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Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: http://www.fcc.gov
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AUCTION OF BROADBAND RADIO SERVICE (BRS) LICENSES SCHEDULED FOR OCTOBER 27, 2009

COMMENT SOUGHT ON COMPETITIVE BIDDING PROCEDURES FOR AUCTION 86

AU Docket No. 09-56

Comments Due: May 15, 2009 Reply Comments Due: May 29, 2009

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I. INTRODUCTION

1. By this Public Notice, the Wireless Telecommunications Bureau ("Bureau") announces an auction of licenses for unassigned Broadband Radio Service ("BRS") spectrum to commence on October 27, 2009. This auction, which is designated Auction 86, will include 78 licenses within the 2496-2690 MHz band.

II. LICENSES TO BE OFFERED IN AUCTION 86

2. The Commission previously made available for licensing all spectrum allocated to the Multipoint Distribution Services ("MDS") and Multichannel Multipoint Distribution Service ("MMDS"), the predecessor services to BRS. Specifically, in Auction 6, which was completed in 1996, the Commission conducted competitive bidding for 493 Basic Trading Areas ("BTAs")[1] licenses to provide access to all BRS spectrum nationwide that was not assigned to pre-existing MDS or MMDS site-based licenses.[2]

3. The licenses to be offered in Auction 86 consist of the available spectrum in 78 BRS service areas. BRS service areas are BTAs or additional service areas similar to BTAs adopted by the Commission.[3] Overlay licenses for 75 of the BTAs originally offered in Auction 6 are available now as a result of default, cancellation, or termination. Underlying, pre-existing incumbent BRS licenses within these geographic areas remain intact.[4] In the *BRS/EBS 4th MO&O*, the Commission amended its rules to establish Gulf of Mexico Service Areas for BRS. This auction will, therefore, also include three additional licenses for BTAs in the Gulf of Mexico.[5] A complete list of licenses available for Auction 86 is included as Attachment A of this Public Notice.

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[1] BTAs are material copyright © 1992 Rand McNally & Company. Rights granted pursuant to a license from Rand McNally & Company ("Rand McNally") through an agreement with the Federal Communications Commission. Rand McNally's BTA specification contains 487 geographic areas covering the 50 states and the District of Columbia. *See* Rand McNally, *1992 Commercial Atlas and Marketing Guide*, 123rd Edition, at 38-39 (1992). *See also* 47 C.F.R. § 27.1208.

[2] Such licenses are commonly referred to as geographic "overlay" licenses. *See* Amendment 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, *Fourth Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 03-66, 23 FCC Rcd 5992, 6002 n. 38 (2008) ("*BRS/EBS 4th MO&O & 2nd FNPRM*").

[3] The Commission established additional BRS service areas in places where Rand McNally has not defined BTAs: American Samoa; Guam; Gulf of Mexico Zone A; Gulf of Mexico Zone B; Gulf of Mexico Zone C; Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayaguez/Aguadilla-Ponce, PR, service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincón, Sabana Grande, Salinas, San German, Santa Isabel, Villalba and Yauco. The San Juan service area consists of all other municipios in Puerto Rico. 47 C.F.R. § 27.1208.

[4] One license in BTA396, which is available in Auction 86, had been cancelled/terminated after being partitioned.

[5] The boundaries of Gulf of Mexico Zone A are from an area twelve nautical miles from the shoreline at mean high tide on the north and east, to the limit of the Outer Continental Shelf to the south, and to longitude 91°00' to the west. The boundaries of Gulf of Mexico Zone B are from an area twelve nautical miles from the shoreline at mean high tide on the north, to the limit of the Outer Continental Shelf to the south, to longitude 91°00' to the east, and to longitude 94°00' to the west. The boundaries of Gulf of Mexico Zone C are from an area twelve nautical miles from the shoreline at mean high tide on the north and west, to longitude 94°00' to the east, and to a line 281 kilometers from the reference point at Linares, N.L., Mexico on the southwest. *See* 47 C.F.R. § 27.1208. *See also, BRS/EBS 4th MO&O & 2nd FNPRM*, WT Docket No. 03-66, 23 FCC Rcd 5992, 6040 ¶ 127.

4. Where unencumbered, the licenses to be auctioned consist of 76.5 megahertz of spectrum at 2496-2502, 2602-2614, 2614-2615, 2616-2618, and 2618-2673.5 MHz. We note that the licenses issued pursuant to this auction will be issued pursuant to the post-transition band plan contained in Section 27.5(i)(2) of the Commission's Rules.[6] A table showing the channelization of this spectrum is included as Attachment B of this Public Notice.

5. ***Incumbency Issues.*** There are pre-existing BRS incumbent licenses. The service area for each of those incumbent licenses is a 35-mile circle centered at the station's reference coordinates, and is bounded by the chord(s) drawn between the intersection points of the licensee's previous protected service area and those of respective adjacent market, co-channel licensees.[7] Any licenses granted pursuant to this auction will not include the geographic service areas of any overlapping, co-channel incumbent licenses.[8] If an incumbent license cancels or is forfeited, however, the right to operate within that area shall revert to the overlay licensee that holds the license for the BRS service area that encompasses that BTA.[9] BRS incumbent licenses are entitled to interference protection in accordance with the applicable technical rules.[10]

6. In addition, on the E and F channel groups, grandfathered Educational Broadband Service ("EBS") licenses originally issued on those channels prior to 1983 may continue to operate indefinitely.[11] Such grandfathered EBS licenses must be protected in accordance with the applicable technical rules.[12]

7. Operations within the 2614-2618 MHz band are secondary to adjacent channel operations.[13]

8. Finally, in the 2496-2500 MHz band, BRS licensees must share the band on a co-primary basis with the Code Division Multiple Access ("CDMA") Mobile Satellite Service ("MSS"),[14] grandfathered Broadcast Auxiliary Service ("BAS") stations,[15] and grandfathered land mobile and microwave licenses licensed under Parts 90 and 101 of the Commission's rules, respectively.[16] In

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[6] *See* 47 C.F.R. § 27.5(i)(2).

[7] *See* 47 C.F.R. § 27.1206(a)(1).

[8] *See* 47 C.F.R. § 27.1206(a)(2).

[9] *See* 47 C.F.R. § 27.1206(b).

[10] *See* 47 C.F.R. §§ 27.50(h), 27.53(m), 27.55(a)(4), 27.1221.

[11] *See* Amendment 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; Part 1 of the Commission's Rules - Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico; WT Docket Nos. 03-66, 03-67, 02-68, MM Docket No. 97-217, *Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order*, 21 FCC Rcd 5606, 5749-5751 ¶¶ 347-354 (2006); 47 C.F.R. § 27.1216 (*BRS/EBS 3rd MO&O* or *Big LEO Spectrum Sharing Reconsideration Order*, as appropriate).

[12] *See* 47 C.F.R. §§ 27.50(h), 27.53(m), 27.55(a)(4), 27.1221.

[13] *See* 47 C.F.R. § 27.1222.

[14] *See Big LEO Spectrum Sharing Reconsideration Order*, 21 FCC Rcd at 5623-5627 ¶¶ 29-34. CDMA MSS licensees are not entitled to interference protection from fixed and mobile services operating in the 2495-2500 MHz band. *Id.* at 5623 ¶ 29.

[15] *See id.* at 5628-5630 ¶¶ 38-42.

[16] *See id.* at 5631-4632 ¶¶ 44-47.

addition, the 2400-2500 MHz band is allocated for use by Industrial, Scientific, and Medical equipment under Part 18 of the Commission's rules.[17]

III. BUREAU SEEKS COMMENT ON AUCTION PROCEDURES

9. Section 309(j)(3) of the Communications Act of 1934, as amended, requires the Commission to "ensure that, in the scheduling of any competitive bidding under this subsection, an adequate period is allowed . . . before issuance of bidding rules, to permit notice and comment on proposed auction procedures . . . ."[18] Consistent with the provisions of Section 309(j)(3) and to ensure that potential bidders have adequate time to familiarize themselves with the specific rules that will govern the day-to-day conduct of an auction, the Commission directed the Bureau, under its existing delegated authority, to seek comment on a variety of auction-specific procedures prior to the start of each auction.[19] We therefore seek comment on the following issues relating to Auction 86.

A. Auction Structure

1. Simultaneous Multiple-Round Auction Design

10. We propose to auction all licenses included in Auction 86 using the Commission's standard simultaneous multiple-round ("SMR") auction format. As described further below, this type of auction offers every license for bid at the same time and consists of successive bidding rounds in which eligible bidders may place bids on individual licenses. Typically, bidding remains open on all licenses until bidding stops on every license. We seek comment on this proposal.

2. Anonymous Bidding

11. The Bureau proposes to conduct Auction 86 using certain procedures for limited information disclosure or "anonymous bidding." Specifically, the Bureau proposes to withhold, until after the close of bidding, public release of (1) bidders' license selections on their short-form applications (FCC Form 175), (2) the amounts of bidders' upfront payments and bidding eligibility, and (3) information that may reveal the identities of bidders placing bids and taking other bidding-related actions.[20]

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[17] *See* 47 C.F.R. § 18.301.

[18] 47 U.S.C. § 309(j)(3)(E)(i).

[19] *See* Amendment of Part 1 of the Commission's Rules — Competitive Bidding Procedures, Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, WT Docket No. 97-82, ET Docket No. 94-32, *Third Report and Order and Second Further Notice of Proposed Rule Making*, FCC 97-413, 13 FCC Rcd 374, 448 ¶¶ 124-25 (1997) ("*Part 1 Third Report and Order*") (directing the Bureau to seek comment on specific mechanisms related to day-to-day auction conduct including, for example, the structure of bidding rounds and stages, establishment of minimum opening bids or reserve prices, minimum acceptable bids, initial maximum eligibility for each bidder, activity requirements for each stage of the auction, activity rule waivers, criteria for determining reductions in eligibility, information regarding bid withdrawal and bid removal, stopping rules, and information relating to auction delay, suspension or cancellation). *See also* 47 C.F.R. § 0.131; Amendment of Part 1 of the Commission's Rules — Competitive Bidding Proceeding, WT Docket No. 97-82, *Order, Memorandum Opinion and Order, and Notice of Proposed Rule Making*, FCC 97-60, 12 FCC Rcd 5686, 5697-98 ¶ 16 (1997) ("*Part 1 Order*").

[20] *See* "Auction of AWS-1 and Broadband PCS Licenses Rescheduled for August 13, 2008; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 78," *Public Notice*, DA 08-1090, 23 FCC Rcd 7496, 7535-38 ¶¶ 155-166 (2008) (*"Auction 78 Procedures Public Notice"*); "Auction of 700 MHz Band Licenses Scheduled for January 24, 2008; Notice and Filing Requirements, Minimum Opening Bids, Reserve Prices, Upfront Payments, and Other Procedures for Auctions 73 and 76," *Public Notice*, DA 07-4171, 22 FCC Rcd 18,141, 18,181-85 ¶¶ 145-156 (2007) (*"Auction 73 Procedures Public Notice"*). *See also* "Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66," *Public Notice*, FCC 06-47, 21 FCC Rcd 4562, 4600-05 ¶¶ 140-157 (2006) (*"Auction 66 Procedures Public Notice"*).

12. Under these proposed limited information procedures, the amount of every bid placed and whether a bid was withdrawn would be disclosed after the close of every round, but the identities of bidders placing specific bids or withdrawals and the net bid amounts would not be disclosed until after the close of the auction.

13. Bidders will have access to additional information about their own bids. For example, bidders will be able to view their own level of eligibility, before and during the auction, through the Commission's Integrated Spectrum Auction System ("ISAS" or "FCC Auction System").

14. Moreover, for the purpose of complying with section 1.2105(c), the Commission's rule prohibiting certain communications between applicants (sometimes referred to as the "anti-collusion rule"), applicants will be made aware of other applicants with which they will not be permitted to cooperate, collaborate, or communicate, including discussing bids or bidding strategies.[21] Specifically, the Bureau will notify separately each applicant with a short-form application for participation in a pending auction, including but not limited to Auction 86, whether applicants in Auction 86 have applied for licenses in any of the same or overlapping geographic area as that applicant.

15. After the close of bidding, bidders' license selections, upfront payment amounts, bidding eligibility, bids, and other bidding-related actions will be made publicly available.

16. We seek comment on the details regarding our proposal for implementation of anonymous bidding in Auction 86, and on alternative proposals for anonymous bidding or other information disclosure procedures.

3. Bidding Rounds

17. Auction 86 will consist of sequential bidding rounds. The initial bidding schedule will be announced in a public notice to be released at least one week before the start of the auction.

18. The Commission will conduct Auction 86 over the Internet, and telephonic bidding will be available as well. The toll-free telephone number for the Auction Bidder Line will be provided to qualified bidders.

19. The Bureau proposes to retain the discretion to change the bidding schedule in order to foster an auction pace that reasonably balances speed with the bidders' need to study round results and adjust their bidding strategies. Under this proposal, the Bureau may change the amount of time for bidding rounds, the amount of time between rounds, or the number of rounds per day, depending upon bidding activity and other factors. The Bureau seeks comment on this proposal. Commenters may wish to address the role of the bidding schedule in managing the pace of the auction and the tradeoffs in managing auction pace by bidding schedule changes, by changing the activity requirements or bid amount parameters, or by using other means.

4. Stopping Rule

20. The Bureau has discretion "to establish stopping rules before or during multiple round auctions in order to terminate the auction within a reasonable time."[22] For Auction 86, the Bureau proposes to employ a simultaneous stopping rule approach. A simultaneous stopping rule means that all licenses remain available for bidding until bidding closes simultaneously on all licenses. More specifically, bidding will close simultaneously on all licenses after the first round in which no bidder submits any new bids, applies a proactive waiver, or withdraws any provisionally winning bids.[23] Thus,

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[21] *See* 47 C.F.R. § 1.2105(c).

[22] 47 C.F.R. § 1.2104(e).

[23] Proactive waivers are described in Section III.B.3. "Activity Rule Waivers and Reducing Eligibility," provisionally winning bids are defined in Section III.B.6. "Provisionally Winning Bids," and bid withdrawals are described in Section III.B.8. "Bid Withdrawal," below.

unless the Bureau announces alternative stopping procedures, bidding will remain open on all licenses until bidding stops on every license. Consequently, it is not possible to determine in advance how long the auction will last.

21. Further, the Bureau proposes to retain the discretion to exercise any of the following options during Auction 86:

a) Use a modified version of the simultaneous stopping rule. The modified stopping rule would close the auction for all licenses after the first round in which no bidder applies a waiver, withdraws a provisionally winning bid, or places any new bids on any license for which it is not the provisionally winning bidder. Thus, absent any other bidding activity, a bidder placing a new bid on a license for which it is the provisionally winning bidder would not keep the auction open under this modified stopping rule.

b) Declare that the auction will end after a specified number of additional rounds ("special stopping rule"). If the Bureau invokes this special stopping rule, it will accept bids in the specified final round(s) after which the auction will close.

c) Keep the auction open even if no bidder submits any new bids, applies a waiver, or withdraws any provisionally winning bids. In this event, the effect will be the same as if a bidder had applied a waiver. The activity rule, therefore, will apply as usual and a bidder with insufficient activity will either lose bidding eligibility or use a waiver.

22. The Bureau proposes to exercise these options only in certain circumstances, for example, where the auction is proceeding unusually slowly or quickly, there is minimal overall bidding activity, or it appears likely that the auction will not close within a reasonable period of time or will close prematurely. Before exercising certain of these options, the Bureau is likely to attempt to change the pace of the auction by, for example, changing the number of bidding rounds per day and/or changing minimum acceptable bids. The Bureau proposes to retain the discretion to exercise any of these options with or without prior announcement during the auction. We seek comment on these proposals.

5. Information Relating to Auction Delay, Suspension, or Cancellation

23. For Auction 86, the Bureau proposes that, by public notice or by announcement during the auction, the Bureau may delay, suspend, or cancel the auction in the event of natural disaster, technical obstacle, administrative or weather necessity, evidence of an auction security breach or unlawful bidding activity, or for any other reason that affects the fair and efficient conduct of competitive bidding.[24] In such cases, the Bureau, in its sole discretion, may elect to resume the auction starting from the beginning of the current round, resume the auction starting from some previous round, or cancel the auction in its entirety. Network interruption may cause the Bureau to delay or suspend the auction. The Bureau emphasizes that exercise of this authority is solely within the discretion of the Bureau, and its use is not intended to be a substitute for situations in which bidders may wish to apply their activity rule waivers. The Bureau seeks comment on this proposal.

B. Auction Procedures

1. Upfront Payments and Bidding Eligibility

24. The Bureau has delegated authority and discretion to determine an appropriate upfront payment for each license being auctioned.[25] A bidder's upfront payment is a refundable deposit to

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[24] 47 C.F.R. § 1.2104(i).

[25] *See Part 1 Order,* 12 FCC Rcd at 5697-98 ¶ 16. *See also Part 1 Third Report and Order,* 13 FCC Rcd at 425 ¶ 86; Implementation of Section 309(j) of the Communications Act–Competitive Bidding, PP Docket No. 93-253, (continued....)

establish eligibility to bid on licenses. Upfront payments related to the licenses for specific spectrum subject to auction protect against frivolous or insincere bidding and provide the Commission with a source of funds from which to collect payments owed at the close of the auction.[26] With these guidelines in mind, the Bureau proposes to calculate upfront payments on a license-by-license basis using a formula based on bandwidth and license area population:[27]

$0.01 * MHz * BTA population with a minimum of $20,000 per license.[28]

25. The Bureau further proposes that the amount of the upfront payment submitted by a bidder will determine the bidder's initial bidding eligibility in bidding units. The Bureau proposes that each license be assigned a specific number of bidding units equal to the upfront payment listed in Attachment A, on a bidding unit per dollar basis.[29] The number of bidding units for a given license is fixed and does not change during the auction as prices rise. A bidder's upfront payment is not attributed to specific licenses. Rather, a bidder may place bids on any combination of licenses it selected on its short-form application (FCC Form 175) as long as the total number of bidding units associated with those licenses does not exceed its current eligibility.

26. Eligibility cannot be increased during the auction; it can only remain the same or decrease. Thus, in calculating its upfront payment amount and hence its initial bidding eligibility, an applicant must determine the maximum number of bidding units it may wish to bid on (or hold provisionally winning bids on) in any single round, and submit an upfront payment amount covering that total number of bidding units. Provisionally winning bids are bids that would become final winning bids if the auction were to close in that given round.[30]

27. The proposed number of bidding units for each license and associated upfront payment amounts are listed in Attachment A. The Bureau seeks comment on these proposals.

2. Activity Rule

28. In order to ensure that the auction closes within a reasonable period of time, an activity rule requires bidders to bid actively throughout the auction, rather than wait until late in the auction before participating. A bidder's activity in a round will be the sum of the bidding units associated with any licenses upon which it places bids during the current round and the bidding units associated with any licenses for which it holds provisionally winning bids. Bidders are required to be active on a specific percentage of their current bidding eligibility during each round of the auction. Failure to maintain the requisite activity level will result in the use of an activity rule waiver, if any remain, or a reduction in the

(Continued from previous page)
Second Report and Order, FCC 94-61, 9 FCC Rcd 2348, 2378-79 ¶¶ 171-75 (1994) ("*Competitive Bidding Second Report and Order*").

[26] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2378-79 ¶¶ 171-76.

[27] All population figures are from the 2000 U.S. Census, U.S. Department of Commerce, Bureau of the Census. *See* Census 2000 Summary File 1 (SF1) and July 3, 2001, News Releases covering the U.S. Virgin Islands, Guam, the Northern Mariana Islands, and American Samoa.

[28] Results are rounded using our standard rounding procedure: results above $10,000 are rounded to the nearest $1,000; results below $10,000 but above $1,000 are rounded to the nearest $100; and results below $1,000 are rounded to the nearest $10.

[29] "Former Defaulters" — *i.e.*, applicants, including any of their affiliates, any of their controlling interests, or any of the affiliates of their controlling interests, that in the past have defaulted on any Commission licenses or been delinquent on any non-tax debt owed to any Federal agency, but that have since remedied all such defaults and cured all of their outstanding non-tax delinquencies — are required to pay upfront payments that are fifty percent more than the normal upfront payment amounts. 47 C.F.R. § 1.2106(a).

[30] *See* Section III.B. 6. "Provisionally Winning Bids," below.

bidder's eligibility, possibly curtailing or eliminating the bidder's ability to place additional bids in the auction.[31]

29. The Bureau proposes to divide the auction into at least two stages, each characterized by a different activity requirement.[32] The auction will start in Stage One. The Bureau proposes to advance the auction to the next stage by announcement during the auction. In exercising this discretion, the Bureau will consider a variety of measures of auction activity, including but not limited to the percentage of licenses (as measured in bidding units) on which there are new bids,[33] the number of new bids, and the increase in revenue. The Bureau seeks comment on these proposals.

30. The Bureau proposes the following activity requirements, while noting again that the Bureau retains the discretion to change stages unilaterally by announcement during the auction:

Stage One: In each round of the first stage of the auction, a bidder desiring to maintain its current bidding eligibility is required to be active on licenses representing at least 90 percent of its current bidding eligibility. Failure to maintain the required activity level will result in the use of an activity rule waiver or a reduction in the bidder's bidding eligibility for the next round of bidding. During Stage One, a bidder's reduced eligibility for the next round will be calculated by multiplying the bidder's current round activity by ten-ninths (10/9).

Stage Two: In each round of the second stage, a bidder desiring to maintain its current bidding eligibility is required to be active on 98 percent of its current bidding eligibility. Failure to maintain the required activity level will result in the use of an activity rule waiver or a reduction in the bidder's bidding eligibility for the next round of bidding. During Stage Two, a bidder's reduced eligibility for the next round will be calculated by multiplying the bidder's current round activity by fifty-fortyninths (50/49).

31. Under this proposal, the Bureau will retain the discretion to change the activity requirements during the auction. For example, the Bureau could decide to add an additional stage with a higher activity requirement, not to transition to Stage Two if it believes the auction is progressing satisfactorily under the Stage One activity requirement, or to transition to Stage Two with an activity requirement that is higher or lower than the 98 percent proposed herein.[34] If the Bureau exercises this discretion, it will alert bidders by announcement in the FCC Auction System.

3. Activity Rule Waivers and Reducing Eligibility

32. Use of an activity rule waiver preserves the bidder's eligibility despite the bidder's activity in the current round being below the required minimum level. An activity rule waiver applies to an entire round of bidding, not to particular licenses. Activity rule waivers can be either proactive or automatic and are principally a mechanism for bidders to avoid the loss of bidding eligibility in the event that exigent circumstances prevent them from bidding in a particular round.

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[31] *See* Section III B.3. "Activity Rule Waivers and Reducing Eligibility," below.

[32] *See* 47 C.F.R. § 1.2104 (g).

[33] For example, when monitoring activity for determining when to change stages, the Bureau may consider the percentage of bidding units of the licenses receiving new provisionally winning bids, excluding any FCC-held licenses. In past auctions, the Bureau has generally changed stages when this measure was approximately twenty percent or below for three consecutive rounds of bidding.

[34] If the Bureau implements stages with activity requirements other than the ones listed above, a bidder's reduced eligibility for the next round will be calculated by multiplying the bidder's current round activity by the reciprocal of the activity requirement. For example, with a 95 percent activity requirement, the bidder's current round activity would be multiplied by 20/19; with a 100 percent activity requirement, the bidder's current round activity would become its bidding eligibility (current round activity would be multiplied by 1/1).

33. The FCC Auction System assumes that a bidder not meeting the activity requirement would prefer to apply an activity rule waiver (if available) rather than lose bidding eligibility. Therefore, the system will automatically apply a waiver at the end of any bidding round in which a bidder's activity level is below the minimum required unless: (1) the bidder has no activity rule waivers remaining; or (2) the bidder overrides the automatic application of a waiver by reducing eligibility, thereby meeting the activity requirement. If a bidder has no waivers remaining and does not satisfy the required activity level, its eligibility will be permanently reduced, possibly curtailing or eliminating the bidder's ability to place additional bids in the auction.

34. A bidder with insufficient activity may wish to reduce its bidding eligibility rather than use an activity rule waiver. If so, the bidder must affirmatively override the automatic waiver mechanism during the bidding round by using the "reduce eligibility" function in the FCC Auction System. In this case, the bidder's eligibility is permanently reduced to bring the bidder into compliance with the activity rule as described above. Reducing eligibility is an irreversible action. Once eligibility has been reduced, a bidder will not be permitted to regain its lost bidding eligibility, even if the round has not yet closed.

35. Under the proposed simultaneous stopping rule, a bidder may apply an activity rule waiver proactively as a means to keep the auction open without placing a bid. If a bidder proactively applies an activity rule waiver (using the "apply waiver" function in the FCC Auction System) during a bidding round in which no bids are placed or withdrawn, the auction will remain open and the bidder's eligibility will be preserved. An automatic waiver applied by the FCC Auction System in a round in which there are no new bids, withdrawals, or proactive waivers will not keep the auction open. A bidder cannot apply a proactive waiver after bidding in a round, and applying a proactive waiver will preclude a bidder from placing any bids in that round.[35] Applying a waiver is irreversible; once a proactive waiver is submitted, that waiver cannot be unsubmitted, even if the round has not yet closed.

36. Consistent with recent auctions of wireless spectrum, the Bureau proposes that each bidder in Auction 86 be provided with three activity rule waivers that may be used as set forth above at the bidder's discretion during the course of the auction. The Bureau seeks comment on this proposal.

4. Reserve Price or Minimum Opening Bids

37. Section 309(j) calls upon the Commission to prescribe methods for establishing a reasonable reserve price or a minimum opening bid amount when FCC licenses are subject to auction, unless the Commission determines that a reserve price or minimum opening bid amount is not in the public interest.[36] Consistent with this mandate, the Commission has directed the Bureau to seek comment on the use of a minimum opening bid amount and/or reserve price prior to the start of each auction.[37]

38. Normally, a reserve price is an absolute minimum price below which an item will not be sold. Reserve prices can be either published or unpublished. A minimum opening bid, on the other hand, is the minimum bid price set at the beginning of the auction below which no bids are accepted. It is generally used to accelerate the competitive bidding process. Also, the auctioneer often has the discretion to lower the minimum opening bid amount later in the auction. It is also possible for the minimum opening bid and the reserve price to be the same amount.

39. In light of Section 309(j)'s requirements, the Bureau proposes to establish minimum opening bid amounts for Auction 86. The Bureau believes a minimum opening bid amount, which has been used

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[35] In general, once a bidder places a proactive waiver during a round, the FCC Auction System does not allow the bidder to take any other bidding-related action, including placing or withdrawing bids later in that round.

[36] 47 U.S.C. 309(j)(4)F). *See also* 47 C.F.R. 1.2104(c) and (d).

[37] *Part 1 Third Report and Order*, 13 FCC Rcd at 454-55 ¶ 141. *See also* 47 C.F.R. § 1.2104(c).

in other auctions, is an effective bidding tool for accelerating the competitive bidding process.[38] The Bureau does not propose a separate reserve price for the licenses to be offered in Auction 86.

40. Specifically, for Auction 86, the Bureau proposes to calculate minimum opening bid amounts on a license-by-license basis using a formula based on bandwidth and license area population as follows:

$0.01 * MHz * BTA population with a minimum of $20,000 per license[39]

This proposed minimum opening bid amount for each license available in Auction 86 is set forth in Attachment A of this public notice. The Bureau seeks comment on this proposal. If commenters believe that these minimum opening bid amounts will result in unsold licenses, or are not reasonable amounts, or should instead operate as a reserve price, they should explain why this is so, and comment on the desirability of an alternative approach. Commenters are advised to support their claims with valuation analyses and suggested reserve prices or minimum opening bid amount levels or formulas. In establishing minimum opening bid amounts, we particularly seek comment on such factors as the amount of spectrum being auctioned, levels of incumbency, the availability of technology to provide service, the size of the service areas, issues of interference with other spectrum bands and any other relevant factors that could reasonably have an impact on valuation of the licenses being auctioned. We note that we have not attempted to adjust minimum opening bid amounts for licenses based on precise levels of incumbency within particular geographic areas, and have instead proposed a formula that is more easily administered, and which is intended to reflect overall incumbency levels within the BRS service areas being offered. Because minimum opening bids are intended to be starting points for bids, not estimates of final bid amounts, we do not believe that using this general formula will adversely affect the dynamics of the auction. The Bureau seeks comment on this approach, and, whether, consistent with Section 309(j), the public interest would be served by having no minimum opening bid amount or reserve price.

5. Bid Amounts

41. The Bureau proposes that, in each round, eligible bidders be able to place a bid on a given license using one or more pre-defined bid amounts.[40] Under this proposal, the FCC Auction System interface will list the acceptable bid amounts for each license.[41]

a. Minimum Acceptable Bids

42. The first of the acceptable bid amounts is called the minimum acceptable bid amount. The minimum acceptable bid amount for a license will be equal to its minimum opening bid amount until there is a provisionally winning bid on the license. After there is a provisionally winning bid for a license, the minimum acceptable bid amount for that license will be equal to the amount of the provisionally winning bid plus a percentage of that bid amount calculated using the formula described below. In general, the percentage will be higher for a license receiving many bids than for a license receiving few bids. In the case of a license for which the provisionally winning bid has been withdrawn, the minimum acceptable bid amount will equal the second highest bid received for the license.[42]

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[38] *See, e.g.*, Auction of 800 MHz SMR Upper 10 MHz Band, Minimum Opening Bids or Reserve Prices, *Order*, DA97-2147, 12 FCC Rcd 16,354 (1997); Auction of the Phase II 220 MHz Service Licenses, Auction Notice and Filing Requirements for 908 Licenses Consisting of Economic Area (EA), Economic Area Grouping (EAG), and Nationwide Licenses, Scheduled for September 15, 1998, Minimum Opening Bids and Other Procedural Issues, *Public Notice*, DA 98-1010, 13 FCC Rcd 16,445 (1998).

[39] *See* note 28 (concerning rounding), above.

[40] Bidders must have sufficient eligibility to place a bid on the particular license. *See* Section III.B.1. "Upfront Payments and Bidding Eligibility," above.

[41] In the event of duplicate bid amounts due to rounding, the FCC Auction System will omit the duplicates and will list fewer acceptable bid amounts for the license.

[42] *See* Section III.B.8. "Bid Withdrawal," below.

43. The percentage of the provisionally winning bid used to establish the minimum acceptable bid amount ("the additional percentage") is calculated at the end of each round, based on an activity index. The activity index is a weighted average of (a) the number of distinct bidders placing a bid on the license, and (b) the activity index from the prior round. Specifically, the activity index is equal to a weighting factor times the number of bidders placing a bid covering the license in the most recent bidding round plus one minus the weighting factor times the activity index from the prior round.[43] The additional percentage is determined as one plus the activity index times a minimum percentage amount, with the result not to exceed a given maximum. The additional percentage is then multiplied by the provisionally winning bid amount to obtain the minimum acceptable bid for the next round. The Bureau proposes initially to set the weighting factor at 0.5, the minimum percentage at 0.1 (10%), and the maximum percentage at 0.3 (30%). Hence, at these initial settings, the minimum acceptable bid for a license will be between ten percent and thirty percent higher than the provisionally winning bid, depending upon the bidding activity for the license. Equations and examples are shown in Attachment C.

b. Additional Bid Amounts

44. Any additional bid amounts are calculated using the minimum acceptable bid amount and a bid increment percentage – more specifically, by multiplying the minimum acceptable bid by one plus successively higher multiples of the bid increment percentage. If, for example, the bid increment percentage is ten percent, the calculation of the first additional acceptable bid amount is (minimum acceptable bid amount) * (1 + 0.05), or (minimum acceptable bid amount) * 1.05; the second additional acceptable bid amount equals the minimum acceptable bid amount times one plus two times the bid increment percentage, or (minimum acceptable bid amount) * 1.1, etc. The Bureau will round the results of these calculations and the minimum acceptable bid calculations using the Bureau's standard rounding procedures.[44] The Bureau proposes to set the bid increment percentage at 0.05.

45. The Bureau seeks comment on whether to start with eight additional bid amounts (for a total of nine bid amounts) or with fewer or no additional bid amounts for Auction 86. In particular, commenters should address the issue of additional bid amounts in light of particular circumstances of Auction 86, including the nature of the license inventory. The Bureau retains the discretion to change the minimum acceptable bid amounts, the additional bid amounts, the number of acceptable bid amounts, and the parameters of the formulas used to calculate minimum acceptable bid amounts and additional bid amounts if it determines that circumstances so dictate. Further, the Bureau retains the discretion to do so on a license-by-license basis.

46. The Bureau also retains the discretion to limit (a) the amount by which a minimum acceptable bid for a license may increase compared with the corresponding provisionally winning bid, and (b) the amount by which an additional bid amount may increase compared with the immediately preceding acceptable bid amount. For example, the Bureau could set a $1 million limit on increases in minimum acceptable bid amounts over provisionally winning bids. Thus, if the activity-based formula calculates a minimum acceptable bid amount that is $2 million higher than the provisionally winning bid on a license, the minimum acceptable bid amount would instead be capped at $1 million above the provisionally winning bid. We seek comment on the circumstances under which the Bureau should employ such a limit, factors we should consider when determining the dollar amount of the limit, and the tradeoffs in setting such a limit or changing parameters of the activity-based formula, such as changing the minimum percentage. If the Bureau exercises this discretion, it will alert bidders by announcement in the FCC Auction System.

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[43] For Round 1 calculations, because there is no prior round (*i.e.*, no round 0), the activity index from the prior round is set at 0.

[44] *See* note 28 (concerning rounding), above.

47. The Bureau seeks comment on the above proposals. Commenters may wish to address the role of the minimum acceptable bids and the number of acceptable bid amounts in managing the pace of the auction and the tradeoffs in managing auction pace by bidding schedule changes, by changing the activity requirements or bid amount parameters, or by using other means.

6. Provisionally Winning Bids

48. Provisionally winning bids are bids that would become final winning bids if the auction were to close in that given round. At the end of a bidding round, a provisionally winning bid for each license will be determined based on the highest bid amount received for the license. In the event of identical high bid amounts being submitted on a license in a given round (*i.e.*, tied bids), we will use a random number generator to select a single provisionally winning bid from among the tied bids. (Each bid is assigned a random number, and the tied bid with the highest random number wins the tiebreaker.) The remaining bidders, as well as the provisionally winning bidder, can submit higher bids in subsequent rounds. However, if the auction were to end with no other bids being placed, the winning bidder would be the one that placed the provisionally winning bid. If any bids are received on the license in a subsequent round, the provisionally winning bid again will be determined by the highest bid amount received for the license.

49. A provisionally winning bid will remain the provisionally winning bid until there is a higher bid on the license at the close of a subsequent round, unless the provisionally winning bid is withdrawn. Bidders are reminded that provisionally winning bids count toward activity for purposes of the activity rule.[45]

7. Bid Removal

50. For Auction 86, the Bureau proposes and seeks comment on the following bid removal procedures. Before the close of a bidding round, a bidder has the option of removing any bid placed in that round. By removing selected bids in the FCC Auction System, a bidder may effectively "undo" any of its bids placed within that round. In contrast to the bid withdrawal provisions described below, a bidder removing a bid placed in the same round is not subject to a withdrawal payment. Once a round closes, a bidder may no longer remove a bid.

8. Bid Withdrawal

51. A bidder may withdraw its provisionally winning bids using the "withdraw bids" function in the FCC Auction System. A bidder that withdraws its provisionally winning bid(s) is subject to the bid withdrawal payment provisions of the Commission rules.[46]

52. In the *Part 1 Third Report and Order*, the Commission explained that allowing bid withdrawals facilitates efficient aggregation of licenses and the pursuit of backup strategies as information becomes available during the course of an auction.[47] The Commission noted, however, that in some instances bidders may seek to withdraw bids for improper reasons. The Bureau, therefore, has discretion in managing the auction to limit the number of withdrawals to prevent any bidding abuses. The Commission stated that the Bureau should assertively exercise its discretion, consider limiting the number of rounds in which bidders may withdraw bids, and prevent bidders from bidding on a particular market if the Bureau finds that a bidder is abusing the Commission's bid withdrawal procedures.[48]

53. For Auction 86, we propose to limit each bidder to withdrawing provisionally winning bids in only one round during the course of the auction. To permit a bidder to withdraw bids in more than one round may encourage insincere bidding or the use of withdrawals for anti-competitive purposes. The

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[45] *See* Section III.B.2. "Activity Rule," above.

[46] 47 C.F.R. §§ 1.2104(g) and 1.2109.

[47] *Part 1 Third Report and Order*, 13 FCC Rcd at 459-60 ¶ 150.

[48] *Id.*

round in which withdrawals may be used will be at the bidder's discretion, and there is no limit on the number of provisionally winning bids that may be withdrawn during that round. Withdrawals must be in accordance with the Commission's rules, including the bid withdrawal payment provisions specified in Section 1.2104(g).[49] The Bureau seeks comment on these bid withdrawal procedures. If commenters believe that each bidder should be allowed to withdraw provisionally winning bids in more than one round during the course of the auction, they should state how many bid withdrawal rounds they seek and explain what specific factors lead them to that conclusion.

C. Post-Auction Procedures

1. Establishing the Interim Withdrawal Payment Percentage

54. We seek comment on the appropriate percentage of a withdrawn bid that should be assessed as an interim withdrawal payment in the event that a final withdrawal payment cannot be determined at the close of the auction. Balancing the potential need for bidders to use withdrawals to avoid winning incomplete combinations of licenses with our interest in deterring abuses of our bidding procedures, we propose an interim bid withdrawal payment level of fifteen percent for Auction 86.

55. In general, the Commission's rules provide that a bidder that withdraws a bid during an auction is subject to a withdrawal payment equal to the difference between the amount of the withdrawn bid and the amount of the winning bid in the same or subsequent auction(s).[50] If a bid is withdrawn and no subsequent higher bid is placed and/or the license is not won in the same auction, the final withdrawal payment cannot be calculated until after the close of a subsequent auction in which a higher bid for the license (or the equivalent to the license) is placed or the license is won.[51] When that final payment cannot yet be calculated, the bidder responsible for the withdrawn bid is assessed an interim bid withdrawal payment, which will be applied toward any final bid withdrawal payment that is ultimately assessed.[52] Section 1.2104(g)(1) of the Commission rules requires that the percentage of the withdrawn bid to be assessed as an interim bid withdrawal payment be between three percent and twenty percent and that it be set in advance of the auction.[53]

56. The Commission has determined that the level of the interim withdrawal payment in a particular auction will be based on the nature of the service and the inventory of the licenses being offered.[54] The Commission has noted that it may impose a higher interim withdrawal payment percentage to deter the anti-competitive use of withdrawals when, for example, bidders likely will not need to aggregate the licenses being offered in the auction, such as when few licenses are offered that are on adjacent frequencies or in adjacent areas, or when there are few synergies to be captured by combining licenses.[55]

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[49] *See* 47 C.F.R. § 1.2104(g).

[50] *See* 47 C.F.R. § 1.2104(g)(1). The withdrawal payment amount is deducted from any upfront payments or down payments that the withdrawing bidder has deposited with the Commission. No withdrawal payment is assessed for a withdrawn bid if either the subsequent winning bid or any of the intervening subsequent withdrawn bids equals or exceeds that withdrawn bid. *Id.*

[51] *Id.*

[52] *Id.*

[53] *See id.*, as amended by Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures, WT Docket No. 05-211, *Report and Order*, FCC 06-4, 21 FCC Rcd 891, 903 ¶ 30 (2006) ("*CSEA/Part I Report and Order*").

[54] *See CSEA/Part I Report and Order*, 21 FCC Rcd at 903-04 ¶ 31.

[55] *See id.* at 904 n.57.

57. For Auction 86, it is not possible to combine licenses across multiple frequency blocks in a given geographic area, and opportunities for combining licenses in adjacent areas are somewhat limited, so there is likely to be little need to use withdrawals to protect against incomplete aggregations. Therefore, we propose to establish the percentage of the withdrawn bid to be assessed as an interim bid withdrawal payment at fifteen percent for this auction. The Bureau seeks comment on this proposal.

2. Establishing the Additional Default Payment Percentage

58. Any winning bidder that, after the close of an auction, defaults – by, for example, failing to remit the required down payment within the prescribed period of time, to submit a timely long-form application, or to make full payment – or is otherwise disqualified is liable for a default payment under Section 1.2104(g)(2) of the Commission's rules.[56] This payment consists of a deficiency payment, equal to the difference between the amount of the bidder's bid and the amount of the winning bid the next time a license covering the same spectrum is won in an auction, plus an additional payment equal to a percentage of the defaulter's bid or of the subsequent winning bid, whichever is less.

59. Under Section 1.2104(g)(2), the Commission will, in advance of each auction without combinatorial or package bidding, establish an additional default payment for that auction of three percent up to a maximum of twenty percent.[57] The level of this payment in each case will be based on the nature of the service and the inventory of the licenses being offered.[58]

60. As noted in the *CSEA/Part 1 Report and Order,* defaults weaken the integrity of the auctions process and impede the deployment of service to the public, and an additional default payment of more than the previous three percent will be more effective in deterring defaults. Given the nature of the service and the inventory of the licenses being offered in Auction 86, we believe that an additional default payment percentage of fifteen percent will provide a sufficient deterrent to defaults. Accordingly, the Bureau proposes an additional default payment of fifteen percent of the relevant bid for Auction 86 and seeks comment on this proposal.

IV. COMMENTS AND EX PARTE RULES

61. Comments are due on or before May 15, 2009, and reply comments are due on or before May 29, 2009. All filings related to the auction of these BRS licenses (Auction 86) should refer to AU Docket No. 09-56. Comments may be submitted using the Commission's Electronic Comment Filing System ("ECFS") or by filing paper copies.[59] The Bureau strongly encourages interested parties to file comments electronically, and requests submission of a copy via the Auction 86 e-mail box (auction86@fcc.gov).

62. Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS at http://www.fcc.gov/cgb/ecfs/. Filers should follow the instructions provided on the website for submitting comments. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and AU Docket No. 09-56. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

63. Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S.

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[56] 47 C.F.R. § 1.2104(g)(2).

[57] *Id.*

[58] *See CSEA/Part 1 Report and Order*, 21 FCC Rcd at 903-04 ¶¶ 30-31.

[59] *See* Electronic Filing of Documents in Rulemaking Proceedings, GC Docket No. 97-113, *Report and Order*, FCC 98-56, 13 FCC Rcd 11,322 (1998).

Postal Service mail). All filings must be addressed to the Commission's Secretary Attn: WTB/ASAD, Office of the Secretary, Federal Communications Commission, and should reference AU Docket No. 09-56.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. Eastern Time (ET). All hand deliveries must be held together with rubber bands or fasteners. Any envelopes 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.
- U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12th Street, SW, Washington DC 20554.

64. Auction 86 E-mail Box: The Bureau also requests that a copy of all comments and reply comments be submitted electronically to the following address: auction86@fcc.gov.

65. Copies of comments and reply comments will be available for public inspection between 8:00 a.m. and 4:30 p.m. ET Monday through Thursday or 8:00 a.m. to 11:30 a.m. ET on Fridays in the FCC Reference Information Center, Room CY-A257, 445 12th Street, SW, Washington, DC 20554, and will also be accessible through the search function on the ECFS web page at http://www.fcc.gov/cgb/ecfs/.

66. This proceeding has been designated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[60] Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. Other rules pertaining to oral and written *ex parte* presentations in permit-but-disclose proceedings are set forth in Section 1.1206(b) of the Commission's rules.[61]

V. CONTACTS

67. For further information concerning this proceeding, contact the Wireless Telecommunications Bureau, as listed below:

Broadband Division, Wireless Telecommunications Bureau

For BRS service rule questions: Nancy Zaczek (legal) or Stephen Zak (technical), at (202) 418-2487

Auctions and Spectrum Access Division, Wireless Telecommunications Bureau

For general auction questions: Jeff Crooks at (202) 418-0660 or Lisa Stover at (717) 338-2868
For auctions legal questions: Sayuri Rajapakse at (202) 418-0660

68. To request materials in accessible formats (Braille, large print, electronic files, audio format) for people with disabilities, send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at (202) 418-0530 or (202) 418-0432 (TTY).

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[60] 47 C.F.R. §§ 1.1200(a), 1.1206.

[61] 47 C.F.R. § 1.1206(b).

Auction 86 — Auction of Broadband Radio Service Licenses
DA 09-843, Attachment A

Item Name	Item Description	Market	Bandwidth (MHz)*	Population*	Bidding Units	Upfront Payment	Minimum Opening Bid
BR-BTA008	Albuquerque, NM	BTA008	76.5	831,850	636,000	$636,000	$636,000
BR-BTA010	Allentown-Bethlehem-Easton, PA	BTA010	76.5	740,395	566,000	$566,000	$566,000
BR-BTA023	Athens, OH	BTA023	76.5	130,742	100,000	$100,000	$100,000
BR-BTA025	Atlantic City, NJ	BTA025	76.5	354,878	271,000	$271,000	$271,000
BR-BTA033	Battle Creek, MI	BTA033	76.5	240,527	184,000	$184,000	$184,000
BR-BTA034	Beaumont-Port Arthur, TX	BTA034	76.5	467,106	357,000	$357,000	$357,000
BR-BTA035	Beckley, WV	BTA035	76.5	166,963	128,000	$128,000	$128,000
BR-BTA048	Bluefield, WV	BTA048	76 5	168,756	129,000	$129,000	$129,000
BR-BTA053	Bozeman, MT	BTA053	76.5	83,525	64,000	$64,000	$64,000
BR-BTA056	Brownsville-Harlingen, TX	BTA056	76.5	355,309	272,000	$272,000	$272,000
BR-BTA063	Burlington, VT	BTA063	76 5	406,799	311,000	$311,000	$311,000
BR-BTA070	Cedar Rapids, IA	BTA070	76.5	289,492	221,000	$221,000	$221,000
BR-BTA080	Chillicothe, OH	BTA080	76.5	101,040	77,000	$77,000	$77,000
BR-BTA082	Clarksburg-Elkins, WV	BTA082	76 5	190,767	146,000	$146,000	$146,000
BR-BTA096	Cookeville, TN	BTA096	76.5	138,089	106,000	$106,000	$106,000
BR-BTA105	Davenport, IA-Moline, IL	BTA105	76 5	429,924	329,000	$329,000	$329,000
BR-BTA113	Dickinson, ND	BTA113	76.5	35,772	27,000	$27,000	$27,000
BR-BTA121	Eagle Pass-Del Rio, TX	BTA121	76 5	117,380	90,000	$90,000	$90,000
BR-BTA124	El Centro-Calexico, CA	BTA124	76.5	142,361	109,000	$109,000	$109,000
BR-BTA132	Escanaba, MI	BTA132	76.5	47,423	36,000	$36,000	$36,000
BR-BTA137	Fairmont, WV	BTA137	76.5	56,598	43,000	$43,000	$43,000
BR-BTA139	Farmington, NM-Durango, CO	BTA139	76.5	208,285	159,000	$159,000	$159,000
BR-BTA162	Gallup, NM	BTA162	76.5	144,221	110,000	$110,000	$110,000
BR-BTA163	Garden City, KS	BTA163	76.5	73,686	56,000	$56,000	$56,000
BR-BTA168	Grand Junction,CO	BTA168	76.5	246,119	188,000	$188,000	$188,000
BR-BTA179	Hagerstown, MD-Chambersburg, PA-Martinsburg, WV	BTA179	76.5	366,345	280,000	$280,000	$280,000
BR-BTA180	Hammond, LA	BTA180	76.5	111,113	85,000	$85,000	$85,000
BR-BTA182	Harrison, AR	BTA182	76 5	92,314	71,000	$71,000	$71,000
BR-BTA183	Harrisonburg, VA	BTA183	76.5	152,235	116,000	$116,000	$116,000
BR-BTA189	Hickory-Lenoir-Morganton, NC	BTA189	76.5	341,851	262,000	$262,000	$262,000
BR-BTA190	Hilo, HI	BTA190	76.5	148,677	114,000	$114,000	$114,000
BR-BTA215	Jamestown, NY-Warren, PA-Dunkirk, NY	BTA215	76.5	183,613	140,000	$140,000	$140,000
BR-BTA218	Johnstown, PA	BTA218	76.5	232,621	178,000	$178,000	$178,000
BR-BTA244	Las Cruces, NM	BTA244	76.5	249,902	191,000	$191,000	$191,000
BR-BTA252	Lexington, KY	BTA252	76.5	927,633	710,000	$710,000	$710,000
BR-BTA254	Lihue, HI	BTA254	76.5	58,463	45,000	$45,000	$45,000
BR-BTA258	Logan, UT	BTA258	76.5	102,720	79,000	$79,000	$79,000
BR-BTA259	Logan, WV	BTA259	76.5	37,710	29,000	$29,000	$29,000
BR-BTA261	Longview, WA	BTA261	76.5	96,772	74,000	$74,000	$74,000
BR-BTA269	McComb-Brookhaven, MS	BTA269	76.5	114,119	87,000	$87,000	$87,000
BR-BTA270	McCook, NE	BTA270	76.5	33,749	26,000	$26,000	$26,000
BR-BTA287	Meadville, PA	BTA287	76.5	90,366	69,000	$69,000	$69,000
BR-BTA293	Miami-Fort Lauderdale, FL	BTA293	76 5	3,955,969	3,026,000	$3,026,000	$3,026,000
BR-BTA306	Morgantown, WV	BTA306	76 5	111,200	85,000	$85,000	$85,000
BR-BTA333	Oneonta, NY	BTA333	76 5	109,731	84,000	$84,000	$84,000
BR-BTA352	Plattsburgh, NY	BTA352	76.5	118,745	91,000	$91,000	$91,000
BR-BTA355	Poplar Bluff, MO	BTA355	76.5	154,045	118,000	$118,000	$118,000
BR-BTA370	Reading, PA	BTA370	76.5	373,638	286,000	$286,000	$286,000
BR-BTA373	Richmond, IN	BTA373	76.5	104,034	80,000	$80,000	$80,000
BR-BTA380	Rockford, IL	BTA380	76.5	456,277	349,000	$349,000	$349,000
BR-BTA388	Rutland-Bennington, VT	BTA388	76.5	100,394	77,000	$77,000	$77,000
BR-BTA396	Salina, KS	BTA396**	76 5	59,760	46,000	$46,000	$46,000

Item Name	Item Description	Market	Bandwidth (MHz)*	Popu-lation*	Bidding Units	Upfront Payment	Minimum Opening Bid
BR-BTA405	San Luis Obispo, CA	BTA405	76.5	246,681	189,000	$189,000	$189,000
BR-BTA407	Santa Fe, NM	BTA407	76.5	218,804	167,000	$167,000	$167,000
BR-BTA408	Sarasota-Bradenton, FL	BTA408	76.5	622,168	476,000	$476,000	$476,000
BR-BTA411	Scottsbluff, NE	BTA411	76.5	101,597	78,000	$78,000	$78,000
BR-BTA412	Scranton--Wilkes-Barre--Hazleton, PA	BTA412	76.5	672,498	514,000	$514,000	$514,000
BR-BTA431	Steubenville, OH-Weirton, WV	BTA431	76 5	132,008	101,000	$101,000	$101,000
BR-BTA432	Stevens Point-Marshfield-Wisconsin Rapids, WI	BTA432	76.5	214,617	164,000	$164,000	$164,000
BR-BTA435	Stroudsburg, PA	BTA435	76.5	138,687	106,000	$106,000	$106,000
BR-BTA444	Toledo, OH	BTA444	76.5	789,378	604,000	$604,000	$604,000
BR-BTA456	Victoria, TX	BTA456	76.5	165,277	126,000	$126,000	$126,000
BR-BTA462	Waterloo-Cedar Falls, IA	BTA462	76.5	266,449	204,000	$204,000	$204,000
BR-BTA463	Watertown, NY	BTA463	76.5	301,747	231,000	$231,000	$231,000
BR-BTA466	Wausau-Rhinelander, WI	BTA466	76.5	244,048	187,000	$187,000	$187,000
BR-BTA470	West Plains, MO	BTA470	76.5	77,090	59,000	$59,000	$59,000
BR-BTA471	Wheeling, WV	BTA471	76.5	211,493	162,000	$162,000	$162,000
BR-BTA474	Williamson, WV-Pikeville, KY	BTA474	76.5	175,453	134,000	$134,000	$134,000
BR-BTA476	Williston, ND	BTA476	76.5	25,498	20,000	$20,000	$20,000
BR-BTA483	York-Hanover, PA	BTA483	76 5	473,043	362,000	$362,000	$362,000
BR-BTA487	Zanesville-Cambridge, OH	BTA487	76.5	188,410	144,000	$144,000	$144,000
BR-BTA488	San Juan, PR	BTA488	76.5	2,674,278	2,046,000	$2,046,000	$2,046,000
BR-BTA490	Guam	BTA490	76.5	154,805	118,000	$118,000	$118,000
BR-BTA492	American Samoa	BTA492	76.5	57,291	44,000	$44,000	$44,000
BR-BTA493	Northern Mariana Islands	BTA493	76.5	69,221	53,000	$53,000	$53,000
BR-BTA494	Gulf of Mexico Zone A	BTA494	76.5	-	20,000	$20,000	$20,000
BR-BTA495	Gulf of Mexico Zone B	BTA495	76.5	-	20,000	$20,000	$20,000
BR-BTA496	Gulf of Mexico Zone C	BTA496	76.5	-	20,000	$20,000	$20,000
78 Licenses			76.5	23,272,544	17,862,000	$17,862,000	$17,862,000

* Bandwidth and population figures have **not** been adjusted to reflect any encumbrance. Population figures are based on the 2000 decennial census.

** The license for BTA396 does not include the entire market; it includes only Ottawa County and Saline County.

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ATTACHMENT B

Broadband Radio Service Channels per License

Channel	Band Segment	Frequeucy Bauds (MHz)*	Bandwidth (MHz)*
1	Lower	2496-2502	6.0
E1	Upper	2624-2629.5	5.5
E2	Upper	2629.5-2635	5.5
E3	Upper	2635-2640.5	5.5
E4	Middle	2608-2614	6.0
F1	Upper	2640.5-2646	5.5
F2	Upper	2646-2651.5	5.5
F3	Upper	2651.5-2657	5.5
F4	Middle	2602-2608	6.0
H1	Upper	2657-2662.5	5.5
H2	Upper	2662.5-2668	5.5
H3	Upper	2668-2673.5	5.5
KH1	Upper (Guard)	2614-2614.33333	0.33333
KH2	Upper (Guard)	2614.33333-2614.66666	0.33333
KH3	Upper (Guard)	2614.66666-2615	0.33333
KF1	Upper (Guard)	2616-2616.33333	0.33333
KF2	Upper (Guard)	2616.33333-2616.66666	0.33333
KF3	Upper (Guard)	2616.66666-2617	0.33333
KE1	Upper (Guard)	2617-2617.33333	0.33333
KE2	Upper (Guard)	2617.33333-2617.66666	0.33333
KE3	Upper (Guard)	2617.66666-2618	0.33333
2	Upper (Guard)	2618-2624	6.0
Total			76.5

* The frequency bands and bandwidth listed in the table represent that maximum amount of spectrum that may be available in a given area. Not all of this spectrum is available in all areas due to incumbent licensees in the 2496-2690 MHz band.

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ATTACHMENT C

Minimum Acceptable Bid Formula

The following formula used to calculate minimum acceptable bids is based on activity. After there is a provisionally winning bid for a license, the minimum acceptable bid amount for that license will be equal to the amount of the provisionally winning bid plus a percentage of that bid amount calculated using the formula below. In general, the percentage will be higher for a license receiving many bids than for a license receiving few bids.

$A_i = (C * B_i) + ((1-C) * A_{i-1})$

I_{i+1} = smaller of $((1 + A_i) * N)$ and M

$X_{i+1} = I_{i+1} * Y_i$

where

- A_i = activity index for the current round (round i)
- C = activity weight factor
- B_i = number of bidders submitting bids on the licenses in the current round (round i)
- A_{i-1} = activity index from previous round (round i-1), A_0 is **0**
- I_{i+1} = additional percentage for the next round (round i+1)
- N = minimum additional percentage or floor
- M = maximum additional percentage or ceiling
- X_{i+1} = additional dollar amount
- Y_i = provisionally winning bid amount from the current round

Examples

C = 0.5, N = 0.1, M = 0.3

<u>Round 1 (1 bidder submitting bids, provisionally winning bid = $1,000,000)</u>

1. Calculation of additional percentage for round 2:

$A_1 = (0.5 * 1) + (0.5 * 0) = 0.5$

I_2 = The smaller of [((1 + 0.5) * 0.1) = 0.15] and 0.3 (the maximum additional percentage)

= 0.15

2. Calculation of dollar amount associated with the additional percentage for round 2 (using I_2 from above):

X_2 = 0.15 * $1,000,000 = $150,000

3. Minimum acceptable bid amount for round 2 = $1,150,000

Round 2 (3 bidders submitting bids, provisionally winning bid = $2,000,000)

1. Calculation of additional percentage for round 3:

A_2 = (0.5 * 3) + (0.5 * 1) = 2

I_3 = The smaller of [((1 + 2) * 0.1) = 0.3] and 0.3 (the maximum additional percentage)

= 0.03

2. Calculation of dollar amount associated with the additional percentage for round 3 (using I_3 from above):

X_3 = 0.2 * $2,000,000 = $400,000

3. Minimum acceptable bid amount for round 3 = $2,400,000

Round 3 (1 bidder submitting bids, provisionally winning bid = $2,400,000)

1. Calculation of additional percentage for round 4:

A_3 = (0.5 * 1) + (0.5 * 2) = 1.5

I_4 = The smaller of [((1 + 1.5) * 0.1) = 0.25] and 0.3 (the maximum additional percentage)

= 0.25

2. Calculation of dollar amount associated with the additional percentage for round 4 (using I_4 from above):

X_4 = 0.2 * $2,400,000 = $480,000

3. Minimum acceptable bid amount for round 4 = $2,880,000