

Next Steps for Auction of TV Broadcast Airwaves to Commercial Carriers

October 21, 2016 (IN10531)

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The closing phases of an [incentive auction](#) process to license airwaves currently used for television broadcasting began on August 16, 2016. Bidding for commercial licenses in the [first stage](#) concluded on August 30, without meeting rules and conditions established by the Federal Communications Commission (FCC). The FCC therefore scheduled a second stage to set new targets for clearing spectrum. The reverse auction of Stage 2 concluded on October 17, establishing \$54.6 billion as the amount to be met by wireless carriers in the next forward auction, beginning October 19. [Licenses](#) covering 90 MHz of spectrum were offered but the auction concluded after one round, with bids reaching \$20.95 billion. The FCC will now set new targets for Stage 3, conducting new reverse and forward auctions. Many industry observers believe that additional stages will be needed. An online [dashboard](#) established by the FCC provides status reports on auction activity.

The proceeds of the auction are expected to pay billions of dollars to broadcasters that relinquish their spectrum holdings and may alter the competitive environment for wireless broadband if new entrants acquire spectrum licenses in the auction. However, Stage 1 was closed at \$23.1 billion, well below the then clearing target of \$88 billion-plus needed to successfully conclude the broadcast incentive auction process.

Key requirements for this auction were established by Congress in Title VI (Spectrum Act) of the Middle Class Tax Relief and Job Creation Act of 2012 ([P.L. 112-96](#)). The act requires a reverse auction to determine the amount of compensation broadcasters would be willing to accept for the radio frequencies they voluntarily release for auction. Radio frequency spectrum released by TV broadcasters is to be repurposed for commercial broadband communications, with licenses sold through what the act refers to as a forward auction.

The FCC [Public Notice](#) establishing incentive auction bidding procedures was released on August 11, 2015. Auction 1000, as it is called, consists of two parts, as required by the Spectrum Act: Auction 1001 (reverse) and Auction 1002 (forward). Broadcasters participated in Auction 1001, establishing the prices they would accept for releasing spectrum. Wireless carriers and other commercial interests will participate in Auction 1002, bidding for licenses created from released spectrum. The public notice also describes the process for setting targets for clearing spectrum. The FCC developed nine separate auction scenarios based on different amounts that might be released. It developed band plans for creating licenses from relinquished broadcast spectrum for each of the hypothetical amounts that might be made

available. The band plans designate licensed and unlicensed spectrum allocations for each scenario.

The [first phase](#) of the reverse auction began on March 29, 2016, with broadcasters establishing the amount of spectrum they were willing to relinquish. At the conclusion of the reverse auction on [April 29, 2016](#), broadcasters had volunteered to make up to 126 MHz of spectrum available for commercial interests or for unlicensed use, the highest amount the FCC had considered in its planning. The amount of spectrum that might be [reassigned through licensing](#) would be 100 MHz, with the balance of available spectrum used for unlicensed use or protection from interference. The [next phase](#) of the reverse auction established the values placed by broadcasters on the spectrum holdings: over \$86 billion.

As required by the Spectrum Act, the minimum amount that must be recovered in the forward auction for spectrum licenses is: the total amount committed to paying broadcasters that are releasing spectrum; plus the costs to the FCC of the auction; plus \$1.75 billion to cover some of the costs for relocating broadcasters displaced by spectrum reallocation. At the prices set by the reverse auction that concluded in June, this would be in excess of \$88 billion for licenses totaling 100MHz.

The FCC had anticipated multiple stages for the auction, with less spectrum available and lower dollar amounts accepted by broadcasters at each stage. The [final clearing value](#) may be \$30 billion to \$40 billion with 84 MHz cleared and [70 MHz auctioned](#). The auction rules call for the FCC to repeat the auction process with modifications of the spectrum band plan until either the market clears at an equilibrium point between supply and demand, or it determined that the auction has failed. [Qualified bidders](#) include Verizon, AT&T, T-Mobile, and Comcast. Sprint, the fourth national wireless carrier, is not participating. The field of bidders may not be deep enough to create spectrum demand at the prices participating broadcasters are willing to accept.

The likelihood of the auction generating extra revenue for the federal treasury seems slight. Congressional Budget Office [predictions](#) for net auction revenue of \$25 billion or more were based on spectrum values averaging \$2.21 MHz-pop. MHz-pop is a standard measurement for market value determined by the bandwidth, in MHz, assigned to a license multiplied by the number of people in the geographic area covered by the license. An estimate in a February 2015 [report](#) commissioned by the FCC projected the MHz-pop would average \$1.50. To have met the \$88 billion in an auction, for example, a market value of at least \$2.76 MHz-pop would have been needed, according to a report in the [Wall Street Journal](#). The highest values established in the Stage 1 forward auction were \$2.00 MHz-pop in Los Angeles and \$1.89 in New York City.

Many commercial wireless licenses can be resold directly by their license-holders for comparable uses; the purpose of incentive auctions is to reward license-holders, such as television broadcasters, in repurposing their spectrum for a different use. Incentive auctions might be used for other types of license-holders that want to receive payment for returning spectrum licenses. The act specifically addresses spectrum assignments held by over-the-air television broadcasters.

See also: CRS Report R44433, [Framing Spectrum Policy: Legislative Initiatives](#), by Linda K. Moore.