

Commission Order Adopts Rules for 37 GHz, 39 GHz, and 47 GHz mmW Spectrum Auction

December 14, 2018

On December 12, 2018, the Federal Communications Commission released its Fourth Report and Order (Fourth R&O) in its “Spectrum Frontiers” proceeding on expanding flexible use in millimeter wave (mmW) spectrum at or above 24 GHz. The Fourth R&O adopts rules to facilitate auction of the 37.6-38.6 GHz (Upper 37 GHz), 38.6-40 GHz (39 GHz), and 47.2-48.2 GHz (47 GHz) bands. The FCC expects to auction the three bands by the end of 2019.

The Fourth R&O adopts a new band plan for the Upper 37 GHz, 39 GHz, and 47 GHz bands in preparation for Upper Microwave Flexible Use Service (UMFUS) license auctions, while aiming to preserve the rights of incumbent operators in the 39 GHz band. The Upper 37 GHz and 47 GHz bands do not have commercial terrestrial wireless incumbent licensees. The Fourth R&O also adopts a voluntary, two-phase incentive auction mechanism, in which phase one (the “clock phase”) offers timed bidding on generic license blocks and phase two (the “assignment phase”) allows clock phase winners to bid on specific frequencies. The clock phase will include both a reverse auction to determine incentive payments for participating 39 GHz band incumbent licensees and a forward auction to assign new flexible use licenses. Incumbents choosing not to participate will have their existing licenses reconfigured into contiguous 100 megahertz blocks licensed by Partial Economic Area (PEA).

The FCC’s decisions in the Fourth R&O set the stage for future auctions of mmW spectrum. The FCC opened bidding in its first-ever mmW spectrum auction just last month—starting with spectrum in the 28 GHz band. The agency plans to follow the 28 GHz band auction, once complete, by auctioning spectrum in the 24 GHz band. Through

Authors

Scott D. Delacourt
Partner
202.719.7459
sdelacourt@wiley.law

Jennifer D. Hindin
Partner
202.719.4975
jhindin@wiley.law

Madeleine M. Lottenbach
Partner
202.719.4193
mlottenbach@wiley.law

Practice Areas

Telecom, Media & Technology

the 28 GHz and 24 GHz band auctions (Auction 101 and 102, respectively), the Commission will make 1,550 megahertz of spectrum available for flexible-use wireless services, including 5G. The Upper 37 GHz and 47 GHz bands each promise another 1,000 megahertz for such services and the 39 GHz band 1,400 megahertz more.

The final version of the Fourth R&O is similar to the draft. The Commission's changes focused on clarity and word choice, rather than substantive updates. The Final Rules in Appendix A remain unchanged.

Fourth Report and Order

A. Band Plan

The FCC adopts its proposal to modify the Upper 37 GHz, 39 GHz, and UMFUS portion of the 47 GHz band plans from 200 megahertz to 100 megahertz channels. The Upper 37 GHz band and 47 GHz band will each have ten channels, and the 39 GHz band fourteen. The Commission will license the spectrum by PEA. By organizing all three bands into 100 megahertz channels, the Commission hopes to facilitate the repacking of 39 GHz incumbent licenses, allow contiguous bands to function more effectively, and support simultaneous auction of all three bands. (¶ 12).

B. Preparing for an Incentive Auction

1. Modifying 39 GHz Licenses Based on Reconfigured Spectrum Usage Rights

Before the incentive auction, the Commission will offer each 39 GHz licensee the option to reconfigure its existing license to more closely conform to the new band plan and service areas. The reconfiguration will maintain the overall value of spectrum usage rights quantified in terms of MHz-PoPs (spectrum bandwidth multiplied by the covered population) for each license in each PEA. (¶ 16). An incumbent may also select an alternate reconfiguration that may more closely align with its existing operations subject to certain conditions, including that the incumbent's existing total spectrum usage rights remain unchanged. (¶ 17).

The Wireless Telecommunications Bureau (Bureau) will set the relative PEA price based on results from the broadcast television spectrum incentive auction and from the 28 GHz and 24 GHz band auctions. (¶ 20). The agency will use 2010 Census data to determine the population covered by each license. (¶ 21).

The FCC will try to optimize reconfiguration of existing spectrum usage rights by minimizing white space, thereby offering more contiguous spectrum in the incentive auction. (¶ 25). The Commission adopts a five percent de minimis standard (or up to 10 percent at the Bureau's discretion) entitling an incumbent covering nearly all the population in a PEA after reconfiguration to hold the entire license. (¶ 26).

Incumbent licensees choosing not to relinquish their rights in exchange for an incentive payment and that have a partial PEA block after reconfiguration will receive a 100 megahertz license covering a portion of the PEA. (¶ 27). The rest of the PEA will remain unassigned white space, and the Commission will remove the

entire PEA from auction inventory. (¶ 28).

2. Incumbent Options Following Reconfiguration

Following the reconfiguration process, a 39 GHz licensee may choose to:

- Have its licenses modified based on the Commission’s proposed reconfiguration;
- Have its licenses modified based on its proposed alternative reconfiguration with equal or fewer MHz-Pops and that satisfies specific conditions; or
- Agree to relinquish its licenses in exchange for an incentive payment and/or the ability to bid for new licenses. (¶ 29).

Incumbents electing to relinquish their 39 GHz band licenses will receive “vouchers” sufficient to win blocks in the auction equivalent to their existing PEA holdings. Incumbents will receive a cash incentive payment for their vouchers if they choose not to bid in the auction. And incumbents participating in the auction will receive a cash incentive payment if the value of their vouchers exceeds net auction winnings. (¶ 34). Vouchers will be valued at the final clock phase price of a generic spectrum block in the PEA. (¶ 35).

C. Incentive Auction Structure

1. Spectrum Available for New Licenses

The Commission will offer new UMFUS licenses through an incentive auction of available spectrum in the Upper 37 GHz, 39 GHz, and 47 GHz bands. If all incumbent licensees choose to participate, the agency will offer thirty-four 100 megahertz licenses in each PEA—a total 3,400 megahertz of spectrum. The FCC will remove PEAs containing incumbent licensees that choose not to participate in the auction from auction inventory. (¶ 37).

2. Eligibility

Any party that satisfies the Commission’s application requirements is eligible to participate in the auction, except for incumbent 39 GHz licensees that accept modified licenses and decline to relinquish all existing licenses. To prevent any competitive advantage, incumbent licensees wishing to participate in the auction cannot relinquish some, but not all, of their existing licenses. (¶ 38).

3. Round Zero Adjustments to Incumbent Spectrum Usage Rights—Voucher Exchange

Before round one of the incentive auction clock phase, the FCC will permit incumbent licensees participating in the auction to redistribute their initial voucher holdings subject to certain conditions. The voucher exchange is intended to address concerns that an incumbent with partial PEAs may have less certainty about the cost of obtaining full licenses in the incentive auction that cover its current partial PEA block holdings. (¶ 39).

4. Other Structural Issues

Like all other applicants, incumbents may apply for designated entity bidding credits as small businesses or rural service providers. Even so, eligible incumbents may only apply bidding credits to payments for new licenses offering spectrum rights beyond their existing aggregate spectrum usage rights before auction. (¶ 43).

The Commission adopts a net revenue requirement which, if met, will ensure that auction proceeds cover all incentive payments. The FCC will make equal incentive payments even if incumbent spectrum is not needed for new licenses in a particular PEA. (¶ 45).

D. Incentive Auction Bidding

The Commission adopts a two-phase auction procedure. In the first phase, participants will bid for generic spectrum blocks by PEA in the Upper 37 GHz, 39 GHz, and 47 GHz bands using an ascending clock auction. In the second phase, phase one winners will bid on frequency-specific licenses.

1. Auction Clock Phase

In the clock phase, the FCC will establish a uniform price for two generic bidding categories in each PEA. The first category will consist of generic blocks in the Upper 37 GHz and 39 GHz bands. These bands are adjacent and subject to identical service and interoperability rules. The second category will consist of generic blocks in the 47 GHz band. (¶¶ 54-55).

Participants will bid for generic spectrum blocks by PEA using an ascending clock auction. The rules for forward auction bidding will be much like those used in the broadcast incentive auction and in the 24 GHz band auction. Bidding will end when bidder demand in each category for generic blocks in each PEA no longer exceeds supply. (¶¶ 56-57).

2. Auction Assignment Phase

The auction assignment phase will determine the specific frequencies assigned to clock phase winners. Participation in the auction assignment phase is optional. Winning bidders may choose to submit sealed bids by PEA specifying additional amounts that they would be willing to pay for licenses on particular frequencies. All clock phase winning bidders—regardless whether they participate in the assignment phase—will receive contiguous frequencies assigned to all of their licenses in the same category in a PEA. (¶ 58).

The Commission will adopt more detailed procedures for incentive auction bidding through an upcoming Auction Comment Public Notice and Auction Procedures Public Notice. (¶¶ 57, 58).

E. Post-Auction Transition

Incumbent licensees will retain their existing licenses until the Commission assigns new licenses based on the results of the incentive auction. (¶ 59).

The FCC declines to establish a transition plan or reimbursement program for secondary operations in the 39 GHz band. (¶ 61).

Wiley Rein Law Clerk Boyd Garriott contributed to this alert.