

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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

REPLY COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”) submits these reply comments in the above-referenced proceeding regarding the proposed rules for Advanced Wireless Services (“AWS”) in the 1915-1920 MHz and 1995-2000 MHz bands (together the “H Block”).^{1/} The initial comments in this proceeding highlight the need for additional wireless broadband capacity, but demonstrate that the FCC must proceed cautiously in order to ensure that H Block operations do not interfere with existing Personal Communications Service (“PCS”) handsets.

I. INTRODUCTION

In its initial comments, T-Mobile applauded the Commission for taking the steps necessary to make additional spectrum, including the H Block, available for mobile broadband services.^{2/} However, it noted that there is a risk of harmful interference from Lower H Block operations at 1915-1920 MHz to PCS handsets operating at 1850-1915 MHz.^{3/} T-Mobile therefore recommended that the Commission adopt the technical limits it proposed in 2004,

^{1/} See *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*, Notice of Proposed Rulemaking, 27 FCC Rcd 16258 (2012) (“NPRM”).

^{2/} See Comments of T-Mobile USA, Inc., WT Docket No. 12-357, at 1 (filed Feb. 6, 2013) (“T-Mobile Comments”).

^{3/} See *id.* at 2-3.

when the FCC first addressed potential service rules for the H Block.^{4/} T-Mobile, however, also recognized that technology has advanced since then. It therefore supported additional, industry-directed testing to determine if alternative limits are appropriate.^{5/} Finally, T-Mobile stated that while it generally supports the FCC’s proposed service rules, it opposes the proposed renewal criteria because they are ambiguous and fail to adequately define an objective standard for license renewals.^{6/}

The record in this proceeding shows unanimity with respect to the need for more spectrum.^{7/} However, while many parties recognize that permitting mobile operations in the H Block to meet this need could result in harmful interference to PCS handsets, there is no agreement with respect to the interference protections needed for PCS operations.^{8/} In addition, although several parties support the adoption of the proposed service and auction rules, many oppose the FCC’s renewal obligation rules. Therefore, the Commission should proceed with its efforts to permit AWS in the H Block, but it must develop a more complete record on the interference potential before final rules are adopted.

^{4/} See *id.* at 3-7.

^{5/} See *id.* at 3.

^{6/} See *id.* at 7-9.

^{7/} See, e.g., Comments of AT&T, Inc., WT Docket No. 12-357, at 1 (filed Feb. 6, 2013) (“AT&T Comments”); Comments of CTIA–The Wireless Association, WT Docket No. 12-357, at 1, 3-5 (filed Feb. 6, 2013) (“CTIA Comments”); Comments of MetroPCS Communications, Inc., WT Docket No. 12-357, at 15 (filed Feb. 6, 2013) (“MetroPCS Comments”); Comments of the United States Cellular Corporation, WT Docket No. 12-357, at 1 (filed Feb. 6, 2013) (“USCC Comments”); Comments of DISH Network Corporation, WT Docket No. 12-357, at 2 (filed Feb. 6, 2013) (“DISH Comments”).

^{8/} See, e.g., Comments of Sprint Nextel Corporation, WT Docket No. 12-357, at 6 (filed Feb. 6, 2013) (“Sprint Comments”); AT&T Comments at 3-6; CTIA Comments at 7-9; USCC Comments at 4; DISH Comments at 17.

II. THERE IS BROAD AGREEMENT ON THE NEED FOR ADDITIONAL SPECTRUM

Several parties pointed out the need for additional spectrum to support the growing demand for wireless capacity. As DISH Network Corporation observes, “additional spectrum is needed to meet the ‘skyrocketing demand for mobile service.’”^{9/} AT&T notes that bringing new mobile broadband spectrum to market, including the H Block, will help meet “the unprecedented and dramatic increase in consumer demand for wireless services.”^{10/} CTIA similarly agrees that making additional spectrum such as the H Block available for licensed, flexible mobile broadband use “could play an important role in helping alleviate the capacity crunch facing the wireless industry.”^{11/} More importantly, Congress has recognized the need for additional spectrum by directing the auction of the H Block, assuming that there is no interference to PCS operations.^{12/}

The H Block is potentially well suited – because of its proximity to existing mobile wireless bands – to meet this need for additional spectrum. Indeed, because the H Block is directly adjacent to the broadband PCS band, which is the most intensively used spectrum band for mobile broadband services, it could serve as a PCS extension band.^{13/} Moreover, as the United States Cellular Corporation (“USCC”) observes, the H Block “is the only spectrum

^{9/} DISH Comments at 2 (citing *NPRM* ¶ 1).

^{10/} AT&T Comments at 1.

^{11/} CTIA Comments at 1.

^{12/} See 47 U.S.C. § 1451 (directing the Commission to auction and grant new licenses for the H Block unless doing so would cause harmful interference to commercial mobile service licensees in the 1930-1995 MHz band).

^{13/} See AT&T Comments at 4; USCC Comments at 2-3; Sprint Comments at 1.

allocated for commercial wireless services that is cleared of incumbent licensees, and thus [is] ready for immediate licensing and deployment.”^{14/}

Savari, Inc. (“Savari”) suggests that the FCC adopt rules and requirements in the Lower H Block that will promote Intelligent Transportation Systems (“ITS”) operations and other low-power services because high-powered operations in the Lower H Block have already been identified as problematic to adjacent PCS operations.^{15/} The Commission should reject this proposal. As noted above, the H Block is better used for mobile wireless operations. Further, the premise of Savari’s argument – that H Block operations are problematic to PCS – is not necessarily accurate and certainly is not a sufficient reason for the FCC to abandon its plans and Congressional directive to permit wireless broadband services in the H Block in favor of ITS operations. As T-Mobile stated in its comments and parties agree, appropriate out-of-band emission (“OOBE”) and power limits can be adopted to protect PCS operations from mobile operations in the Lower H Block.^{16/}

III. MANY PARTIES RECOGNIZE THE POTENTIAL INTERFERENCE TO PCS OPERATIONS

Like T-Mobile, many commenting parties recognize that allowing new mobile broadband services in the H Block could potentially cause interference to PCS operations.^{17/} MetroPCS Communications, Inc. (“MetroPCS”), for instance, cautions that “attention needs to be paid to

^{14/} USCC Comments at 2.

^{15/} See Comments of Savari, Inc., WT Docket No. 12-357, at 12-14 (filed Feb. 6, 2013).

^{16/} See T-Mobile Comments at 4-7; see also Sprint Comments at 2-8 (arguing that it should be possible to license the H Block for flexible use without causing harmful interference to PCS operations through the adoption of reasonable technical standards); Comments of the Rural Telecommunications Group, Inc., WT Docket No. 12-357, at 2 (filed Feb. 6, 2013) (“RTG Comments”) (stating that “the potential for interference can be successfully abated by imposing technical limitations, such as reduced power limits, on H Block devices”).

^{17/} See, e.g., USCC Comments at 4 (“H Block operations have the potential to interfere with PCS systems.”).

assure that licensing the H Block will not lead to interference with other PCS spectrum”,^{18/} and AT&T likewise urges the Commission to ensure that use of the H Block for commercial mobile services “does not interfere with existing use of the PCS band.”^{19/} CTIA notes that it specifically found three distinct types of interference risks from Lower H Block operations that could threaten PCS handsets – overload, intermodulation, and OOBE interference.^{20/}

Also like T-Mobile,^{21/} parties recognize that additional testing to better assess this interference potential is appropriate to update the record. As AT&T explains, technology has changed significantly since the Commission last evaluated use of the H Block and “new testing is required to determine whether the adoption of new technologies like Long Term Evolution (‘LTE’) and advancements in mitigation techniques would allow use of the H Block for commercial mobile broadband without harming PCS.”^{22/} CTIA agrees that “data surrounding technical guidelines to protect PCS operations require updating.”^{23/} USCC notes that it plans to closely examine the technical analyses that will be filed in this proceeding and urges the Commission to take a similar approach and “only make final decisions after the industry has had a full opportunity to refresh the record.”^{24/}

T-Mobile has already taken steps to conduct joint testing with another carrier to determine the appropriate technical parameters for H Block operations in light of recent changes in technology. T-Mobile expects to be able to provide the Commission with the results of its

^{18/} MetroPCS Comments at 3.

^{19/} AT&T Comments at 1-2.

^{20/} *See* CTIA Comments at 8.

^{21/} *See* T-Mobile Comments at 4.

^{22/} AT&T Comments at 2.

^{23/} CTIA Comments at 7.

^{24/} USCC Comments at 4.

testing in the near future. The Commission should not proceed until T-Mobile has the opportunity to provide the results of its tests and its recommendations based on those results.

Sprint Nextel Corporation (“Sprint”) submits that recent testing and analysis indicate that the potential for interference between Lower H Block and PCS operations “is now entirely manageable and poses no genuine obstacle to [the] auction of the entire H Block.”^{25/} It reports that measurements conducted by Sprint and V-COMM LLC (“V-COMM”), a third-party laboratory and engineering consulting firm, indicate that intermodulation interference is no longer a “significant interference threat” to PCS devices and receiver blocking to such devices is also “unlikely.”^{26/} However, Sprint has not presented any current studies to support those assertions or to address OOBE interference;^{27/} the V-COMM study to which it refers has not yet been submitted. Once the test data is submitted in this proceeding, affected parties like T-Mobile must have an opportunity to review and comment on it.

IV. THE COMMISSION SHOULD NOT ADOPT THE PROPOSED RENEWAL RULES

Most parties agree with the adoption of the proposed service and auction rules.^{28/}

However, commenters do not agree with the Commission’s proposed rules for renewal

^{25/} Sprint Comments at 5-6.

^{26/} *See id.* at 6.

^{27/} *See id.* (conceding that “Sprint is still reviewing test data related to the impact of H Block device OOBE” to PCS operations).

^{28/} For instance, parties generally support the FCC’s proposed geographic licensing scheme, 10-year license term, buildout rules, small entity bidding credits, and secondary market policies for the H Block. *See, e.g.*, AT&T Comments at 7-10; MetroPCS Comments at 8-12, 19-20; USCC Comments at 9; Sprint Comments at 9; RTG Comments at 6-8; Comments of the Competitive Carriers Association, WT Docket No. 12-357, at 9-14 (filed Feb. 6, 2013) (“CCA Comments”); Comments of Cellular South, Inc., WT Docket No. 12-357, at 9-10 (filed Feb. 6, 2013) (“Cellular South Comments”). MetroPCS and the Competitive Carriers Association also support the FCC’s proposal to conduct an H Block auction pursuant to its general competitive bidding rules. *See* MetroPCS Comments at 20-22; CCA Comments at 6-7; *see also* Cellular South Comments at 3-4 (stating that the H Block should be allocated via competitive bidding).

applications. MetroPCS echoes T-Mobile's concern that the proposed renewal standard is vague and will "strip[] away a level of certainty and stability that the wireless industry has grown accustomed to rely upon," which, in turn, can diminish investment.^{29/} USCC adds that the renewal standard, in addition to creating investment-killing uncertainty, "would generate enormous and unnecessary new paperwork burdens for affected licensees."^{30/} Moreover, as T-Mobile previously stated, the renewal criteria proposed in this proceeding are the same as those proposed in the separate *WRS Renewals NPRM* proceeding, which is still pending before the Commission.^{31/} Because this matter is under consideration in a pending proceeding, it should be more broadly addressed there, rather than applied uniquely to the H Block.

V. CONCLUSION

There is widespread agreement in this proceeding that there is an increasing need for spectrum such as the H Block for mobile broadband services. The record, however, also makes clear that there is a potential for operations in the H Block to cause harmful interference to incumbent PCS operations and that it is premature for the Commission to adopt its proposed renewal criteria for the H Block. The Commission must therefore develop a more complete record on the interference concerns before it adopts final rules in this proceeding.

^{29/} MetroPCS Comments at 17-18; *see also* T-Mobile Comments at 8-9.

^{30/} USCC Comments at 9.

^{31/} *See* T-Mobile Comments at 8; *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*, Notice of Proposed Rulemaking and Order, 25 FCC Rcd 6996 (2010).

Respectfully submitted,

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