

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

In the Matter of)	
)	
Service Rules for the Advanced Wireless Services)	WT Docket No. 12-357
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)	

COMMENTS OF UNITED STATES CELLULAR CORPORATION

United States Cellular Corporation (“USCC”) submits these comments in response to the Notice of Proposed Rulemaking (“NPRM”) released December 17, 2012 in the above-captioned proceeding.¹ The NPRM represents a first step in implementing the directive in the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”) to auction licenses for the H Block unless doing so would cause harmful interference to commercial mobile services in the 1930-1995 MHz band.² Licensing the H Block for flexible use, and thereby extending the Personal Communications Services (“PCS”) band by ten megahertz, would unleash much-needed additional spectrum for mobile broadband services, and thereby assist the Commission and the wireless industry in addressing the nation’s current spectrum crunch. In myriad proceedings, USCC has strongly supported Commission efforts to make additional spectrum available for wireless broadband applications. At the same time, however, as a PCS licensee, USCC continues to have some concerns regarding the potential for H Block operations to cause harmful interference in the PCS bands. USCC therefore appreciates that “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.”³

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 1995-200 MHz Bands*, Notice of Proposed Rulemaking, 27 FCC Rcd 16258 (2012).

² See Spectrum Act, Pub. L. No. 112-96, §6401 (2012).

³ NPRM, 27 FCC Rcd at 16269.

I. The H Block is Well Suited to Help Alleviate the Current Spectrum Crunch.

As the Obama Administration noted shortly after the Commission's release of the National Broadband Plan, "[f]ew technological developments hold as much potential to enhance America's economic competitiveness, create jobs, and improve the quality of our lives as wireless high-speed access to the Internet."⁴ Many consumers have recognized these substantial benefits and incorporated wireless Internet access into their daily lives. As a result, "[d]emand for wireless broadband services and the network capacity associated with those services is surging, resulting in a growing demand for spectrum to support these services."⁵ The Commission therefore must continue to pursue every reasonable opportunity, including here, to free up additional spectrum for wireless broadband services. Otherwise, "the result could be higher prices, poor service quality, an inability for the U.S. to compete effectively on an international basis, depressed demand and, ultimately, a drag on innovation."⁶

The characteristics of the H Block make it particularly well suited to increase the amount of spectrum available in the near term, while also promoting other important public interest benefits. For instance, because the H Block is the only spectrum allocated for commercial wireless services that is cleared of incumbent licensees, and thus ready for immediate licensing and deployment, wireless networks likely can be built out in this spectrum in the relatively near future.⁷ In contrast, the 600 MHz band will be heavily encumbered by broadcast operations for at least several more years. Moreover, the H Block likely can be put to use more cost-effectively

⁴ Presidential Memorandum, *Unleashing the Wireless Broadband Revolution*, 75 Fed. Reg. 38387, 38387 (2010).

⁵ *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102,16104 (2012) ("AWS-4 Order").

⁶ *Id.* at 16169-70.

⁷ 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*, Sixth Report and Order, Third Memorandum Opinion and Order, and Fifth Memorandum Opinion and Order, 19 FCC Rcd 20720, 20739 (2004) ("AWS Sixth R&O") ("[P]airing the 1915-1920 MHz and 1995-2000 MHz bands would allow for the rapid introduction of terrestrial wireless services.").

than most newly-auctioned spectrum because licensees could use it as a PCS extension band.⁸ PCS licensees, including USCC and other regional carriers, could build upon their existing infrastructure and incorporate the H Block into their current operations, which would improve network capacity and enable them to quickly and efficiently offer new and expanded services, including in rural areas.⁹ In addition, existing PCS equipment can be utilized for H Block deployment,¹⁰ which would result in cost savings to the industry and consumers.

Licensing the H Block also could spur competition because it would “increase the deployment options available to new licensees.”¹¹ This potential to promote competition from new entrants, as well as small and regional PCS licensees expanding their service areas and network capacities, is particularly important given the current lack of competition in the wireless industry.¹² Increased competition spurs investment and innovation¹³ and prevents carriers from exercising market power to the detriment of consumers.¹⁴ Finally, auctioning the H Block would “further Congress’s objectives related to the use of public safety broadband spectrum in the 700 MHz band” because “[t]he Spectrum Act directs that the proceeds from the auction of licenses in the H Block ... be used to fund FirstNet.”¹⁵ This funding could be quite significant, considering that “[o]ne analyst projected that the value of the paired H block would be \$2-3 billion...”¹⁶

⁸ See NPRM, 27 FCC Rcd at 16260, n. 3 (“The H Block is adjacent to PCS and therefore viewed by some as a PCS extension band.”); *AWS-4 Order*, 27 FCC Rcd at 16135 (“[E]xtensions of existing bands can typically be put to use more cost-effectively than new bands.”).

⁹ See *AWS Sixth R&O*, 19 FCC Rcd at 20739 (finding that H Block licensees “would benefit from the design of high power PCS equipment in the adjacent Broadband PCS bands, which in turn would promote the rapid design and deployment of new systems and result in economies of scale.”).

¹⁰ See Comments of Sprint Nextel Corp., WT Docket No. 12-70, p. 4 (May 17, 2012) (“Even though new devices and transmitting elements might be required, that equipment could be based on existing PCS designs...”).

¹¹ *AWS Sixth R&O*, 19 FCC Rcd at 20739.

¹² See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fifteenth Report, 26 FCC Rcd 9664, 9679 (2011) (“*Fifteenth Competition Report*”) (noting that, from 2003 to mid-2010, the average Herfindahl-Hirschman Index (“HHI”) for the wireless market increased from 2151 to 2848, and that a market with an HHI greater than 2500 is classified as “highly concentrated”).

¹³ See *id.* at 9820 (“Ensuring that sufficient spectrum is available for incumbent licensees, as well as for entities that need spectrum to enter the market, is critical for promoting competition, investment, and innovation.”).

¹⁴ See *id.* at 9690 (highly concentrated markets “raise concerns that firms may be able to exercise market power”).

¹⁵ *AWS-4 Order*, 27 FCC Rcd at 16132.

¹⁶ *Id.* at 16129.

II. The Commission Must Ensure H Block Operations Would Not Cause Harmful Interference to the Adjacent PCS Bands.

Given the substantial public interest benefits detailed above, USCC supports auctioning the H Block *provided that* the adjacent PCS bands are adequately protected from harmful interference. USCC and other commenters have previously noted that H Block operations have the potential to interfere with PCS systems. However, in past proceedings, including in response to last year's AWS-4 NPRM, various parties have proffered potential solutions to these interference concerns. In addition, since the Commission last sought comment on these issues, wireless broadband technologies and the wireless industry have evolved. USCC believes that these technological advancements, when combined with appropriate technical rules (*e.g.*, lower power limits for the Lower H Block), could remedy the potential for H Block operations to cause harmful interference in the PCS bands. At this time, however, USCC declines to offer comment on specific technical proposals. Instead, USCC plans to closely examine the technical analyses that will be filed in this proceeding and then reach a fully-informed conclusion regarding the technical issues in this proceeding. USCC 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, even if some studies and discussions are delayed until after the reply comment deadline. It is imperative for the Commission to proceed cautiously where the consequences of a premature decision could have unintended adverse consequences for PCS licensees and their customers.

III. The H Block Should Be Licensed Using Small Geographic License Areas.

In order to protect competition and ensure the deployment of rural networks, the Commission should adopt small geographic license areas for the H Block. At a minimum, the Commission should adopt its proposal to license the H Block on an Economic Area ("EA") basis, but USCC believes that the smaller Cellular Market Area ("CMA") basis would better serve the public interest. For instance, build-out requirements that apply only to large service

areas can be satisfied by concentrating only on urban centers,¹⁷ which would withhold the potential benefits of this new spectrum allocation from rural areas, where the digital divide is most evident and wired broadband is often unavailable or available only at slower speeds. Clearly, this would contravene the statutory directive for the Commission to ensure the widest possible deployment of communications services, including to rural areas.¹⁸

Small license areas also are necessary to 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.¹⁹ Small and regional carriers often cannot purchase licenses for areas larger than CMAs because larger areas encompass large and dense populations, and therefore sell at a premium.²⁰ In contrast, licensing the H Block on a CMA basis would provide these carriers, who often focus their deployment efforts on small and rural markets, with the opportunity to become H Block licensees, which would “foster service to rural areas ... and thereby bring the benefits of advanced services to these areas.”²¹ CMA-based licensing also would better align with the existing operating footprints of small and regional carriers,²² enabling them to quickly and efficiently improve capacity and offer new services.

In addition, small license areas provide a desirable and efficient scale that fits within the business plans of carriers who compete on a regional or local basis.²³ Similarly, large carriers also would benefit from the use of CMAs because they too often desire more targeted spectrum

¹⁷ See *id.* at 16122 (“[L]icensing smaller geographic blocks averts the phenomenon of huge tracts of licensed territory being left unserved.”).

¹⁸ See 47 U.S.C. §§309(j)(3)(A) and (4)(B).

¹⁹ See *Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)*, Report and Order, 17 FCC Rcd 1022, 1061 (2002) (“*Lower 700 MHz Order*”) (“Licensing a portion of the Lower 700 MHz Band over [CMAs] balances the playing field such that small and rural providers will have an opportunity to participate in the auction and the provision of spectrum-based services.”).

²⁰ See *Service Rules for Advanced Wireless Service in the 1.7 GHz and 2.1 GHz Bands*, Report and Order, 18 FCC Rcd 25162, 25177 (2003) (“*AWS-1 Order*”) (“MSAs and RSAs permit entities who are only interested in serving rural areas to acquire spectrum licenses for these areas alone and avoid acquiring spectrum licenses with high population densities that make purchase of license rights too expensive for these types of entities.”).

²¹ *Id.*

²² See *Lower 700 MHz Order*, 17 FCC Rcd at 1061 (“MSAs and RSAs represent known area sizes to many business entities, especially small regional and rural providers.”).

²³ See *id.* (“[CMAs] can be the focus of smaller carriers that do not wish to bid on or provide service to larger regions.”).

acquisitions. For instance, large carriers could acquire spectrum in urban areas without having to also acquire rural areas they do not intend to serve.²⁴ At the same time, carriers seeking to create large service areas would be free to aggregate several service areas together, so they would not be disadvantaged by small license areas.²⁵ The benefits of smaller licenses therefore would greatly outweigh any potential diseconomies of scale.²⁶ CMAs also would more closely align with the Commission's previous proposal to license the H Block on a Basic Trading Area basis.²⁷

For many of these same reasons, USCC strongly opposes licensing the H Block on a nationwide basis. Because small and regional carriers lack the financial resources to compete for nationwide licenses, this approach would skew the H Block auction in favor of the few national carriers, who historically have not given priority to small and rural markets.²⁸ Nationwide licensing therefore would be inconsistent with the Commission's obligations to "avoid[] excessive concentration of licenses," to promote "economic opportunity for a wide variety of applicants," and to "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."²⁹

IV. The Commission Must Not Impose Unduly Stringent Build-Out Requirements or Draconian Penalties.

Although the Commission must take certain steps to ensure adequate spectrum utilization and rapid deployment of new services, overly stringent performance requirements are unjustified

²⁴ See *AWS-1 Order*, 18 FCC Rcd at 25176-77 ("[L]ocal service areas will be optimal for incumbent operators who may need spectrum capacity only in limited areas."); *Service Rules for Advanced Wireless Service in the 1.7 GHz and 2.1 GHz Bands*, Order on Reconsideration, 20 FCC Rcd 14058, 14066 (2005) ("[W]ith respect to larger carriers, the ... aggregation at auction of smaller spectrum licenses and blocks may provide bidders with greater flexibility to implement their business plans as compared with a more traditional approach of defining an optimal size.").

²⁵ See NPRM, 27 FCC Rcd at 16267-68 ("EAs are small enough to provide spectrum access opportunities for smaller carriers but also may be aggregated up to larger license areas to achieve economies of scale.").

²⁶ See *id.* at 16268.

²⁷ See *Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands*, Further Notice of Proposed Rulemaking, WT Docket No. 04-356, FCC 08-158, ¶ 4 (June 20, 2008) ("*2008 H Block NPRM*").

²⁸ See, e.g., *Fifteenth Competition Report*, 26 FCC Rcd at 9839.

²⁹ 47 U.S.C. §§309(3)(B), (4)(C)(ii) and (4)(D).

by market realities and contrary to sound economic principles. Their effect is to discourage new investment, limit service to the public, force suboptimal deployments, and diminish auction participation. They also weigh most heavily on new entrants and small and regional carriers because these licensees do not have extensive, if any, existing networks that can serve as a foundation to facilitate meeting these requirements. Smaller carriers also are more likely to serve rural areas, which do not offer the same economies of scope and scale as urban markets. For these reasons, overly stringent performance requirements would further decrease competition to the already dominant national carriers and materially diminish investment and innovation.

With this in mind, USCC generally supports the Commission's proposed build-out requirements for the H Block – *i.e.*, forty percent population coverage within four years and seventy percent coverage within ten years.³⁰ However, USCC believes that a thirty-five percent interim benchmark would be more appropriate, and would mirror the build-out requirements proposed by the Commission in 2008,³¹ which USCC supported at that time.³² A thirty-five percent interim benchmark also would be consistent with the Commission's treatment of EA- and CMA-based licenses in the 700 MHz band.³³ In addition, a less stringent interim benchmark, even if only by this minimal amount, would help further the Commission's long-held preference of providing licensees sufficient flexibility in how they deploy their networks,³⁴ a goal that has even led the Commission to refrain from imposing an interim benchmark in the past.³⁵ USCC also believes that a less stringent interim benchmark is necessary so that small and regional carriers, as well as new entrants, are not disproportionately burdened. As noted, these

³⁰ See NPRM, 27 FCC Rcd at 16288.

³¹ See 2008 H Block NPRM, FCC 08-158, ¶ 4.

³² See Comments of United States Cellular Corp., WT Docket Nos. 07-195 & 04-356 (July 24, 2008).

³³ See 47 C.F.R. §27.14(g).

³⁴ See, *e.g.*, *Amendments of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 14165, 14283 (2004) (“We believe that establishing more flexible rules will result in ubiquitous, high-quality service to the public and at the same time encourage investment by increasing the value of licenses.”).

³⁵ See, *e.g.*, *AWS-1 Order*, 18 FCC Rcd at 25192 (“[I]n keeping with our desire to provide flexibility to licensees to implement their business plans, we will not adopt interim performance requirements.”).

carriers may have little or no existing infrastructure in a particular service area, and therefore are more susceptible to delays in tower siting, permitting, and other local approvals that must be secured before they can begin network deployment.

USCC agrees with the Commission's proposal to reduce the term of an H Block license by two years where a licensee fails to meet the interim build-out requirement, but strongly opposes the Commission's proposal that a failure to meet the final build-out requirement would result in automatic license termination for the entirety of the license area.³⁶ Although penalties are needed for build-out requirements to serve their purpose, the proposed penalty would be excessively punitive, and could unnecessarily harm both licensees and the public. Particularly for small and regional carriers, network deployment is a massive financial and logistical undertaking which involves numerous variables – *e.g.*, equipment delays and tower siting issues – that can unexpectedly derail even the most well-intentioned construction plans. A licensee could spend considerable resources constructing a network and providing service to tens of thousands of customers and still fail to meet the final build-out requirement, which would strand its good faith investments and cause its customers to suddenly lose service. The excessive risk created by such a penalty likely also would depress auction participation and auction revenues because the value of each H Block license would decrease and because potential bidders would find it far more difficult, or at least far more costly, to obtain the necessary financing.³⁷

Instead of automatic license termination, USCC believes that a “keep-what-you-use” penalty for a failure to meet the final build-out requirement would be far more equitable for both H Block licensees and their customers. It would provide sufficient incentive for H Block licensees to meet their performance requirements, but would not risk leaving consumers without

³⁶ See NPRM, 27 FCC Rcd at 16289.

³⁷ Although the Commission has previously justified this draconian penalty by noting its authority to grant extensions where a failure to comply with construction requirements is due to causes beyond a licensee's control, see *Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band*, Order on Reconsideration, 27 FCC Rcd 13651, 13705 (2012), this uncertain possibility fails to provide an adequate basis for carriers, or the financial community, to rely upon.

services that they may have been relying on for years. It also would treat H Block licensees consistently with wireless operators in other commercial mobile bands.³⁸

V. The Commission Should Establish a Ten-Year License Term, Avoid Additional License Renewal Standards, and Provide a Renewal Expectancy to Licensees That Meet Their Build-Out Obligations.

USCC supports the Commission’s proposal to establish a ten-year license term for the H Block, which would be consistent with the terms for most wireless radio services licenses.³⁹

USCC does not, however, support the Commission’s proposal “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 [the] *Wireless Radio Services Renewal NPRM*.”⁴⁰ As USCC has detailed in prior comments,⁴¹ these renewal standards would be profoundly ill-advised and contrary to the public interest. They would generate enormous and unnecessary new paperwork burdens for affected licensees and create investment-killing uncertainty concerning the security of all wireless licenses, as there would be no certainty that a license would be renewed even if the licensee had met all applicable performance requirements and otherwise complied with the Commission’s rules.

Based on these same considerations, USCC believes the Commission should “award[] 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,” and that “H Block licensees should obtain a renewal expectancy for subsequent license terms if they continue to provide at least [that] level of service ... through the end of any subsequent license terms.”⁴²

The cost of spectrum acquisition is only the starting point with respect to financing broadband

³⁸ See, e.g., 47 C.F.R. §§22.947, 22.949, 27.14(h)(1)-(2).

³⁹ See NPRM, 27 FCC Rcd at 16287.

⁴⁰ *Id.* at 16290.

⁴¹ See Comments of United States Cellular Corp., WT Docket No. 10-112 (Aug. 6, 2010); Reply Comments of United States Cellular Corp., WT Docket No. 10-112 (Aug. 23, 2010); Comments of United States Cellular Corp., Docket No. 12-268 (Jan. 25, 2013).

⁴² NPRM, 27 FCC Rcd at 16290.

