201, 301, 302, 303, 307, 308, 309, 310, 316, 319, 324, 332, 333, 1404, and 1451 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 201, 301, 302, 303, 307, 308, 309, 310, 316, 319, 324, 332, 333, 1404, and 1451.

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

4. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.⁸ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁹ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.¹⁰ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹¹

5. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* Our action may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards that encompass entities that could be directly affected by the proposals under consideration.¹² As of 2009, small businesses represented 99.9% of the 27.5 million businesses in the United States, according to the SBA.¹³ Additionally, a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”¹⁴ Nationwide, as of 2007, there were approximately 1,621,315 small organizations.¹⁵ Finally, the term “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹⁶ Census Bureau data for 2007 indicate that there were 89,527 governmental jurisdictions in the United States.¹⁷ We estimate that, of this total, as many as 88,761 entities may qualify as “small governmental jurisdictions.”¹⁸ Thus, we estimate that most governmental jurisdictions are small.

⁸ 5 U.S.C. § 603(b)(3).

⁹ 5 U.S.C. § 601(6).

¹⁰ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” *Id.*

¹¹ 15 U.S.C. § 632.

¹² See 5 U.S.C. § 601(3)–(6).

¹³ See SBA, Office of Advocacy, “Frequently Asked Questions,” available at <http://web.sba.gov/faqs/faqindex.cfm?areaID=24> (last visited Dec. 11, 2012).

¹⁴ 5 U.S.C. § 601(4).

¹⁵ INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

¹⁶ 5 U.S.C. § 601(5).

¹⁷ U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007).

¹⁸ The 2007 U.S. Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 local governmental organizations in 2007. If we assume (continued....)

6. *Wireless Telecommunications Carriers (except satellite)*. The *NPRM* proposes to apply various Commission policies and rules to terrestrial service in the MSS bands. We cannot predict who may in the future become a licensee or lease spectrum for terrestrial use in these bands. In general, any wireless telecommunications provider would be eligible to become an Advanced Wireless Service licensee or lease spectrum from the MSS or AWS licensees. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.¹⁹ The appropriate size standard under SBA rules is for the category Wireless Telecommunications Carriers. The size standard for that category is that a business is small if it has 1,500 or fewer employees.²⁰ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.²¹ For this category, census data for 2007 show that there were 1,383 firms that operated for the entire year.²² Of this total, 1,368 firms had employment of 999 or fewer employees and 15 had employment of 1000 employees or more.²³ Similarly, according to Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.²⁴ Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.²⁵ Consequently, the Commission estimates that approximately half or more of these firms can be considered small. Thus, using available data, we estimate that the majority of wireless firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and other Compliance Requirements

7. This *NPRM* contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. The projected reporting, recordkeeping, and other compliance requirements resulting from the *NPRM* will apply to all entities in the same manner.

(Continued from previous page) _____

that county, municipal, township, and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,095. If we make the same population assumption about special districts, specifically that they are likely to have a population of 50,000 or less, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 such special districts. Therefore, there are a total of 89,476 local government organizations. As a basis of estimating how many of these 89,476 local government organizations were small, in 2011, we note that there were a total of 715 cities and towns (incorporated places and minor civil divisions) with populations over 50,000. CITY AND TOWNS TOTALS: VINTAGE 2011 – U.S. Census Bureau, *available at* <http://www.census.gov/popest/data/cities/totals/2011/index.html>. If we subtract the 715 cities and towns that meet or exceed the 50,000 population threshold, we conclude that approximately 88,761 are small. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 2011, Tables 427, 426 (Data cited therein are from 2007).

¹⁹ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search>

²⁰ 13 C.F.R. § 121.201, NAICS code 517210.

²¹ 13 C.F.R. § 121.201, NAICS code 517210. The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

²² U.S. Census Bureau, Subject Series: Information, Table 5, “Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517210” (issued Nov. 2010).

²³ *Id.* Available census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “100 employees or more.”

²⁴ *See Trends in Telephone Service* at Table 5.3.

²⁵ *See id.*

The Commission believes that applying the same rules equally to all entities in this context promotes fairness. The Commission does not believe that the costs and/or administrative burdens associated with the rules will unduly burden small entities. The revisions the Commission adopts should benefit small entities by giving them more information, more flexibility, and more options for gaining access to valuable wireless spectrum.

8. OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4), we seek specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

9. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”²⁶

10. The proposal to license the H Block under Economic Areas (EA) geographic size licenses will provide regulatory parity with other AWS bands that are licensed on an EA basis, such as AWS-1 licenses.²⁷ Additionally, assigning H Block in EA geographic areas would allow H Block licensees to make adjustments to suit their individual needs. EA license areas are small enough to provide spectrum access opportunities for smaller carriers.²⁸ EA license areas also nest within and may be aggregated up to larger license areas.²⁹ Depending on the licensing mechanism we adopt, licensees may adjust their geographic coverage through auction or through secondary markets.³⁰ This proposal should enable H Block providers, or any entities, whether large or small, providing service in other AWS bands to more easily adjust their spectrum to build their networks pursuant to individual business plans.

11. The technical rules proposed in Section III.C of the *NPRM* will protect entities operating in nearby spectrum bands from harmful interference, which may include small entities. These technical rules are based on the rules for AWS-1 spectrum, with specific additions or modifications designed to protect broadband PCS services operating in the 1930-1995 MHz band, as well as future services operating in the 2020-2025 MHz band.³¹

12. The *NPRM* proposal pertaining to how the H Block licenses will be assigned includes proposals to assist small entities in competitive bidding. Specifically, small entities will benefit from the proposal to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.³² Providing small businesses and very small businesses with bidding credits

²⁶ 5 U.S.C. § 603(c)(1) – (c)(4).

²⁷ *See NPRM* section III.B.2 (Service Area).

²⁸ *Id.*

²⁹ *Id.*

³⁰ *See NPRM* section III.E.4 (Secondary Markets).

³¹ *See NPRM* section III.C (Technical Issues).

³² *See NPRM* section III.F.3 (Small Business Provisions for Geographic Area Licenses).

will provide an economic benefit to small entities by making it easier for small entities to acquire spectrum or access to spectrum in these bands.

13. The *NPRM* also proposes to provide H Block licensees with the flexibility to provide any fixed or mobile service that is consistent with the allocations for this spectrum, which is consistent with other spectrum allocated or designated for licensed fixed and mobile services, *e.g.*, AWS-1.³³ The *NPRM* further proposes to generally license this spectrum under the Commission's market-oriented Part 27 rules, except that certain restrictions would apply.³⁴ These proposals include applying the Commission's secondary market policies and rules to all transactions involving the use of H Block bands for terrestrial services, which will provide greater predictability and regulatory parity with bands licensed for terrestrial mobile broadband service.³⁵ This proposal should make it easier for H Block providers to enter secondary market arrangements involving terrestrial use of their spectrum. The secondary market rules apply equally to all entities, whether small or large. As a result, we believe that this proposal will provide an economic benefit to small entities by making it easier for entities, whether large or small, to enter into secondary market arrangements for H Block spectrum

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

14. None.

³³ See *NPRM* section III.A.2 (Flexible Use).

³⁴ See *NPRM* at ¶ 10.

³⁵ See *NPRM* section III.E.4.a (Partitioning and Disaggregation).