

## Why GAO Did This Study

The radio-frequency spectrum enables an array of wireless communications services that are critical to the U.S. economy and national security, such as wireless broadband. In 2010, a Federal Communications Commission (FCC) task force issued the National Broadband Plan that included recommendations to reform spectrum policy. Since 1994, FCC has used competitive bidding, or auctions, to assign licenses to commercial entities for their use of spectrum; however, its authority to use auctions expires on September 30, 2012.

Among other things, GAO examined (1) the extent to which FCC has made spectrum available for new commercial uses and the time taken to do so, (2) experts' and stakeholders' views on FCC's plans and recent actions to meet future spectrum needs, and (3) experts' and stakeholders' views on the continued use of auctions to assign spectrum. To address these objectives, GAO reviewed FCC's plans, notices, and orders; reviewed six instances in which FCC made spectrum available for new commercial uses; and surveyed 30 experts and 79 industry stakeholders about their views on FCC's efforts to make spectrum available for new uses, its plans and actions to meet future needs, and its continued use of auctions (the survey had a 68 percent response rate).

## What GAO Recommends

Given the continued support of FCC's use of auctions, Congress should consider extending FCC's auction authority beyond the current expiration date of September 30, 2012. FCC provided technical comments that were incorporated as appropriate.

View [GAO-12-118](#). For more information, contact Mark Goldstein at (202) 512-2834 or [goldsteinm@gao.gov](mailto:goldsteinm@gao.gov).

## COMMERCIAL SPECTRUM

### Plans and Actions to Meet Future Needs, Including Continued Use of Auctions

## What GAO Found

Since 1994, FCC has made over 520 megahertz (a measure of quantity) of spectrum available for new uses, such as wireless broadband, through a process that can be lengthy. Because most of the usable spectrum in the United States has been allocated to existing uses, FCC must change its rules to move spectrum from an existing use to a new use, a process known as repurposing spectrum. Yet, this process can be lengthy—from 7 to 15 years for the six repurposings that GAO reviewed. Four factors contribute to the time it takes FCC to repurpose spectrum: the regulatory nature of the process, which to some extent is guided by statute; opposition of incumbent users, who could be required to vacate spectrum; coordination challenges between FCC and the National Telecommunications and Information Administration (NTIA), which oversees federal agencies' use of spectrum, on the repurposing of federal spectrum for commercial use; and concerns about interference from users of spectrum in adjacent bands of spectrum. FCC has identified voluntary approaches that it thinks could speed the process, but these approaches generally require congressional approval and face some stakeholder opposition.

Experts and stakeholders had mixed views on FCC's plans and recent actions to meet future spectrum needs. The National Broadband Plan included a set of recommendations to FCC, FCC and NTIA jointly, and Congress, aimed at meeting future spectrum needs. Some recommendations garnered broad support, including recommendations to auction certain bands of spectrum and enhance research and development. However, experts' and stakeholders' opinions diverged on other recommendations, such as reallocating a portion of spectrum from television to wireless broadband. Opinions also varied on FCC's progress in implementing the recommendations. In some instances, these conflicting opinions arose from participants' divergent positions in the industry, with, for example, incumbent licensees such as broadcasters opposing recommendations that they believe could impose burdens or costs on their businesses.

Experts and stakeholders GAO contacted strongly supported extending FCC's auction authority, but varied in their opinions on potential changes to auctions. Since 1994, FCC has used auctions to assign mutually exclusive licenses to commercial entities providing certain wireless services. GAO previously reported that auctions were effective in assigning licenses to entities that valued them the most; were quicker, less costly, and more transparent than mechanisms FCC previously used to assign licenses; and were an effective mechanism for the public to realize a portion of the value of a national resource used for commercial purposes. Experts and stakeholders responding to GAO's survey strongly supported extending FCC's auction authority—53 of 65 respondents supported extending FCC's authority. However, experts and stakeholders held varied opinions on potential changes to auctions. For example, respondents generally supported actions that would provide a clear road map detailing future auctions, which could reduce uncertainty. In contrast, a proposal to require winners of auctions to pay royalties based on their revenues rather than the full amount of their winning bids up front garnered the least support.