

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

In the Matter of)	
)	
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
)	
Services 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
)	

REPLY COMMENTS OF UNITED STATES CELLULAR CORPORATION

United States Cellular Corporation (“USCC”) submits these reply comments in response to the Notice of Proposed Rulemaking (“NPRM”) released March 21, 2012 in the above-captioned proceedings and the comments filed in response to the NPRM. In its initial comments, USCC applauded the Commission’s proposal to permit expanded terrestrial services in the AWS-4 Bands, but urged the Commission to ensure that any new technical and service rules not delay, diminish, or impair other initiatives to allocate, auction, and license additional spectrum that is urgently needed to support the expansion of commercial mobile broadband service.

I. THE SPECTRUM ACT REQUIRES AN AUCTION OF THE H BLOCK, SO THE COMMISSION MUST ENSURE ITS CONTINUED VIABILITY.

In its comments, USCC urged the Commission to ensure that any rules adopted in this proceeding protect the viability of the H Block. Other commenters agreed, including Sprint Nextel, which noted that, “[a]mong other things, auctioning the H Block has the potential to achieve: (1) more competition; (2) more capacity for meeting the growing demand for data; (3) expanded scale economies; and (4) enhanced broadband roaming.”¹ Similarly, RCA urged the

¹ Comments of Sprint Nextel Corp. at 3; *see id.* (noting that, of the 185 MHz of spectrum identified in Spectrum Act, “only the H Block is entirely cleared of incumbents and ready for immediate auction and deployment.”).

Commission to “take swift action to license the H Block” because it “represents the last natural expansion for the PCS Band and no other spectrum is available for auction that would permit carriers to build on existing infrastructure investments in providing wireless services.”²

USCC also noted that, because Congress recently required the Commission to auction the H Block by February 22, 2015, the Commission generally cannot remove or otherwise handicap this spectrum. The only exception is if the Commission determines that use of the H Block would cause interference to PCS operations in the 1930-1995 MHz band.³ Despite the demonstrated benefits of the H Block, AT&T nevertheless asks the Commission to “preserve both the lower and upper H Block (1915-1920 MHz and 1995-2000 MHz, respectively) as guard band spectrum.”⁴ According to AT&T, this would be permissible under the Spectrum Act because “the H Block cannot be made available for commercial mobile use because of the substantial risk of interference to PCS operations.”⁵ However, AT&T’s interference concerns, which appear to be focused on potential interference from the H Block uplink operations in the 1915-1920 MHz band, are not justified.

For instance, Sprint Nextel noted that, with respect to the three primary interference concerns regarding H Block uplink operations, only intermodulation could be a true cause for concern “because overload and OOB interference can be solved through fairly routine rules...”⁶ And, with respect to intermodulation, Sprint Nextel identified “means to substantially mitigate this interference risk.”⁷ Specifically, in light of technological advances, the power limitation previously proposed by Sprint Nextel on operations in the 1917-1920 MHz portion of the H

² Comments of RCA at 12; *see* Comments of Sprint Nextel at 5-6.

³ *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, §6401(b)(4) (“Spectrum Act”).

⁴ Comments of AT&T at 7.

⁵ *Id.* at 8.

⁶ Comments of Sprint Nextel at 8-9.

⁷ *Id.* at 9.

Block uplink would “provide[] an effective means of minimizing harmful intermodulation interference risks.”⁸

Further, with respect to H Block downlink operations, Sprint Nextel noted that the “likely technological similarities and the application of PCS-like rules to H Block base station transmitters mean the H Block downlink band transmissions will be similar to any other PCS downlink band transmissions, and the application of standard OOB limits should protect other PCS base stations.”⁹ Sprint Nextel therefore “continues to believe that any interference concerns between H Block downlinks and PCS downlinks are not novel and can be readily mitigated.”¹⁰ Because any concerns regarding interference from H Block operations in the PCS band can be effectively resolved through appropriate technical rules, the Commission should not find that H Block operations cannot be used without causing harmful interference to PCS operations. Accordingly, pursuant to the Spectrum Act, the Commission must auction H Block licenses, and must ensure that AWS-4 operations do not reduce the viability of the H Block.

The Telecommunications Industry Association (“TIA”) also proposes that the Commission allocate the H Block downlink frequencies as a guard band. According to TIA, this would “help mitigate interference that is introduced by placing the PCS G Block Base Station transmitter at 1990-1995 MHz, adjacent to the ATC Base Station receiver at 2000-2020.”¹¹ In other words, TIA proposes to use the H Block downlink band to protect PCS operations from harmful interference *caused by AWS-4 uplink transmissions*, not from H Block downlink operations. The Commission cannot refrain from auctioning the H Block for this reason because

⁸ Comments of Sprint Nextel at 9; *see* Comments of RCA at 12-13 (“Any concerns about harmful interference can be reasonably managed through power limitations...”).

⁹ Comments of Sprint Nextel at 9.

¹⁰ *Id.*

¹¹ Comments of TIA at 11.

the Spectrum Act only provides the Commission with this discretion if it determines that *H Block operations* would cause interference to PCS operations.¹²

Because the H Block must be auctioned, USCC also urged the Commission to create a guard band out of the lower portion of the MSS uplink band, explaining that a guard band is necessary to allow transmitters operating in the AWS-4 uplink band to sufficiently attenuate emissions below 2000 MHz without having to substantially reduce power levels.¹³ Other commenters similarly urged the Commission to create a guard band to protect future H Block operations. For instance, Sprint Nextel explained that a five megahertz guard band from 2000-2005 MHz “could mitigate potential interference with AWS H Block and PCS G Block licensees while increasing the value of the H Block and AWS-4 spectrum by minimizing potential interference concerns.”¹⁴

II. THE COMMISSION SHOULD IMPOSE WHOLESALE ACCESS AND DATA ROAMING CONDITIONS.

If the Commission adopts its proposal to grant terrestrial authority to operate in the AWS-4 bands to the current 2 GHz MSS licensee, it should impose conditions on this grant in order to ensure that other carriers, and therefore the public, have an opportunity to also benefit from the terrestrial deployment of this valuable spectrum. Specifically, USCC agrees that “the Commission should require AWS-4 licensees to make available a minimum percentage of their spectrum capacity to competitive carriers at wholesale rates.”¹⁵ In addition, the Commission “should require AWS-4 licensees to offer data roaming on commercially reasonable rates, terms,

¹² See Spectrum Act, §6401(b)(4).

¹³ See Comments of USCC at 4-5.

¹⁴ Comments of Sprint Nextel at 11; see also Comments of Motorola Mobility, Inc. at 4 (“To minimize the potential for harmful interference, the Commission should ... shift the AWS-4 uplink band up five megahertz...”).

¹⁵ Comments of RCA at 7; see Comments of New America Foundation, Public Knowledge and Consumers Union (“Public Interest Organizations”) at 9 (“[T]he Commission should condition AWS-4 licenses to require that the licensee must make up to 50 percent of its capacity in each Economic Area for open wholesale leasing by any qualified entity, or for roaming by other carriers, on a non-discriminatory basis.”).

and conditions with any competitive carrier whose network is technologically compatible.”¹⁶

USCC also agrees that any “wholesale customer likewise should be required to offer roaming on commercially reasonable rates, terms, and conditions.”¹⁷

Both of these conditions would serve the public interest because they would ensure that at least a portion of this valuable spectrum is available to competitive carriers, which will increase competition and benefit the public through increased broadband deployment and lower prices.¹⁸ However, the Commission also must take certain additional steps to prevent the public interest benefits of these conditions from being undermined. Specifically, it should require the AWS-4 licensee to obtain Commission approval prior to making more than 25% of its data traffic within any license area available to a single carrier.¹⁹ As T-Mobile pointed out, “[b]y imposing such a condition, and affording the Commission an opportunity to review the competitive implications of certain wholesale arrangements, the Commission could preserve the pro-competitive effects intended by authorizing flexible terrestrial use in the 2 GHz MSS band.”²⁰

III. ABSENT SUFFICIENT PUBLIC INTEREST CONDITIONS, THE COMMISSION SHOULD AUCTION 20 MHZ OF THE AWS-4 SPECTRUM.

In addition or as an alternative to imposing strict wholesale access and roaming obligations, USCC agrees that “the Commission can also serve the public interest by reassigning 20 MHz of the proposed AWS-4 spectrum via a competitive auction.”²¹ Particularly if the Commission does not condition the grant of terrestrial rights on non-discriminatory wholesale access and roaming obligations, this approach is necessary to “increase competition and

¹⁶ Comments at RCA at 7; *see* Comments of Public Interest Organizations at 9; Comments of National Telecommunications Cooperative Association at 3.

¹⁷ Comments of RCA at 7.

¹⁸ *See id.* 6-7 (“To ensure that the benefits of the Commission’s proposals inure to the industry and to consumers, the Commission should require AWS-4 licensees to offer wholesale and roaming to competitive carriers.”); Comments of Public Interest Organizations at 10 (“[A] non-discriminatory wholesale access condition would at least ensure that the public interest benefit of a national wholesale access provider would endure...”); *id.* at 11 (“[R]oaming is of critical importance to smaller carriers...”).

¹⁹ *See* Comments of T-Mobile USA, Inc. at 15; Comments of Public Interest Organizations at 11-12.

²⁰ Comments of T-Mobile at 15-16.

²¹ *Id.* at 17.

stimulate the wireless ecosystem, providing spectrum to those who need it most.”²² Otherwise, the Commission “could stunt the development and deployment of competitive mobile broadband services, to the detriment of U.S. consumers.”²³ Moreover, absent auctioning 20 MHz and/or imposing strict wholesale access and roaming conditions, DISH could monopolize this significant swath of spectrum, a result the Commission has previously sought to avoid.²⁴ Auctioning a portion of the AWS-4 spectrum also would ensure that the U.S. Treasury, and thus the American taxpayer, receives consideration in exchange for these valuable spectrum rights.²⁵

An auction also “would serve the public interest by preventing a single licensee from receiving a substantial windfall at the expense of other licensees that have invested billions of dollars in deploying and expanding competitive wireless broadband networks.”²⁶ At the same time, however, DISH would still receive flexible terrestrial use rights for 20 MHz of spectrum. Thus, even if DISH is forced to surrender 20 MHz of spectrum, it still would greatly benefit financially. As MetroPCS noted, “[t]he value of a nationwide terrestrial license, if granted to DISH, would, at an absolute minimum, be more than double and could be as much as ten times the value of the 2 GHz MSS band spectrum DISH acquired.”²⁷

IV. THE COMMISSION SHOULD CREATE SMALL AWS-4 LICENSE AREAS.

In order to protect competition and ensure the deployment of rural networks, the Commission should adopt small geographic license areas for AWS-4 authorizations. At a minimum, the Commission should adopt its proposal to assign AWS-4 licenses on an Economic Area (“EA”) basis,²⁸ but USCC believes that the smaller Cellular Market Area (“CMA”) basis

²² Comments of MetroPCS at 30; *see* Comments of T-Mobile at 18 (“This approach would ... ensure that at least half of the AWS-4 spectrum is acquired and used by the service provider that values it the most.”).

²³ Comments of T-Mobile at 21.

²⁴ *See id.*

²⁵ *See id.*; Comments of MetroPCS at 31; Comments of NTCH, Inc. at 7.

²⁶ Comments of T-Mobile at 18; *see* Comments of MetroPCS at 22 (“If the Commission were to implement the AWS-4 Proposal, the 40 MHz of 2 GHz spectrum would vastly increase in value, thus giving DISH an unwarranted and unprecedented windfall.”); Comments of NTCH at 7.

²⁷ Comments of MetroPCS at 30.

²⁸ *See* NPRM at ¶ 26.

would better serve the public interest. For instance, if the build-out requirements apply only to large license areas, DISH could satisfy these requirements by concentrating only on large metropolitan areas, which would withhold the potential benefits of this new spectrum allocation to rural areas, where broadband service is most needed.²⁹ Clearly, this would contravene the statutory directive for the Commission to ensure the widest possible deployment of communications services, including to rural areas.³⁰ At the same time, smaller license areas could benefit DISH, especially if the Commission adopts its proposed penalties for an AWS-4 licensee's failure to meet the build-out requirements. Specifically, the Commission proposes that, in the event an AWS-4 licensee fails to meet the final build-out requirement in a license area, its license for the entirety of that area will terminate automatically.³¹ Thus, if DISH fails to meet the build-out requirements, smaller license areas would reduce the impact of each penalty.

Smaller license areas also would help ensure the success of the public interest proposals detailed above. For instance, smaller carriers likely could not take advantage of a wholesale access requirement if the license areas are too large. Moreover, if the Commission does auction a portion of the AWS-4 spectrum, small license areas would preserve opportunities for small and regional carriers, as well as new entrants, to provide an important source of competition, variety, and diversity in rural and less densely populated areas.³² At the same time, carriers seeking to create large service areas would be free to aggregate several license areas together, so they would not be disadvantaged by the adoption of small license areas.³³

²⁹ See FCC, *Connecting America: The National Broadband Plan*, p. 22 (Mar. 2010) (“[M]ost areas without mobile broadband coverage are in rural or remote areas.”).

³⁰ See *Promoting Interoperability in the 700 MHz Commercial Spectrum*, Notice of Proposed Rulemaking, WT Docket No. 12-69, FCC 12-31, ¶ 1 (Mar. 21, 2012) (“The Communications Act directs the Commission to, among other things, promote the widest possible deployment of communications services...”).

³¹ See NPRM at ¶ 94.

³² See Comments of USCC, WT Docket No. 06-150, p. 5 (Sept. 29, 2006); Comments of NTCH at 10 (“To further foster the ability of smaller independent carriers to participate in this spectrum opportunity ... the Commission should auction the spectrum in geographic chunks no larger than EAs.”); NPRM at ¶ 26 (“EA license areas are small enough to provide spectrum access opportunities for smaller carriers.”).

³³ See NPRM at ¶ 26.

V. THE COMMISSION SHOULD CONSIDER IMPOSING PENALTIES ON DISH IF IT ATTEMPTS TO “FLIP” THE AWS-4 SPECTRUM.

Another action the Commission could take to ensure that the AWS-4 spectrum is used to increase competition would be to impose “unjust enrichment penalties on the transfer or assignment of the spectrum to either of the largest two wireless carriers.”³⁴ USCC agrees with the Public Interest Organizations that “[u]njust enrichment penalties would mitigate incentives for DISH to ‘flip’ the spectrum” to one of the largest wireless carriers, which would lead to “a much more heavily consolidated mobile broadband environment.”³⁵ The Commission could model this condition on the unjust enrichment rule developed for designated entities (“DEs”), which provides for a five-year sliding penalty schedule. Specifically, if a DE transfers its spectrum in the first two years of the license term, it must repay 100% of the value of its bidding credit. In year three, this penalty is reduced to 75% of the value of the bidding credit, in year four it becomes 50%, in year five it becomes 25%, and thereafter no penalty is imposed.³⁶

Here, because no bidding credits exist, the repayment schedule could “apply to the difference in price between the amount that DISH paid for the spectrum and the amount for which it sold the spectrum.”³⁷ USCC also agrees with RCA “that the restrictions should remain in place longer given the recent deterioration of competition in the wireless sector.”³⁸ Specifically, RCA proposes a ten-year sliding penalty schedule,³⁹ which would “align with the Commission’s proposed 10-year initial licensing period.”⁴⁰ There is good cause for this longer penalty schedule. As RCA notes, in the DE context, “there is little chance that the sale of a single license by a small company would adversely affect the nationwide competitive

³⁴ Comments of RCA at 11; *see* Comments of Public Interest Organizations at 17. This approach also would help prevent DISH from potentially receiving an unjustified windfall from the new spectrum rights the Commission proposes to grant it. *See* Comments of RCA at 11; Comments of Public Interest Organizations at 17.

³⁵ Comments of Public Interest Organizations at 18.

³⁶ *See* 47 C.F.R. §12111(d)(2).

³⁷ Comments of RCA at 12.

³⁸ *Id.* at 11.

³⁹ *See id.* at 12; *see also* Comments of Public Interest Organizations at 19 (proposing a ten-year schedule as a potential alternative to the five-year DE schedule).

⁴⁰ Comments of Public Interest Organizations at 19; *see* NPRM at ¶ 118.

landscape,” which justifies the shorter timeframe.⁴¹ “Here, however, there is substantial risk that the sale of AWS-4 licenses would affect nationwide competition, and thus the restrictions should apply for a longer period so as to prevent not only unjust enrichment, but also harm to competition on the national level.”⁴² The Commission could structure this ten-year penalty schedule as follows: in years one and two, a penalty of 100% of the profit realized; in year three, the penalty would be reduced to 80%; thereafter, the penalty would decrease by 10% each year.

VI. THE PROPOSED BUILD-OUT PENALTIES ARE OVERLY HARSH AND COULD LEAD TO PUBLIC INTEREST HARMS.

Although USCC believes penalties for a licensee’s failure to meet build-out requirements are necessary to ensure adequate spectrum utilization and rapid deployment of new wireless services, USCC agrees that the proposed penalties – including automatic termination of *all* authorizations for failure to meet the interim build-out requirement and automatic termination of all authority for individual license areas for failure to meet the final build-out requirement⁴³ – are too draconian and could harm competitive carriers and the public.⁴⁴ In addition to potentially dissuading new investment in the mobile broadband market,⁴⁵ the proposed penalties could suddenly cut off service for both retail customers and competitive carriers benefitting from the proposed wholesale access and roaming conditions.⁴⁶ In place of the proposed penalties, USCC agrees with AT&T “that a ‘keep-what-you-use’ rule should apply at the buildout deadline consistent with the practice in other commercial mobile bands. Under such a rule, if an AWS-4 licensee misses its final construction benchmark in a particular service area, it could have its

⁴¹ Comments of RCA at 12, n. 15.

⁴² *Id.*

⁴³ See NPRM at ¶ 94.

⁴⁴ See Comments of CTIA at 16-17; Comments of RCA at 6; Comments of AT&T at 13; Comments of Computer & Communications Industry Association (“CCIA”) at 8; Comments of Alcatel-Lucent at 16.

⁴⁵ See Comments of CCIA at 9.

⁴⁶ See *id.*; Comments of Alcatel-Lucent at 16 (“[T]he licensee could successfully provide broadband service to tens of thousands of customers but still fail to meet the milestones. In that situation, it would not serve the public interest to suddenly cut those customers off.”); Comments of AT&T at 13.

