



May 6, 2025

**House Speaker Mike Johnson**  
H-232  
The Capitol  
Washington, D.C. 20515

**House Democratic Leader Hakeem Jeffries**  
The Capitol  
Washington, D.C. 20515

**House Energy and Commerce Committee  
Chairman Brett Guthrie**  
2125 Rayburn House Office Building  
Washington, D.C. 20515

**House Energy and Commerce Committee  
Ranking Member Frank Pallone**  
2322A Rayburn House Office Building  
Washington, D.C. 20515

Dear Speaker Johnson, Leader Jeffries, Chairman Guthrie, and Ranking Member Pallone:

The Digital Progress Institute (the “Institute”) respectfully asks this committee to include legislation in the upcoming budget proposal that both reauthorizes the Federal Communications Commission’s spectrum auction authority and one that includes a spectrum pipeline. The Institute is a think tank located in Washington, D.C. that seeks to advance bipartisan, incremental policies in the tech and telecom spaces. Integral to that mission are measures to ensure the U.S. remains competitive in 5G and beyond and assures the bipartisan goal of universal broadband. We believe that reauthorizing the FCC’s spectrum auction authority with a spectrum pipeline advances those core principles.

The sobering reality is that the race to 5G is just as much an arms race as it is spurring mobile innovation. China certainly sees flooding the markets with its equipment as both an economic and militaristic advantage. Chinese spies have strategically used its 5G networks to surveille citizens in countries where its state-sponsored companies, like Huawei or ZTE, have deployed systems as they did in Australia.<sup>1</sup>

But while China was starting to take over 5G circa 2012, the U.S. was asleep at the wheel. Up until 2017, we provided almost no resources toward the 5G effort. For example, we had literally zero mid-band spectrum for 5G where other countries, like China, had 300 MHz or more for its networks. Even worse, Chinese equipment found its way into our own networks.<sup>2</sup>

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<sup>1</sup> *Chinese Spies Accused of Using Huawei in Secret Australia Telecom Hack*, Bloomberg (Dec. 16, 2021), <https://www.bloomberg.com/news/articles/2021-12-16/chinese-spies-accused-of-using-huawei-in-secret-australian-telecom-hack?embedded-checkout=true>.

<sup>2</sup> *Keynote Remarks of FCC Commissioner Brendan Carr at The American Enterprise Institute*, FCC (Mar. 15, 2021), <https://www.fcc.gov/document/carr-aei-keynote-extending-americas-5g-leadership>.

In short, China was dominating in the war on 5G.

Recognizing this, Congress and the FCC quickly turned this around. First, Congress passed the MOBILE NOW Act in 2018, which, in part, created a spectrum pipeline for commercial 5G use.<sup>3</sup> The FCC, under the leadership of Ajit Pai, put the pedal to the metal and used every bit of newly authorized spectrum from the MOBILE NOW Act and every authority it could muster.

The FCC started off with a bang by launching several auctions deluging the market with spectrum for 5G services. Its efforts paid off.<sup>4</sup> At nearly the speed of 5G, the FCC opened up more than six gigahertz of spectrum for licensed 5G services. More importantly, the FCC brought more than 600 MHz of mid-band spectrum to auction to augment our 5G capacities.

Shortly thereafter, U.S. carriers started providing actual 5G commercial offerings. In fact, the very first commercial 5G service in the world launched in the U.S. in 2018. All of this happened in a few short years thanks in large part to the FCC's ability to leverage its auction authority to bring these spectrum frequencies to market expeditiously.<sup>5</sup>

The abundance of licensed spectrum in the pipeline allowed the FCC to make thousands of megahertz of unlicensed spectrum available in the 5.9 GHz and 6 GHz bands. These unlicensed frequencies are why non-traditional wireless companies, like Comcast, Charter, Amazon, and Meta, can provide comparable wireless services that compete directly with Verizon and AT&T. Better yet, the added competition has put more money in consumers' pockets by reducing the price of wireless services.<sup>6</sup>

Even with the FCC changing hands with the new administration in 2020, we were still going strong. FCC Chairwoman Jessica Rosenworcel finished up the Pai administration's strategy by auctioning off more mid-band spectrum in the 2.5 GHz band. Auctioning this mid-band spectrum made it possible for companies, like T-Mobile, to expand its Ultra Capacity 5G bandwidth allowing it to cover more rural, hard-to-reach areas and created more wireless competition in those areas.<sup>7</sup>

But, after that auction, the pipeline ran dry.

Worse, with neither FCC spectrum auction authority nor a healthy spectrum pipeline, the Trump administration will have a tough row to hoe to recreate the same success as he did in his first term.

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<sup>3</sup> S. 19—115<sup>th</sup> Congress (2017-2018).

<sup>4</sup> *America's 5G Future*, FCC (last visited May 7, 2025), <https://www.fcc.gov/5G>.

<sup>5</sup> Peter Cramton, *et al.*, *Using Spectrum Auctions to Enhance Competition in Wireless Services*, *Uni. Of Chi. J. of L. & Econ.* Vol 54 (2011), <https://cramton.umd.edu/papers2010-2014/cramton-kwerel-rosston-skrzypacz-spectrum-auctions-and-competition.pdf>.

<sup>6</sup> *More for Less: The Actual Story of the Amazing Decline in U.S. Wireless Price*, CTIA (Mar. 30, 2021), <https://www.ctia.org/news/blog-more-for-less-the-actual-story-of-the-amazing-decline-in-u-s-wireless-prices>.

<sup>7</sup> *Already Nationwide, T-Mobile Superchargers 5G Speeds for Millions More People in Over 80 New Cities & Towns*, T-Mobile (Sep. 2, 2020),

This is the absolute worst time for the Trump administration to have such a vital tool missing from his toolkit as the future of the internet is becoming increasingly more mobile. Cars, remote patient monitoring devices, and smart houses all run on some form of wireless internet. Even most consumer-facing artificial intelligence applications are run through mobile apps, such as Perplexity AI and OpenAI.

With more online applications going mobile, more data will need to travel over our wireless networks. We are already seeing AI's impact on 5G networks. The ubiquity of AI applications, such as AI-powered assistants and augmented reality platforms, "will soon drive mobile data traffic beyond the capacity of current 5G networks," according to a report by Mobile Experts.<sup>8</sup> We may start seeing capacity issues as soon as 2027, unless wireless broadband infrastructure gets a much-needed upgrade.

So, not only will a lack of auction authority and a spectrum pipeline inhibit our ability to compete with China on 5G but can also hamper our ability to compete with them on AI.

However, the budget's reconciliation process presents an opportunity to turn those tides as we did in 2017 by including a spectrum bill.

Better yet, it can even ease the burden on the taxpayer because spectrum bills not only pay for themselves but also contribute to lowering the cost of Congress' overall spending because of how much money the auctions bring to the Treasury. For instance, auctions during the first Trump administration led to \$103 billion in revenue for the United States. The 3.45 GHz spectrum auction brought in \$21.8 billion alone.<sup>9</sup> This is an astounding figure given that the 3.45 GHz auction only included 100 MHz of mid-band spectrum (equaling \$218 million per 1 MHz). Even better, it only took about 18 months (from start to finish) to clear government users within that band and get it into the hands of private carriers.

Based on the proceeds from the 3.45 GHz auction, auctioning the lower 3 GHz—a band both a bipartisan Congress and the administration has identified as a contender for 5G—could bring in \$76.3 billion to the Treasury given that it has about 350 MHz of spectrum ripe for auction.

Additionally, the Biden administration identified the 7–8 GHz bands as another contender to replenish our spectrum pipeline. Those bands have at least 125 MHz of licensable spectrum, which adds another \$27 billion in revenue.

FCC Chairman Brendan Carr has suggested bands that build on mid-band spectrum already in the market, like in the 4 GHz range.<sup>10</sup> This band will not only allow us to handle the tsunami of data transmissions we'll see from AI, autonomous vehicles, remote surgeries, and beyond, but

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<sup>8</sup> Julia King, *AI Is Increasing 5G Traffic. Sings Point Toward 6G As the Answer*, Fierce Network (Sep. 6, 2024), <https://www.fierce-network.com/cloud/ai-reshaping-5g-traffic-are-networks-ready-surge>.

<sup>9</sup> Monica Allevan, *FCC Closes Historic 3.45 GHz Auction at \$21.8B*, Fierce Network (Nov. 17, 2021), <https://www.fierce-network.com/wireless/fcc-closes-historic-345-ghz-auction-218b>.

<sup>10</sup> Keith Krach & Brendan Carr, *If China Dominates 5G and 6G, No Defense System Can Protect America*, The Hill (Feb. 21, 2024), <https://thehill.com/opinion/technology/4479232-if-china-dominates-5g-and-6g-no-defense-system-can-protect-america/>.

also has 500 MHz of actionable spectrum. Even if the FCC auctioned 350 MHz, that would be another \$76.3 billion into the Treasury.

That's at least 825 MHz of mid-band now in play and just under \$180 billion into the Treasury too.

All of this doesn't even include other revenue-generating opportunities, like further auctions in the C-Band or a potential broadcast incentive auction. Frankly, Congress not considering this option to offset its spending is legislative malfeasance. Reauthorizing the FCC's spectrum auction authority with a spectrum pipeline is an opportunity to bring in revenue and better ensure the integrity of wireless networks well within Trump's presidential tenure.

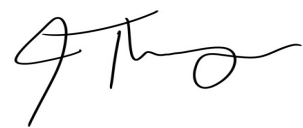
We as Americans have to realize that the race to 5G begins here. When we take a stand against China, so does the world. Just take a look at the scoreboard. When we banned Huawei and ZTE from our network, the E.U.,<sup>11</sup> Australia, Canada, and New Zealand followed suit.<sup>12</sup>

But while we engage in these unnecessary fights, China gains more ground in the race to 5G. To be blunt, if we don't allocate new spectrum to 5G and neglect to reauthorize the FCC's spectrum authority, we cede the race to 5G and even 6G to China. Full stop. Even now, China pulls far ahead of us by adding 2.22 million 5G base stations<sup>13</sup> in its market and is already working on 6G capabilities.

Congress needs to see the forest for the trees and pass good policy that promotes our 5G networks. If not, then we will have no choice but to let China into our markets to provide 5G for us and the rest of the world.

We hope the Committee will move forward on this request.

Sincerely,



Joel L. Thayer  
President & Member of the Board

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<sup>11</sup> Laurens Cerulus, et al., *How Washington Chased Huawei Out of Europe*, Politico Pro (Nov. 23, 2022), <https://subscriber.politicopro.com/article/2022/11/how-washington-chased-huawei-out-of-europe-00070768?source=email>.

<sup>12</sup> Ren Zhengfei, et al., *Can Huawei Thrive Despite American Sanctions?* The Economist (Oct. 25, 2022), <https://www.economist.com/business/2022/10/25/ren-zhengfei-has-big-plans-for-huawei-in-spite-of-american-sanctions>.

<sup>13</sup> Juan Pedro Tomás, *China Reaches 2.22 Million 5G Base Stations at End of Q3*, RCRWireless News (Nov. 16, 2022), <https://www.rcrwireless.com/2022/11/16/5g/china-reaches-2-million-5g-base-stations-end-q3#:~:text=China%20ended%20September%20with%20a,from%20the%20end%20of%202021>.