



Insight

The FCC C-Band Auction and the Future of 5G

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Executive Summary

- The Federal Communications Commission (FCC) recently announced plans to conduct a C-Band auction by the end of the year. This timely auction will be important for 5G and the technologies that rely on it.
- This analysis discusses how secondary market solutions provide the best option, but a timely public auction can minimize the potential costs of delays and the risks of falling behind on 5G leadership.
- This announcement, combined with the technology-related elements of the President's FY2021 Budget, indicates next generation communication technologies and the emerging technologies they support are an administration priority.

Analysis

5G and its potential applications are an exciting technology for a number of reasons, and the Federal Communications Commission (FCC) recently announced an auction for wireless spectrum that could speed the deployment of this technology. A faster auction will allow for the benefits of faster connectivity to reach consumers more quickly.

5G is exciting not just for its potential to provide faster service and more connectivity on wireless networks, but also as the potential backbone for many emerging connected technologies such as various smart home devices and autonomous vehicles. Already consumers can see benefits of this new technology, such as improving [safety and connectivity at the Super Bowl](#), and wireless companies such as AT&T and Verizon are [planning to offer 5G nationwide](#) by the end of year.

Last Friday, FCC Chairman Ajit Pai announced draft rules for a [public auction of the C-Band spectrum on December 8, 2020](#). This quick timeframe is important when it comes to this mid-band spectrum, which is [a critical piece](#) for deploying 5G. By setting an auction by the end of the year, Chairman Pai and other commissioners such as [Mike O'Rielly](#) recognize the need for smooth and quick transition that will continue innovation in next-generation communications technology.

The costs of a delay would be quite large both in lost consumer benefits as well as the potential opportunity costs. As AAF's Will Rinehart previously pointed out, a two-year delay in the C-Band auction could result in a [loss of \\$18 million in consumer surplus](#). These losses would be further exacerbated if litigation or bankruptcies caused more delays and increased costs. Waiting for Congress to act rather than allowing the FCC to go forward with the auction would also cause further delays that could drive up costs and could become another example of [congressional inaction on tech policy](#) issues. The FCC's timeline for a December 2020 auction would minimize the potential costs of delays.

But the importance of a timely C-Band auction, and the American leadership in 5G that such a step would facilitate, extend beyond these costs. There are increasing concerns about what falling behind in 5G might mean for national security, particularly regarding China. A [recent coalition letter](#) pointed out "China has already pledged to make its C-band spectrum available for their wireless systems, giving them an alarming advantage in the development of the high-tech weaponry that is going to be essential to national defense in the coming years." Given rising concerns about [Huawei and its potential security risks](#), it is perhaps even more important to ensure U.S. companies are able to provide competitive and innovative alternatives and to encourage a timely auction and smooth transition for the C-Band spectrum.

While the FCC did not choose the [private auction](#) that might have provided the most adaptive and market-based response, the recent announcement of plans for an auction in December 2020 should help avoid unnecessary losses and encourage the rapid deployment of 5G technology. Coupled with announcements in President Trump's FY2021 Budget to increase funding for both the FCC and the Department of Commerce [for modernizing spectrum management](#) (including modernizing and increasing spectrum auctions at the FCC), the announcement also indicates an administration priority on next-generation communications technologies such as 5G and the need to encourage proper incentives for the best usage.

While the C-Band auction is important to the roll out of 5G, so too is the public-policy approach to spectrum taken more generally. Given the growing number of connected devices, consumers and innovators will benefit from quicker deployment and more connectivity when currently underutilized spectrum is reallocated for more needed purposes rather than simply held by existing owners or agencies. While [secondary markets could best encourage](#) the most efficient and highest-valued allocation, ideally a public auction can take any diminishing of these incentives into consideration and attempt to redress them to achieve as similar a solution as possible.

Technology continues to move more rapidly and encouraging a market response to an otherwise scarce resource will help continue to encourage innovation and higher valued uses rather than the status quo or hoarding of resources. When it comes to 5G and the emerging technologies that will rely on it, a quick roll out will be important to U.S. leadership. A timely C-Band auction can help ensure that.