Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones	)	WT Docket No. 01-309

COMMENTS OF RURAL CELLULAR ASSOCIATION

Rural Cellular Association ("RCA"), by its attorneys, respectfully submits these comments in response to the Commission's Notice of Proposed Rule Making in WT Docket No. 06-150 which solicited comments on proposed changes to the rules governing wireless licenses in the 698-746, 747-762, and 777-792 MHz spectrum bands. *See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, FCC 06-114 (Aug. 10, 2006) ("*NPRM*"). RCA particularly recommends that the Commission reassign Block B (704-710 MHz and 734-740 MHz) in the Lower 700 MHz Band to be licensed to serve the nation's 734 Cellular Market Areas ("CMAs").[1]

INTRODUCTION

Concerned that rural carriers and other small business will effectively be denied access to highly desirable spectrum by the high auction prices of 700 MHz Band Economic Area Groupings

[1] RCA is an association representing the interests of more than 90 small and rural wireless licensees providing commercial services to subscribers throughout the nation. Its member companies provide service in more than 135 rural and small metropolitan markets where approximately 14.6 million people reside. RCA's wireless carriers operate in rural markets and in a few small metropolitan areas. No member has as many as 1 million customers, and the vast majority of RCA's members serve fewer than 500,000 customers. RCA was formed in 1993 to address the distinctive issues facing wireless service providers. The ability to gain

("700 MHz EAGs") licenses, RCA urged the Commission to revisit the 700 MHz Band plans with an eye towards designating smaller service areas for geographic licensing.[2] In particular, RCA suggested that the Commission make additional 700 MHz Band licenses available to serve CMAs in order to ensure that rural wireless operators and other small businesses have a reasonable opportunity to acquire 700 MHz spectrum.[3] RCA appreciates that the Commission found merit to its suggestion, s*ee NPRM*, at 15 (¶ 22), and called for comment on the issue it raised. *See id*., at 17 (¶ 26).

RCA welcomes the opportunity to submit these comments supporting its primary recommendation that Block B in the Lower 700 MHz Band be reassigned to the 734 CMAs, consistent with the Commission's wireless spectrum policy of promoting "access to spectrum … for entities seeking to serve rural areas or improve service to rural areas." *Rural Wireless Order*, 19 FCC Rcd at 19080. RCA turns first to the propagation characteristics of the 700 MHz Band that make it the best spectrum to deliver advanced wireless services to rural America.[4]

DISCUSSION

I. It Is Well Recognized That the Propagation Characteristics of the 700 MHz Band Would Lower Construction Costs in Rural Areas

---

reasonable access to auctioned spectrum in the 700 MHz Band presents one such issue.

[2] *See* Petition to Institute Review and Modification of the Size of Service Areas for Geographic Licensing for the Lower and Upper Bands of 700 MHz Spectrum Not Yet Auctioned, GN Docket No. 01-74, at 3-4 (filed July 29, 2005).

[3] *See id*., at 4-5. The Commission established "a baseline definition of 'rural area' as those counties (or equivalent) with a population density of 100 persons per square mile or less." *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, 19 FCC Rcd 19078, 19087 (2004) ("*Rural Wireless Order*").

[4] *See* Comments of RVW, Inc., GN Docket No. 01-74, at 2 (filed Oct. 4, 2005) ("RVW Comments").

The Commission asked for "specific examples demonstrating that 700 MHz band spectrum has unique spectral advantages that would help to lower costs of construction in rural or high-cost areas." *NPRM*, at 18-19 (¶ 30). RCA submits that no such examples are necessary. The Commission agrees with RCA that "the propagation characteristics of the Lower 700 MHz band are ideal for two-way mobile communications." *Reallocation and Service Rules for the 698-746 MHz Spectrum Band (TV Channels 52-59)*, 17 FCC Rcd 1022, 1027 (2002). And it has already concluded that "the 700 MHz band provides superior propagation characteristics (reduced signal loss through buildings, vegetation and other obstructions) and allows use of lower cost technology than higher bands." *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, 15 FCC Rcd 20845, 20878 (2000) ("*Lower 700 MHz Order*"). Most recently, the Commission had the following to say about the suitability of 700 MHz band spectrum for rapid deployment of advanced wireless services in rural areas:

> The 700 MHz spectrum being recovered in the transition possesses propagation characteristics that are well suited for the provision of a variety of services, including broadband services. The propagation characteristics of this spectrum are also well suited for the provision of services in rural and underserved areas and could dramatically speed the deployment of advanced wireless services to these areas. Accordingly, the recovered spectrum is a valuable resource promising numerous public benefits, and thus should be put to its intended new uses as soon as possible.[5]

What was true in 2002 remains true. The "narrowband and wideband communications provided by the 700 MHz band" are well suited for "longer-range communications over larger service areas." *The 4.9 GHz Band Transferred from Federal Government Use*, 17 FCC Rcd 3955, 3968 (2002). Indeed, it has been reported that the typical 700 MHz Band system can serve five to

[5] *Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules*, FCC 06-133, at 22 (Sept. 8, 2006).

ten miles or more "with some signal penetration through foliage."[6] Seeing that 700 MHz Band equipment can serve a larger area, rural carriers licensed to operate in that band will need to invest in, and deploy, "fewer base stations and less associated infrastructure" to serve high-cost areas. *Rural Wireless Order*, 19 FCC Rcd at 19081.

II. Statutory and Commission Spectrum Allocation Policies Favor the Assignment of a Block of 700 MHz Band Spectrum to Serve CMAs

Congress directed the Commission to design competitive bidding systems to promote, *inter alia*, (1) the "development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas," and (2) "economic opportunity and competition and ensuring that new innovative technologies are readily available to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses [and] rural telephone companies." 47 U.S.C. § 309(j)(3)(A), (B). Following those congressional directives, the Commission has designated various sizes of geographic service areas in order to encourage participation in spectrum auctions, facilitate deployment of wireless services, and disseminate licenses for a broad array of uses. *See Rural Wireless Order*, 19 FCC Rcd at 19090. The Commission expressed its commitment that, when it determined the size of service areas on a service-by-service basis, it would consider "using smaller service areas in some spectrum blocks in order to encourage deployment in rural areas for the service in question." *Rural Wireless Order*, 19 FCC Rcd at 19080.

Under its wireless spectrum policy, the Commission employs a "combination approach" to geographic licensing under which band plans include "a combination of licenses to be assigned over

[6] RVW Comments, at 2.

small and large regional areas." *NPRM*, at 10 (¶ 15), 22 (¶ 40). Needless to say, the Commission took the combination approach when designing the current Lower 700 MHz Band plan.[7] It did so again when it adopted service rules for Advanced Wireless Services ("AWS").[8]

For AWS, the Commission included a combination of large regional licensing areas, smaller regional licensing plans, and CMAs in its band plan for AWS in order to achieve the congressional goals, including the goal of fostering service to rural areas. *See AWS Service Rules*, 36 Communications Reg. (P&F) at 651, 655. Apparently recognizing that small businesses and rural carriers lack the capital to acquire large regional licenses,[9] the Commission designated a 20 MHz block of spectrum to the 734 CMAs in large part to "encourage small and rural carrier participation in the AWS auction." *Id*. at 655. The Commission should do much the same here by redesignating a 12 MHz block of Lower 700 MHz Band spectrum (preferably Block B) for the CMAs.

The recently concluded AWS auction (Auction No. 66) demonstrates the obvious reason why CMA licenses must be offered if small businesses and rural carriers are to participate in the auction of wireless licenses for the unauctioned 30 MHz spectrum in the Lower 700 MHz Band. In Auction 66, the winning prices for the six 20 MHz Regional Economic Area Grouping ("REAG") licenses for the continental United States ranged from $274,995,000 (REAG 4) to $1,335,374,000 (REAG 1).[10] By comparison, the winning bids for 20 MHz CMA licenses were between $7,200 (Wyoming 5

[7] *See Lower 700 MHz Order*, 17 FCC Rcd at 1059.

[8] *See Service Rules for AWS in the 1.7 GHz and 2.1 GHz Bands*, 18 FCC Rcd 25162 (2003), *reconsideration granted in part*, 36 Communications Reg. (P&F) 648 (2005) ("*AWS Service Rules*").

[9] Like most rural wireless carriers, RCA's members generally lack access to capital markets and must depend on internal financial resources and debt financing. Nevertheless, they are forced to compete in spectrum auctions against large carriers which can raise virtually any sum necessary to acquire auctioned licenses.

[10] *See Auction of AWS Licenses Closes*, DA 06-1882, Attach. A, at 54-56 (Sept. 20, 2006).

- Converse) and $396,232,000 (New York - Newark, NY-NJ).[11] The following table compares the total winning bids for the 20 MHz CMA, Economic Area ("EA"), and REAG licenses offered in the AWS auction.[12]

Block	A	B	F
Service Area	CMAs	EAs	REAGs
Number of Licenses	734	176	12
Total Winning Bids	$2,247,017,899	$2,437,132,750	$4,174,486,000
Cost per Pop	$7.95	$8.67	$14.63
Cost per MHzPop	$0.40	$0.43	$0.73

By any measure, the licenses for the CMAs proved to be more affordable than the REAG licenses in the AWS auction. The availability of 734 comparatively, more affordable CMA licenses undoubtedly helped attract rural carriers and other small businesses to the AWS auction. By RCA's count, 70 of the 94 winning bidders, including 16 that are RCA members or their affiliates,[13] were rural carriers or small businesses.

The need for additional 700 MHz Band spectrum to serve CMAs, or any other smaller sized service area, is really not at issue. One way or another, an additional 30 MHz of spectrum in the

---

[11] *See Auction of AWS Licenses Closes*, DA 06-1882, Attach. A, at 17, 54.

[12] The term "MHzPop" means the total number of MHz of spectrum times the total population to be served by the AWS licenses.

[13] Pine Cellular Phones, Inc., Union Telephone Company, 18th Street Spectrum, LLC, Agri-Valley Communication, Carolina West Wireless, Inc., CCTN Bidding Consortium, Cellular South Licenses, Central Texas Telephone Investments, Chariton Valley Communications, Churchill County Telephone dba CC Communications, Cross Telephone Company, Farmers Communications Cooperative, Grand River Communications, La Ward Cellular Telephone Company, NSIGHTTEL Wireless Inc., and Plateau Telecommunications Inc. are RCA members or affiliates of RCA members.

Lower 700 MHz Band will be auctioned for use throughout the United States, obviously including all the CMAs. The issue is whether the licenses for the additional 30 MHz of spectrum to serve every CMA will be held either by three 700 MHz EAG licensees or by a combination of a CMA licensee and two 700 MHz EAG licensees.

RCA submits that the Commission should once again take the combination approach to the unauctioned Lower 700 MHz Band spectrum since that approach closely follows the wireless spectrum policies set forth by Congress in 47 U.S.C. § 309(j)(3) and by the Commission in its *Rural Wireless Order*. By reassigning the Block B spectrum to the CMAs, the Commission will encourage small and rural carrier participation in spectrum auctions, facilitate deployment of wireless services in rural areas, and avoid excessive concentration of licenses.

The Commission should keep in mind the fact that large wireless carriers, such as Cellco Partnership d/b/a Verizon Wireless, Cingular AWS LLC, and T-Mobile License LLC, have recently demonstrated their ability to buy a combination of large regional area licenses and CMA licenses.[14] Small businesses and rural carriers, like RCA's members, have demonstrated no such ability.[15] Hence, large carriers can acquire both 700 MHz EAG licenses and regional clusters of CMA licenses in a Lower 700 MHz Band auction. Small businesses seeking to serve rural areas, and rural carriers seeking to deploy advanced wireless services, will gain access to Lower 700 MHz Band spectrum only if the Commission auctions licenses for CMAs as well as 700 MHz EAGs. It seems clear that there will be a further concentration of licenses in the hands of the largest wireless carriers

---

[14] *See Auction of AWS Licenses Closes*, DA 06-1882, Attach. A, at 17-56.

[15] *See id*.

unless the Commission redesignates Lower 700 MHz Band spectrum for the CMAs.

RCA does not have a specific proposal for revising the size of the geographic service areas for the unauctioned spectrum in the Upper 700 MHz Band.[16] If a revision is deemed necessary, RCA would prefer that the Commission redesignate Upper 700 MHz Band Block C or Block D to serve the 176 EAs.[17] But RCA feels strongly that the imperative is the redesignation of the Lower 700 MHz Band spectrum in Block B to serve the CMAs.

III. Geography-Based Build-Out Requirements Should Be Imposed on All 700 MHz Band Licenses to Be Auctioned

The superior propagation characteristics of 700 MHz Band spectrum make it a uniquely valuable resource and a likely target for "stockpiling or warehousing." 47 U.S.C. § 309(j)(4)(B). To fulfill its statutory obligations to combat warehousing and ensure the prompt delivery of service to rural areas, *see id*., the Commission must abandon its current toothless "substantial service" standard of 47 C.F.R. § 27.14(a) in favor of more enforceable performance requirements for the remaining unauctioned portions of the 700 MHz Band. RCA suggests that the Commission adopt construction benchmarks based on geography, not population, as the performance requirements for all spectrum bands to be auctioned in the 700 MHz Band. *See generally Rural Wireless Order*, 19 FCC Rcd at 19123 (adopting geography-based construction benchmark as a safe harbor for providing wireless service to rural areas). In particular, RCA suggests that all 700 MHz Band licenses acquired at auction be subject to the following requirements during the initial ten-year license term:

[16] RCA is currently reviewing a proposal that would license the Upper 700 MHz Band for public safety and commercial purposes.

[17] Surprisingly, the 10 Mhz EA licenses attracted higher bids in the AWS auction than the 20 MHz EA licenses. The 10 Mhz Block C and Block D licenses were auctioned for $0.51 and $0.59 per MHzPop, respectively, as opposed to $0.43 per MHzPop for the 20 MHz Block B licenses. Assuming the AWS auction of EA licenses was not an anomaly, RCA would prefer that the 20 MHz of Upper 700 MHz Band spectrum in

(1) By the three-year anniversary of license grant, the licensee must cover at least 25% of the license area;[18]

(2) By the five-year anniversary of license grant, the licensee must cover at least 50% of the license area;

(3) By the eight-year anniversary of license grant, the licensee must cover at least 75% of the license area; and

(4) At the end of the ten-year license term, the licensee must submit a map and supporting data to the Commission depicting the areas where reliable service is provided.[19] All unserved area rights would be forfeited by the licensee and the Commission would auction licenses for the unserved areas.

RCA submits that the foregoing performance requirements will be particularly effective to prevent a practice known as "rural creamskimming" in the world of universal service. In the Commission's view, rural creamskimming occurs when wireless "competitors seek to serve only the low-cost, high revenue customers in a rural telephone company's study area." *E.g., Virginia Cellular, LLC*, 19 FCC Rcd 1563, 1578 (2004). Even where the wireless carrier does not deliberately attempt to serve "the lowest cost portions of a rural study area," and serves them only because they are the only portions of the study area the carrier is licensed to serve, the Commission can still find the wireless carrier guilty of "de facto creamskimming." *Cellular South License, Inc.*, 17 FCC Rcd 24393, 24404 (WCB 2002).

In the context of the 700 MHz Band, a form of de facto creamskimming can occur when a 700 MHz EAG licensee naturally constructs its facilities to serve first the "lowest-cost, highest-density" portions of its huge, regional service area. *Virginia Cellular*, 19 FCC Rcd at 1579. The

---

Block D be redesignated for the 176 EAs solely on the basis of affordability.

[18] If construction occurs but is less than sufficient to meet the interim coverage requirement, the licensee could surrender its rights to serve counties in the market to meet the applicable benchmark and retain its license for the counties it did not surrender.

large carrier that holds a 700 MHz EAG license may not set out to serve only the many high-revenue metropolitan areas in its region. But left to its own devices, the licensee will build-out its system to serve its low-cost, high-density urban areas and will never extend its services to reach its high-cost, low-density rural areas. However, the licensee will not be left to its own devices if the Commission adopts the construction requirements suggested by RCA. The 700 MHz EAG licensee will either deploy its wireless service in its rural areas or forfeit its licensed right to do so.

Respectfully submitted,

/s/ Russell D. Lukas

Russell D. Lukas
David L. Nace

Attorneys for
Rural Cellular Association

LUKAS, NACE, GUTIERREZ & SACHS, CHARTERED
1650 Tysons Boulevard, Suite 1500
McLean, Virginia 22102
(703) 584-8678

September 29, 2006

[19] RCA suggests that the Commission initiate a further rulemaking to define reliable service for 700 MHz Band systems. Reliable service should be defined with respect to both downlink and uplink transmissions.